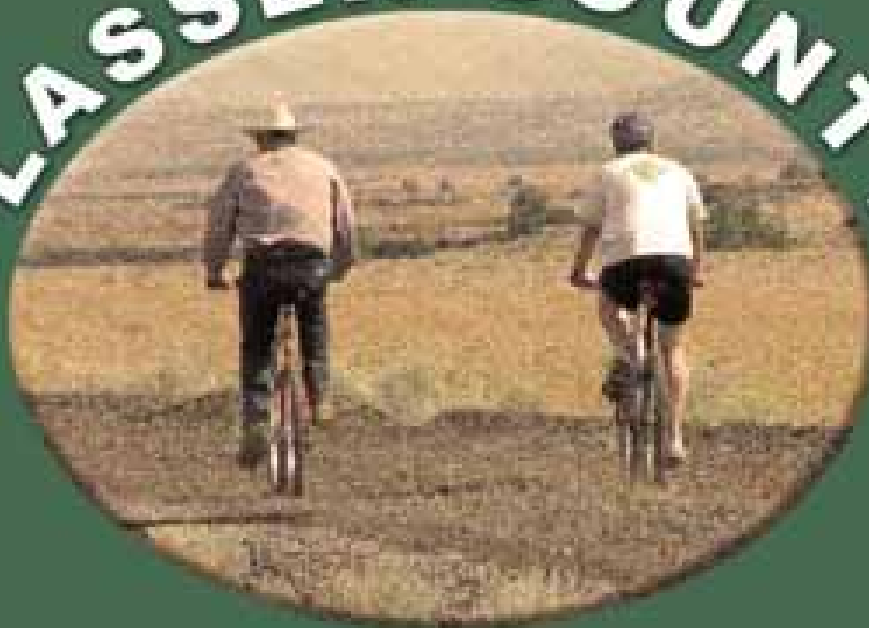




LASSEN COUNTY



BIKEWAY MASTER PLAN

Lassen County Transportation Commission
November 2011



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INTRODUCTION

The 2011 Lassen County Bikeway Master Plan Update (2011 Update) re-evaluates the goals and policies of the 1999 Bikeway Master Plan (1999 Plan), prepared by Fehr & Peers Associates, Inc. to establish its relevance to today's bicycle commuter needs and priorities. The 2011 Update is prepared under the direction of and for use by the Lassen County Transportation Commission (LCTC). It provides a blueprint for developing a bikeway system that includes both on-street and off-street facilities as well as support facilities and programs throughout the County. The plan covers bicycling on State highways, County Roads, and City of Susanville streets as well as cycling opportunities on roadways through public lands managed by the Bureau of Land Management (BLM), the United States Forest Service (USFS) and Lassen County.

STUDY AREA

The study area includes all of Lassen County. Most of the County can be characterized as having rolling to mountainous terrain, with elevations ranging from about 4,000 to 8,000 feet above sea level. The western and southern areas of the County stretch through the Sierra Nevada. This area of the County is the most heavily populated, with urban development concentrated in the County's single incorporated City of Susanville (see Figure 1). Additional development exists in the unincorporated communities of Herlong, Doyle, Janesville, Milford and Westwood. In addition to several national forests and public lands managed by the Bureau of Land Management, the Lassen Volcanic National Park and Caribou Wilderness Area reside along the eastern border of Lassen County. The northern and eastern areas of the County extend from the east Sierra Nevada into the deserts neighboring the State of Nevada. This more arid area has limited development, which is concentrated in the unincorporated communities of Standish, Litchfield, Johnstonville, Wendel, Little Valley, Bieber, Madeline, Termo, and Ravendale.

PLANNING AND DESIGN STANDARDS

Bikeway planning and design in California typically rely on the guidelines and design standards established by the California Department of Transportation (Caltrans) as documented in "Chapter 1000: Bikeway Planning and Design" contained in the Highway Design Manual, California Department of transportation, July 24, 2009. Chapter 1000 identifies specific design standards for bikeways under various conditions and describes the relationship of bikeways to roadways. The Caltrans standards provide for three distinct types of bikeway facilities as generally described below and shown in Figure 2.

- Class I Bikeway (Bike Path) - Provides a completely separated right of way for exclusive use of bicycles and pedestrians with crossflow minimized.
- Class II Bikeway (Bike Lane) - Provides a striped lane for one-way bike travel on a street or highway.
- Class III Bikeway (Bike Route) - Provides for shared use with pedestrian or motor vehicle traffic.



LASSEN COUNTY BIKEWAY MASTER PLAN

STUDY AREA AND EXISTING POPULATION DISTRIBUTION

Isolated Dots = 0 - 50 People

Clustered Dots = > 50 People



Figure 1

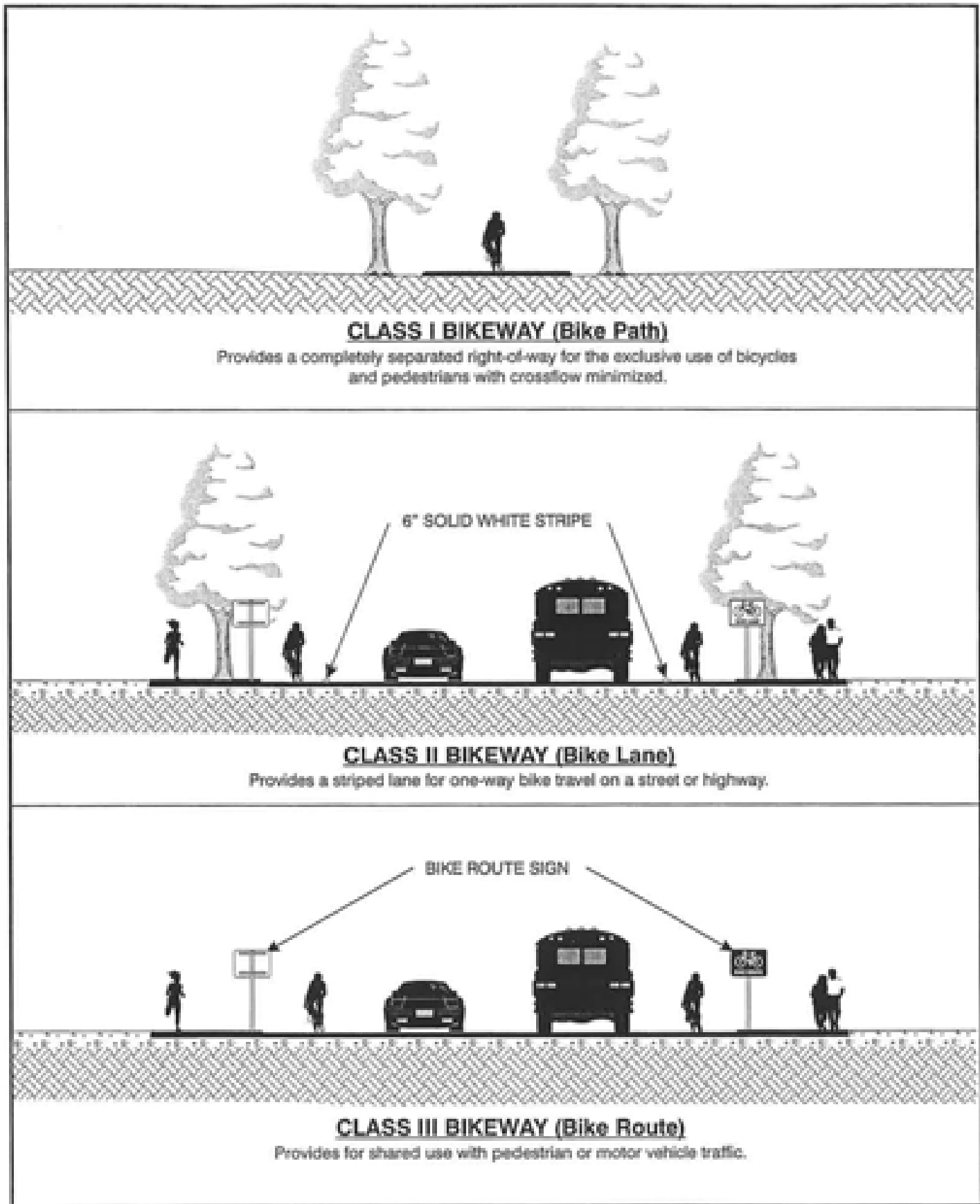


FIGURE 2

GENERAL BIKEWAY CLASSIFICATIONS

Other important policy documents that affect bikeway planning and design include the California Streets and Highways Code and Vehicle Code as well as the California Bicycle Transportation Act (2001). The California Bicycle Transportation Act (2001) re-codifies the Streets and Highways Code (Sections 890-894.2 & Section 2106) and requires Caltrans to take certain actions that further promote bicycle programs. A key component of this act is the requirement for cities and counties to complete bikeway master plans containing the following eleven elements as a condition of applying for state funding through the Bicycle Lane Account 891.2:

- 1) Estimated number of existing and future bicycle commuters;
- 2) Land use and population density;
- 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.

This plan addresses each of the eleven components in the remaining sections of this document, which are outlined below.

CONSISTENCY WITH OTHER PLANS

Preparation of this plan update included a review of the *Lassen County General Plan*, 2000, the *Susanville General Plan*, 1991, and the *Susanville Ranch Regional Recreation Area Master Plan*, 1990, and Bureau of Land Management (BLM), Eagle Lake Field Office Resource Management Plan (RMP). Goals and policies from all of these documents have been incorporated into this plan. In addition, specific bikeway designations contained in the Susanville General Plan are also reflected in the proposed system of bikeway routes.

A draft *Lassen County Trails Master Plan* has been prepared in cooperation with the Lassen Land & Trails Trust, City of Susanville, Lassen County, BLM, and USFS. This plan has identified extensive mountain biking opportunities in Lassen County.

COMMUNITY PARTICIPATION

Community participation was an important component of this plan update for the purpose of obtaining input on existing bicycling conditions, potential roadways for improvement to accommodate bicycles, and the type of support facilities or programs needed to improve bicycling in Lassen County. The community participation effort included input from County Agencies and the general public. LCTC staff mailed informational postcards to County Agencies, Community Services Districts and Chambers of Commerce. Announcements were

placed in the local newspaper and the 1999 Plan was available for review on the LCTC's website, www.lassentransportation.com, and a meeting to receive public input was held.

ORGANIZATION OF THE PLAN

The remainder of this document includes the following components:

- Bikeway Goals and Policies;
- Existing Conditions;
- Analysis of Demand;
- Proposed System;
- Cost and Funding Analysis; and
- Implementation.

The information presented for each of these components is the result of the data collection efforts of Lassen County staff and reference to the 1999 Plan. The components have been organized to provide the reader with a logical discussion of how this plan was prepared, which began with the development of bikeway goals and policies to direct the planning effort.

GOALS, OBJECTIVES, AND POLICIES

The development of goals, objectives, and policies for this plan are intended to provide specific direction on the necessary actions involved in planning, designing, funding, and constructing bikeway facilities. The following information is based on the relationship between the proposed bikeway system, key issues facing implementation of specific routes, and the requirements of local, state, and federal funding programs. To create a more user-friendly document, this section is organized by "topic areas" that relate to specific implementation issues. These topic areas include:

- Overall System;
- Future Development;
- Commuting;
- Safety Education;
- Environmental Considerations;
- Funding; and
- Maintenance and Responsibility

Within each topic area addressed below, the reader will find an overall goal, measurable objective, and policies with specific action statements related to the development of specific facilities or programs.

OVERALL SYSTEM

The following goal and policy statements express the philosophy behind this plan and the proposed system. They stem from the County's desire to provide citizens and visitors with a bikeway system that can accommodate all trip purposes.

Goal 1: Provide safe and efficient bikeways in Lassen County

Objective: Construct bikeways identified in the Lassen County Bikeway Master Plan and provide for the maintenance of both existing and new facilities.

Policies

- 1.1 Maintain the Countywide Bikeway Master Plan to identify existing and future needs, and provide specific recommendations for facilities and programs including adequate provisions for bicycle use and bikeways in all new developments.
- 1.2 Create a bikeway system that is cost-effective to construct and maintain; respects landowners, utilities, and special districts' property rights; and minimizes the potential for conflicts with other types of vehicles and users.
- 1.3 Require all bikeways to conform to design standards contained in the latest version of the Highway Design Manual, "Chapter 1000: Bikeway Planning and Design," Caltrans, unless otherwise established by the Lassen County Board of Supervisors or the City of Susanville City Council.
- 1.4 Update local roadway design standards to include sufficient pavement sections to accommodate bikeway facilities.
- 1.5 Consider a proposed route's importance in providing access to regional bikeway facilities when recommending local routes for implementation.
- 1.6 Coordinate with agencies such as Caltrans, Sierra County, Plumas County, Shasta County, Modoc County, and the Nevada Department of Transportation regarding the implementation of the proposed system.

FUTURE DEVELOPMENT

As development occurs in Lassen County, individual projects should be reviewed to ensure consistency with the proposed system. In addition, development projects should adhere to the policy statements below regarding access, mobility, and support facilities for bicyclists.

Goal 2: Include bikeway facilities in all appropriate future development projects to facilitate on-site circulation for bicycle travel, on-site bicycle parking, and connections to the proposed system.

Objective: Maximize the number of daily trips made by bicycling in future development areas.

Policies

- 2.1 Require future development to construct and dedicate bikeways included in the proposed bikeway system as a condition of development. The bikeways should provide connectivity between new development and the proposed bikeway system.

- 2.2 Require future commercial development to provide bicycle access to surrounding residential areas when a nexus can be demonstrated between the development and potential bicycle travel to and from the residential areas.
- 2.3 Require future non-residential development to place bike racks near entrances.
- 2.4 Consider landowner concerns when planning and acquiring off-street bikeway easements.
- 2.5 Meet the requirements of the Americans with Disabilities Act when constructing facilities contained in the proposed system, where applicable.
- 2.6 Require future residential developments to provide Class I or Class II bikeways to adjacent schools when designing future circulation systems.

COMMUTING

Commuters that bicycle to work can represent a larger percentage of total commute trips if a comprehensive network of bikeway facilities is developed. This plan proposes to implement such a system as defined by the following goal and policy statements.

Goal 3: Develop a bikeway system that enhances safety and convenience of bicycling to work and school.

Objective: Increase bicycle trips to work and school to reduce vehicle congestion and improve air quality.

Policies

- 3.1 Provide connections to the proposed system from all existing and future transit facilities, stations, and terminals in Lassen County.
- 3.2 Provide support facilities such as bicycle racks, personal lockers, and showers at appropriate locations such as “park and ride” facilities, employment centers, schools, and commercial centers. This policy should apply to Lassen County, the City of Susanville, and to new development.

SAFETY EDUCATION

Safety education is an important aspect of increasing bicycle use. If residents perceive the bikeway system to be unsafe, they will be discouraged from using it. Therefore, the following goals and policies are intended to improve the public’s knowledge of how to use the bikeway system safely.

Goal 4: Educate and inform all residents and visitors of Lassen County about how to use bikeway facilities safely.

Objective: Improve bicycle conditions in Lassen County by reducing accidents and increasing the number of bikeway system users.

Policies

- 4.1 Incorporate standard signing and traffic controls as established by Caltrans to ensure a high level of safety for bicyclist and motorist.
- 4.2 Use available accident data to monitor bicycle-related accident levels annually, and target a 10 percent reduction on a per capita basis over the next twenty (20) years.
- 4.3 Encourage local law enforcement agencies and local school districts to cooperatively develop a comprehensive bicycle education program that is taught to all school children in Lassen County.

ENVIRONMENTAL CONSIDERATIONS

Bikeway facilities are generally considered to benefit the environment because their use reduces demand for motorized travel. Nevertheless, the construction of specific facilities may adversely affect the physical environment. The following goal and policy statements have been developed to avoid and minimize potential impacts to the environment.

Goal 5: Avoid adverse environmental impacts associated with the implementation of the proposed system.

Objective: Mitigate potentially significant impacts to a level of less than significant.

Policies

- 5.1 Conduct environmental review consistent with the California Environmental Quality Act for individual projects as they advance to the implementation stage of development.
- 5.2 Avoid areas of sensitive habitats for plants and wildlife when constructing facilities contained in the proposed system whenever feasible. If sensitive areas are affected by new routes, mitigate impacts through the appropriate California Environmental Quality Act or National Environmental Policy Act process.
- 5.3 Solicit and consider community input in the design and location of bikeway facilities.
- 5.4 Consider the effect on other transportation facilities such as travel lane widths, turn lanes, on-street parking, and on-site circulation when planning and designing on-street bikeways.

FUNDING

To obtain the funding required to implement the proposed system, local and regional agencies in Lassen County must take advantage of funding sources at the state and federal level. Because there are limited funding opportunities, it will also require a commitment of local funding.

Goal 6: Acquire sufficient funding to construct the proposed system in 20 years.

Objective: Maximize the amount of local, state, and federal funding for bikeway facilities that can be received by agencies in Lassen County.

Policies

- 6.1 Maintain current information regarding regional, state, and federal funding programs for bikeway facilities along with specific funding requirements and deadlines. The LCTC should be responsible for this effort.
- 6.2 Prepare joint grant applications with other agencies or eligible groups for state and federal funds.
- 6.3 Seek outside funding to the maximum degree possible to minimize fiscal impacts of bicycle facilities on limited local transportation funds.
- 6.4 Encourage partnerships as a means to jointly fund bicycle transportation facilities.

MAINTENANCE AND RESPONSIBILITY

Goal 7: Develop a program to provide regular bikeway maintenance

Objective: Obtain funding or identify funding sources that will provide sufficient funding to maintain the proposed system

Policies

- 7.1 Require that bikeways and road shoulders be maintained in the best possible condition during construction and repair or remove damages or hazards when identified.
- 7.2 Implement a regular striping program and initiate a bicycle hazard remediation program such as sweeping, hazard identification, pavement repairs, striping, and signs along bike route, as funding becomes available.
- 7.3 Identify and implement funding strategies for installing and maintaining bicycle related facilities.
- 7.4 Recommend to appropriate City and/or County Agency to require developers to include bicycle facilities in new large proposed projects, with such facilities to either be offered for public dedication upon completion or to be held and maintained by an applicable private management organization. An assessment district may be recommended in order to provide a funding source for maintenance.
- 7.5 In instances where bicycle facilities are required as a part of a proposed private development, developers may also be required to fund pre-construction and construction costs associated with proposed bicycle facilities.

- 7.6 Maintain an up-to-date prioritized list of bicycle projects, projected costs, and potential funding sources.

EXISTING CONDITIONS

This summary of existing conditions describes the current status of bikeway facilities in Lassen County. The discussion focuses on existing bikeways, regional and multi-modal connections, and bikeway support facilities and programs.

EXISTING BIKEWAYS

Bikeways in Lassen County are very limited. However, since the 1999 Plan, new facilities have been developed and Share the Road signs have been placed throughout the County. Other existing facilities are the Bizz Johnson Trail between Susanville and Westwood, a trail along the Susan River from Alexander Drive to Riverside Drive just past the Bureau of Land Management and various recreational trails in the Susanville Ranch Regional Recreation area, including an additional 14 miles of multiuse trails that were constructed in 2008. Additionally, mountain biking was observed on many County and U.S. Forest Service Roads in the southern and western portions of the County.

BIKEWAYS COMPLETED SINCE THE 1999 PLAN

Several bikeways were identified in the 1999 Plan as Priority Routes. Since the 1999 Plan, a number of these bikeways have been at least partially constructed.

- **Skyline Class I Bike Path from Cherry Terrace to the Bizz Johnson Trail**
A portion of this bike path was completed during the construction of Skyline East in 2008. The bike path runs the length of Skyline East from State Highway 139 to Johnstonville Road. This bike path sees significant pedestrian and bicycle use. It is anticipated that this trail will be a major connector around the city limits of Susanville. The completion of the bike path from Johnstonville Road to the Bizz Johnson Trail is still considered high priority and it is anticipated that funding for this project will be programmed for construction during the construction of Skyline Drive South.
- **The Susan River Class I Bike Path (River Front Trail)**
A portion of this bike path was completed from Alexander Avenue to just beyond the Bureau of Land Management building on Riverside Drive. This portion of the trail provides a valuable safety connection between the residents in the Alexander Avenue area to the major shopping centers of Safeway and Wal-Mart.
- **Skyline Park**
As proposed in the 1999 Plan, the Skyline Park Class I bike path continues the vision of providing connectivity around the City of Susanville. The Skyline Park bike path provides a route to Skyline Drive East, around the east end of Susanville and will eventually continue around the southern portion of the city with the completion of Skyline Drive South.

- **State Route 36/Town Hill**
A Class II bicycle lane was constructed in 2009 from the Town Hill portion of the city of Susanville to Eagle Lake Road. This bikeway was constructed to provide a safety element of the roadway and was nominated for the Excellence in Transportation awards under the inter-modal transportation category.
- **Class III Bike Routes**
Share the Road signage has been put in place along U.S. Highway 395 and State Routes 36, 44 and 139, as well as on local roads such as Richmond Road and Johnstonville Road. The bike routes provide for regional connections to neighboring counties along these routes.

REGIONAL AND MULTI-MODAL CONNECTIONS

To encourage bicycle use, a bikeway plan should contain connections to other communities outside of Lassen County, and it should contain connections to other forms of travel such as public transit at transfer locations. The extent of existing regional and multi-modal connections is discussed below.

REGIONAL CONNECTIONS

Lassen County is bordered by Sierra County, Plumas County, Shasta County, Modoc County, and the State of Nevada. U.S. Highway 395 and State Routes 70, 36, 44, 299, and 139 all provide regional roadway connections to these counties and their urban areas, while local roads provide minor connections to the State of Nevada. A Caltrans Regional Blueprint Planning Grant was successfully obtained to foster the cooperation of regional planning between multi-jurisdictional agencies.

MULTI-MODAL CONNECTIONS

Multi-modal connections in Lassen County are important due to barriers for continuous bicycle travel such as topography and distance. Existing public transit service in Lassen County provides fixed-route and demand responsive service for both residents and visitors. Service is provided by the Lassen Rural Bus, which offers inter-city fixed-route service to southern County communities including Susanville, the Susanville Municipal Airport, Johnstonville, Janesville, Milford, Herlong, and Doyle, and west County service to Westwood and Hamilton Branch (Plumas County) as well as intra-city service in Susanville. The inter-city bus routes have connections to Plumas County Transit and Modoc County's Sage Stage.

The Lassen Rural Bus allows bikes on the buses utilizing bike racks on the outside of the vehicles; however, no bicycle parking facilities were identified at key bus stops along the transit routes and there is a limited number of bicycles that can be secured on the racks. Not providing secure bicycle parking at transit stops can limit bicycle mobility. Also, the two bicycle limit hinders the opportunity for commuters. Bicyclists often rely on transit service to transfer them to destinations safely when barriers to continuous travel are present. Other potential multi-modal

transfer points typically include park-and-ride lots. The Lassen Rural Bus service operates park-and-ride lots at the Susanville Airport and Janesville stops, neither of which provide bike lockers.

SUPPORT FACILITIES

Bikeway support facilities include physical infrastructure designed to accommodate or promote the use of bicycles. Examples include bicycle racks, bicycle lockers, restrooms, and shower facilities. A windshield survey of major shopping centers, schools, parks, and employment centers in the Susanville area revealed few bike racks. In addition, other facilities such as bicycle lockers, restrooms, or shower facilities do not exist in the County. Support facilities are important because potential riders can be discouraged from riding if they think that their bicycle may be stolen or vandalized or if sufficient facilities are not provided to make bicycling convenient.

In many cities and counties, the installation of secure bicycle parking is required as part of local transportation system management plans or the zoning code to encourage the use of bicycles as an alternative to automobile use. For example, Yuba City, CA requires the provision of bicycle racks as part of their zoning code while similar requirements apply in the City of Roseville, CA as part of their transportation systems management program. Based on available information, similar standards are not required in Lassen County jurisdictions.

BICYCLE SAFETY

As part of this plan update, bicycle safety was evaluated. In particular, existing and available bicycle accident data was reviewed to identify accident locations and local law enforcement agencies were contacted to determine the types of bicycle safety programs that were being conducted in the County.

ACCIDENT DATA

Five bicycle accidents were reported in Lassen County between January 2007 and December 2009. Primary causes of these accidents generally resulted from illegal turns or other vehicle code violations by bicyclists. Table 1 summarizes the accident data by year, severity, and party at fault.

TABLE 1 UNINCORPORATED LASSEN COUNTY BICYCLE ACCIDENT SUMMARY (JANUARY 2007 - DECEMBER 2009)					
Year	Accidents		Party at Fault		
	Total	Fatalities	Bicyclist	Driver	Other
2007	1	0	1	0	0
2008	2	0	2	0	0
2009	2	0	2	0	0
Total	5	0	5	0	0
Source: Reported accidents according California Statewide Integrated Traffic Records System (SWITRS)					

Figure 3 on the following page shows the location of each reported bicycle accident in Table 1. The information shown in the figure also indicates the party at fault and the severity of the accident. All five of the accidents involved a collision between a bicycle and a vehicle.

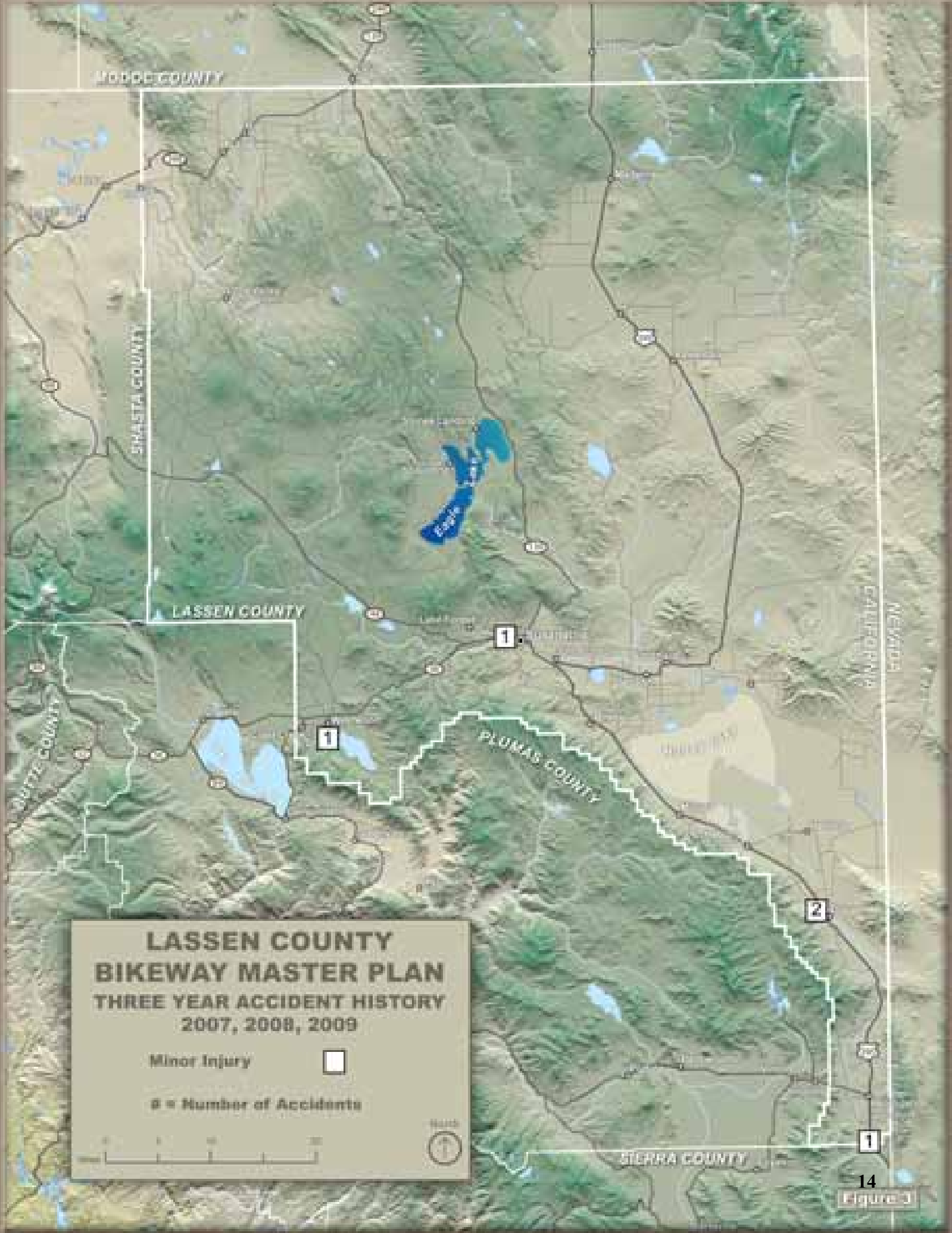
In an effort to compare the rate of bicycle accidents in Lassen County with other communities, Table 2 was prepared which shows a calculated bicycle accident rate based on number of bicycle accidents per 1,000 persons for the unincorporated portions of several counties. This information is only intended for comparison purposes and does not contain sufficient data to demonstrate any statistical relationships.

TABLE 2			
COMPARISON OF BICYCLE ACCIDENTS ON LOCAL ROADS PER 1,000 PERSONS			
(SELECTED CALIFORNIA COUNTIES)			
County	Population	Accidents/Year	Accidents/ 1,000 Persons
Lassen County (unincorporated) ¹	35,550	3	0.09
Sierra County (unincorporated) ¹	3,358	0	0
Plumas County (unincorporated) ¹	20,632	2	0.10
Shasta County (unincorporated) ¹	183,023	6	0.03
Modoc County (unincorporated) ¹	9,698	0	0
Tehama County (unincorporated) ¹	62,836	0	0
Notes: ¹ Reported 2009 accidents according to California Statewide Integrated Traffic Records System (SWITRS) reports.			

Table 2 indicates that the calculated bicycle accident rate for Lassen County is relatively similar to that of other neighboring Counties.

SAFETY PROGRAMS

Safety is a major concern of both existing and potential bicyclists. For those who ride, safety is typically an on-going concern and sometimes a distraction. Potential riders often consider safety one of the most compelling reasons not to ride. These reasons make safety education for both children and adults an important component of this plan. Existing bicycle safety programs in Lassen County were reviewed as part of this update effort. The results are summarized in Table 3.



MODOC COUNTY

SHASTA COUNTY

LASSEN COUNTY

PLUMAS COUNTY

SIERRA COUNTY

**LASSEN COUNTY
BIKEWAY MASTER PLAN
THREE YEAR ACCIDENT HISTORY
2007, 2008, 2009**

Minor Injury

= Number of Accidents

0 1 2 3 4

Scale

North Arrow

14
Figure 3

**TABLE 3
BICYCLE SAFETY EDUCATION PROGRAM SUMMARY**

Agency	Contact Person	Program Functions
CHP	Officer Sam Glucklich Phone: 530-257-2191	<ul style="list-style-type: none"> • The program organizes bicycle rodeos that include roadway and bicycle safety • The rodeos are offered annually or semiannually at schools (K-8) throughout Lassen County and Susanville • No internal education program specific to bicycle laws are conducted for officers; however, officers are updated annually on any new laws, including bicycle-related laws • Child helmet laws are actively enforced through parent notification and/or citation
Lassen Co. Sheriff	Phone: 530-251-8013	<ul style="list-style-type: none"> • The sheriff's department does not offer any bicycle safety education programs.
Susanville Police Department	Tom Downing Phone: 530-257-5603	<ul style="list-style-type: none"> • The program proactively organizes safety courses that include roadway and bicycle safety. The program also organizes bicycle rodeos. • The safety courses and rodeos are mainly offered at schools (K-8) within Susanville city limits. • Officers are internally educated on bicycle safety topics through distribution of materials published by the California State Automobile Association. • Child helmet laws are actively enforced through positive reinforcement (e.g. handing gift certificates out to children wearing helmets).
Lassen County Health & Human Services	Joanna Zimmermann 251-8183	<ul style="list-style-type: none"> • No programs offered however would actively participate in programs that could be funded through the BTA or other sources
City of Susanville Parks and Rec.	Mae Sherman 257-1031	<ul style="list-style-type: none"> • A bicycle safety course is offered once every summer through the Child Care Center and is open to all children in the County. The safety course is administered by the Susanville Police Department.

ANALYSIS OF DEMAND

The objective of analyzing bicycle travel demand is to identify existing bicycle ridership levels and travel patterns, project future use, and explain possible methods for stimulating additional ridership. This section identifies the location of existing major activity centers likely to attract bicycle trips, and provides information about population and employment trends and their influence on bicycle travel demand.

EXISTING MAJOR ACTIVITY CENTERS

One purpose of a bikeway master plan is to provide improved linkages from residential areas to employment, commercial, education and recreational centers. These linkages support bicycle travel demand for both commuter and recreational trip purposes. Major activity centers in Lassen County include regional commercial areas, large residential developments, employment and educational centers, schools, and parks (see Figure 4). Most of these centers are located within the urbanized areas of the County and are located along or near a state highway.

POPULATION AND EMPLOYMENT TRENDS

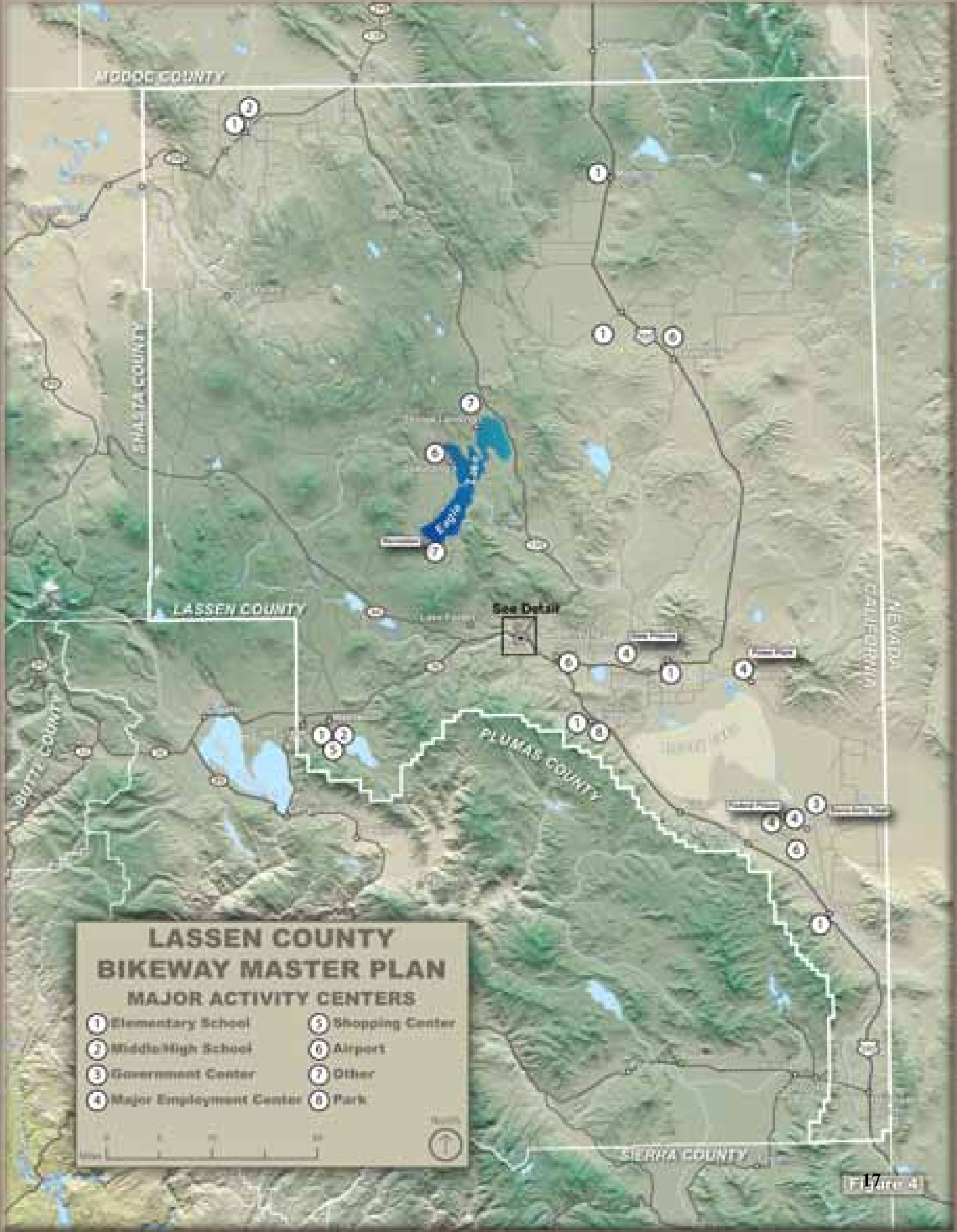
The following discussion contains estimates of existing and forecasts of future population and employment levels to determine trends and how they affect demand for bikeway facilities.

EXISTING POPULATION AND EMPLOYMENT

In 2009, Lassen County had an estimated total population of 35,550 persons and an estimated total employment level of 11,800 persons. Table 4 shows the breakdown of these population and employment estimates for both incorporated and unincorporated areas of the County.

TABLE 4 LASSEN COUNTY POPULATION AND EMPLOYMENT ESTIMATES		
Jurisdiction	2009 Population ¹	2009 Employment ²
Unincorporated Lassen County	18,148	7,400
City of Susanville	17,402	4,400
Total	35,550	11,800
Source: ¹ California Department of Finance, Demographic Research Unit, <i>City/County Population & Housing Estimates 1/1/2009</i> . As of January 1, 2010. Includes group quarters population (i.e., inmates). Without inmates, the City of Susanville population was approximately 8,972. ² Employment Development Department, <i>Labor Market Information 2009</i> .		

The distribution of existing population in Lassen County was shown above in Figure 1. Similar information was not available for employment although the Lassen County General Plan Map contained in Appendix A provides a good context for the location of employment generating land uses. In most cases, employment is concentrated in and around Susanville and to the east at the California Correctional Center and High Desert State Prison, and to the south at the Herlong Federal Prison and Sierra Army Depot.



MODOC COUNTY

SHASTA COUNTY

LASSEN COUNTY

PLUMAS COUNTY

SIERRA COUNTY

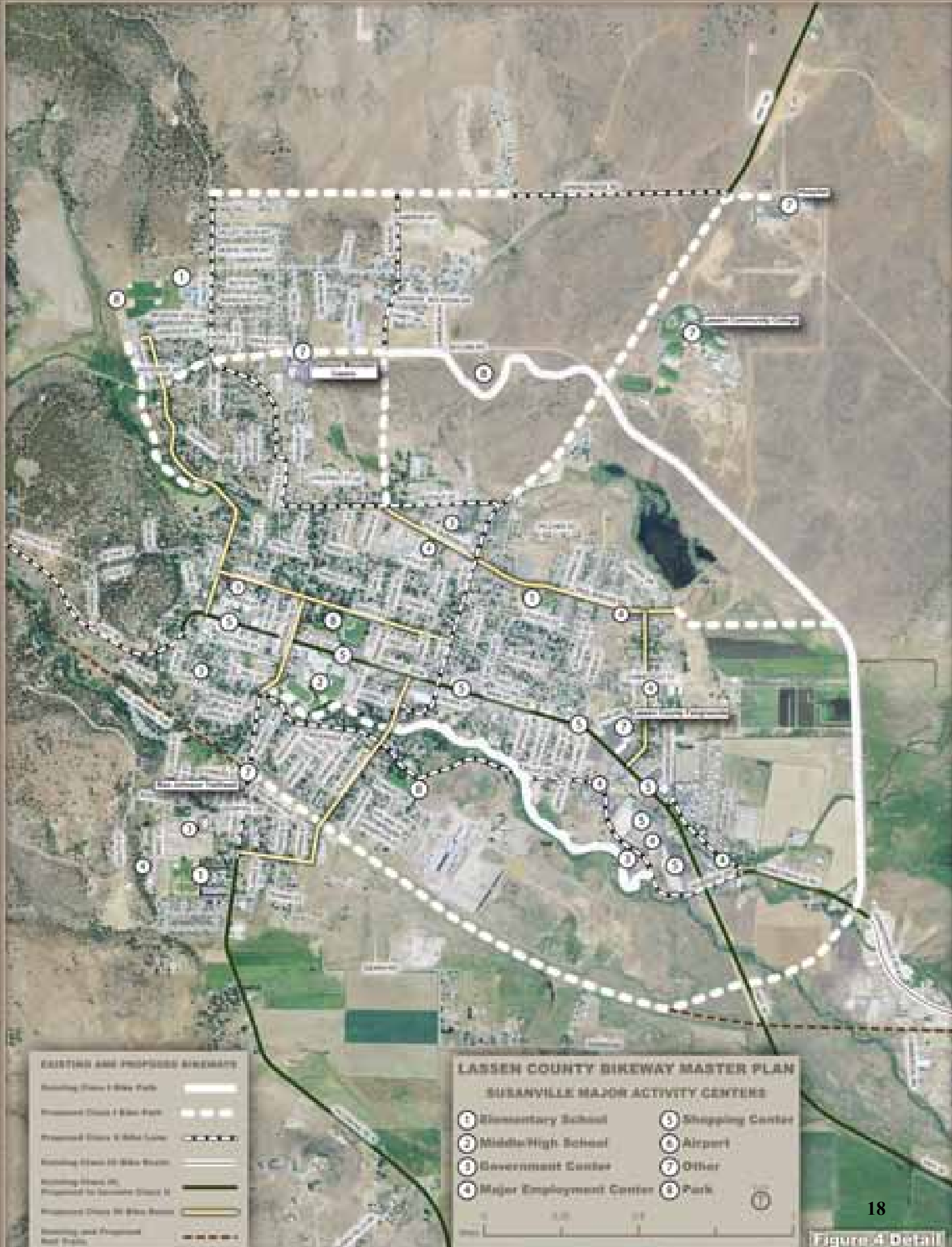
See Detail

**LASSEN COUNTY
BIKEWAY MASTER PLAN
MAJOR ACTIVITY CENTERS**

① Elementary School	⑤ Shopping Center
② Middle/High School	⑥ Airport
③ Government Center	⑦ Other
④ Major Employment Center	⑧ Park

Scale: 0 10 20 Miles

North Arrow



EXISTING AND PROPOSED BIKEWAYS

- Existing Class I Bike Path
- Proposed Class I Bike Path
- Proposed Class II Bike Path
- Existing Class III Bike Path
- Existing Class IV Bike Path
- Proposed Class V Bike Path
- Proposed Class VI Bike Path
- Proposed Class VII Bike Path
- Proposed Class VIII Bike Path
- Proposed Class IX Bike Path
- Proposed Class X Bike Path
- Proposed Class XI Bike Path
- Proposed Class XII Bike Path
- Proposed Class XIII Bike Path
- Proposed Class XIV Bike Path
- Proposed Class XV Bike Path
- Proposed Class XVI Bike Path
- Proposed Class XVII Bike Path
- Proposed Class XVIII Bike Path
- Proposed Class XIX Bike Path
- Proposed Class XX Bike Path

**LASSEN COUNTY BIKEWAY MASTER PLAN
SUSANVILLE MAJOR ACTIVITY CENTERS**

- 1 Elementary School
- 2 Middle/High School
- 3 Government Center
- 4 Major Employment Center
- 5 Shopping Center
- 6 Airport
- 7 Other
- 8 Park

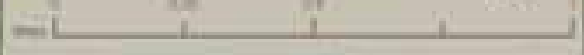


Figure 4 Detail

FUTURE POPULATION AND EMPLOYMENT

According to the *County Population Projections with Race/Ethnic Detail*, California Department of Finance Demographic Research Unit, 2007, Lassen County is expected to experience at least moderate levels of growth over the next 20 years. By 2030, the total population including group quarters is expected to reach about 47,240, which represents an increase of about 33 percent above 2009 levels. Although formal forecasts of employment are not available for 2020, the level of growth is expected to be commensurate with population.

Future growth and changes in population and employment are important to bikeway planning for two reasons. First, new developments will require new and upgraded roadways, which would provide on-street bikeways as part of the standards recommended for this plan. Some of the cost of the proposed system could be borne as part of the cost of developing new or widening existing roadways. Almost all communities in Lassen County are projected to experience at least moderate growth over the next 20 years, which implies that there will be additional demand placed on the area's roadway system. The resulting need for enhanced capacity of the roadway system may also present opportunities for the expansion of the regional bikeway system.

Second, changes in land use patterns impact average commute distance, which in turn affects the attractiveness of bicycling as a commute mode. From a bicycling perspective, land use policies that encourage a balance between residential and employment developments, higher land use densities, and an increase in local employment is a favorable step.

BICYCLE RIDERSHIP LEVELS

Bicycle ridership levels are not easily measured or projected for an entire County without extensive data collection efforts. Existing and available data currently includes the 2000 Census, while projections regarding future travel demand can only be based on population growth. With this limited amount of information, the following discussion describes both existing and future bicycle ridership levels and their relationship to the availability of a comprehensive bikeway system.

EXISTING BICYCLE RIDERSHIP

The concept of "demand" for bicycle facilities is difficult to measure. Unlike vehicle use, where historical trip generation studies for different types of land uses allows an estimate of future "demand", no such methodology exists for bicycles.

A common term used in describing demand for bicycle facilities is "mode split." Mode split refers to the form of transportation a person chooses to take, be that walking, bicycling, using public transit, or driving. Mode split is often used in evaluating commuter alternatives such as bicycling, where the objective is to increase the split or percentage of people selecting an alternative means of transportation. From the 2000 Census, mode split information is available for the journey-to-work. This information is presented in Table 5 for Lassen County.

TABLE 5
2000 CENSUS JOURNEY-TO-WORK
(ALL WORKERS WHO DID NOT WORK AT HOME)

Mode (Home-based work trips):	Lassen County
Drive Alone	89.7%
Carpool	13.0%
Public Transportation	.5%
Bicycle	.2%
Walk	3.6%
Other	0.7%

As shown in Table 5, less than 1 percent of 2000 home-based work trips in Lassen County residents were made by bicycle. This represented approximately 100 commute trips. Many more bicycle trips were made for other trip purposes such as recreation. For example, counts taken by the Bureau of Land Management measured approximately 81,112 users on the first seven miles of the Bizz Johnson Trail west of Susanville for the period of October 1, 2008 through September 30, 2009. BLM estimates that at least 50 percent of this use is by bicyclists, which represents approximately 40,556 annual users.

FUTURE BICYCLE RIDERSHIP

Future bicycle ridership levels will depend on a number of factors such as demographics, the location, density and type of future land development, and the availability of bikeway facilities. Bicycle mode splits may increase as a result of implementing comprehensive bikeway systems such as the Lassen County system described in the next section.

PROPOSED SYSTEM

This section describes the proposed system of bikeways for Lassen County that was developed for this plan. The planning effort relied on information contained in the 1999 Plan, interested agencies, groups, and members of the public. Based on input received, no potential new routes were mapped during the 2011 Update. The initial system in the 1999 Plan was reviewed by the LCTC and was modified to create the proposed system presented in this section.

PROPOSED SYSTEM DEVELOPMENT

This selection of individual routes for the proposed system was based on the following bikeway planning criteria:

- Local Input - Consider local information in the bikeway planning process, including input from interested agencies and the general public.
- Use - Bikeways contained in the proposed system should reflect use levels that are commensurate with the level of investment required for construction and maintenance.

- Coverage - The system should provide balanced access from all portions of Lassen County's population centers for both commuting and recreation routes.
- Safety - The system should provide the highest level of safety possible while eliminating major safety concerns such as narrow roadways.
- Connectivity - The system should provide bikeway connections to major activity centers, multi-modal transfer locations, and to routes that provide access to neighboring counties. Activity centers include residential neighborhoods, schools, regional parks, shopping centers, employment centers, government centers, transit centers, and other recreational opportunities. Major gaps and barriers, including narrow bridges and roadways, should be targeted as high priority items.
- On-Street Bikeways - Class II bike lanes should be provided as the preferred on-street bikeway facility. Class III bike routes should be used when Class II bike lanes are not feasible due to existing physical, environmental, or funding constraints. As with bike lanes, the designation of bike routes should indicate to bicyclists that there are particular advantages to using these routes as compared with alternative routes. This means that responsible agencies have taken actions to assure that these routes are suitable as shared routes and will be maintained in a manner consistent with the needs of bicyclists. Regular sweeping of these routes will increase safety and use of the route for cyclists.
- Off-Street Bikeways - Where feasible, Class I bike paths on grade separated rights-of-way should be implemented. These bikeways provide a higher degree of safety and recreational benefit than bikeways located on streets. They can also become linear parks, adding to the range of amenities for local communities. In many areas of Lassen County, the cost of constructing off-street bikeways may be competitive with that for on-street facilities due to the physical characteristics of the existing roadway system. However, off street bikeways are used by pedestrians as a means of traversing the routes. Regular sweeping of these routes will increase safety and use of the route for cyclists.

After refining the proposed system according to the bikeway planning criteria, the proposed system map was presented to LCTC and members of the public to obtain their comments about specific routes. Based on comments received through this review process, the proposed system map shown in Figure 5 was prepared.

The proposed system includes a total of approximately 375.5 miles (604.19 kilometers) of bikeway facilities plus another 420 miles of motorized and non-motorized trails on various County, BLM, and USFS roadways, which can be used by mountain bicyclists. The system connects each community in Lassen County, and it provides regional connections to other counties including Sierra County, Plumas County, Shasta County, and Modoc County. Each bikeway route is classified according to standards defined in "Chapter 1000: Bikeway Planning and Design" contained in the Highway Design Manual, Fifth Edition, California Department of Transportation, July 24, 2009 and presented earlier in Figure 2.

The reader should note that the Caltrans standards for the Class III bike route designation do not specify a minimum shoulder width or roadway lane width. Although four-foot shoulders and 12-foot travel lanes (i.e., 32-foot paved section) are desirable on all roadways used by bicyclists, a minimum roadway lane width of 14 feet (i.e., 28-foot paved section) is suggested for the Class III designation in Lassen County. Table 6 shows the number of proposed miles and kilometers for each bikeway classification.

It should also be noted that while high volume roads such as Main Street and Ash Street have been proposed as Class II bikeways, roadway widening and intersection improvements may be necessary at some locations along these streets. These issues may pose potential constraints as additional right of way may be required.

TABLE 6		
LENGTH OF PROPOSED SYSTEM BY BIKEWAY CLASSIFICATION¹		
Bikeway or Trail Classification	Miles	Kilometers
Class I Bike Path	30.5	47.47
Class II Bike Lane	204	329.85
Class III Bike Route	141	226.87
Subtotal	375.50	604.19
Motorized Recreational Trail	391.7	630.4
Non-Motorized Recreational Trail	27.7	446.0
Notes: ¹ Does not include existing bikeways.		

It should be noted that in the 1999 Plan, several routes throughout the County were designated as Class II, but have since been signed as Class III. These routes are identified on Figure 5 inset as “Existing Class III, Proposed to become Class II.”

REGIONAL AND MULTI-MODAL BIKEWAY CONNECTIONS

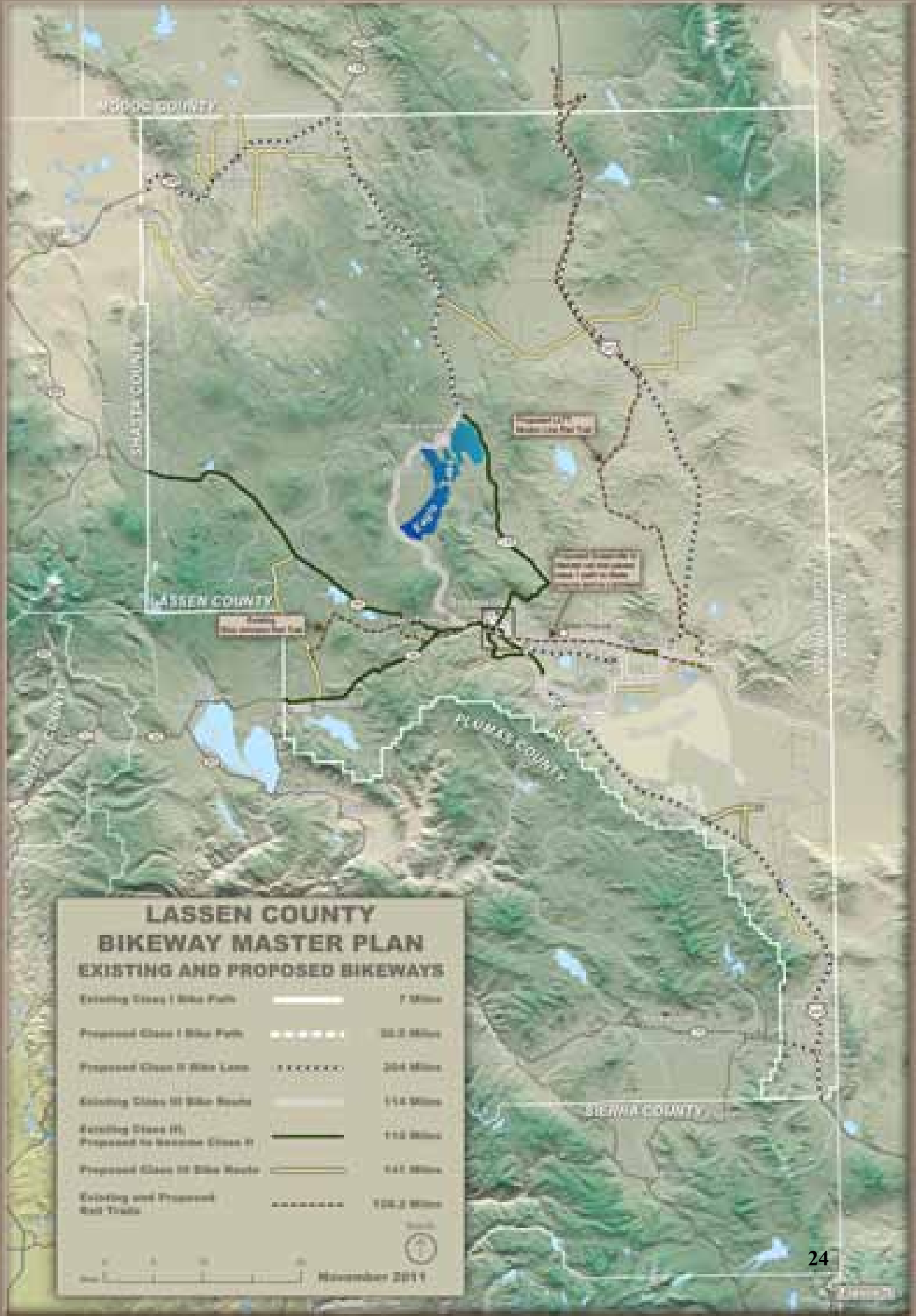
Regional connections include those bikeway facilities that connect urban areas in Lassen County with urban areas in surrounding counties. Multi-modal connections allow bicyclists to transfer to other modes such as buses. Including these components in the discussion about the proposed system is important for the development of a bikeway system that provides a high degree of both accessibility and mobility.

REGIONAL CONNECTIONS

In the development of the proposed bikeway routes, an effort was made to assess the potential connectivity of Lassen County bikeways with existing or planned bikeways in surrounding counties. Lassen County is bordered by Sierra County, Plumas County, Shasta County, Modoc County, and the State of Nevada. As discussed in the existing conditions section above, adding Class III bikeways on strategic routes helps connect Lassen County to these surrounding counties. The proposed system would provide Class II bike lanes on the state routes connecting to these counties, as well as some additional Class III bike routes on selected County roads

connecting to these counties. An example would be an extension of the Bizz Johnson Trail from Westwood to the Almanor Basin as indicated in Figure 5.

Lassen Land and Trails Trust recently purchased an 85 mile segment of abandoned rail line from 1 mile north of Wendel in Lassen County to approximately 12 miles south of Alturas, Modoc County. The Modoc line connects the two counties and this rail line would be a valuable commuting connection between small communities along the corridor.



COLUSA COUNTY

CHICO COUNCIL

LASSEN COUNTY

LAUREL CREEK
RECREATION AREA

LAUREL CREEK
RECREATION AREA
BIKEWAY

LAUREL CREEK
RECREATION AREA
BIKEWAY

PLUMAS COUNTY

SIERRA COUNTY

LASSEN COUNTY BIKEWAY MASTER PLAN EXISTING AND PROPOSED BIKEWAYS

Existing Class I Bike Paths		7 Miles
Proposed Class I Bike Paths		22.2 Miles
Proposed Class II Bike Lanes		204 Miles
Existing Class III Bike Routes		112 Miles
Existing Class III, Proposed to become Class II		112 Miles
Proposed Class III Bike Routes		147 Miles
Existing and Proposed Belt Trails		104.2 Miles



November 2011



**LASSEN COUNTY
BIKEWAY MASTER PLAN
EXISTING AND PROPOSED BIKEWAYS**

Existing Class 1 Bike Route —————

Proposed Class 1 Bike Route - - - - -

Proposed Class 15 Bike Route ————

Existing Class 15 Bike Route —————

Existing Class 15 Proposed and Existing Class 2 ————

Proposed Class 15 Bike Route ————

Existing and Proposed
Rail Corridor ————

**PROPOSED SITES FOR BICYCLE
INFRASTRUCTURE IMPROVEMENTS**

1 Transfer	10 Lassen High School
2 Lassen College	11 Memorial Park
3 County Administration	12 Riverside Beach Park
4 Shopping Center	13 Riverside Beach Park
5 Shopping Center	14 Westwood Center
6 Riverside Park	15 Riverside Beach Park
7 Memorial West School	16 Station Park
8 Riverside National Depot	

The Susanville/Wendel line, a railroad grade that was abandoned and tracks removed in 2008 has high potential as a commuter route providing access to the largest employer in the County, the California Correctional Center and High Desert Prison. The route also has high potential as a commuter route to Susanville for people living in the Honey Lake Valley. The route also provides access to two K-8 public schools, the high school and a junior college.

MULTI-MODAL CONNECTIONS

The proposed bikeway system includes routes that connect with the existing park-and-ride lots at the Susanville Municipal Airport and in Janesville, and overlap with existing transit routes and stations. To facilitate use of these routes by bicyclists, all transit buses and major transit stations should be equipped with bike racks.

SUPPORT FACILITIES AND PROGRAMS

Support facilities and educational programs are an important part of the proposed bikeway system. Existing support facilities are very limited in Lassen County based on available data collected during this study. However, local law enforcement agencies are actively involved in bicycle education programs. Specific recommendations on how to improve these conditions are listed below.

BICYCLE PARKING, SHOWER, AND LOCKER FACILITIES

Support facilities such as bicycle parking, shower and locker facilities can encourage bicycling by reducing the threat of theft and making riding more convenient. Properly designed bike racks should be available at major bicycle destinations in Lassen County. For the most part, these facilities should be required for new developments that are likely to experience a demand for bicycle parking such as commercial areas, parks, libraries, schools, and major employers. In some cases, though, existing activity centers should add bicycle parking facilities. The type of parking facility (bike rack or bicycle locker) should be selected based on (a) cost, (b) ease of use, and (c) ability to prevent theft.

Access to shower and locker facilities may help encourage people to commute by bicycle, particularly in the summer months. Many jobs require employees to wear specific uniforms or formal attire such as suits and ties. By having shower and locker facilities, employees have the option to shower and dress at work. This is an important consideration for bicycle commuters since they cannot control their travel environment and are much more dependent on support facilities located at the workplace.

The following action is recommended for increasing the number of locations with bicycle parking, shower, and locker facilities:

- Require the installation of bicycle parking, shower, and locker facilities as conditions of approval for major new developments.

CROSSING PROTECTION

These improvements should be targeted for major intersections on the proposed bikeway network, and at locations where school children cross a busy street to gain access to their school. The following steps are recommended to build upon this effort.

- Use signing, striping, crossing guards, flashing beacons, and pedestrian actuated signals at street crossings with high levels of pedestrian and bicycle demand when warranted by engineering standards.
- Install bicycle detectors at signalized intersections along the bikeway system as intersections are upgraded. Detectors should be located within the striped bike lane either along the curb or between the right-turn lane and through lane.

STREET DRAIN SAFETY

All City and County street drain covers should be bicycle safe. Lassen County and the City of Susanville should replace any existing street drain covers that do not currently prevent bicycle wheels from slipping into the drain cover slots. In addition, all new drain covers should be compatible for bicycle travel.

EDUCATIONAL PROGRAMS

Programs to teach existing and potential bicyclists about the fundamentals of bicycle riding are important to establishing good riding habits. Currently, elementary school children in Lassen County are given regular bicycle-riding safety education by law enforcement officials from both the Susanville Police Department and the California Highway Patrol. The following steps are recommended to build upon this effort.

- Continue and expand the current bicycle education program for school children. The existing programs are offered on an as needed basis without interagency cooperation. A coordinated proactive effort between the California Highway Patrol and local law enforcement agencies would be more efficient and productive.
- Establish an adult bicycle education program through the parks and recreation departments or other local agency departments that teaches adults how to ride defensively and encourages people to ride to work.

COST AND FUNDING ANALYSIS

Implementation of the proposed system will require funding from local, state, and federal sources and coordination with other agencies. To facilitate funding efforts, this section presents conceptual construction cost estimates for the proposed system along with a brief description of past expenditures for bikeway and pedestrian facilities.

COST ESTIMATES

Table 7 contains a unit cost summary for bikeway facilities in Lassen County. These cost estimates are based on actual costs experienced in Lassen County and various other California communities. However, they should be used only to develop conceptual construction cost estimates. More detailed estimates should be developed after preliminary engineering.

Facility Type	Estimated Cost Per Mile*
Class I Bike Path	
<ul style="list-style-type: none"> • Construct asphalt path on existing graded right-of-way • Construct asphalt path along natural terrain with some grade and drainage improvements 	\$100,000 \$150,000
Class II Bike Lane ¹	
<ul style="list-style-type: none"> • Signing and striping only • Signing and striping plus minor/moderate roadway improvement 	\$ 3,000 \$120,000
Class III Bike Route ¹	
<ul style="list-style-type: none"> • Signing only • Signing plus minor/moderate roadway improvement 	\$ 1,000 \$18,000
Notes: ¹ Minor/moderate roadway improvements would be needed on many County roadways to accommodate a Class II or Class III bikeway. *Estimates are based using in-house labor	

The range in costs shown in Table 7 is due to the level of improvement associated with each type of bikeway. In many locations throughout Lassen County, moderate to major roadway improvements would be required to construct on-street bikeways. Although Class III bike routes only require signing, many of the roadways designated for these routes should be widened to provide a usable shoulder as previously discussed. Using the cost information in Table 7, conceptual construction costs were developed for the proposed system. A summary of these costs is presented in Table 8 by type of facility.

Bikeway Classification	Cost Estimate Range	
	Low	High
Class I Bike Path	\$2,950,000	\$4,425,000
Class II Bike Lane	\$615,000	\$24,600,000
Class III Bike Route	\$141,000	\$2,538,000
Total	\$3,706,000	\$31,563,000
Source: Lassen County Public Works, 2010		

Table 8 shows a total cost for constructing the proposed system that could range from a low of \$3.7 million to a high of \$31.5 million. The large range in total cost is due predominantly to the following factors:

- Limited information regarding the existing condition of many roadways;
- Limited information about potential construction constraints along most roadways;
- Unknown phasing and timing of specific projects; and
- Unknown opportunities for construction related to development projects and roadway upgrades.

All of these factors are related to the amount and quality of information available as part of this planning study. More detailed cost estimates will be prepared as individual projects advance from the planning stage to design and construction.

A final cost issue that needs to be addressed is the potential maintenance cost of the proposed system. Roadways with on-street bikeways will require a higher level of maintenance to ensure that roadway shoulders are free of debris and are in good condition. This requirement will result in higher total maintenance costs. The specific cost in any given year will depend primarily on the number of miles of on-street facilities and where facilities are located. For off-street bikeways, which have an annual maintenance cost of approximately \$8,500 per mile, maintenance will also be important. But, unlike the roadway system that is maintained by the County and Caltrans, off-street bike paths can be maintained by private groups such as volunteer organizations. This form of maintenance is useful for keeping costs down and provides an opportunity for educating youth or school groups about bicycling.

POTENTIAL FUNDING SOURCES

In some cases, portions of the proposed system will be completed as part of future development and road widening and construction projects. For those portions that will rely on other funding mechanisms, the following discussion provides descriptions of the more effective funding sources.

FEDERAL SOURCES

Federal funding through the Transportation Enhancement (TE) program is available for bicycle transportation projects. Projects must have a direct relationship-by function, proximity or impact to the surface transportation system. Activities must be over and above normal projects, including mitigation. Only these activities are eligible to be accounted for as Transportation Enhancement activities. They are:

1. Provision of facilities for pedestrians and bicycles.
2. Provision of safety and educational activities for pedestrians and bicyclists.
3. Acquisition of scenic easements and scenic or historic sites.
4. Scenic or historic highway programs (including the provision of tourist and welcome center facilities).
5. Landscaping and other scenic beautification.

6. Historic preservation.
7. Rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals).
8. Preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails).
9. Control and removal of outdoor advertising.
10. Archaeological planning and research.
11. Environmental mitigation to address water pollution due to highway runoff or reduce vehicle caused wildlife mortality while maintaining habitat connectivity.
12. Establishment of transportation museums.

Other federal funding sources include the following:

- Land and Water Conservation Fund Program (administered locally by the California Department of Parks and Recreation, Local Assistance Section);
- Recreation and Public Purposes Act (Bureau of Land Management); and
- Schools and Roads Grants to States (United States Forest Service).

STATE SOURCES

The following state sources are the most applicable for bikeway funding in Lassen County.

Bicycle Transportation Account

The State Bicycle Transportation Account (BTA) is an annual program that is available for funding bicycle projects. Available as grants to local jurisdictions, the emphasis is on projects that benefit bicycling for commuting purposes. 2010/2011 funding for this program was \$7.2 million, with eligible applicants able to apply for 25 percent funding, or \$1.8 million. BTA funds up to 90 percent of a project.

Local Transportation Fund (LTF)

Under Article 3 of the Transportation Development Act (TDA), up to two percent of the LTF allocation to cities and counties can be used for bicycle and pedestrian projects. Revenues to the LTF program are derived from 1/4¢ of the statewide sales tax. The 1/4¢ is returned by the State Board of Equalization to each county according to the amount of tax collected in that county. These funds are distributed through the LCTC and average approximately \$600,000 annually.

Habitat Conservation Fund Grant Program

This program originates from the California Wildlife Protection Act of 1990 (Prop 117). Eligible projects include the acquisition of various types of wildlife habitats, enhancement and restoration of various wildlife habitats, trails, and programs which attract visitors to park and wildlife areas and that educate them about the State's resources. Projects must be incorporated

into the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) if they are regionally significant.

Environmental Enhancement and Mitigation Program (EEM)

Bicycle projects can qualify for EEM funds if they meet the program's requirements. Any non-profit organization can sponsor projects, which are submitted to the State Resources Agency for evaluation in June/July of each year.

Flexible Congestion Relief Program (FCR)

Bicycle projects are eligible to compete for FCR funds. Projects must provide congestion relief and they must be included in an approved Regional Transportation Improvement Program.

LOCAL SOURCES

A variety of local sources are available for funding bikeway and pedestrian improvements, however, their use is often depended on political support.

New Construction

Future road widening and construction projects are one means of providing on-street bikeways. To ensure that roadway construction projects provide these facilities where needed, roadway design standards need to include minimum cross-sections that have sufficient pavement for on-street bikeways and the review process for new development should include input pertaining to consistency with the proposed system. Future development in Lassen County will contribute to the implementation of new bikeway facilities only if projects are conditioned and roadway design standards are updated to include bikeway facilities.

Impact Fees

Another potential local source of funding is developer impact fees, which are typically tied to trip generation rates and traffic impacts produced by the proposed development. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- and off-street bikeway improvements which will encourage residents to bicycle rather than drive.

Assessment Districts

Different types of assessment districts can be used to fund the construction and maintenance of bikeway facilities. Examples include Mello-Roos Community Facility Districts, Infrastructure Financing Districts (SB 308), Open Space Districts, or Lighting and Landscape Districts. These types of districts have specific requirements relating to their establishment and use of funds.

Other Sources

Local sales taxes, developer or public agency land dedications, private donations, and fundraising events are other local options to generate funding for bikeway projects. Creation of these potential sources usually requires substantial local support.

COST AND FUNDING SUMMARY

In recent years, the County has placed a greater emphasis on bikeway projects. This is evidenced by the update of the BMP and the LCTC's recent programming of TE and STIP funds to design and construct the Class I Bike Path along Skyline Drive. These decisions are supported by local community groups such as the Lassen Land & Trails Trust.

Other future expenditures for bikeway facilities are difficult to predict given the number of variables involved. However, knowing the total annual expenditure that would be required over 20 years to complete implementation of the proposed system is useful. Although some of the proposed system will be constructed as new development occurs, a substantial portion of the total cost will rely on public funding. With this understanding, the following options should be considered by Lassen County while fulfilling the funding commitment necessary to complete the proposed system:

- 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, especially through the BTA and LTF programs; and
- 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 system. This could include a variety of resources such as volunteer labor during construction, which is becoming popular for recreational improvements, or monetary donations towards specific improvements.

IMPLEMENTATION

This section addresses a number of issues related to implementation of the proposed system. It includes a discussion of phasing and priorities for implementing specific routes and also contains typical design standards for each bikeway classification.

BIKEWAY SYSTEM PHASING

The specific implementation of any given route, with all other things considered equal, should be based on the following criteria:

- Where an opportunity, such as a road widening or repaving, makes implementation favorable;

- Where an eminent loss of an opportunity, such as the sale of a railroad right-of-way, makes implementation necessary;
- Where resolution of a major obstacle, such as access to flood channel right-of-way, makes implementation necessary; and
- Where the segment is not disconnected or otherwise poorly accessible from the rest of the system.

In many situations, the most needed bikeway improvement may not be implemented first. In these cases, external factors such as new road construction create opportunities to provide new bikeway facilities without consideration for need. Therefore, the proposed system does not include a definitive ranking of the specific routes, but it does include the following list of high priority routes.

PRIORITY ROUTES

Priority routes were selected based on expected use, type of route, connectivity, and potential improvements to safety. The following routes, which are shown on Figure 6, currently have the highest priority for implementation.

- Skyline Class I Bike Path from Johnstonville Road to the Bizz Johnson Trail

Continuation of the Skyline Class I Bike path is proposed to connect to the Bizz Johnson Trail and would provide access to Lassen Community College, the Fairgrounds, the Wal-Mart and Safeway Shopping Centers, and the Susanville Ranch regional recreation area.

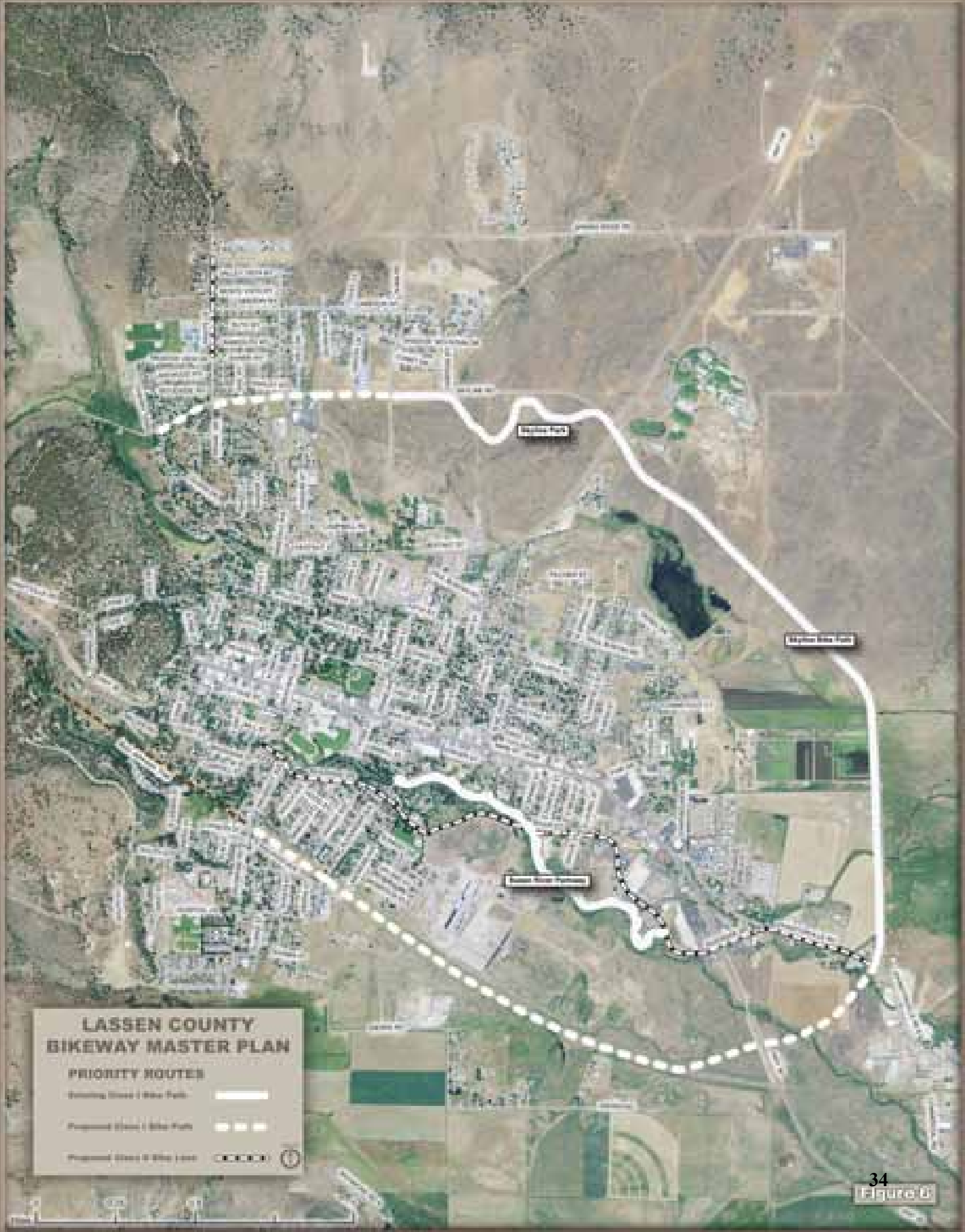
- Susan River Class I Bike Path from Alexander Road to Richmond Road

The Susan River Class I Bike Path is both a scenic recreational route and a direct transportation corridor for bicyclists and pedestrians. While a portion of the route has been completed, the original plan calls for the path to connect to Richmond Road. This remaining section from Alexander Road to Richmond road is still a high priority for Lassen County. The path connects the residential areas of western Susanville south of SR 36 with major destinations such as the high school, offices and businesses along eastern Riverside Drive, the Safeway Shopping Center, and the Wal-Mart Shopping Center.

**LASSEN COUNTY
BIKEWAY MASTER PLAN**

PRIORITY ROUTES

- Existing State & City Paths 
- Proposed State & City Paths 
- Proposed State & City Links 



- Riverside Drive Class I Bike Lanes from Richmond Road to SR 36

Riverside Drive parallels SR 36 through downtown Susanville and serves as the main collector for residential areas on the south side of town. The proposed Class I Bike Lanes would improve bicycle travel on this roadway, which provides access to major destinations such as the high school, offices and businesses along eastern Riverside Drive, the Safeway Shopping Center, and the Wal-Mart Shopping Center.

BIKEWAY DESIGN STANDARDS

The Caltrans Highway Design Manual gives extensive detail on the design for bikeways. The Caltrans standards provide a good framework for future implementation, but may not always be feasible in the rugged terrain of Lassen County. Bikeway design and planning standards are continually changing and expanding. For example, there is pressure from the bicycling public to allow bike lanes that are narrower than Caltrans Standards to be installed on existing streets. However, local jurisdictions must be protected from liability concerns so most agencies adopt the Caltrans guidelines as a minimum. Examples of typical standard design treatments for Class I, Class II, and Class III bikeways are provided in Figures 7 through 9. This information is provided to assist local agency staff in the design and construction of future bikeway facilities. With these standards and other information contained in this bikeway plan, Lassen County is prepared to take the next step in advancing bikeway projects from the planning stage to the design and construction phase.

MAINTENANCE

Maintenance on existing trails will be an ongoing effort. Local Transportation Funds (LTF) may be set aside by the LCTC, as they are available. These funds will be allocated to the city and county based on the adopted claims process set forth by the TDA and the LCTC. Funds should be combined by both the city and county to ensure the best use of funds for maintaining trails and a schedule for maintaining city and county trails should be developed. Equipment owned by the city and county will be used in the maintenance efforts. Future funding sources could be tapped for the purchase of other equipment or to pay for staffing in the ongoing efforts to maintain the existing trails. Maintenance of existing trails should be in place before any effort is made to obtain or create future trail systems.

For proposed future development, a long range maintenance plan for trails should be included as a condition of approval as deemed applicable by the appropriate governing City and/or County Agency. At a minimum, staffing, funding and materials should be included as part of the maintenance plan.

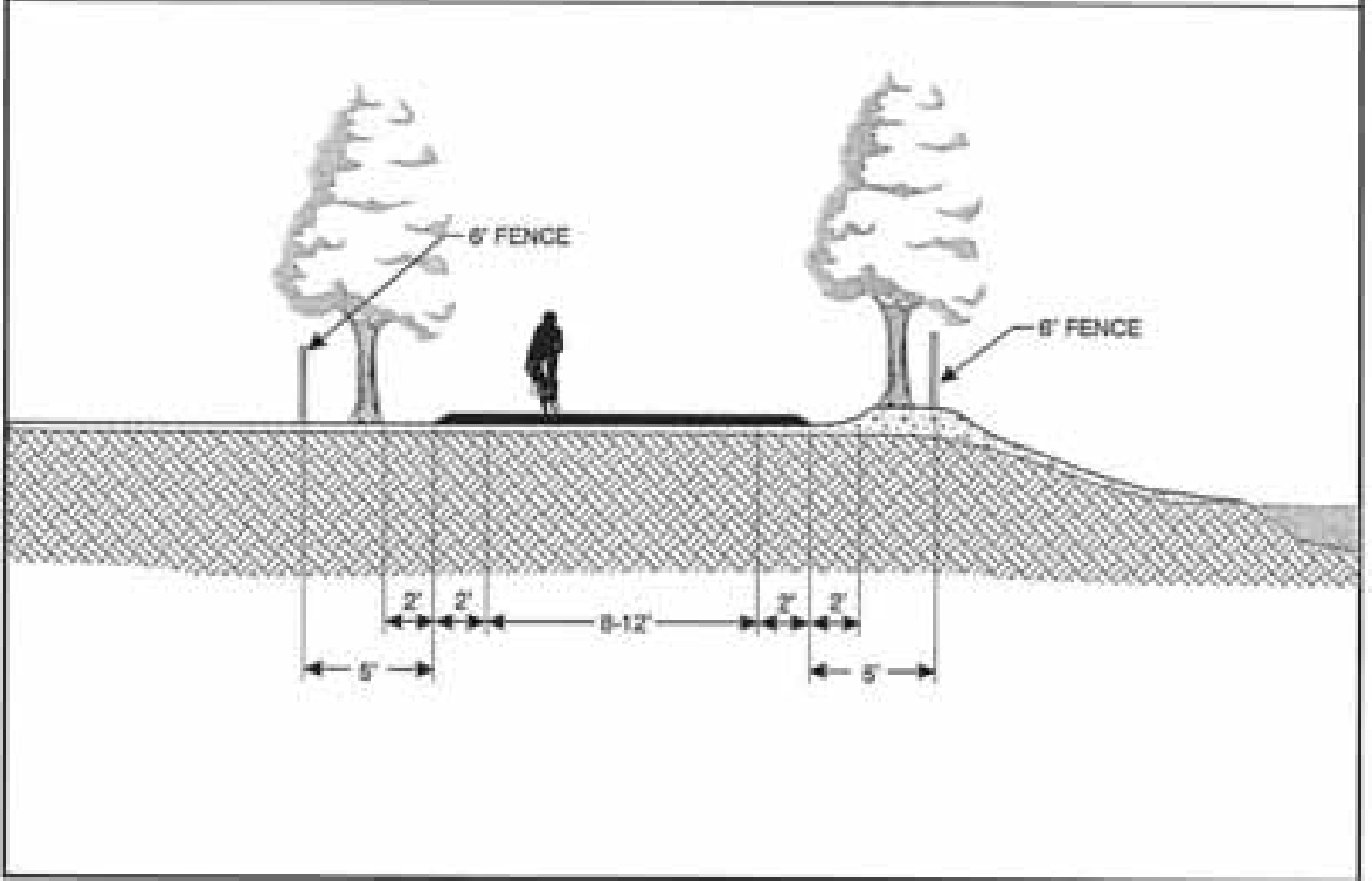
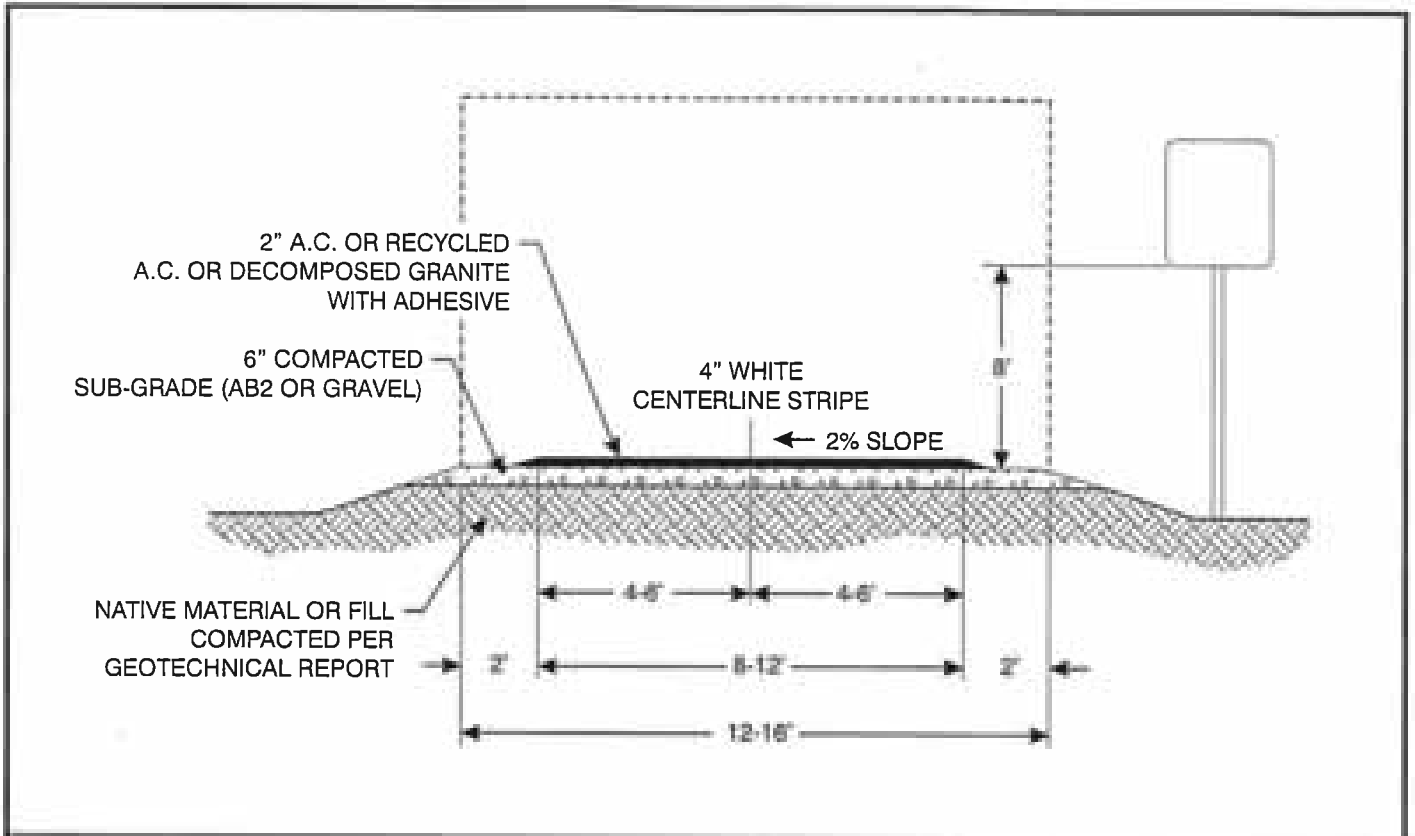
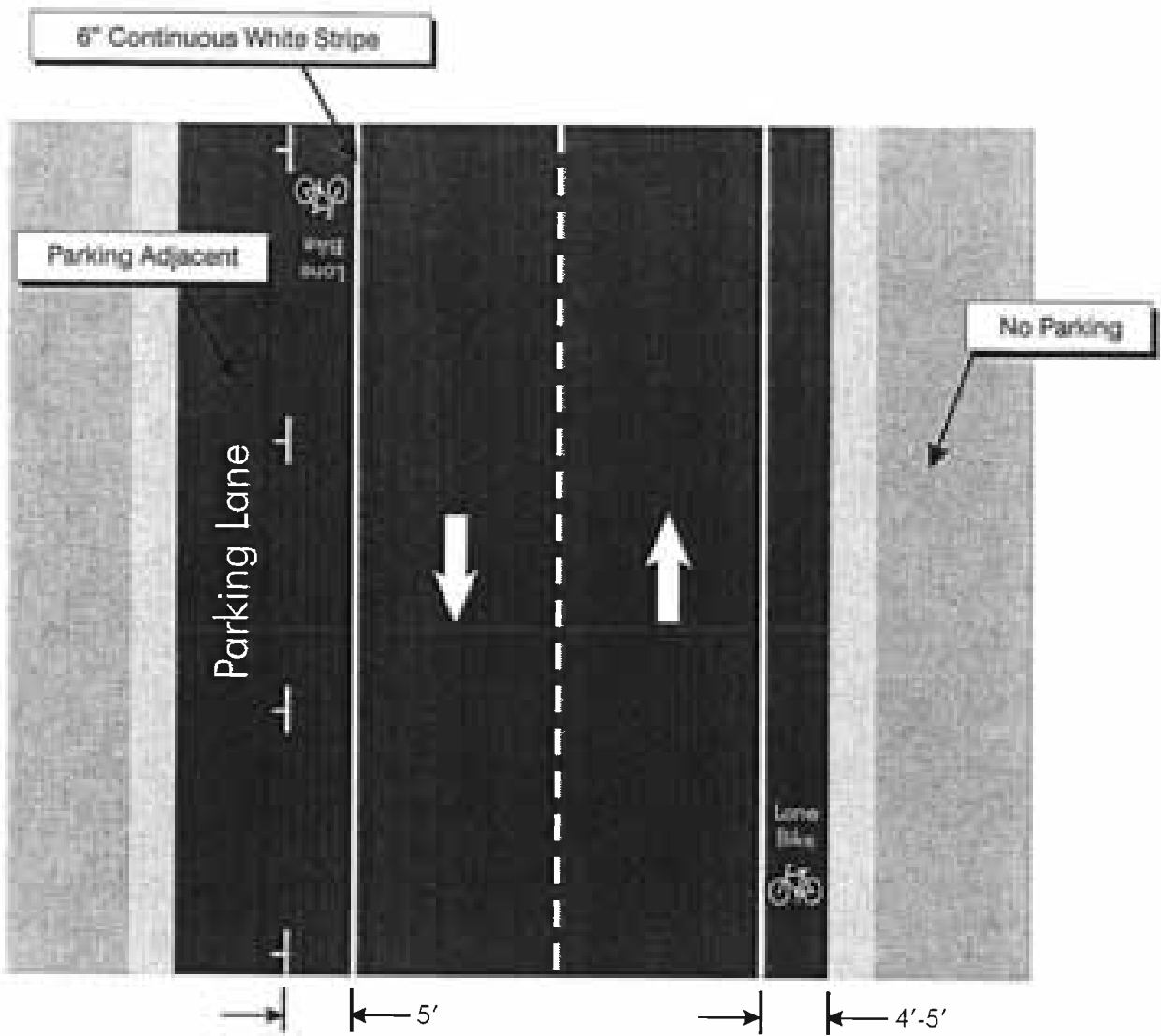


FIGURE 7 **TYPICAL CLASS I BIKE PATH** **fp Fehr & Peers Associates, Inc**
Transportation Consultants



TYPICAL SIGNING



FIGURE 8

TYPICAL CLASS II
BIKE LANES

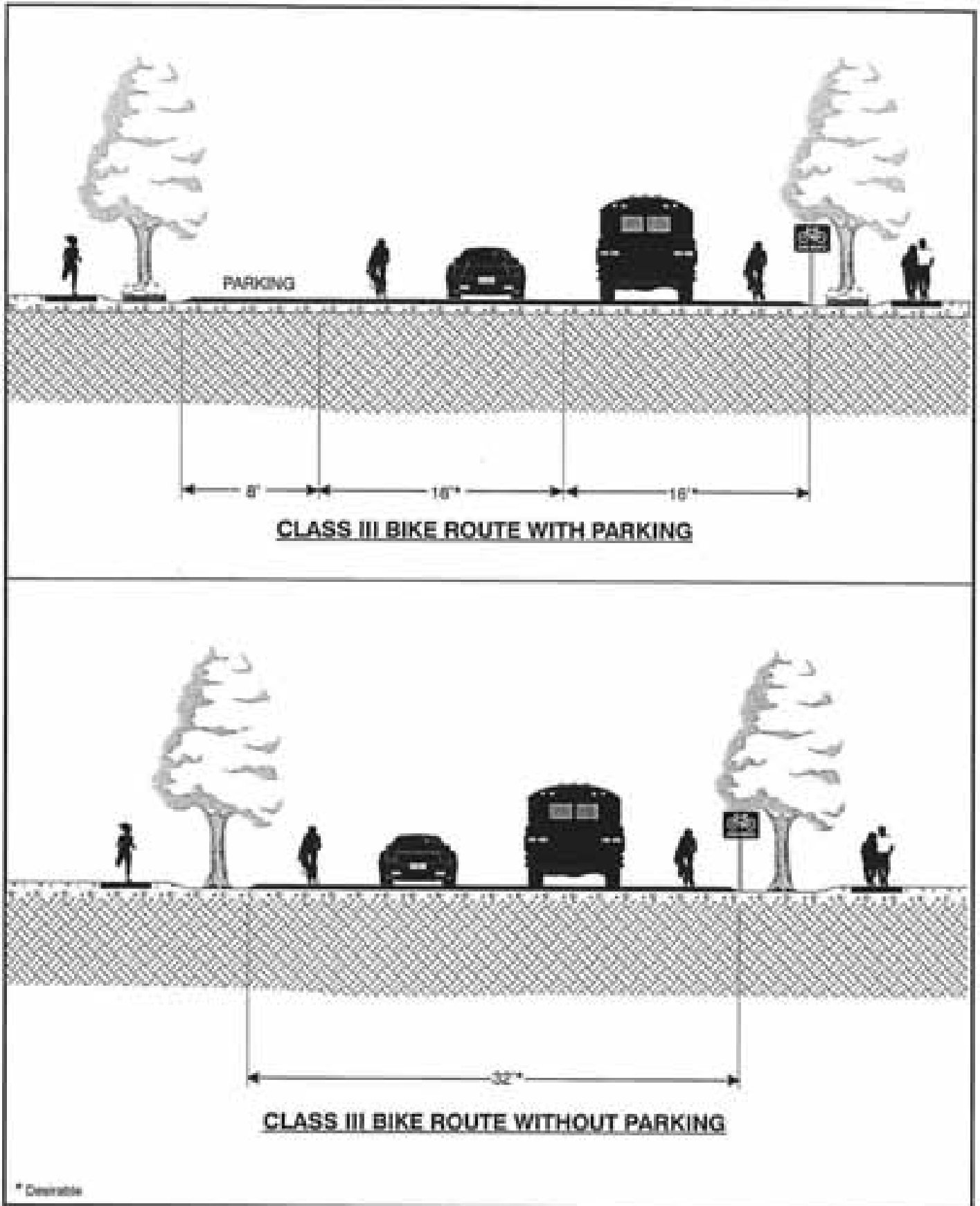


FIGURE 9

TYPICAL CLASS III BIKE ROUTES