

Fresno County Regional Bicycle & Recreational Trails Master Plan



Adopted September 24, 2013



Fresno County

Regional Bicycle & Recreational Trails Master Plan

The Fresno County Regional Bicycle & Recreational Trails Master Plan adheres to the definition of “nonmotorized transportation facility” and the eleven elements identified in Section 891.2 of the Streets and Highways Code of the Nonmotorized Transportation Act. The Fresno County Board of Supervisors adopted this amendment to the Plan September 24, 2013 certifying its compliance with State law and the October 2000 Fresno County General Plan.

Department of Public Works and Planning
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INTRODUCTION

The Fresno County Regional Bicycle Master Plan (Plan) was created through the coordinated efforts of the Fresno County Department of Public Works and Planning, the Council of Fresno County Governments (Fresno COG), the Fresno Cycling Club, the City of Fresno Bicycle Pedestrian Advisory Committee (BPAC), various government and non-profit agencies, and citizens interested in improving the bicycling environment in Fresno County. Without the sustained efforts of these organizations and citizens, the continuing improvements to the cycling environment throughout the County would not be realized. The Plan is one component of the continued effort towards making bicycling an integral part of Fresno County daily life.

Purpose

The purpose of the amendment to the approved Plan is to meet the requirements of the 2006 Measure “C” Transportation Sales Tax Extension, Local Transportation Program by adding recreational trails to the plan. Approval of the Bicycle Maser Plan allows the County to be eligible to receive funding from the State of California Bicycle Transportation Account (BTA) funds. The Plan provides a comprehensive long-range view for the development of an extensive regional bikeway and recreational trails network that connects cities and unincorporated areas countywide. The Plan also implements the October 2000 Fresno County General Plan, according to Transportation and Circulation Element Policies TR-D.1 - 8, and meets the requirements of Proposition 116, the Clean Air and Transportation Improvement Act of 1990, as set forth in Section 891.2 (items a - k) of the California Streets and Highways Code. With an approved Plan, Fresno County and local municipalities are eligible for non-motorized transportation infrastructure project funding including BTA grants. The Plan is intended to:

- Incorporate citizen input;
- Meet State of California requirements for non-motorized transportation planning;
- Reflect current bicycle and trail planning in Fresno County;
- Coordinate the Regional Bikeway System with existing local bikeway plans;
- Develop a bicycle plan that ties into a comprehensive bikeway system;
- Identify regional goals and objectives, along with policy to guide the Plan;
- Coordinate the Fresno County Regional non-motorized transportation system with adjoining counties;
- Offer citizens of Fresno County opportunities to increase bicycle ridership through awareness and participation;
- Encourage community members to commute to work and school on a bicycle or pedestrian trail instead of motor vehicles;
- Serve as the basis for the Bicycle Facilities Element of the Transportation and Circulation Element of the Fresno County General Plan;

- Coordinate non-motorized transportation route planning in conjunction with transportation planning on streets, roads, highways, and public transit;
- Identify barriers that inhibit safe and convenient non-motorized travel and develop a list of corrective measures to remove the barriers; and to
- Complement existing local non-motorized transportation plans in County jurisdictions and reflect the land use and circulation elements identified.

The Fresno County Department of Public Works and Planning will periodically review the Plan a minimum of every five years or as needed for updates and revisions. The Capital Implementation Plans will be reviewed every a minimum of every two years. Plan reviews will reflect continuing changes in bicycling and pedestrian needs, safety, growth, regulatory requirements, and the overall level of service provided.

Goals

The five main goals listed below emphasize the importance of providing a continuous system of safe bikeways and recreational trails that encourage more non-motorized trips over those currently being made.

- Create a comprehensive and safe system of bikeways, bicycle facilities, and trails that focus on travel to work, commercial and government centers, schools, and recreational areas in the County of Fresno.
- Create a system of bicycle facilities that enables more multimodal trips with other forms of transportation by bicyclists.
- Increase bicycle ridership by implementing bicycle facility improvements.
- Promote bicycle safety, reduce the number of bicycle accidents, and increase recreational opportunities for the general public.
- Implement the Plan as part of the Fresno County General Plan Transportation and Circulation Element.

Setting

The valley floor of Fresno County is generally flat and has a temperate climate for most of the year which allows for increased bicycle travel. Recreational cyclists and hikers traveling in the northeastern and southeastern quadrants of the County have access to the scenic San Joaquin River and Sierra Nevada Mountains and national parks such as the Sierra National Forest, Yosemite National Park, Kings Canyon National Park, and Sequoia National Park and Forest. However, the long distances between incorporated cities and hot summers provide challenges to creating a favorable non-motorized transportation climate in Fresno County.

Of the County's total estimated population of 953,761 (California Department of Finance January 1, 2010), approximately 174,783 residents live in the unincorporated area which includes the communities of Auberry, Biola, Bowles, Calwa, Cantua Creek, Caruthers, Del Rey, Easton, Friant, Lanare, Laton, Malaga, Raisin City, Riverdale, Shaver Lake, Squaw Valley and Tranquillity. Fresno County's residents have a per capita income of \$20,640 (Census 2006-2008 American Community Survey 3-Year

Estimates) which is lower than United States average, and are also statistically younger than the United States average.

Fresno County is connected via major transportation corridors with Interstate Highway I-5, State Routes 33, 41, 43, 63, 99, 145, 245 and 269 providing north-south intra and inter-county connections linking Fresno County with Merced, Madera, Kings and Tulare counties. State Routes 168, 180 and 198 provide east-west intra and inter-county connections linking Fresno County with Kings and Tulare counties. The State Highways listed above also link the fifteen incorporated cities of Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, Sanger, San Joaquin, and Selma with each other and nearby cities in other counties,

Rural transit service is provided by the Fresno County Rural Transit Agency (FCRTA) that connects with the Fresno Area Express (FAX) and the Clovis Transit's Stageline in the Fresno-Clovis Metropolitan Area. All three local transit carriers typically have bicycle racks installed on their buses. Greyhound Bus Lines also serves the Fresno Region, but bicycles must be boxed and stowed as baggage. Regional rail service is accessed at the downtown City of Fresno Amtrak station at the corner of Tulare and Santa Fe Streets. Bicycles may be stowed in bike racks provided on the "California" rail-car on the lower-level on a first-come, first-served basis or boxed and stowed as baggage. Also, the California High Speed Rail Authority is proposing a high-speed train project from Merced to Bakersfield and looking at Fresno County as a site for a high-speed rail heavy maintenance facility. Regional airport access is provided by the Fresno Yosemite International Airport located at Peach and McKinley Avenues in the City of Fresno and bicycles must be boxed and stowed as baggage aboard aircraft.

Project Area

The Project Area of the Plan includes all of the unincorporated regions of the County. The primary focus of the Plan is on developing a countywide Primary Network and Local Feeder Network of non-motorized pathways for travel within and between the various unincorporated communities and incorporated cities in Fresno County (see Figure 1). The Plan's approach includes consideration of bikeways and trails located exclusively within Fresno County as well as those which serve a countywide or regional function across multiple jurisdictions.

Benefits

Non-motorized transportation is a commuting option and recreational activity that can be enjoyed most of the year in Fresno County as well as the region. Benefits of implementing the Plan include the following:

- Non-motorized transportation such as cycling reduces air pollution and traffic congestion. The San Joaquin Valley Air Pollution Control District encourages bicycling instead of driving to reduce air pollution and traffic congestion.
- Bikeway and trail infrastructure improvements offer residents of the San Joaquin Valley the ability to utilize non-motorized transportation such as commuter bicycling as an alternative to daily vehicular travel. The San Joaquin Valley Air Pollution Control District's, REMOVE II Program, Bicycle Infrastructure Component, provides incentives for Class I bicycle path or Class II bicycle lane

construction. The program serves to promote bicycling as a viable option of transportation for residents traveling short distances (less than five miles) to school, work and commercial sites.

- On the average, 54% of all commuters in Fresno County live within 10 miles of their worksite which makes commuting by bicycle a viable option. (Fresno COG).
- Cycling and walking is a beneficial physical activity in a comprehensive program of health promotion and disease prevention. The American Heart Association states that activities such as bicycling are especially beneficial to improving health and preventing disease when performed regularly. The Centers for Disease Control and Prevention, recommends that adults engage in moderate physical activity for a minimum of 30 minutes most days of the week and children should be engaged in 60 minutes or more on a daily basis.

BICYCLE MASTER PLAN DEVELOPMENT

Public Participation

The County of Fresno invited comments on the Plan from interested stakeholders including public and non-profit agencies, affected school districts, local bicycling clubs and coalitions, and interested citizens. Fresno County staff conducted a comprehensive Internet Website Bikeway Survey from April 27, 2009 to June 23, 2009 and received 428 responses (see Appendix E). In addition, the County of Fresno has solicited comments from stakeholders at Fresno COG Bikeways/Trails Committee meetings and bicycle plan open houses sponsored by the City of Fresno.

The County circulated a map showing the equestrian-hiking trail at the January 26, 2011 Fresno COG Bikeways/Trails Committee meeting. Comments via email were received from committee members regarding the proposed recreational trails. On December 12, 2011, a Notice of Intent (NOI) to adopt a Negative Declaration for Initial Study prepared for the Plan was published in Fresno Business Journal. The NOI announced a public comment period from December 12, 2011 to January 10, 2012, a Planning Commission hearing date of January 12, 2012 and a Board of Supervisor hearing date of February 21, 2012.

The Plan is scheduled to be made available to the public throughout a duly noticed California Environmental Quality Act (CEQA) public comment period in May 2013. During the scheduled public comment period copies of the Plan will be posted on the County's website, available by request from the Department of Public Works and Planning, and placed at the Downtown Branch of the Fresno County Library. After the scheduled public comment period the County will incorporate comments, as appropriate, in the Plan.

After the public comment period the Fresno COG is scheduled to review the Plan for consistency with the Regional Transportation Plan's (RTP) Rural Bikeways System Map (see Appendix C). The Fresno County Planning Commission is scheduled to review the Plan in July 2013 and forward their findings to the Board of Supervisors for review in August 2013. Caltrans District 6, Bicycle Facilities Planning Unit has reviewed the Plan

in December 2011 to ensure eligibility for available Bicycle Transportation Account (BTA) funding.

(Public reviews, hearings, meetings, et al listed in this section of the Plan are to be updated with the adoption of the Plan.)

EXISTING BIKEWAYS AND RECREATIONAL TRAILS SYSTEM

Role of Bikeways

For the purposes of this discussion, the terms "Class I Bikeways" and "recreational trails" are synonymous. The California Department of Transportation "Highway Design Manual" provides the following discussion of the role of bikeways in the urban setting.

- "Bikeways are one element of an effort to improve bicycling safety and convenience which, when added to maintenance and support facilities, either help accommodate motor vehicle traffic and bicycle traffic on shared roadways, or compliment the road system to meet needs not adequately met by roads alone.
- Off street bikeways in exclusive corridors can be effective in providing new recreational opportunities, or in some instances, desirable commuter routes. They can also be used to close gaps where barriers exist to bicycle travel.
- On-street bikeways can serve to enhance safety and convenience, especially if other commitments are made in conjunction with establishment of bikeways, such as: elimination of parking or increasing roadway width, elimination of surface irregularities and roadway obstacles, frequent street sweeping, and the installation of bicycle-sensitive loop detectors at signalized intersections.
- The decision to develop bikeways should be made with the knowledge that bikeways are not the solution to all bicycle related problems. Many of the common problems are related to improper bicyclist and motorist behavior and can only be corrected through effective education and enforcement programs. The development of well-conceived bikeways can have a positive effect on bicyclist and motorist behavior. Conversely, poorly conceived bikeways can be counterproductive to education and enforcement programs."

Development Guidelines

Class I and II bikeways (see page 6) will continue to be developed throughout the County as funding becomes available and development occurs.

The State of California Highway Design Manual, Bikeway Planning and Design, California Manual of Uniform Traffic Control Devices (CA-MUTCD) and the American Association of State Highway and Transportation Officials (AASHTO), Guide for the Development of Bicycle Facilities, establishes minimum criteria for planning and designing bikeways in California. The County uses the most current California Highway Design Manual, CA-MUTCD, and AASHTO standards when planning new bikeways or improving the performance of existing bikeways. By using these design standards, the County has the flexibility to carefully evaluate conditions and can make modifications as appropriate for each bicycle improvement.

The County also adheres to current Americans with Disabilities Act requirements when designing and constructing its bikeways. (See Figures 6 - 8 for bicycle path, lane, and route design guidelines.)

Class I Bikeways

Class I Bikeways or Multiple Purpose Paths/Trails typically follow existing streams and greenways, and are a component of a community trails system separate from motor vehicle traffic. Multiple Purpose Paths/Trails serve both commuter and recreational cyclists. Motorized vehicles are not permitted on Class I bikeways except for maintenance. Recreational trails identified in this master plan will differ from multipurpose trails only where the locations of recreational trails fall within another agency's boundaries, such as the Bureau of Land Management (BLM). Recreational trails that fall within another agency's boundaries may have to adhere to the standards or requirements of the respective agency. In some locations, some of the allowed uses may be reduced, or the Class I standards modified.

Bicyclist, pedestrians, and joggers often use Multiple Purpose Paths/Trails. For this reason, a Multiple Purpose Path/Trail is also referred to as a shared use path. Key components to successful Multiple Purpose Paths/Trails include:

- Continuous separation from traffic.
- Scenic qualities.
- Connection to activity centers.
- Street crossings with bike and pedestrian activated traffic signals, median islands, and warning signs.
- Providing adequate width, sight distance, and drainage, etc.
- Proper Maintenance.

The County's typical development width standard for Class I Multiple Purpose Path/Trail bikeways is ten-feet. (Refer to Figure 6 for Multiple Purpose Paths/Trail guidelines.)

Class II Bikeways

Class II Bikeways or Bicycle Lanes are established along streets. In all cases, Bicycle Lanes are one-way bikeways, paired on opposite sides of the street to facilitate two-way travel. Bicycle Lanes separate cyclists from traffic by a white six-inch wide stripe, allowing the cyclist to travel within their own lane.

Bicycle Lanes are not recommended between parking areas and the curb because bicycle access is severely limited and the design does not follow accepted standards. Where parking is permitted without a stripe or stall marking, Bicycle Lanes are established in conjunction with the parking area. Parking may be prohibited by the Board of Supervisors in developed County Island areas along Bicycle Lanes to avoid automobile and bicycle conflicts. Where possible, and as funding allows, the County will construct Bicycle Lanes on arterial and collector streets designated for Class II Bikeways in this Plan.

Bicycle Lanes on paved shoulders are commonly found on rural roads without curbs and sidewalks. Shoulder bikeways provide a paved shoulder for the bicyclist to travel outside of the travel lane. The County uses the minimum width for a typical Shoulder Bicycle Lane per California Highway Design Manual, CA-MUTCD, and AASHTO standards. (Refer to Figure 7 for Bicycle Lane guidelines.)

Class III Bikeways

Class III Bikeways or Bicycle Routes are established along streets to provide continuity to the bikeway system by placing bike route signs along the roadway. (Refer to Figure 8 for Bicycle Route guidelines.)

Retrofit Guidelines

Retrofitting urban areas to support bicycling, and accommodate bicyclists as well as recreational users may be necessary. The following guidelines will be considered when retrofitting urban areas by determining which portions of a roadway may be modified.

- **Reconsider the Need for Parking** - As appropriate the County will evaluate the need for parking along streets in County urban areas that are designated for bikeways. Bicycle Routes may be proposed as a connection between Bicycle Lanes in developed County urban areas with street widths insufficient to accommodate both vehicle parking and Bicycle Lanes. The prohibition of parking along the roadway is required by the Board of Supervisors before Bicycle Lanes are added to existing streets with widths insufficient to accommodate vehicle parking and Bicycle Lanes.
- **Lane Widths** - The County uses the California Highway Design Manual and AASHTO in determining the minimum width for travel lanes and shoulders in County urban areas.

There are approximately six miles of existing Class I bike paths which include the Kearney Trail that travels along the Kearney Frontage Road from Brawley Avenue to Kearney Park, the Belmont Trail that travels along the McKenzie Avenue alignment from Willow Avenue to Clovis Avenue, and the Van Ness Trail that travels along the west side of Van Ness Avenue from Keats Avenue to Herndon Avenue.

Approximately 86 miles of existing Class II bike lanes, are generally located in the eastern section of Fresno County east of Maple Avenue, north along Friant Road extending to North Fork Road in the community of Friant, along Belmont Avenue to Trimmer Springs Road and then to the Friant Kern Canal, and south along the Golden State Boulevard to the City of Kingsburg.

In addition, there is approximately one mile of an existing Class III bike route that follows the Kearney Frontage Road from Marks Avenue to Brawley Avenue.

The total existing Class I, II, and III bikeway within Fresno County is approximately 93 miles. (Refer to Figures 2 and 3, for the location of the existing Class I, II, and III bikeways within Fresno County.)

EXISTING AND FORECAST BICYCLE USE

As of January 1, 2010, the estimated population of Fresno County was 953,761 (California Department of Finance, Report E-5, Population and Housing Estimate for Cities, Counties and the State 2001-2010). Fresno County covers approximately six thousand square miles of area; however, the majority of bicycle commuting is within the Fresno-Clovis Metropolitan Area, Fresno County also encompasses the thirteen smaller cities of Coalinga, Firebaugh, Fowler, Huron, Kerman, Kingsburg, Mendota, Orange

Cove, Parlier, Reedley, Sanger, San Joaquin, Selma, and the unincorporated rural communities such as Auberry, Biola, Bowles, Calwa, Cantua Creek, Caruthers, Del Rey, Easton, Friant, Lanare, Laton, Malaga, Raisin City, Riverdale, Shaver Lake, Squaw Valley, and Tranquillity.

Recreational bicycle riding takes place primarily within the cities, unincorporated communities, and on the rural roads and trails in the eastern section of Fresno County.

It is anticipated that development of bikeway recreational trails in accordance with the Plan will increase bicycle commuting, thereby, reducing citizens' reliance on motor vehicles. This in turn reduces vehicle miles traveled, reducing vehicle emissions and improving air quality. In addition to reducing vehicle miles traveled, the Plan will provide opportunities to increase recreational uses. The 2008 American Community Survey derived from the 2000 Census identified 1,647 daily bicycle commuters in the Plan area, or approximately half-of-a-percent of workers age 16 and over of the work force of 364,626 (these figures do not include students commuting to school).

According to the 2008 American Community Survey mentioned above, the existing bicycle mode split percentage for travel to work is approximately 0.6 percent in the City of Fresno. The same data set shows that the City of Clovis has an approximate half-of-a-percent bicycle mode split for travel to work. This data is from the 2000 Census, a year when the most recent "bicycle revolution" was just getting started. Also, these percentages are just for work trips which likely under represent bicycle travel as a whole since people are more likely to make other trips such as shopping and travel to restaurants or school.

In accordance with the bicycle plan goals of the City of Fresno and City of Clovis it is anticipated that with the implementation of the Plan, overall bicycle commuter trips within the urban areas of Fresno County will double by the year 2035.

The implementation of the Plan will result in a comprehensive, continuous, and well-maintained bikeway network, maximizing bicycling commuter benefits to the local communities.

EXISTING AND FUTURE LAND USE PATTERNS

The Agriculture and Land Use Element of the General Plan establishes land use designations for Fresno County.

The Land Use Element describes the designations appearing on the Land Use Diagram and outlines the legally-required standards of density and intensity for these land use designations. The County's Land Use Diagram, Countywide Land Use Diagram, Figure LU-1a, is shown in the Plan as Figure 1.

The County of Fresno lies in the heart of the Central California San Joaquin Valley and covers approximately 6,000 square miles of rich agricultural land.

Fresno County is bordered by Merced and Madera Counties to the north, Kings and Tulare Counties to the south, the Sierra Nevada Mountains to the east, and the California Coastal Mountain range to the west. The City of Fresno is the county seat and houses the largest population within Fresno County.

The Valley Floor of Fresno County which is generally located between Interstate I-5 on the west to the Friant Kern Canal on the east, is relatively flat, and laced with canals and waterways. East of the Friant Kern Canal the County rises in elevation through the foothills to Sierra Nevada mountain areas with reservoirs, lakes, streams, and forests. West of Interstate I-5, rolling hills abound at the foot of the California Coastal Mountain range.

The topography of the Valley Floor of Fresno County benefits bicycle riders as they are not challenged with significant changes in elevation.

Many economic factors have set the stage for steady population growth in Fresno County. The Regional Bikeway system needs to expand with the population to help minimize congestion on local and regional roadways as well as to improve the San Joaquin Valley air quality.

EXISTING BICYCLE ACTIVITY CENTERS

Bicycle activity centers such as schools, colleges, recreation areas, parks, community centers, commercial, financial, and general employment areas are of particular interest to the Plan because of their potential to attract bicycle travel. It is a goal of this Plan to connect these activity centers with bikeways.

In addition, the County of Fresno will continue to cooperatively work with County school districts in developing and/or improving safe bicycle and pedestrian travel routes to schools within the County. (See Figures 4 and 5, and Policies BP-A.2 and BP-B.1 for specific examples of goals related to bicycle activity centers.)

BICYCLE PARKING AND LOCKER/SHOWER FACILITIES

According to an estimate from the National Crime Victim Survey (NCVS) in 2006, 1.3 million bicycles were stolen in the United States. Fear of bicycle theft is recognized as a significant deterrent to bicycle use (Braiden 1986). The availability of safe and convenient parking is as critical to bicyclists as it is for motorists and yet it may be overlooked in the design and operation of shops, offices, schools, and other buildings.

Good quality bicycle parking that is going to be used and useful is encouraged in Policies BP-B.6 and 7 of the Plan. The Association of Pedestrian and Bicycle Professionals (APBP) pulled together a task force to develop recommendations on bicycle parking guidelines, including bicycle rack selection, location and placement that answers bicycle parking questions and promotes quality bicycle parking.

The APBP Bicycle Parking Guidelines can be downloaded at <http://www.apbp.org> and additional bicycle parking information obtained on the bicyclinginfo.org website <http://www.bicyclinginfo.org/engineering/parking.cfm>. cursory level surveys of existing bicycle parking facilities (see Glossary of Terms, Appendix A) were conducted to determine the approximate number of end-of-trip parking facilities in the County of Fresno.

As of June 2010 approximately 90 bicycle-parking locations were estimated throughout the County.

Rural bicycle parking locations are primarily at educational facilities. A couple of bicycle parking racks, along popular rural bike routes, have been donated by local bicycle clubs.

Currently the Fresno County Rural Transit Agency (FCRTA) does not offer bicycle parking facilities at its transit stops or park and ride lots. However, all of the FCRTA, Clovis Stageline, and Fresno Area Express (FAX) fixed route busses; have racks holding two or three bicycles. These busses allow bicycle commuters the ability to ride the additional distance to their destination, which in turn increases the County's public transit catchment areas and reduces single-occupant vehicle riders, all of which improve air quality. See Figures 4 and 5 for the FCRTA Route System in Fresno County. These noted routes are subject to change on an annual basis.

The County does not envision the need to develop public locker/shower facilities at this time. However, private developments are encouraged to include these amenities as part of their approved plans.

BICYCLE SAFETY AND EDUCATION PROGRAMS

A number of advisory bodies, agencies and advocacy groups exist in the County of Fresno serving as representatives to the County's bicycling community. These groups include, but are not limited to: the California Highway Patrol, the Fresno County Sheriff's Department, the Fresno County Fire Departments, city Police Departments, school districts, the Fresno Cycling Club, the Fresno County Bicycle Coalition, the local League of American Bicyclists League Certified Instructors, and Tree Fresno.

With past grant funding, the Fresno County Sheriff's Department offered public outreach programs regarding bicycle education and safety. The Fresno County Sheriff's Department now provides bicycle safety information on its website: <http://www.fresnosheriff.org/Community/BikeSafety.htm>. On a public request basis, local League of American Bicyclists, League Certified Instructors (LCI), offer on-site presentations to train children and adults on bicycle safety as part of a bicycle outreach community service program.

As part of this outreach program, coloring sheets identifying safety issues are handed out to children and "Bike Rodeos" are sometimes held where the LCI are able to inspect and train bike riders regarding bicycle equipment and safety gear.

As additional funding opportunities permit, the County will educate both motorists and cyclists as to their proper roles within the traffic environment.

FINANCING

The federal government has established programs under the U.S. Department of Transportation (DOT), Federal Highway Administration (FHWA), through the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA - LU), offering competitive funds for bikeway and bicycle facility development. Such programs include the Congestion Mitigation and Air Quality (CMAQ), and the Transportation Enhancement Program (TE) that may provide funds for the design, right-of-way, and construction of bikeways. Other SAFETEA - LU programs include the Surface Transportation Program (STP), the Safe Routes to School (SRTS) Program,

the Recreational Trails Program, the Highway Safety Improvement Program (HSIP), and the Transportation, Community and System Preservation Program (TCSP). The FHWA also offers funding through the National Scenic Byways Program, and Bikes Belong, a nonprofit organization out of Boulder, Colorado, offers grant funding.

Lastly, the Federal Land and Water Conservation Program offers funds to states and then the funds are passed on from State government to local governments for trail acquisition and development.

Historically, the County has received annual State of California, Department of Transportation (Caltrans), Article 3, Transportation Development Act (TDA), Local Transportation Fund (LTF) Allocation funds, of approximately \$100,000 per year for bicycle and pedestrian facility development. Typically, these funds are set aside for capital projects.

Class II bikeways are considered as part of the roadway and the maintenance of the roadway is funded through the Road Fund. Revenues associated with the Road Fund include Gas Tax and Measure C funds.

Maintenance for Class I Multi-Purpose trails averages approximately \$7,500 per year and is funded by General Fund dollars through the Resources Division of Public Works and Planning. Maintenance of Class I facilities consists mainly of the clearing of vegetation and trash on or near the trail.

Caltrans also offers the State Transportation Improvement Program (STIP) funding through the Interregional Transportation Improvement Program (ITIP), the Regional Transportation Improvement Plan (RTIP), the State Safe Routes to School Program (SR2S), and a competitive source of revenue, the Bicycle Transportation Account (BTA).

Additional funding for the development of bikeways includes local Measure "C" and discretionary general funds. The Measure "C" Transportation Sales Tax Program was extended for twenty more years in 2006 and requires every highway, expressway, super-arterial, arterial or collector within the County constructed or reconstructed in whole or in part with Measure "C" funds to include accommodations for bicycle travel either by a shared roadway or by bike lane. The County's bikeways system also benefits greatly when new development or road improvement projects construct planned bikeways.

Construction of rural Class I Bikeways or Multiple Purpose Paths/Trails is estimated to cost on average \$400,000 per mile plus set project costs and additional considerations for environmentally sensitive areas and right-of-way (ROW) acquisition costs.

In general, the County estimates it costs an average of \$20,000 per rural lane mile plus set project costs for Class II Bicycle Lane striping modifications. Urban (County Island) Bicycle Lane striping modifications are estimated on an individual project segment basis. If four feet of pavement are added to both sides of the roadway to accommodate rural bike lanes, the estimated cost rises to \$275,000 per lane mile plus set project costs.

Recent Bicycle Lane projects completed by the County of Fresno include:

- Friant Road from Copper Avenue to North Fork Road, approximately 7.19 miles of bike lane and shoulder at an approximate cost of \$818,000, started in 2005 and completed during the 2009/10 project year. (See Table V, Class II – Bicycle Lane Completed Projects.)
- Auberry Road from Mile Post 2.3 to Mile Post 4.2, approximately 1.9 miles of bike lane and shoulder at an approximate cost of \$1,013,600, completed during the 2005/06 project year. (See Table V, Class II – Bicycle Lane Completed Projects.)
- Copper Avenue from Auberry Road to Minnewawa Avenue, approximately 0.25 miles of bike and shoulder at an approximate cost of \$98,777 completed during the 2011-12 project year. (See Table V, Class II – Bicycle Lane Completed Projects.)

IMPLEMENTATION

The County of Fresno, Department of Public Works and Planning, Design Division, is responsible for implementing the Plan. Various components of implementation include planning for the design, right-of-way, and construction of proposed bicycle improvements. The Road Maintenance Division within the Department-of Public Works and Planning is responsible for striping and signage and long-term maintenance of the completed bikeway network.

The Department-of Public Works and Planning will periodically review implementation of the Plan, and provide future revisions and updates on an as-needed basis.

Figures 2 and 3 identify the location of existing and planned bicycle paths and lanes in the County. To complete the Plan a number of projects are needed. Tables I and IV identify proposed capital driven projects that are planned for implementation over the next twenty five-years. The proposed projects are identified by priority, location, description of improvement, facility type, and estimated cost. The County reserves the right to modify projects and priorities as funding, timing and opportunities arise. Figures 2 and 3, and Tables I and IV, will be updated, as needed, on a routine basis.

It should be noted that the development of programmed bikeways is largely dependent on the County's ability to secure applicable funding sources, given its limited amount of available discretionary revenue sources. Cost estimates are preliminary and therefore will be updated at the commencement of each project.

GOALS AND POLICIES

In 2010 the County of Fresno reviewed its General Plan in accordance with standard practices for a General Plan Five-Year Review. The General Plan serves as a blueprint for future growth and development in the County. The Fresno County General Plan addresses seven Elements that are related to and influence land use decisions: Economic Development, Agriculture and Land Use, Transportation and Circulation, Public Facilities and Services, Open Space and Conservation, Health and Safety, and Housing.

The Transportation and Circulation Element of the General Plan is intended to guide development of the County's transportation system in a manner that is compatible with the Agriculture and Land Use Element and other elements of the General Plan. The current goal of the Transportation and Circulation Element for Bicycle Facilities is:

- **Goal TR-D** To plan and provide a safe, continuous, and easily accessible bikeway system that facilitates the use of the bicycle as a viable alternative transportation mode and as a form of recreation and exercise.

In conjunction with the current General Plan Transportation and Circulation Element, the Plan identifies goals and policies for the planning, development and operation of the bicycle system. The following goals and policies of the Fresno County Regional Bicycle Master Plan provide greater detail than the General Plan Transportation and Circulation Element goals and policies, which they support:

Goal BP-A Develop a safe and convenient, interregional system of bikeways throughout Fresno County.

Policy BP-A.1 Coordinate the planning, design, and construction of regional bikeways with the appropriate agencies to provide consistency and continuity with the Fresno-Clovis Metropolitan Area (FCMA) bikeways as financially feasible.

Policy BP-A.2 Promote cooperation between Fresno County, the City of Fresno, the City of Clovis, the Fresno Irrigation District and other agencies in the development and implementation of regional bikeways that link activity centers and regional recreational destinations.

Policy BP-A.3 Road construction or reconstruction projects using Measure "C" funds in whole or in part shall refer to the Measure "C" Transportation Sales Tax Extension, 2007 Local Agency Handbook, Local Pass-Through Revenue Programs, Section 3, Local Transportation Program, for provisions regarding bicycle facility improvements.

Policy BP-A.4 Develop a consistent bicycle system with clearly defined areas, boundaries, and standard signs and markings, as designated by the most current version of the California Highway Design Manual, CA-MUTCD, and AASHTO, Guide for the Development of Bicycle Facilities.

Policy BP-A.5 Require development projects adjacent to designated bikeways to provide adequate rights-of-way or easements (see General Plan, Transportation and Circulation Element Policy TR-D.5).

Goal BP-B Promote bicycling as an alternate form of transportation and integrate bicycling with other forms of transportation, including public transit to major destination areas.

Policy BP-B.1 Assign design and construction priority to bikeways in proximity to major traffic generators such as commercial centers, schools, recreational areas, health care facilities, business and retail centers, and major public facilities to reduce automobile traffic.

Policy BP-B.2 Coordinate with the Fresno County Rural Transit Agency (FCRTA) to promote secure bicycle parking at bus stops.

Policy BP-B.3 Coordinate with the Fresno County Rural Transit Agency (FCRTA) and Amtrak to promote bicycle racks on their buses or railway cars.

Policy BP-B.4 Coordinate with the Fresno County Rural Transit Agency (FCRTA) during the design of new facilities to ensure that bicycle access is provided to new transit facilities and on new transit vehicles.

Policy BP-B.5 Develop bicycle Park and Ride facilities at transit centers and recreational facility beginning/end-of-trip areas as financially feasible.

Policy BP-B.6 Develop bicycle parking, rest areas, showers and/or changing facilities, water stations, landscape buffers, and shade such as tree canopies along bikeways as financially feasible.

Policy BP-B.7 Promote the installation of bicycle locking racks and bicycle parking facilities at public buildings, commercial and government centers, transit facilities, public and private parking lots, and recreational facilities.

Policy BP-B.8 Encourage bicycling by providing public information on the bikeway system and its support facilities and by sponsoring or participating in bicycling activities that promote bicycle transportation and recreation as a non motorized form of travel that will reduce vehicle use and fuel consumption, improve air quality and provide health benefits as financially feasible.

Goal BP-C Increase Fresno County bicycle transportation in urban areas so that the number of bicycle commuter trips doubles by the year 2035.

Policy BP-C.1 Promote and encourage local coverage of local bicycle sporting events as a venue to increase bicycle ridership and encourage event sponsors to provide safe bicycle access and secure bicycle parking at special events as a means of publicizing the public health and lifestyle benefits of cycling.

Policy BP-C.2 Coordinate with local school districts to develop bike to school programs and identify safe routes to school to encourage and support biking thus reducing vehicle trips to school and improving air quality.

Policy BP-C.3 Collaborate with the Fresno County Department of Public Health to assess the public health impacts of bicycle plans and promote public awareness about the public health benefits of bicycling through the County's website and public events held in the County of Fresno.

Goal BP-D Improve bicycling safety, reduce bicycle-related collisions, establish educational opportunities aimed at all levels of bicyclists, and promote safer driving behaviors among cyclists and motorists.

Policy BP-D.1 Provide bikeway maintenance such as pavement repairs, striping, signage, tree trimming, debris removal, and any other upkeep as financially feasible.

Policy BP-D.2 Cooperate with other public agencies (school districts, the healthcare community, safety organizations, bicycle organizations, Department of Motor Vehicles (DMV), law enforcement agencies, et al.) to provide information and instruction on bicycle safety issues.

Policy BP-D.3 Coordinate with local school districts to develop a bicycle safety curriculum for use in K-6 schools as financially feasible.

Goal BP-E Develop and fund a bicycle program at the County and budget to implement improvements.

Policy BP-E.1 Continue to provide an opportunity for bicycle organizations and affected groups or individuals to be represented on bikeway steering committees; and advocacy groups to be consulted prior to and during the implementation of bikeway systems.

Policy BP-E.2 Review the requirements of the Fresno County Regional Bicycle Master Plan (Plan) for funding, frequency and characteristics of bikeway use as well as safety factors, every 5 years, and update the Plan to reflect changing priorities, funding levels, and/or more specific program recommendations.

Policy BP-E.3 Actively seek sources of funding for bikeways, bicycle facilities, safety programs, education programs, promotion programs, and other implementation measures of the Fresno County Regional Bicycle Master Plan.

Policy BP-E.4 The Road Improvement Program will serve as the capital improvement plan to identify funding for the bicycle programs to acquire right-of-way, to construct new bikeways, to retrofit inadequate bikeways and to refurbish older bikeways.

Consistency with Other Bicycle Plans

The Plan has been developed as a part of the Fresno County General Plan Transportation and Circulation Element and coordinated and consistent with the plans and policies of the fifteen incorporated cities and the 2011 Fresno COG Regional Transportation Plan (RTP).