SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS

2008
RTP REGIONAL TRANSPORTATION PLAN

Making the Connections

Non-Motorized Transportation Report

NON-MOTORIZED TRANSPORTATION

Non-Motorized Transportation

Southern California Association of Government's (SCAG) Regional Transportation Plan (RTP), seeks to promote development that is less dependent on automobiles, increases transit service and use, reduces congestion, and assists in reducing air pollution. The RTP supports non-motorized transportation through the development of bicycle and pedestrian incentive policies, and changes in development patterns for both new and redeveloped communities.

Non-motorized Transportation largely refers means of transport such as walking or using a bicycle, tricycle, velomobile, wheelchair, scooter, skates, skateboard, push scooter, trailer, hand cart, shopping cart, and above vehicles with supporting electrical drive. For the purposes of this report, non-motorized transportation is generally referred to as bicycling and pedestrian transportation, the two most common methods. Every every trip in the region begins and ends with non-motorized transportation. Each trip may range from a few feet, to several miles. Non-motorized transportation offers a low-cost and non-pollutant means of transportation. Building an environment where people can walk or bicycle is one of the key alternatives to creating a livable community where people are able to live, work, visit, and play. Growing support towards the promotion of non-motorized transportation has resulted from the increased effort to encourage healthy lifestyles and transportation alternatives.

The Non-Motorized Transportation Report of the Regional Transportation Plan serves as a technical and policy document to guide, support and encourage the development and maintenance of county and city bicycle and pedestrian networks, facilities and other non-motorized programs for the SCAG region over the next 30 years. Particular emphasis is placed on increasing bicycling and walking, as a commute alternative and improving safety for all non-motorized transportation.

The goals of the non-motorized chapter of the Regional Transportation Plan are:

- Decrease injuries and fatalities to bicyclists and pedestrians
- Increase accommodation and planning for bicyclists and pedestrians
- Increase bicycle and pedestrian use

Additional policies and outcomes are provided at the end of this document.

PHYSICAL SETTING

The climate for the SCAG region varies by location. The western Los Angeles Basin, as well as Ventura County and western Orange County, benefit from the marine climate and cool ocean breezes, and have only moderate average temperature variations. Further inland, the region is comprised of a more arid climate with more significant temperature variations through out the day. Rainfall throughout the SCAG region averages only 30 days per year and provides ideal conditions for walking and bicycling. Much of the western portion of the region is heavily developed with areas of dense urbanization that are dominated by suburban areas. Further inland, the land is becoming developed with significant suburbanization and pockets of urban development, but significant areas remain undeveloped, or are designated as national and state parkland.

PERFORMANCE MEASURES

Measuring the improvements and benefits of the regional bicycle and pedestrian system is important to the long-term success of this plan. There are a variety of metrics that may be used, including:

- Changes in the number of bicycle lanes, sidewalks, paths, trails, bicycle parking and locking facilities
- Changes in bicycle and pedestrian usage
- Changes in the number of vehicle accidents involving bicyclists and pedestrians that result in injury or fatality
- Changes in land use patterns, towards one that fosters and promotes bikeable and walkable communities

Consistent evaluations of bicycle and walking transportation systems could enable decision makers to develop updated strategies and encourage public participation. Increases in the utilization of bicycle and walking transportation may help communities work towards preserving both natural and economic resources, and improved public health.

INCREASING MOBILITY

According to SCAG's 2006 State of the Commute Survey, commuter trips within the region average a self-reported distance to work of 19.2 miles, which is too far for bicyclists and pedestrians. However, the integration between bicycle and transit nodes offers the opportunity to extend the commuting range of bicyclists. In addition to work trips, there are many ways that bicycling and walking are able to play an important role in our transportation system. According to the 2001 National Household Travel Survey, in urban areas, 50 percent of all trips were less than 3 miles, and 28 percent of all trips were less than 1 mile. These trips are ideal for biking, walking, transit or a combination of those modes of travel.

AIR QUALITY

Bicycle transportation infrastructure has an important role in regional mobility and air quality improvements. Automobile drivers that switch to alternative transportation options (walking, bicycling, and transit) reduce a significant percentage of air pollution, congestion, need for increased roadway capacity and, in the case of walking and bicycling, improve public health. By only switching 2-3 miles per day per household, to a bicycle and walking mode of transportation there may be significant benefits to the region, in terms of congestion and air quality; as well as significant health benefits for the individual making the trip. The following example illustrates the environmental benefits of using non-motorized transportation for a conservative average of 1.8 mile trip length.

TABLE 1 TRAVEL AND EMISSION REDUCTION IN 2010 FOR EACH 1% REPLACEMENT OF LIGHT DUTY VEHICLE* TRIPS WITH [NON-MOTORIZED] TRIPS (TONS/DAY)*****[1]**

	Reduction in Vehicle Miles of Travel**	Reduction in Smog-Forming Gases (ROG + NOx)	Reductions in Inhalable Particles (PM10)***	Reductions in Carbon Monoxide
South Coast Region	1,027,214	1.38	0.25	7.78
Southeast Desert Region	57,526	0.08	0.01	0.44
Ventura County	64,974	0.09	0.01	0.49
SCAG Region	1,149,714	1.55	0.27	8.71

*Light-Duty Vehicles = Passengers Cars + Light Trucks (GVWR < 5,751 lbs.)
** Average Trip Length of 1.8 miles
***PM10 Includes Tire and Brake Wear

Source: California Air Resources Board

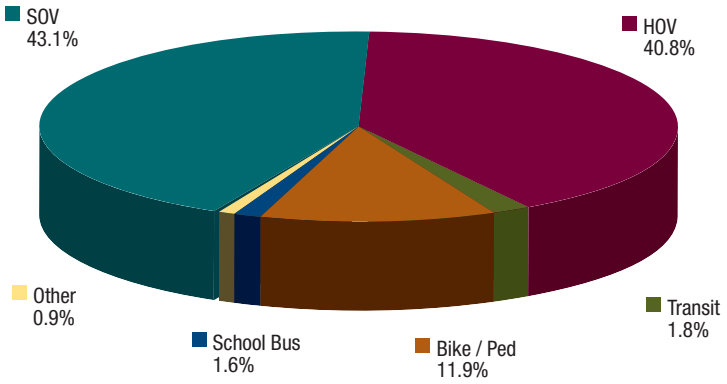
EXISTING BICYCLE AND WALKING CONDITIONS TRENDS IN USAGE

Based on data collected by SCAG in 2001 and 2002, 12 percent of all trips in the SCAG region were conducted by non-motorized modes of transportation, including walking or biking (see Figure 1).

Los Angeles County currently leads the way with the highest percentage of walking trips with 14 percent (see Table 2). Each of the counties within the SCAG region shares a similar percentage of bicycle trips at around 1 percent.

[1] California Air Resources Board, Bicycle Fact Sheet, Calculation with EMFAC 2002 Version 2.2 (April 23, 2003) emission factors. Retrieved 09/10/07 http://www.arb.ca.gov/planning/tsaq/bicycle/factsht.htm#8

FIGURE 1 MODE OF TRAVEL FOR TOTAL TRIPS



Source: Southern California Association of Governments, Year 2000 Post-Census Regional Travel Survey: Final Report of Survey Results, page 21. Published Fall 2003. Numbers may not add due to rounding.

The need for more viable transportation choices has become more apparent as the region faces population growth, increases in trips, and increases in vehicle miles traveled while system expansion has not kept pace with the growing demand. Residents of the SCAG region need additional transportation options to meet the increasing travel demand. While the share of bicycle and walking transportation for all trip purposes was relatively high at 12 percent as noted earlier, the share of work trips or commute trips has remained relatively low as indicated by the 2006 American Community Survey (ACS) (Table 3).

Relying on the U.S. Census ACS data for generating estimates of non-motorized users presents a number of challenges. According to the Los Angeles County Bicycle Transportation Compliance Document, the Census undercounts bicycle commuters for the following reasons:

1. The Census includes only employed adults ages 16 and over in the modal analysis. This disregards the biggest group of bicyclists; students, who in many cases may be reducing vehicle trips.
2. When school children and college students are factored in, the percentage of commuters goes up significantly. For example, Los Angeles County, when factoring in students, indicates 1.3 percent bicycle commute to school, versus the 0.6 percent work commute. Other county plans show similar results when factoring in students.
3. Bicyclists, who ride to transit or commuter rail services may identify themselves as transit users since the overall non-bicycling mileage is probably much higher.
4. An unknown number of bicycle commuters are thought to be lower income and/or members of minority groups, who are traditionally undercounted in the Census.
5. Finally, utilitarian bicycle trips for shopping and other reasons were not included, even though these trips were the primary purpose cited in the 1995 National Bicycling and Walking Study.

The current level of non-motorized transportation in the SCAG region does not reflect the potential it has, but is indicative of those that are committed to alternate modes of travel in a region that has focused on motorized transportation. A 1992 Harris poll commissioned by Bicycling magazine found that one-quarter of respondents would bicycle to work if safe bicycle lanes were available.[2]

At the enof of this report, Exhibit 1-6 show the existing bicycle facilities in the SCAG Region. Please note the map for Western Riverside only includes on road bicycle facilities and does not include off road bike, equestrian and hiking trails. (Note that Class I, II and III Bicycle Facilities are defined on page 14)

AGENCIES, GROUPS AND INDIVIDUALS INVOLVED IN BICYCLE AND WALKING PLANNING

SCAG, in its role as a Regional Transportation Agency, is required under federal and state requirements to plan and accommodate bicycle and walking transportation. SCAG's Regional Transportation Plan (RTP), has been developed in cooperation and collaboration with federal, state, local and community stake-

[2] Harris Poll data published by Bicycling Magazine, April 1991 and by Rodale Press, 1992.

TABLE 2 NON-MOTORIZED TRAVEL PATTERNS IN THE SCAG REGION FOR ALL TRIPS

Trip Type	Imperial		Los Angeles		Orange		Riverside		San Bernardino		Ventura	
	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent	Total	Percent
Walk	35,933	10%	3,120,556	14%	636,937	9%	322,128	8%	298,069	7%	171,468	9%
Bicycle	2,067	1%	162,334	1%	94,213	1%	18,391	N/A	23,896	1%	23,967	1%

Source: SCAG Year 2000 Post-Census Regional Travel Survey

TABLE 3 SCAG REGION - MEANS OF TRAVEL TO WORK (2006 AMERICAN COMMUNITY SURVEY)

	Imperial		Los Angeles		Orange		Riverside		San Bernardino		Ventura		SCAG Region	
WORKERS 16 YEARS AND OVER: Total (Estimate)	55,866		4,423,725		1,427,968		858,612		835,775		383,037		7,984,983	
Drove alone (car/ truck/van)	46,090	82.5%	3,184,454	72.0%	1,109,328	77.7%	634,053	73.8%	647,207	77.4%	300,590	78.5%	5,921,726	74.2%
Carpooled (car/ truck/van)	5,005	9.0%	528,190	11.9%	161,461	11.3%	143,757	16.7%	118,459	14.2%	47,106	12.3%	1,003,979	12.6%
Transit (excl. taxi)	224	0.4%	310,711	7.0%	47,915	3.4%	12,324	1.4%	12,247	1.5%	4,933	1.3%	388,354	4.9%
Non-Motorized*	1,242	2.2%	151,051	3.4%	38,698	2.7%	20,012	2.3%	15,612	1.9%	10,007	2.6%	236,622	3.0%
Bicycle	37	0.1%	25,815	0.6%	10,674	0.7%	3,841	0.4%	2,117	0.3%	2,026	0.5%	44,510	0.6%
Walked	1,205	2.2%	125,236	2.8%	28,024	2.0%	16,171	1.9%	13,495	1.6%	7,981	2.1%	192,112	2.4%
Taxicab, motorcycle, or other	557	1.0%	63,354	1.4%	10,379	0.7%	9,120	1.1%	10,450	1.3%	3,508	0.9%	97,368	1.2%
Worked at home	2,748	4.9%	185,965	4.2%	60,187	4.2%	39,346	4.6%	31,800	3.8%	16,893	4.4%	336,939	4.2%

*Non-Motorized mode totals for counties does not appear in the 2006 ACS Table C08006. The sums have been calculated and inserted into this table.

Source: 2006 American Community Survey (Table C08006)

holders. All of these stakeholders play different roles in the development and final adoption of the RTP. Federal and state statutes and requirements have begun to lay the framework for the RTP by setting parameters of what needs to be included in the development of a long term transportation framework for the region.

FEDERAL GOVERNMENT

Federal Statues have mandated Metropolitan Planning Organizations (MPOs), such as SCAG, to include pedestrian and bicycle facility strategies as part of their overall systematic approach in addressing current and future transportation demands (Title 23, CFR §450.322). In 2005, the Safe and Efficient Transportation Efficiency Act-a Legacy for Users (SAFETEA-LU) was established, which provided requirements for bicycle and pedestrian planning in metropolitan

areas. SAFETEA-LU requires that the plans and programs of each metropolitan area provide for the development and integration of the management and operation of transportation systems and facilities (including pedestrian walkways and bicycle transportation facilities) that will function as an intermodal transportation system for the metropolitan area and as an integral part of an intermodal transportation system for the State and the Nation (Title 23, U.S.C. Sec. 134 (a) (3)).

STATE OF CALIFORNIA

The State of California and Caltrans has long supported the inclusion of pedestrian and bicycle transportation in planning and design policies and practices. The 1970's California's Highway Design manual included a chapter on Bikeway Facilities Planning and Design; which became the basis for the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities.[3] In November 2001, the "Director's Policy on Context Sensitive Solutions," DP-22. DP-22 was issued to support an approach towards managing the transportation system by balancing transportation needs with community goals. The transportation solutions integrated community goals in the planning, design, construction, and maintenance and operations processes; including the accommodation of the needs of bicyclists and pedestrians. The Context Sensitive Solutions approach led to the development of Caltrans publication, "Main Streets: Flexibility in Design and Operation," which emphasized Caltrans' production of transportation projects that allow state highways that are also local main streets to become more walkable and livable places.

In response to the Supplemental Report of the 2001 Budget Act, the Department, in collaboration with numerous stakeholders, developed the California Blueprint for Bicycling and Walking. The blueprint sets goals towards increasing bicycling and walking trips by 50 percent, decreasing bicycle and pedestrian fatality rates by 50 percent by 2010, and increasing funding for bicycle and pedestrian-related programs. Caltrans has established a steering committee to guide the implementation of the Blueprint. Emphasizing the fact that the maximization of "opportunities for bicycling and walking, shifts the focus from safely moving the maximum number of passenger vehicles to safely moving the maximum number of people,"[4] the Blueprint was able to act as another influence in the integration of non-motorized transportation in transportation planning. In 2002, Deputy Directive 64 (DD-64) created a policy which directed Caltrans to "fully consider the needs of non-motorized travelers (including pedestrian bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products. Caltrans then adopted the best practice concepts in the U.S. DOT Policy Statement on "Integrating Bicycling and Walking into Transportation Infrastructure."

State of California shows its commitment to non-motorized transportation in the following documents:

- Highway Design Manual
- Deputy Directive on Accommodating Non-motorized Transportation (DD64)
- Director's Policy on Context Sensitive Solutions (DP22)
- Main Streets: Flexibility in Design and Operations Assembly Concurrent Resolution 211
- California Supplement to the MUTCD
- California Blueprint for Bicycling and Walking
- California Bicycle Transportation Act
- California Vehicle Code
- California Streets and Highway Code
- California Access Compliance Reference Manual

[3] California Department of Transportation, "Pedestrian and Bicycle Facilities in California," July 2005.

[4] Report to the Legislature, May 2002

The State of California currently accommodates bicyclist and pedestrians in many other ways. The California Bicycle Act (1994), works "to establish a bicycle transportation system designed and developed to achieve the functional commuting needs of the employee, student, business person, and shopper as the foremost consideration in route selection, to have the physical safety of the bicyclist and bicyclist's property as a major planning component, and to have the capacity to accommodate bicyclists of all ages and skills." As a source of state funds for bicycle projects, the Bicycle Transportation Account (BTA) of 1997 has provided funds for city and county projects that include the adoption of local bicycle transportation plans. It is important to note that, although not legally required, cities or counties must complete a bicycle transportation master plan if they expect to receive funding from the California Department of Transportation's Bicycle Transportation Account.

Caltrans accommodation of non-motorized transportation (DD64), and the Department's use of "Context Sensitive Solutions" as an approach to plan, design, construct, maintain, and operate its transportation system (DP22) demonstrates it's commitment to multi-modal planning. California's State Transportation Plan also calls for a sustainable multi modal network that provides viable transportation choices. These actions all formalize the State's commitment to include, accommodate and consider the needs of bicyclists and pedestrian in transportation planning and implementation.

COUNTIES

Each county within the SCAG region, with the exception of Riverside County, has developed and maintained a bicycle or bicycle and walking master plan to guide the development of non-motorized transportation within their county. Furthermore, many cities have developed their own bicycle plans.

Imperial County developed its first Bicycle Master Plan in 1999, which has been updated in 2003 and 2007. Although the county is not as densely populated as other counties in the SCAG region, the development of their bicycle master plan indicated foresight for future needs in the county.

TABLE 4 COUNTY NON-MOTORIZED PLANS IN THE SCAG REGION

Imperial	Bicycle Master Plan	2003 (updated 2007)
Los Angeles	Bicycle Master Plan	2006
Orange	Bicycle Commuter Bikeways	2001 (update 2008)
Riverside	General Plan, Circulation Element	
San Bernardino	Non-Motorized	2001
Ventura	Bicycle Master Plan	2007

Imperial County's Bicycle Master Plan proposes a 254-mile system of bicycle lanes, routes, and pathways that will link to schools, shopping, employment and future expanding residential areas. The master plan was based on bicycle plans from each of the seven cities within the Valley to ensure continuity and connectivity.

The Los Angeles County Metropolitan Transportation Authority's (Metro) Bicycle Master Plan focused on the development of a bicycle network linking the regional bus and rail network with residential communities and regional activity centers. In their 2006 Bicycle Plan, Metro presented a shift in focus from "arterial bikeway to a strategy of using bicycles with transit to fully utilize and enhance the regional transit system"[5]. The policy outlined Metro's objectives in relation to bicycle planning, Transportation Demand Management (TDM) strategies, construction of facilities, bus and rail operations and the programming of available funds. Metro's policy does not fund recreational bicycle trails, since they are funded through park and recreation funding sources. It is intended to serve as the framework of bicycle master plans within Metro's jurisdiction. The policy emphasizes four main points:

- Bicycle projects serving commute or utilitarian trips are favored over recreational facilities.
- The primary focus for MTA Regional Bikeway Funding is on regionally significant projects that add new lane miles to the existing bicycle network.

[5] "Metro Bicycle Transportation Strategic Plan," Los Angeles County Metropolitan Transportation Authority 2006.

- Cities must agree to maintain facilities, provide bicycle traffic counts and adopt a pavement management system for Class I facilities in order to qualify for funding.
- Ancillary features, including bicycle lockers are an eligible expenditure of available TDM funds (bicycle parking).

Orange County's bicycle master plan would like to complete a bicycle network across the entire built-out portion of the county and implement new educational and safety programs, place parking at all rail stations and park-and-ride lots, and support cities that provide bicycle parking in public places, and amenities at work sites. In 2001, Orange County Transportation Authority (OCTA) adopted its "Bicycle Commuter Plan", where specific recommendations were made to work towards a comprehensive bikeway network and the implementation of new education and safety programs over the life of the plan. In the fall of 2007, OCTA began work on updating and developing a new bicycle master plan.

Riverside County does not have a bicycle plan. However, the Western Riverside Council of Governments and Coachella Valley Association of Governments are both performing inventories of bicycle, pedestrian, hiking and equestrian trails.

San Bernardino County's non-motorized plan strives to coordinate the numerous bicycle plans among the County's 24 cities to ensure the development of a cohesive, consistent and high quality bikeway system throughout the County. San Bernardino County recommended "the completion of a comprehensive Countywide Bikeway Network, a refinement in the way bicycle projects in the County are funded, to help cities identify, prioritize, and fund portions of the Countywide bicycle network, and implementation of new programs to be implemented over the 5-10 year life of the Plan."[6] The plan also highlights the cities of Rancho Cucamonga and Ontario as cities with the most extensive network of bicycle lanes and paths.

Ventura County's bicycle master plan provides an updated look at the county wide bikeway network, and builds upon the various bicycle planning efforts already conducted by the VCTC, and the ten incorporated cities. The plan provided recommendations to enhance and expand the existing bikeway network, connect gaps, address constrained areas, provide for greater local and regional connectivity, and encourage more residents to bicycle.

SCAG'S ROLE

Federal and state directives are placing greater importance on accommodating pedestrians and bicyclists. SCAG's goal is to further support such directives. Caltrans stipulated that Regional Transportation Agencies shall include a discussion of non-motorized transportation, including bicycle, pedestrians, and accessibility or persons with disabilities. Caltrans states that bicycle and walking planning should address the following:

- Pedestrian programs and facilities
- Pedestrian design guidelines for transportation facilities
- Bicycle programs and facilities
- Bicycle transportation plans including commuter bicycle facilities
- Transit interfaces with bicyclists and pedestrians
- Unmet bicycle and walking needs
- Bicycle and walking enhancement activities

Historically, bicycle and pedestrian planning and policies have been established at the local level. Given the local focus of bicycle and pedestrian planning, the development of a regional plan provides an opportunity to share best practices; and improve coordination and connectivity between counties and communities. This plan will allow for the coordination of projects amongst jurisdictions to ensure that crucial linkages are created in a timely, cost effective, and efficient manner

[6] San Bernardino Associated Governments (SANBAG) "San Bernardino County Non-Motorized Transportation Plan 2001 Update."

ADVOCACY GROUPS

As in many other areas across the United States, residents of the SCAG region who promote walking and bicycling as a means of transportation are becoming more organized, with an increase in pedestrian and bicycling advocacy groups. Within the SCAG Region there are many bicycle advocacy groups. Some of the major associations include, but are not limited to:

- California Bicycle Coalition
- California Association of Bicycling Organizations
- Bicycle Association of South Orange County
- Inland Empire Bicycle Commuter Coalition
- Los Angeles Bicycle Coalition
- Long Beach Cyclists
- Orange County Bicycle Coalition
- Ventura County Bicycle Coalition
- C.I.C.L.E. (Cyclists Inciting Change thru Live Exchange)

The work done on behalf of planning for bicycle and walking by all the advocacy groups listed above, and those not included in the list, have further advanced the goals of increasing bicycle and pedestrian integration in transportation planning as well as increasing users.[7]

Bicycling

Most counties and many local cities have developed bicycle and pedestrian facilities, non-motorized or bicycle plans and/or policies incorporated in their General Plans. The Regional Non-Motorized chapter of the RTP was developed using existing local city and county plans. The non-motorized plan focuses on commuter/utilitarian trips and emphasizes connections to transit systems and the enhancement of regional connectivity by working towards a regional network of linked facilities.

TYPES OF BICYCLISTS

It is useful to examine the reasons why individuals ride bicycles since there are a wide range of reasons that may be offered from the variety of bicyclists. The Regional Transportation Plan has paid particular attention to the needs of individuals that use bicycling as a means of transportation, especially for commuting purposes. The RTP also recognizes that there may be other factors that motivate people to ride bicycles. Increases in bicycle ridership may result in reduced car trips and increased support for the mode as a whole.

TRANSPORTATION/COMMUTER

Individuals that use their bicycle as a form of transportation on a reasonably regular basis, particularly for traveling to work, are classified as a bicycle commuters. An individual that uses a bicycle for utilitarian travel, not recreation, also falls into this classification. Many riders in this group have a car but choose to travel by bicycle when they can. There is also a group of riders who use bicycling as a means for transportation, because they have no other option. Often lower income individuals will find a bicycle as a necessary choice when transit options do not exist or are too costly for their budget.

Bicycle commuter needs are consistent throughout the SCAG region, and are expected to be representative of the needs of the nation. Both Orange and San Bernardino Counties' bicycle plans state similar commuter cyclists' needs; and are summarized as:

- Commuter bicyclists typically fall into one of three categories: (1) adult employees, (2) students, and (3) shoppers.
- Commute periods typically coincide with peak traffic volumes and congestion, increasing the exposure to potential conflicts with vehicles.

[7] Although referencing various advocacy groups in this document, SCAG makes no endorsement of any external group's policies, goals or positions.

- Places to safely store bicycles are of paramount importance to all bicycle commuters.
- Major commuter concerns include changes in weather (rain), riding in darkness, personal safety and security.

EXERCISE/RECREATION

Bicyclists that train or compete and take riding seriously are competent, knowledgeable riders. Many weekend riders, mountain bikers, and other recreational riders often drive their bicycle to a location in order to ride, often view bicycle riding more as a form of recreation than transportation.

SOCIAL/GROUPS

Social bicycle riders represent a growing group of riders, especially in Los Angeles County. This group represents a combination of transportation and recreation riders. These bicyclists are often concerned that transportation systems are currently oriented towards the use of a car. They have created group rides and events to address their concerns and raise awareness. In the City of Los Angeles there is currently a growing and supportive bicycle culture, activity and advocacy efforts include informally and formally organized rides of Critical Mass, Midnight Ridazz, and C.I.C.L.E. (Cyclists Inciting Change thru Live Exchange).[8]

TYPES OF RIDING STYLES

VEHICULAR CYCLISTS

Vehicular cyclists, also referred to as integrated cyclists, are highly experienced cyclists who ride frequently, confident in cycling with motorized traffic and long distances, accustomed to cycling in a variety of environments and can negotiate with less operating space. Many of these individuals advocate for vehicular cycling because riders are able to operate their bicycles on the road in a manner that is visible, predictable and in accordance with how cars navigate the road. Automobile drivers are able to predict how these bicyclists will act because they follow the same road rules as the driver.

BASIC CYCLISTS

Basic cyclists are riders that are more casual, less comfortable in traffic and have limited experience and skills. They form the largest group of bicyclists, cycle occasionally and account for the largest group ranging in age from young to old. Basic cyclists are more comfortable using bicycle lanes and are often hesitant in making the same decisions that vehicular cyclists are comfortable making; for example, using a left hand turning lane in traffic.

INEXPERIENCED CYCLISTS

Inexperienced cyclists and children form a separate group of bicyclists. This group tends to have minimal riding skill, little experience, limited physical capability, and are not comfortable riding with traffic or within the roadway. These cyclists lack confidence and judgment regarding safe cycling practices. Sidewalks, school grounds, parks, bicycle lanes, and (Class I) bicycle paths generally provide the preferred environments for these riders.

TYPES OF BICYCLE FACILITIES

A bicycle facility may include a variety of developments, ranging from bicycles lanes, bicycle parking facilities and other related facilities. Varying types and groups of riders prefer different types of riding environments. The Caltrans Highway Design Manual currently classifies bicycle lanes, paths and routes in the following way:

Class I Bikeway: Typically called a “bicycle path,” “shared-use path,”or bicycle trail. A Class I Bikeway provides a completely separated right-of-way designated for the exclusive use of bicycles and/or pedestrians with crossflows by motorists minimized.

[8] Although referencing various advocacy groups in this document, SCAG makes no endorsement of any external group's policies, goals or positions

Class II Bikeway: Often referred to as a "bicycle lane," a Class II Bikeway provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

Class III Bikeway: Generally referred to as a "bicycle route," a Class III Bikeway, such as an on street or off street "bicycle route," provides a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists. Oftentimes, but not necessarily, a Class III Bikeway has a wider shoulder that can accommodate bicyclists and motorists. It provides for shared use with motor vehicle traffic and is identified only by signage. Designated routes provide notification to the bicycle rider and motorist to be observant of bicycle riders.

While some roadways are not "designated" as bikeways, it must be assumed that, unless specifically prohibited, bicyclists are permitted on, and will likely use, any roadway available to them. Bicyclists like their automobile driving counterparts, will most often use the most direct or convenient route to reach their destinations.

TABLE 5 BICYCLE FACILITIES (IN MILES) BY COUNTY

County	Imperial	Los Angeles	Orange	Riverside**	San Bernardino	Ventura
Existing						
Class 1	0	251	205	313#	33	56
Class 2	5	481	639	160	60	251
Class 3	0	520	102	62	29	56
Total		1,252	946	535	122	363
Proposed						
Class 1	42	228	46	59	405	Unknown
Class 2	212	524	155	164	890*	Unknown
Class 3	0	392	8	45	0	Unknown
Total	254	1,145	208	268	1,295	Unknown
Ultimate	254	2,397	1,154	803	1,417	Unknown

*Project could be Class 2 or Class 3
**Riverside County has not developed a bicycle master plan
Does not include some off road bicycle trails, equestrian trails, historic trails, etc.
Draft Ventura bicycle Plan not complete at time of this report

BICYCLE SAFETY

According to the National Highway Traffic Safety Administration (NHTSA), 57 percent of all bicycle fatalities that occurred with the State of California in 2005 and 15 percent of nationwide bicycle fatalities happened within the SCAG Region (Table 6).

In an effort to address this trend, the California Strategic Highway Safety Plan (SHSP) was developed in 2007. The Bicycle Safety strategy of the SHSP, aims to reduce the number of bicycle roadway fatalities, in 2000 levels, by 25 percent in 2010. California intends to reduce bicyclist fatalities on California's roadways by employing the Four "Es" (Education, Enforcement, Engineering, Emergency Response). The California SHSP Implementation Plan will present specific action items to implement these strategies. However, the SHSP Implementation Plan has not been finalized at the time of this RTP. Potential responsibilities for the State, local jurisdictions and SCAG for each strategy are detailed in Table 8.

TABLE 6 BICYCLE FATALITIES

County	1997	1998	1999	2000	2001	2002	2003	2004	2005
Imperial	0	2	2	2	1	2	0	0	0
Los Angeles	23	14	25	29	16	21	21	22	25
Orange	16	16	15	8	10	8	8	7	9
Riverside	3	11	5	9	9	14	7	8	15
San Bernardino	10	8	7	9	4	6	14	13	12
Ventura	2	4	0	6	6	4	3	2	5
SCAG Region	54	55	54	63	46	55	53	52	66
California	110	104	112	110	105	116	106	110	115
USA	814	760	754	693	732	665	629	727	784
SCAG % of CA	49%	53%	48%	57%	44%	47%	50%	47%	57%
CA % of USA	14%	14%	15%	16%	14%	17%	17%	15%	15%

Source: NHTSA National Center for Statistics Analysis

TABLE 7 BICYCLE INVOLVED COLLISIONS BY AGE GROUP IN THE STATE OF CALIFORNIA 2001-2005

	YEAR									
	2001		2002		2003		2004		2005	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
AGE										
0-4		9	1	86	3	64		61		51
5-14	11	2,716	18	2,900	12	2,664	11	2,691	12	2,354
15-24	17	2,828	12	2,484	16	2,507	19	2,570	13	2,350
25-34	13	1,883	10	1,775	8	1,638	11	1,646	15	1,533
35-44	24	1,794	24	1,661	25	1,681	22	1,712	29	1,690
45-54	22	1,245	29	1,154	30	1,274	18	1,362	27	1,382
55-64	9	488	14	514	15	572	19	575	11	657
65-74	11	220	7	212	11	198	9	245	8	255
75-84	6	117	6	102	2	94	5	105	11	100
85 and over	1	19	1	17	1	17		25	1	14
Not stated	2	93	1	97	2	103	9	100	5	87
TOTAL	116	11,412	123	11,002	125	10,812	123	11,092	132	10,473

Source: 2005 Statewide Integrated Traffic Records System (SWITRS)

TABLE 8 CALIFORNIA STRATEGIC HIGHWAY SAFETY PLAN (SHSP) FOR BICYCLISTS

SHSP Strategy	SCAG	Local Level	State Level
Improve data collection regarding bicyclist trips, injuries, and fatalities on California roadways.	Collect data from State and local sources as part of the RTP planning process. Work with local partners to collect data.	Collect local data concerning bicycle usage and forecasts. Required for California Bicycle Transportation Account (BTA) funding	Primary Role for collecting accident data through SWITRS and trip data via state transportation surveys.
Incorporate bicyclists' needs into smart growth, land use planning, and other local plans	SCAG can actively encourage local governments to incorporate bicylclist needs into local plans.	Primary Role	Can set State standards and regulations
Enhance the enforcement of bicyclist and motorist roadway laws	No Direct Influence, SCAG can support local governments and state government enforcement efforts.	Primary Role to enforce laws	Primary Role to enforce laws.
Educate all roadway users regarding the rights and responsibilities of bicyclists.	SCAG can actively encourage local governments education efforts..	Primary Role	Primary Role
Promote and improve roadway safety infrastructure for bicyclist use	SCAG can work with CTCs and subregions to incorporate bicycle safety into RTP Projects	Primary Role	Primary Role
Improve the visibility of bicyclists on the roadway.	No Direct Influence, SCAG can support local governments and state government in data collection and analysis, and to incorporate the results of analysis into Regional transportation planning	No Direct Influence. Local governments can provide support in developing, collecting data and analyzing in cooperation with SCAG and State.	Primary Role
Improve the safety of bicyclists traveling to and from schools, utilizing education, encouragement, enforcement and engineering techniques	SCAG can work with CTCs and subregions to incorporate bicycle safety into RTP Projects, including Safe Routes to School.	Primary Role	Primary Role
Increase the use of helmets and enforcement of related laws	No Direct Influence	Primary Role	Primary Role
Improve bicycle safety expertise among transportation professionals	Training and/or hiring bicycle Transportation professionals	Training and/or hiring bicycle Transportation professionals	Training and/or hiring bicycle Transportation professionals

BICYCLING PRIORITIES

In 2001, a bicycle working group was established at SCAG. The group consisted of various stakeholders and advocates from the surrounding area and was developed to discuss bicycling issues in the region. As a result of the working group a bicycle priority list that identified purposes and needs for future bicycle transportation planning was developed.

LACK OF ADEQUATE BICYCLE FUNDING

Funding for bicycle transportation is inadequate to support high levels of bicycling in the region. Additional funding is needed for the planning, development and construction of identified bikeway system improvements over and above that which has been identified in SCAG's 2008 RTP and in local government and CTC capital programs. In the 2008 RTP, $920 million has been allocated for bicycle and pedestrian related projects, compared to $720 million over the Plan period of the 2004 RTP. The Plan also calls for the Region's decision-makers to continue to promote the integration of bicycle and walking modes of transportation in the transportation planning process and to take steps towards moving beyond conceptual planning and development to the implementation of plans and strategies.

LACK OF PROGRAMS AND SYSTEMS TO COLLECT AND STORE NECESSARY BICYCLE TRANSPORTATION DATA

Current planning efforts for bicycle transportation are limited by the availability of data. Reliable data sources include the US Census and American Community Survey (ACS) data, and SCAG's Year 2000 Post Census Regional Travel Survey. Some SCAG subregions also have general data regarding bicycling needs in their jurisdictions.

Past planning efforts also represent a source of historic bicycling information. Overall, these sources indicate trips that have been captured in survey/sampling efforts, but there is a sense among bicycle advocates and planners that a pool of cyclists exists that is not being captured in these activities. Cyclists believed to be missed are low-income workers, day laborers, and auto-less individuals . No readily accessible and verified data exist for this pool of workers. In addition, aside from the documented bicycling in the region, no information exists on latent bicycle commute demand or those workers who would use the bicycle if the conditions were conducive to bicycling some of the time or on a regular basis.

To make bicycling an integral part of the region's intermodal transportation planning process and system, reliable data is needed. Bicycle transportation data needs include, but are not limited to: comprehensive bicycle use statistics; user demographics; bicycle travel patterns/corridors; bicycle involved traffic accidents; bikeway system characteristics; and subregional improvements projects and funding needs. In addition to bicycle data, a comprehensive, integrated system for easy storage and retrieval of bicycle transportation data is needed.

LOW PRIORITY PLACED ON BICYCLING TRANSPORTATION IN PUBLIC AGENCY PLANNING AND FUNDING PROGRAMS

Planning for bicycle commuting is not uniformly and methodically integrated into subregional and regional transportation/planning processes in the SCAG region, because of the lack of on-going bicycle planning programs, specialized staff training and appropriate analytical tools. In meeting MPO planning regulations to give due consideration to bicyclists and pedestrians, SCAG has budgeted funds for subregional and staff level programs. The County Transportation Commissions also have funded planning programs and bicycle capital projects in their Call for Projects. Some Bicycle advocates consider these efforts inadequate and desire to see increased bicycle planning and funding and the development of a multi-modal mindset among planning, programming and design staff to facilitate the integration of bicycling into the mainstream of transportation.

FURTHER TRANSIT/BICYCLE INTEGRATION

While most buses in the SCAG Region have bicycle racks, there is still progress to be made to improve the bicycle transit connection. Transit operators may have accommodations to integrate bicycle transportation, but prohibit the transport of bicycles on trains during peak travel periods, due to space considerations. To help increase bicycle commuting, all public transit vehicles and routes need to be equipped to accommodate bicycles during peak commute periods. Not only would this include adequate room for bicycles on buses and trains but also adequate bicycle parking at transit locations.

CONCERNS FOR CYCLIST SAFETY

The level of safety for bicycle transportation commuter corridors has not been compiled region-wide. Data on bicycle-involved accidents, accident hot spots and trends should be identified on a subregional level to determine the level of safety for bicycle commuters. Particular attention to safety and design issues is needed in the area of Class I bicycle path crossings at roadways and at intersection turn movements. Class I bicycle paths may not even be indicated in accident reports as they are not roads. The need for studying bicycle related accidents is supported by Section 217 of title 23, United States Code (a)(3)(2) and states that transportation plans and projects shall provide due consideration for safety and contiguous routes for bicyclists and pedestrians. General Plan guidelines do not expressly address safety as related to the Circulation Element.

LAND USE DEVELOPMENT/REDEVELOPMENT PRACTICES

Cities and Counties that undertake arterial street widening and permit new land use development projects do not routinely incorporate or require accommodations and strategies for bicycle transportation. As a result, these capital investments miss opportunities or preclude the incorporation of bicycle lanes when feasible, such as the design and construction phases of projects. Policies and practices that routinely consider bicycling needs could add to the bicycling network possibly leading to greater bicycle use and their associated benefits.

REDUCING THE PREDOMINANCE OF SINGLE OCCUPANCY VEHICLE (SOV) TRAVEL

The presence of higher speed motorized vehicle traffic can be a strong deterrent to safe and convenient bicycle commuting. Livable communities' strategies and incentives to alternatives to SOV travel are needed to reduce the use of SOV and to encourage bicycling and transit/bicycle combinations.

GAPS

Further work towards the completion of a regional commuter bikeway system that utilizes Class I, II and III facilities as a system foundation is needed to encourage bicycle and pedestrian modes of transportation. Identifying a list of commuter corridors that may be used for potential regional bikeways planning would be helpful to planners, agencies and advocates looking to identify future transportation investments.

Walking

Walkability is a term used to describe the overall walking conditions; including safety, comfort and connection and access to desired destinations. A street that is considered walkable tends to have been designed with multiple users in mind: the young, old, people using wheelchairs, walkers, canes, visually impaired, hearing impaired. By taking into consideration the varied needs of different people in transportation planning, it helps to ensure that the environment has the potential to work for everyone. A walkable community is neighborhood or a community where homes, shops, businesses and public transit are all within walking distance of one another, and connected through safe, attractive walkways[9].

[9] "Improving Pedestrian Access to Transit" Prepared by WalkBoston, Sponsored by the Federal Transit Administration 1998.

What are Pedestrian Facilities?

Pedestrian facilities include sidewalks, crosswalks, traffic control features, special walkways found on some portions of freeway right-of-way, and curb cuts (depressions) and ramps for the older walkers and persons with mobility impairments. They are also parts of bus stops or other loading areas, grade separations, and the stairs or escalators related to these facilities.

Policy on Geometric Design of Highways and Streets (1994 AASHTO GREEN BOOK) page 97, "The Pedestrian."

According to the FHWA Safe Route's to School Program, in 1969, about half of all students walked or bicycled to school[10]. Today, however, fewer than 15 percent of all school trips are made by walking or bicycling. One-quarter is made via school bus, and over half of the student population arrives in private automobiles[11]. The decline in walking is not a trend only found among school children, but across the population in general. Safety issues are a valid concern for parents, who consistently cite traffic danger as a reason why their children are unable to bicycle or walk to school.[12] When surveying elderly citizens on the reasons they do not walk, the number one reason was that it was personal health conditions., other reasons that discourage them from walking include lengthy distances, lack of rest areas, poor sidewalk conditions and dangerous intersections[13]. The frequency and amount of walking depends on the detailed characteristics of physical environments, many of which may be addressed through transportation planning and land use design.

The City of Los Angeles, in January of 2007, created a "Walkability Checklist"; a tool to assist City Planning staff in assessing Site Plan Reviews. The checklist focuses on elements and techniques used to enhance the pedestrian experience of the City's sidewalks and building frontages. This type of planning activity and training can go a long way in ensuring that urban arterial and local streets while safely accommodating cars, trucks, parking, buses, and emergency vehicles, are safe, inviting walkable spaces.

As advocated in the Complete Streets movement, streets should strive to be aesthetically pleasing for all travel modes, not just moving as many vehicles as possible. Pedestrians are more likely to use sidewalks that are designed with pedestrian oriented details, such as street trees, landscaping, shade, benches, public art and destinations. Pedestrian mobility in urban, suburban and rural areas presents obstacles unique to each environment. This chapter identifies pedestrian issues related to these areas, but particularly in reference to urban pedestrian movement and access to transit stations, as part of a commuter trip that begins and ends on foot. Pedestrian friendly features are also inherently transit friendly.

Additionally there are basic requirements that must be met: safety, ADA compliance, ease of movement and contiguous access along arterial streets between residential neighborhoods, transit, retail corridors, parks, institutions, businesses and other facilities. It is not feasible for a regional plan to identify all of the gaps and deficiencies of a six county pedestrian environment; however, the role of the RTP is to identify priorities and develop policy recommendations for the use of regionally administered funds to meet shared regional goals and needs.

PEDESTRIAN ORIENTED DESIGN AND ACCESS

ADA

The Americans with Disabilities Act (ADA) was signed into law in 1990 and requires that all public facilities be accessible to people with disabilities. The impact of the ADA has been far-reaching. For example: multi-level facilities, including transit stations, must include elevators, sidewalks must have sloped surfaces at intersections and other crossings to allow wheelchair accessibility, buses must have lifts, and signage must include Braille for the blind.

[10] "Transportation Characteristics of School Children," Report No. 4, Nationwide Personal Transportation Study, Federal Highway Administration, Washington, DC, July 1972.

[11] 2001 National Household Travel Survey

[12] "Barriers to Children Walking and Biking to School," CDC, 2005.

[13] "Traffic Safety Among Older Adults: Recommendations for California," Center for Injury Prevention Policy and Practice, College of Health and Humans Services, San Diego State University, 2002.

Schools

Pedestrian access to schools and nearby neighborhoods is a paramount safety issue. Clear crosswalks, signals timed to allow children to cross streets before and after school, crossing guards, and school speed limit zones provide a safer environment for children on foot. Additionally, pathways and neighborhood parks can provide easier and safer access to schools by allowing children, both on foot and bicycles, to reach schools safely from nearby neighborhoods and bus stops.

Transit

Efficient and well used public transit (buses, subways, light rail, commuter trains) contribute to improved mobility, accessibility and air quality. However, transit decreases its effectiveness if people can not get to it easily and safely. It is estimated that transit users will walk a quarter mile, to a bus stop.[14] People are likely to be willing to walk further to a light rail, subway or commuter rail station. Transit stations benefit from Park and Ride lots by expanding the pool of potential riders by bringing them to a central point. Yet, studies have shown that many Park and Ride users drive 3 miles or less to facilities. If adequate transit, pedestrian and bicycle facilities are provided within this radius, particularly surrounding transit stations, communities can encourage alternative means to access bus and rail. As a result of fewer vehicle trips, traffic congestion and air pollution can be reduced, land for parking facilities can be reduced, and the cost of expanding Park and Ride lots can be expended on enhancing bicycle and walking accessibility options.

Street Design and Access to Destinations

Often buildings are situated for individuals who arrive by car. Buildings sit further back from the street, often with a large parking lot between the entrance and the sidewalk. While this design has minimal effects on motorists as they pass by, the design deters pedestrian activity and access. Pedestrian ease of access to retail and major activity centers is an integral part of a walkable community. Research conducted on creating walkability have identified variables the availability of, or distance to various potential destinations, such as grocery stores, restaurants, cafes, public spaces, and retail stores as significant variables associated with walkability. Blocks that are smaller with more extensive sidewalk networks along main streets, as well as higher densities were positively associated with walking.[15]

In addition to destinations accessible by foot, many communities undergo streetscape projects to enhance the walking environment. Streetscapes have potential impacts that extend beyond basic needs of pedestrian mobility and safety, successful streetscape projects have the capability of influencing the community and the amount of pedestrian and street life activity within a neighborhood. Typically improving destinations and areas to become more pedestrian oriented involve: benches, gathering areas, public art, bicycle racks, traffic calming measures, information kiosks and wayfinding signage, crosswalk texturing, short blocks, paseos, and inventive use of alleys.

PEDESTRIAN SAFETY

In the effort to accommodate mobility and reduce congestion many transportation investments can have a negative impact on pedestrian safety, which is one of the key focal points of pedestrian planning. Research on the types of roads on which pedestrians are killed, the Surface Transportation Policy Project found in 2004 "that 14.6 percent of pedestrians' deaths occur on Interstates, freeways, and expressways, 31.1 percent on other principal arterials, 20.8 percent on minor arterials, 11.9 percent on collectors, and 21.6 percent on local roads. The deadliest roads tend to be high-speed arterials, with few accommodations or protections – such as sidewalks or crosswalks – for pedestrians."[16]

Allowing for the free-flow of vehicular traffic to reduce congestion and air pollution creates barriers for pedestrian travel. Freeway interchanges in urban areas create unique problems for pedestrians. Un-signalized interchanges on

[14] Pedestrian and Transit Friendly Design: A Primer for Smart Growth." By Reid Ewing, (2000) EPA Smart Growth Network, pp. 1-22

[15] "Two Instruments to Score Environments for Neighborhood Walkability." By Anne Vernez Moudon (2005) University of Washington.

[16] "How Far Have We Come: Pedestrian Safety 1994-2003" By Michelle Ernst (2004) Surface Transportation Policy Project.

TABLE 9 PEDESTRIAN FATALITIES

County	1997	1998	1999	2000	2001	2002	2003	2004	2005
Imperial	9	8	6	5	1	4	1	4	4
Los Angeles	232	199	197	213	233	192	213	189	207
Orange	54	36	44	39	47	42	54	49	49
Riverside	51	42	41	42	33	49	39	46	47
San Bernardino	41	43	49	41	52	57	53	53	55
Ventura	10	9	12	9	13	11	6	7	10
SCAG Region	397	337	349	349	379	355	366	348	372
California	757	697	665	670	711	709	704	684	742
USA	5321	5228	4939	4763	4901	4851	4774	4675	4881
SCAG % of CA	52%	48%	52%	52%	53%	50%	52%	51%	50%
CA % of USA	14%	13%	13%	14%	15%	15%	15%	15%	15%

Source: NHTSA National Center for Statistics Analysis

bridges and underpasses allow for the unrestricted flow of traffic onto the ramp from arterial streets. Insufficient traffic controls pose a hazard to pedestrians, who must gauge the speed and intent of vehicles at some distance from the crossing. The angled ramps also increase the crossing length for the pedestrian, further complicating the walker's judgment and safety. Additionally, interchanges at underpasses require adequate lighting and good sidewalk visibility for pedestrian safety, and require routine maintenance to sustain a healthy and safe pedestrian environment. Many pedestrians will avoid underpasses due to their often daunting physical conditions. Pedestrian bridges over freeways can also provide access between neighborhoods, transit facilities and other collector points that have been bisected by the freeway, where no cross street is available to provide a foot path.

According the National Highway Traffic Safety Administration (NHTSA), 50 percent of all pedestrian fatalities that occurred with the State of California in 2005 happened within the SCAG region. 15 percent of nationwide pedestrian fatalities happened within the SCAG Region (Table 9).

In 2001 the Surface Transportation Policy Project (STPP) researched collision statistics for collision rates trends. The number and percentages provide information about the safety of a county. STPP created a Pedestrian Danger Index by dividing the pedestrian incident rate by the pedestrian exposure rate and then adjusting the number to a 0-100 scale where the highest ranking county scores 100 and all other counties are adjusted accordingly to the same scale. These rankings were based on 2000 Census Journey to Work Statistics. Counties within the SCAG Region all ranked within the top half of dangerous counties for pedestrians throughout the state of California using 2001 Statewide Integrated Traffic Records System, Los Angeles ranked number three.

TABLE 10 CALIFORNIA COUNTIES RANK IN PEDESTRIAN SAFETY (1 MOST DANGEROUS - 35 LEAST DANGEROUS)

County	Statewide Rank (out of 35 counties)
Los Angeles	3
Orange	11
Ventura	13
Riverside	15
San Bernardino	16
Imperial	30

Source: STPP

From Table 11, one will notice that the highest number fatalities occur in the age group of 35-44, with the highest injuries occurring in the age group of 5-14. Just like the trends found in the bicyclist collisions by age group, although adult bicyclists are hit less frequently than children, they are more likely to die from their injuries.

In an effort to address these trends, the California Strategic Highway Safety Plan was developed in 2007. This plan included a strategy for pedestrian safety: By 2010, reduce the number of pedestrian fatalities attributed to vehicle collisions by 25 percent from their 2000 level. The SCAG region had 349 pedestrian fatalities in 2000 and would need to reduce pedestrian fatalities to less that 280 by 2010. Because SCAG's Regional Transportation Plan should be consistent with the Strategic Highway Safety Plans, SCAG must consider strategies to reduce pedestrian fatalities. The State of California intends to employ the following strategies to reduce pedestrian fatalities on California roadways. In order to be consistent with the SHSP, the RTP has identified the strategies that SCAG may influence. The SHSP Implementation Plan has not been finalized at the time of this RTP.

TABLE 11 PEDESTRIANS INVOLVED COLLISIONS BY AGE GROUP IN THE STATE OF CALIFORNIA 2001-2005

	2001		2002		2003		2004		2005	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
AGE										
0-4	18	764	26	813	20	657	21	650	19	544
5-14	54	3,397	34	3,183	41	2,918	36	2,759	37	2,544
15-24	82	2,569	81	2,629	83	2,552	66	2,695	96	2,622
25-34	82	1,842	78	1,742	69	1,818	87	1,802	92	1,795
35-44	112	1,928	110	1,933	103	1,876	95	1,813	106	1,732
45-54	102	1,630	101	1,648	98	1,634	120	1,720	125	1,755
55-64	71	960	81	974	84	1,003	83	1,062	85	1,110
65-74	69	689	79	706	73	718	60	645	67	691
75-84	79	496	63	484	85	507	79	490	71	477
85 and over	31	135	29	162	32	152	24	144	26	137
Not stated	21	135	20	141	24	156	23	112	24	149
TOTAL	721	14,545	702	14,415	712	13,991	694	13,892	748	13,556

Source: 2005 Statewide Integrated Traffic Records System (SWITRS)

TABLE 12 CALIFORNIA STRATEGIC HIGHWAY SAFETY PLAN (SHSP) FOR PEDESTRIANS

SHSP Strategy	SCAG	Local Level	State Level
Incorporate the needs of pedestrian roadway users into smart growth, land use planning, and other local plans	SCAG can perform an educational role to local governments on SHSP requirements and incorporate into Regional Comprehensive Plan and Growth Visioning Strategies	Primary Role	Can support through state laws and regulations.
Enhance the enforcement of violations of pedestrian laws; by pedestrians and motorists.	No Direct Influence, SCAG can support local governments and state government	Primary Role	Primary Role
Educate all roadway users regarding the rights and responsibilities of pedestrians	No Direct Influence, SCAG can support local governments and state government	Primary Role	Primary Role
Promote and improve roadway safety infrastructure for pedestrians including the use of advanced technology	SCAG can work with CTCs and subregions to include advanced technology into pedestrian safety projects.	Primary Role	Primary Role
Improve the visibility of pedestrians on the roadway	SCAG can work with CTCs and subregions to incorporate pedestrian visibility into RTP Projects	Primary Role	Primary Role
Improve the safety of pedestrians traveling to and from schools	SCAG can work with CTCs and subregions to incorporate Safe Routes to School and other safety programs into RTP Projects.	Primary Role	Primary Role
Improve data collection and analysis regarding pedestrian trip characteristics, level of service, injuries and fatalities on California roadways	SCAG can support local governments and state government in data collection and analysis, and to incorporate the results of analysis into Regional transportation planning	No Direct Influence. Local governments can provide support in developing, collecting data and analyzing in cooperation with SCAG and State.	Primary Role

Policies and Outcomes

DECREASE BICYCLISTS AND PEDESTRIAN FATALITIES AND INJURIES

In 2005, 372 pedestrians and 66 bicyclists were killed in the SCAG Region representing 50 percent and 57 percent of pedestrians and bicyclists killed in California that year. The California Strategic Highway Safety Plan has a goal of reducing bicycle and pedestrian fatalities in the state to 25 percent below 2000 levels. Proposed ways to address non-motorized safety are:

- Improve data collection and analysis regarding pedestrian and bicycle trip characteristics, facility condition, injuries and fatalities on roadways within the SCAG Region.
- Increase accommodation of non-motorized travel in all transportation planning projects
- Increase education on non-motorized safety among users and motorists.
- Promote and improve roadway safety infrastructure for bicycle and walking use

- Improve bicycle and pedestrian safety expertise among transportation professionals

INCREASE ACCOMMODATION AND PLANNING FOR BICYCLISTS AND PEDESTRIANS

The needs of non-motorized travel (including pedestrian, bicyclists and persons with disabilities) need to be fully considered for all transportation planning projects. An increase in bicycle and walking planning and funding and the development of a multi-modal mindset among planning, programming and design staff will facilitate the integration of transportation planning to routinely accommodate or consider bicyclists and pedestrians in all transportation projects. This strategy of increased accommodation is intended to increase bicyclist and pedestrian safety as well as lead to an annual increase in bicycle facilities within the region.

INCREASE BICYCLE AND PEDESTRIAN USE IN THE SCAG REGION AS AN ALTERNATIVE TO VEHICLE TRIPS

Create and maintain an atmosphere conducive to bicycle and walking transportation, including well maintained bicycle and pedestrian facilities, easy access to transit facilities, and increasing safety and security. While pedestrian sidewalks are fairly well established in most areas, it is estimated that there are only 3,218 miles of dedicated bicycle facilities in the region, with an additional 3,170 miles planned.

Reliable data for planning is needed to increase bicycling and pedestrian to make non-motorized strategies and investments an integral part of the region's intermodal transportation planning process and system. Non-motorized transportation data needs include, but are not limited to comprehensive user statistics; user demographics; bicycle travel patterns/corridors; accident mapping; bikeway system characteristics; and sub regional improvements projects and funding needs.

ENCOURAGE DEVELOPMENT OF LOCAL NON-MOTORIZED PLANS

Encourage all counties and cities within the SCAG region to develop bicycle and walking plans and policies for their jurisdiction. Non-motorized plans that have been created or updated within the previous four years are eligible for bicycle transportation account (BTA) funds.

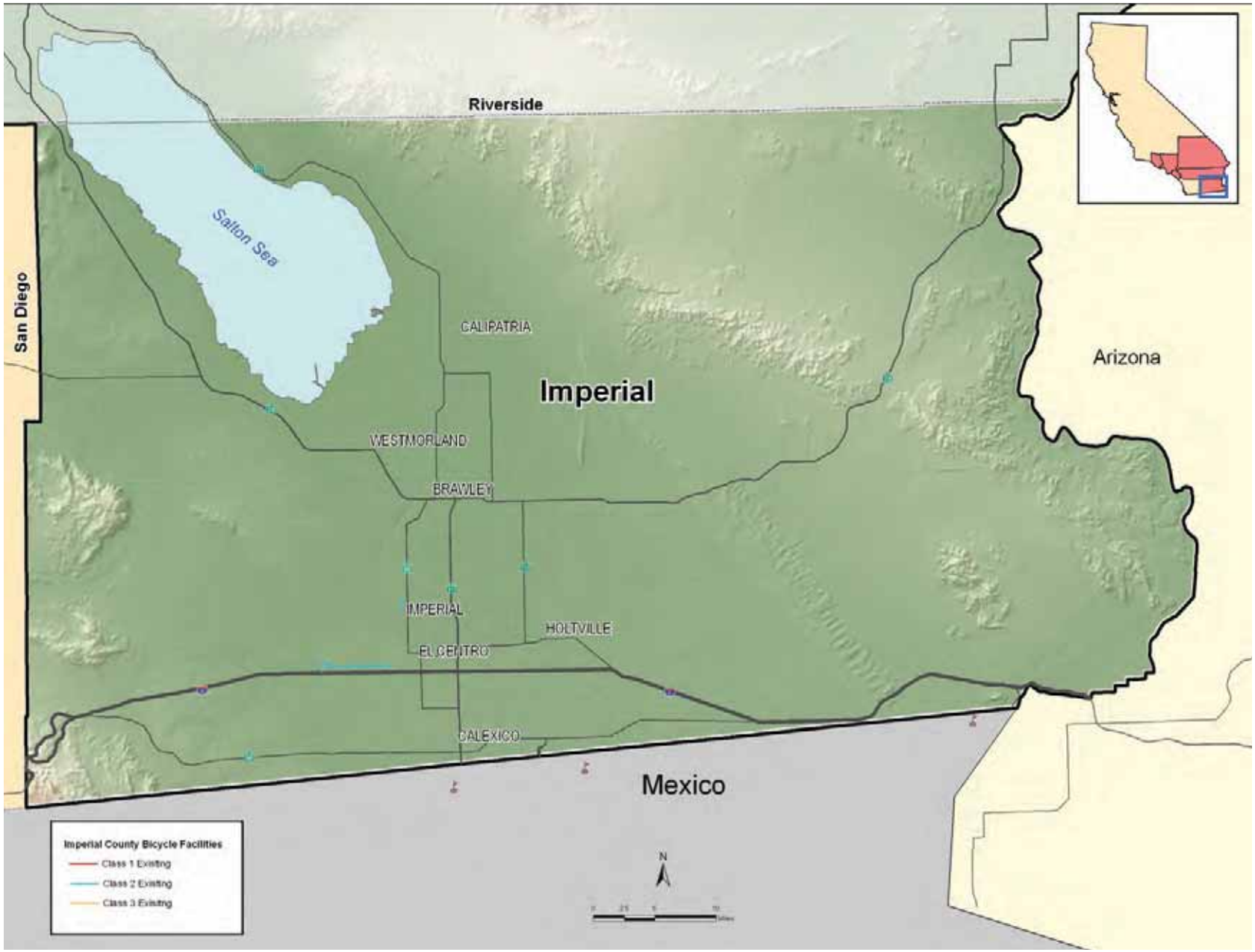
PRODUCE A COMPREHENSIVE REGIONAL NON-MOTORIZED PLAN

Develop a Regional Bicycle and walking Plan that coordinates and integrates all non-motorized plans from counties and jurisdictions in the SCAG Region in a collaborative process, including interested stakeholders.

FUNDING

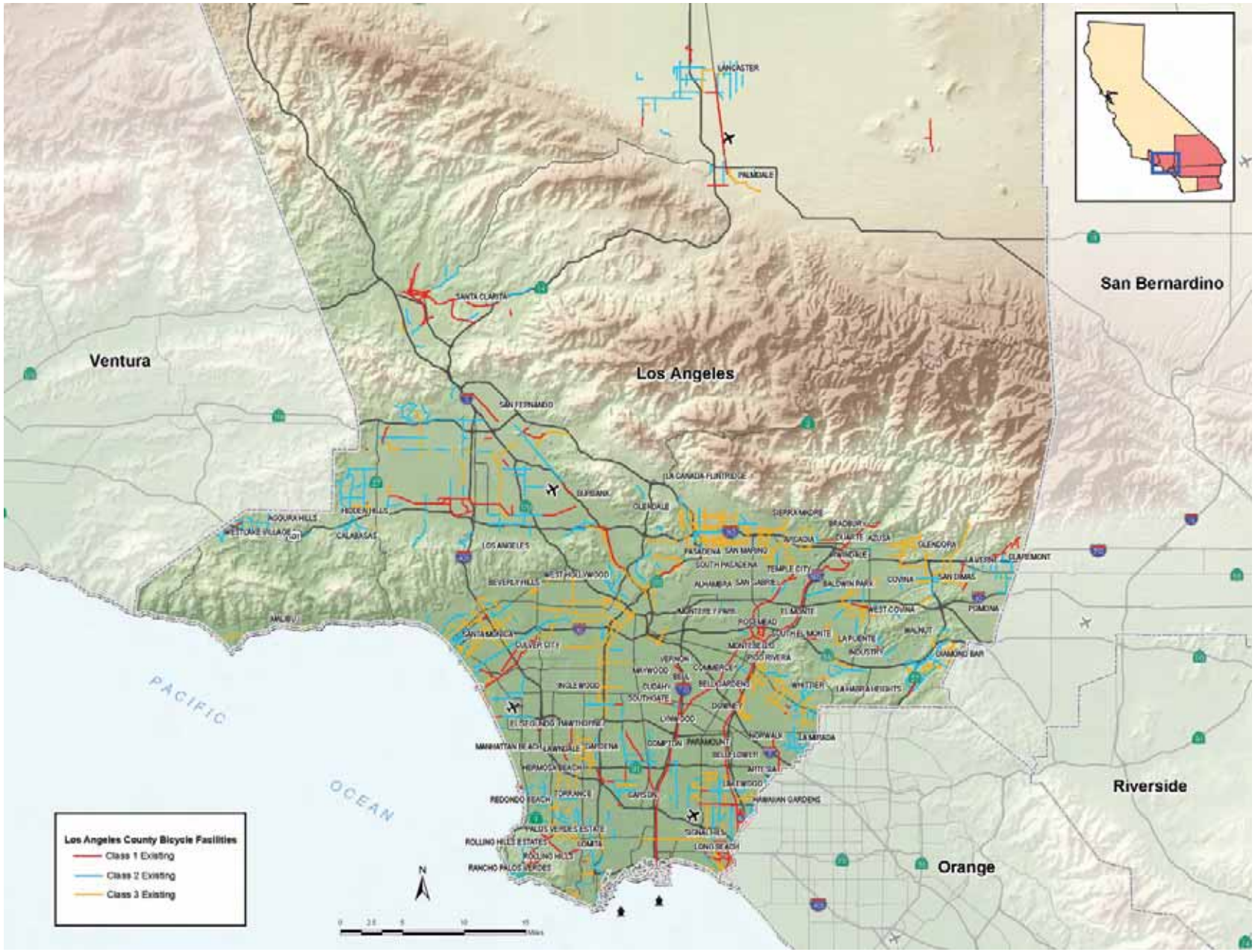
Exclusive funding for non-motorized transportation is inadequate, particularly as it relates to supporting bicycling in the region. Additional funding is needed for the planning, development and construction of identified bikeway system improvements over and above that which has been identified in SCAG's 2008 RTP and in local government and CTC capital programs. Out of the total expenditure of $569 Billion in the 2008 RTP, $2.6 billion are allocated for non-motorized projects. Regionally bicycle and walking travel represents 11.9 percent of all trips respectively, but represents less than 0.46 percent of all transportation funding in the region.

EXHIBIT 1 EXISTING BICYCLE FACILITIES IN IMPERIAL COUNTY



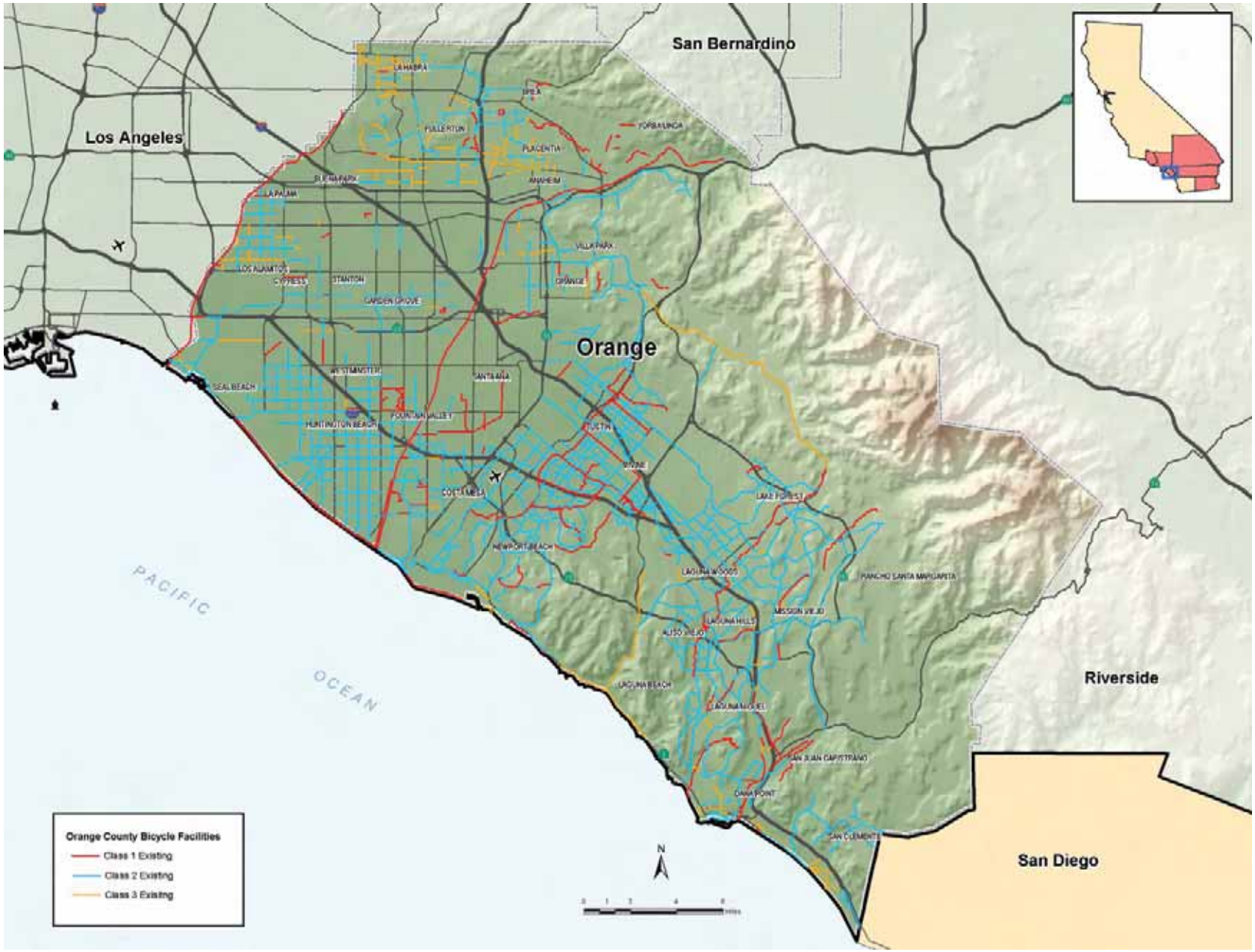
Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

EXHIBIT 2 EXISTING BICYCLE FACILITIES IN LOS ANGELES COUNTY



Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

EXHIBIT 3 EXISTING BICYCLE FACILITIES IN ORANGE COUNTY

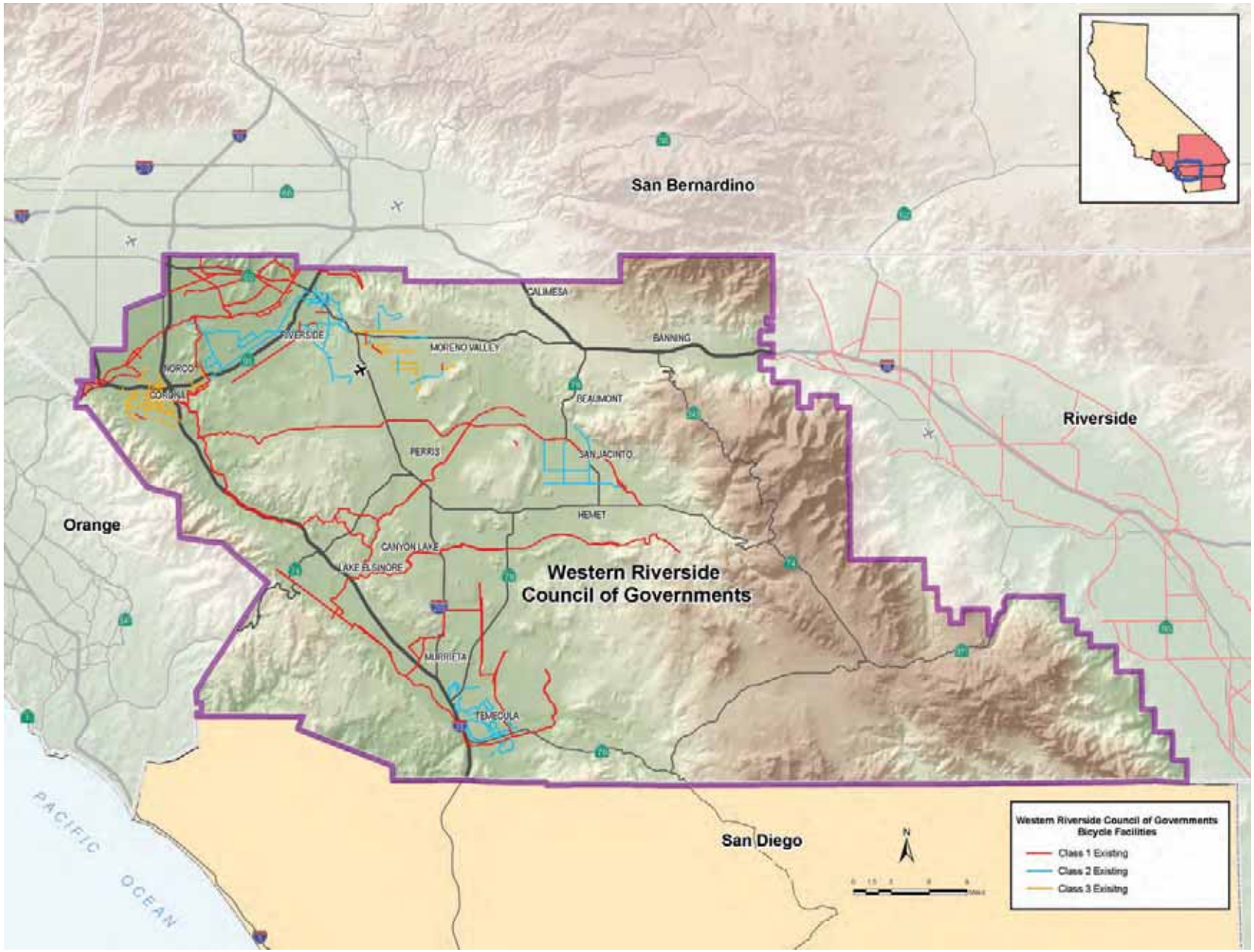


Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

EXHIBIT 4 EXISTING BICYCLE FACILITIES IN SAN BERNARDINO COUNTY

Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

EXHIBIT 5 EXISTING BICYCLE FACILITIES IN WESTERN RIVERSIDE COUNTY



Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas

EXHIBIT 6 EXISTING BICYCLE FACILITIES IN VENTURA COUNTY

Source: Southern California Association of Governments, ESRI StreetMap USA, Teleatlas