Bicycle Transportation Account Compliance Document

FINAL DRAFT – January, 2006

Los Angeles County
Metropolitan Transportation Authority

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Metro

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SECTION 1: INTRODUCTION

INTRODUCTION

The Los Angeles County Metropolitan Transportation Authority (Metro) prepared two independent planning documents to improve mobility in the region through the use of bicycles: the *Metro Bicycle Transportation Strategic Plan* (Strategic Plan) and the *Bicycle Transportation Account Compliance Document* (BTA Document). The Strategic Plan is designed to be used by the cities, the County of Los Angeles, and transit agencies in planning bicycle facilities around transit and setting priorities that contribute to regional improvements. The BTA Document is an inventory and mapping of existing and proposed facilities, and an estimate of past and future expenditures for bicycle facilities. The information for this document was provided by the 89 local jurisdictions in the county.

These planning documents replace earlier 1996 sub-regional bicycle master plans but do not replace local planning documents.

We used a collaborative process in developing the Strategic Plan and the BTA Document. Over the course of a year, all cities, the County, and local interest groups were invited to participate in Project Working Group Meetings and a series of sub-regional briefings. Each city and the County were individually contacted by mail and phone to collect local information and seek local participation. The Project Team, Working Group, Consultant Team, cities, and stakeholder groups participating in the planning process are listed in the Acknowledgements.

Purpose of BTA Compliance Document

The 2006 BTA Compliance Document provides:

- An inventory of all existing and planned bikeway facilities in each city, the county, and other local agencies;
- A document that may be adopted by a participating local city or the county as their Bicycle Master Plan, enabling the municipality to be eligible for a state BTA grant; and
- Data for publishing a county bicycle map.

The objective of this document is to provide a summary of local agency materials so that Caltrans can review and approve grant funding through the Bicycle Transportation Account (BTA). This document does not replace existing approved bicycle transportation plans in Los Angeles County, nor is it a replacement for local agencies doing their own plans.

Of the 89 public agencies in Los Angeles County, 36 (40%) had completed some type of bicycle plan, 10 indicated their plans were BTA-compliant, 70 agreed to participate in this process, and 10 selected not to participate. Materials collected from local agencies can be found in one of four locations in this document:

1. **BTA Compliance Table**: Lists the BTA requirements and data provided by each local agency.
2. **BTA Maps**: Features detailed maps of Los Angeles County showing existing and proposed bikeway facilities, and major activity centers and transit connections.
3. **Land Use Maps**: Features detailed maps of Los Angeles County showing existing land uses.
4. **BTA Appendix**: Provides summaries of information from each local agency.

Seventy local agencies, representing over 95% of the county population, could be compliant with BTA requirements by using the information in this document, supplemented by existing and proposed facility lists and priorities, and adoption by their respective councils or boards.

Background/Past Plans

The six sub-regional bicycle plans completed in the mid-1990s inventoried all of Los Angeles County's facilities and focused on proposed arterial bikeways crisscrossing the county. This plan will replace the earlier documents. Currently, local agencies in Los Angeles County can be classified as:

1. Those that have BTA-compliant bicycle transportation plans that may or may not need updating (Burbank, Calabasas, Long Beach, City of Los Angeles, Palmdale, Pasadena, San Dimas, Santa Monica, West Hollywood, Whittier);

2. Those who are using this plan to develop a local bicycle transportation plan and have submitted requested information;
3. Those who are interested in developing a plan but are not able to provide all of the required information at this time; and
4. Those agencies not interested in having a plan at this time.

The Metro BTA Compliance document is not a county bicycle plan. It is designed to update the county inventory and to help local agencies complete their own plans so they will be eligible for funding.

Agency Outreach

Staff made extensive efforts to contact and include local agencies in this process, and to collect needed materials. This included:

1. Sending multiple mailings to each city advising them of the project, explaining the BTA requirements, and requesting BTA required materials (September 2004 to March 2005);
2. Phoning and e-mailing each agency up to three times as a follow-up request for material (March-May, 2005);
3. Inviting each city to attend scheduled Working Group meetings (six total);
4. Conducting outreach meetings at each Council of Government (January 2005);
5. Sending materials to be reviewed by each local agency for accuracy (June 2005).

The response from most cities was very good, with several cities deciding to embark on their own internal bicycle plan as a result of this effort. Staff tracked each contact and response from the local agencies. This database is available upon request.

How Local Agencies Can Use This Document

Local agencies that need only to update their existing bicycle plans can use the mapping or other information from the Metro BTA Compliance Document in their plan update. Agencies that wish to use this document to help qualify for BTA funding need to ensure that all of the required information was provided and reflected in this document. If this has occurred, those agencies have two basic options to create a plan that can be adopted by their City Council or other body:

1. Adopt this document with a cover summary report and expanded appendix that excludes all relevant materials from other agencies and provides required BTA detail, including a list of existing bicycle facilities, bike parking, changing facilities, safety and education programs, citizen and public involvement, and a list of proposed projects and priorities.
2. Use the digital files of this document, along with the BTA details listed above, to create a bicycle plan that includes needed information for that agency.

Cities that have only partially met the BTA requirements or are planning on doing so in the future may want to expand on these materials.

If an agency wants to apply for BTA grant funding, they must adopt a Bicycle Transportation Plan (BTP), which will require CEQA clearance, and submit it to Metro to review. Metro review consists of verifying the plan to be in compliance with Section 891.2 (see Table 1 in Section 2) of the Bicycle Transportation Act (1994). The local agency submits the plan, its adopting resolution, and Metro's letter of compliance to District 7 Local Assistance along with the grant application by the date due.

Caltrans Bicycle Program staff employs a "checklist" approach to BTP review to determine if the plan includes the required elements of the law. The review does not "grade" the information provided in the discussion of the required elements. Each required element should be addressed in the plan, regardless of applicability to the local agency preparing the plan. A description of the BTA requirements is provided in the next section of this document.

SECTION 2: BICYCLE TRANSPORTATION ACCOUNT REQUIREMENTS

In order to be eligible for Bicycle Transportation Account (BTA) funds, a city or county must prepare and adopt a Bicycle Transportation Plan (BTP) that addresses items a. – k. in the Streets and Highways Code Section 891.2. If a city plans to use a countywide BTP to establish their eligibility for BTA funds, the countywide BTP must include a discussion of items a. – k. in Streets and Highways Code Section 891.2 for that city, in addition to the discussions of these items for the unincorporated areas in the county.

Metro has attempted to collect BTA-required materials from each city and the county, developed many of the required elements (such as maps and estimates of commuters), and otherwise facilitated the process for local agencies. Due to the size and number of jurisdictions in Los Angeles County, Metro has relied on the cities for the quality and quantity of information. Some of the required information that Metro collected from local agencies are:

a. Existing and proposed bikeways
b. Bicycle parking facilities
c. Bicycle safety and education programs
d. Local citizen and community involvement
e. Project priorities

The BTA Compliance Table beginning on page 9 and Maps beginning on page 16 reflect all of the information collected from agencies between September 2004 and June 2005. A detailed log of each mail, e-mail, or phone contact with each city is available upon request. Agencies that did not respond or respond fully to the request for information are shown as 'NR' (No Response) in Table 2. Agencies that choose not to participate are shown as 'NP' (Not Participating). Information that was not available from an agency and cannot be developed by Metro is shown as 'NA' (Not Available).

Table 1 below describes each required element and how it has been addressed, along with the location of that material in this document. It is useful to note that a city may explain, for example, that it has no current safety or education programs and still meet the BTA requirement.

Table 1 – BTA Requirements and Document Location/Explanation

BTA 891.2	Streets and Highway Code Required Plan Elements	Location/Explanation
(a)	The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.	BTA Compliance Table beginning on page 9. An estimate was developed for all agencies using the MTA Bikeway Off-Model Analysis, which is based on US Census and other sources. A full description of this methodology is included in Appendix B.
(b)	A map and description of existing and proposed land use and settlement patterns including, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.	Land use maps for the County were obtained from SCAG. The BTA maps show major activity centers, such as schools and parks.
(c)	A map and description of existing and proposed bikeways.	BTA Maps/BTA Appendix. Information as provided by local agencies in map and/or tabular form. See "Appendix A: Summaries of Local Agency Materials" and "Appendix B: Bicycle Commuter Estimating Methodology" for descriptions.
(d)	A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping enters, public buildings, and major employment centers.	BTA Maps and BTA Compliance Table. Metro provides bike parking at most of its Metro Rail stations. Most host cities of Metrolink stations provide bicycle parking. Four existing and future bicycle parking centers are identified. Agencies have provided information on whether they have (or plan to have) bicycle parking at major activity centers, a bike parking ordinance, or a bike station (Appendix A).

BTA 891.2	Streets and Highway Code Required Plan Elements	Location/Explanation
(e)	A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	BTA Compliance Table and BTA Maps. Jurisdiction served by buses with bike racks; has a Metro station/train that provides bicycle access; and/or has a bicycle parking ordinance or is considering one as part of BTP process. All stations and trains accommodate bicycles. Information has been provided by some cities on bicycle parking ordinances (see Appendix B).
(f)	A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.	BTA Compliance Table and BTA Maps. Publicly accessible restrooms at parks and/or public buildings (shown on the BTA Maps); and/or has or is considering adopting a changing facility ordinance (see Appendix A).
(g)	A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and compile existing data on the resulting effect on accidents involving bicyclists.	BTA Compliance Table. Local agencies have provided information on their programs, although many indicated they have no active education or safety program.
(h)	A description of the extent of citizen and community involvement in development of the plan.	BTA Compliance Table. Agencies that already have approved bicycle transportation plans or have are identified as 'yes,' while others are planning on holding community meetings.
(i)	A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.	BTA Compliance Table. If the local participating agencies provided the required information, they will be consistent.
(j)	A description of the projects proposed in the plan and a listing of their priorities for implementation.	BTA Maps and BTA Appendix. Projects and priorities in list and map-form have been submitted by some participating cities, and are shown in Appendix A. Other cities will need to provide lists and priorities when adopting their plan.
(k)	A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.	BTA Compliance Table. Past expenditures are based on actual costs of existing facilities or estimated based on the average costs per mile in Los Angeles County: $1 million/mile for Class I, $50,000/mile for Class II, and $5,000/mile for Class III.

BTA Compliance Table

Table 2 beginning on page 9 presents a summary of BTA requirements for each of the local agencies in Los Angeles County. This table is based on information received from local agencies, and a review of Caltrans policies on county and regional bicycle plans. Of the 11 requirements, Metro is able to provide seven of the requirements for any agency willing to participate in the process. These are:

(a) Estimate of bicycle commuters
(b) Land use and major destinations
(d) Bicycle parking (Metro facilities only)
(e) Multi-modal connections (bus, rail)
(f) Changing facilities (assumed to be any publicly accessible restroom)
(i) Plan consistency
(k) Past expenditures

BTA Maps

The BTA maps (beginning on page 11) were created using the Metro Thomas Brothers base map and GIS overlays showing: (a) existing and proposed bikeways, (b) Metrolink and Metro rapid stations, and (c) major destinations and land uses such as parks, universities and colleges, and commercial

centers. All bikeway information shown is based on direct input from each agency. Due to the size of the county, 18 maps were created along with a countywide index map.

Land Use Maps

In addition to the BTA Maps, which show major land uses and destinations in Los Angeles County, a series of land use maps for the county, obtained from SCAG, are shown beginning on page 34.

Table 2 – BTA Compliance by City

BTA Compliance by City															
Cities	**(a) Bicycle Commuter Estimates**		**(b) Map & Description of Existing & Proposed Land Use Patterns**	**(c) Map & Description of Existing & Proposed Bikeways**		**(d) Bike Parking**	**(e) Multi-Modal Connections**	**(f) Changing Facilities**	**(g) Safety and Education Programs**	**(h) Citizen and Public Involvement**	**(i) Plan Consistency**	**(j) Proposed Project List & Priorities**	**(k) Past Expenditures & Future Needs**	
LEGEND	Appendix A describes methodology Existing daily bicycle trips (left) Future daily bicycle trips (right)		Yes = Activity centers and land use maps provided for all agencies in the County.	Map provided by Metro. Yes = facilities exist. No = none exist. NP = not participating		0=none 1=city has bike parking at major activity centers 2=bike parking ordinance 3=bike station 4= not specified 5=Metro bike parking 6=not provided	Yes = Jurisdiction served by buses with bike racks, Metro Rail and/or Metrolink bicycle parking; and/or existing bicycle parking ordinance or is considering one.	Yes = Has publicly accessible restrooms at parks, public buildings (shown on the BTA Maps); and/or has or is considering adopting a changing facility ordinance.	1=no programs 2=limited school education 3=bicycle rodeos 4=SR2S program 5=brochures 6=not provided	1=complete (3-5 public meetings) 2=Currently planned 3=Planned for future 4=Not provided	Did cities provide information and/or attend Metro Bicycle Planning meetings?	Yes = lists provided by cities are in Appendix A. No = Lists not provided	Unless estimates were provided, costs based on current estimates of $1 m/mile for Class I, $50,000/mile for Class II, and $5,000/mile for Class III. Not included: costs of grade separations, R/W acquisitions, lighting or other misc costs.	
	Existing	Future		Existing	Proposed								Past	Future
Agoura Hills	567	1579	Yes	Yes	Yes	6	Yes	Yes	6	4	Yes	No	$ 984,947	$ -
Alhambra	2367	6604	Yes	No	No	6	Yes	Yes	6	2	Yes	No	$ -	$ 730,695
Arcadia	1464	4083	Yes	Yes	No	0	Yes	Yes	2	2	Yes	No	$ 26,421,477	$ 2,353,683
Artesia	452	1261	Yes	No	Yes	6	Yes	Yes	6	4	Yes	No	$ -	$ 2,065
Avalon	86	240	Yes	Yes	Yes	1	No	Yes	2	3	Yes	Yes	$ 2,000,000	$ 12,250
Azusa	1233	3438	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 199,527	$ 969,246
Baldwin Park	2092	5831	Yes	Yes	No	6	Yes	Yes	2, 3	6	No	No	$ 65,050	$ 4,030,701
Bell	1011	2819	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 116,839	$ 429,948
Bellflower	2011	5603	Yes	Yes	Yes	6	Yes	Yes	6	4	Yes	No	$ 60,707	$ 2,388,473
Bell Gardens	1215	3387	Yes	Yes	No	6	Yes	Yes	6	3	Yes	No	$ 72,415	$ -
Beverly Hills	932	2598	Yes	No	No	6	Yes	Yes	6	4	Yes	No	$ 62,999	$ -
Bradbury	24	66	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ -	$ -
Burbank	2767	7713	Yes	Yes	Yes	1, 2	Yes	Yes	6	1	Yes	Yes	$ 182,112	$ 5,511,581
Calabasas	553	1540	Yes	Yes	Yes	1	Yes	Yes	2	2	Yes	Yes.	$ 33,700	$ 573,513
Carson	2475	6899	Yes	Yes	Yes	4	Yes	Yes	6	2	Yes	Yes	$ 2,427,123	$ 10,539,888
Cerritos	1420	3959	Yes	Yes	Yes	1, 2	Yes	Yes	2	2	Yes	No	$ 694,146	$ 732,381
Claremont	938	2614	Yes	Yes	Yes	1, 2, 5	Yes	Yes	2, 3, 4, 5	4	Yes	Yes	$ 1,232,500	$ 4,369,000
Commerce	347	966	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ -	$ 27,480
Compton	2579	7189	Yes	Yes	Yes	5	Yes	Yes	5	3	Yes	No	$ 225,250	$ 729,500
Covina	1292	3601	Yes	Yes	No	0	Yes	Yes	6	3	Yes	No	$ 26,996	$ 1,822,129
Cudahy	668	1861	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 3,841	$ -
Culver City	1071	2985	Yes	Yes	Yes	1	Yes	Yes	1	1	Yes	No	$ 160,377	$ 863,173
Diamond Bar	1553	4328	Yes	Yes	Yes	1	Yes	Yes	6	1	Yes	Yes	$ 15,390,629	$ 134,200
Downey	2961	8252	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 109,859	$ -
Duarte	593	1652	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 81,859	$ 543,791
El Monte	3199	8916	Yes	Yes	Yes	1, 2, 5	Yes	Yes	2, 3	1	Yes	Yes	$ 298,965	$ 262,932

BTA Compliance by City

Cities	(a) Bicycle Commuter Estimates		(b) Map & Description of Existing & Proposed Land Use Patterns	(c) Map & Description of Existing & Proposed Bikeways		(d) Bike Parking	(e) Multi-Modal Connections	(f) Changing Facilities	(g) Safety and Education Programs	(h) Citizen and Public Involvement	(i) Plan Consistency	(j) Proposed Project List & Priorities	(k) Past Expenditures & Future Needs	
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	Existing	Future		Existing	Proposed								Past	Future
El Segundo	442	1233	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 62,237	$ 22,542
Gardena	1593	4440	Yes	Yes	No	4	Yes	Yes	6	6	Yes	No	$ 12,645,440	$ 450
Glendale	5379	14991	Yes	Yes	Yes	1	Yes	Yes	6	1	Yes	Yes	$ 33,876	$ 1,119,219
Glendora	1363	3799	Yes	Yes	No	4	Yes	Yes	6	6	Yes	No	$ 20,790,670	$ 4,326,729
Hawaiian Gardens	408	1136	Yes	Yes	No	1	Yes	Yes	6	1	Yes	No	$ 463,762	$ 763,780
Hawthorne	2320	6467	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 31,000	$ 6,393
Hermosa Beach	512	1428	Yes	Yes	Yes	6	Yes	Yes	6	4	Yes	No	$ 94,026	$ 2,461
Hidden Hills	52	144	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ -	$ 5,314
Huntington Park	1692	4717	Yes	No	Yes	6	Yes	Yes	6	2	Yes	No	$ -	$ 2,374,477
Industry	21	60	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ 1,523,562	$ 9,585,850
Inglewood	3106	8656	Yes	No	No	0	Yes	Yes	2	2	Yes	No	$ 177,238	$ 52,097
Irwindale	40	111	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 348,106	$ 1,254,834
La Canada Flintridge	561	1562	Yes	Yes	Yes	2	Yes	Yes	1	2	Yes	No	$ 148,602	$ 687,514
La Habra Heights	158	439	Yes	No	Yes	4	Yes	Yes	2	1	Yes	Yes	$ -	$ 4,935,506
Lakewood	2189	6101	Yes	Yes	Yes	6	Yes	Yes	6	6	Yes	No	$ 14,944,653	$ 907,961
La Mirada	1291	3597	Yes	Yes	Yes	1	Yes	Yes	3	1	Yes	Yes	$ 227,000	$ 2,129,858
Lancaster	3275	9128	Yes	Yes	Yes	4	Yes	Yes	5	3	Yes	Yes	$ 4,483,156	$ 285,495
La Puente	1133	3157	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 3,720,651	$ 16,333
La Verne	873	2433	Yes	Yes	Yes	6	Yes	Yes	6	2	Yes	No	$ 2,345,327	$ 3,664,950
Lawndale	875	2438	Yes	No	No	6	Yes	Yes	6	4	No	No	$ -	$ 850
Lomita	553	1541	Yes	Yes	No	1	Yes	Yes	1	2	Yes	Yes	$ 3,377,775	$ -
Long Beach	12732	35486	Yes	Yes	Yes	1,2,3,5	Yes	Yes	2,3,4,5	1.	Yes	Yes	$ 19,325,476	$ 2,104,550
Los Angeles	101930	284090	Yes	Yes	Yes	1,2,3,5	Yes	Yes	2,3,4,5	1	Yes	Yes	$ 54,461,150	$ 142,730,000
Los Angeles County Unincorporated Area	28369	79068	Yes	Yes	Yes	1	Yes	Yes	2,3,4,5	1	Yes	No	$ 23,454,800	$ 11,342,650

BTA Compliance by City

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	Existing	Future		Existing	Proposed								Past	Future
Lynwood	1927	5370	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ 1,526	$ -
Malibu	347	967	Yes	Yes	No	6	NA	NA	4	1	Yes	NP	$ 1,093,500	$ 22,372,900
Manhattan Beach	934	2603	Yes	Yes	Yes	1,2	Yes	Yes	1	1	Yes	Yes	$ 104,192	$ 155,335
Maywood	775	2159	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ 5,075	$ -
Monrovia	1019	2839	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 973,795	$ 127,824
Montebello	1715	4779	Yes	Yes	No	6	Yes	Yes	6	4	No	No	$ 14,330,579	$ 10,655
Monterey Park	1657	4617	Yes	Yes	Yes	1	Yes	Yes	2	2	Yes	Yes.	$ 3,434	$ 1,136,777
Norwalk	2850	7942	Yes	Yes	Yes	6	Yes	Yes	6	4	Yes	Yes.	$ 366,178	$ 38,673
Palmdale	3219	8971	Yes	Yes	Yes	1, 2, 5	Yes	Yes	2, 3, 5	1	Yes	No	$ 4,537,484	$ 5,550,784
Palos Verdes Estates	368	1026	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ -	$ -
Paramount City	1525	4249	Yes	Yes	Yes	0	Yes	Yes	6	3	Yes	No	$ 111,474	$ 1,528,737
Pasadena	3695	10298	Yes	Yes	Yes	1,2,5	Yes	Yes	3,4,5	3	Yes	Yes	$ 54,366,644	$ -
Pico Rivera	1742	4856	Yes	Yes	Yes	4	Yes	Yes	6	3	Yes	Yes	$ 652,022	$ 89,471
Pomona	4124	11493	Yes	Yes	Yes	6	Yes	Yes	6	4	Yes	No	$ 2,750	$ 7,362,287
Rancho Palos Verdes	1135	3164	Yes	Yes	No	6	Yes	Yes	6	4	No	No	$ 149,161	$ -
Redondo Beach	1039	2896	Yes	Yes	Yes	1	Yes	Yes	2	3	Yes	No	$ 166,014	$ 1,516,611
Rolling Hills	21	60	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ 12,007	$ -
Rolling Hills Estates	212	590	Yes	Yes	No	1,2	Yes	Yes	1	2	Yes	Yes	$ 322,346	$ -
Rosemead	1470	4097	Yes	Yes	No	6	Yes	Yes	6	6	Yes	No	$ 10,663	$ 14,261
San Dimas	967	2696	Yes	Yes	Yes	2	Yes	Yes	2, 3, 5	1	Yes	Yes	$ 13,820,050	$ 1,455,000
San Fernando	649	1809	Yes	Yes	No	6	Yes	Yes	6	4	No	No	$ 1,151,500	$ 1,110,000
San Gabriel	1084	3022	Yes	Yes	Yes	6	Yes	Yes	6	1	Yes	Yes	$ 933,922	$ 3,466,816
San Marino	358	997	Yes	Yes	No	2	Yes	Yes	1	1	Yes	No	$ 126,975	$ -

BTA Compliance by City

Cities	(a) Bicycle Commuter Estimates		(b) Map & Description of Existing & Proposed Land Use Patterns	(c) Map & Description of Existing & Proposed Bikeways		(d) Bike Parking	(e) Multi-Modal Connections	(f) Changing Facilities	(g) Safety and Education Programs	(h) Citizen and Public Involvement	(i) Plan Consistency	(j) Proposed Project List & Priorities	(k) Past Expenditures & Future Needs	
LEGEND	Appendix A describes methodology Existing daily bicycle trips (left) Future daily bicycle trips (right)		Yes = Activity centers and land use maps provided for all agencies in the County.	Map provided by Metro. Yes = facilities exist. No = none exist. NP = not participating		0=none 1=city has bike parking at major activity centers 2=bike parking ordinance 3=bike station 4= not specified 5=Metro bike parking 6=not provided	Yes = Jurisdiction served by buses with bike racks, Metro Rail and/or Metrolink bicycle parking; and/or existing bicycle parking ordinance or is considering one.	Yes = Has publicly accessible restrooms at parks, public buildings (shown on the BTA Maps); and/or has or is considering adopting a changing facility ordinance.	1=no programs 2=limited school education 3=bicycle rodeos 4=SR2S program 5=brochures 6=not provided	1=complete (3-5 public meetings) 2=Currently planned 3=Planned for future 4=Not provided	Did cities provide information and/or attend Metro Bicycle Planning meetings?	Yes = lists provided by cities are in Appendix A. No = Lists not provided	Unless estimates were provided, costs based on current estimates of $1 m/mile for Class I, $50,000/mile for Class II, and $5,000/mile for Class III. Not included: costs of grade separations, R/W acquisitions, lighting or other misc costs.	
	Existing	Future		Existing	Proposed								Past	Future
Santa Clarita	4176	11639	Yes	Yes	Yes	1	Yes	Yes	2, 4, 5	2	Yes	Yes	$ 2,485,817	$ 24,144,500
Santa Fe Springs	492	1371	Yes	Yes	Yes	1,2	Yes	Yes	6	2	Yes	Yes	$ 7,449,501	$ 887,655
Santa Monica	2320	6465	Yes	Yes	Yes	1,2	Yes	Yes	1	2	Yes	Yes	$ 19,096,752	$ 2,352,326
Sierra Madre	292	813	Yes	No	No	6	Yes	Yes	6	4	No	No	$ -	$ -
Signal Hill	256	713	Yes	No	Yes	1,2	Yes	Yes	6	2	Yes	No	$ 283,072	$ 17,154
South El Monte	197	549	Yes	Yes	No	6	Yes	Yes	6	4	Yes	No	$ 29,000	$ -
South Gate	2660	7413	Yes	Yes	Yes	1, 2	Yes	Yes	2	1	Yes	No	$ 295,898	$ -
South Pasadena	670	1869	Yes	No	No	6	Yes	Yes	6	4	No	No	$ 771,376	$ -
Temple City	919	2560	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ -	$ 21,300
Torrance	3805	10605	Yes	Yes	Yes	1, 2	Yes	Yes	4,5	Yes	Yes	Yes	$ 15,033,856	$ 103,900
Vernon	3	7	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP	$ 26,023	$ 2,700,225
Walnut	828	2307	Yes	Yes	No	1	Yes	Yes	2	2	Yes	No	$ 10,118	$ -
West Covina	2894	8065	Yes	Yes	No	4	Yes	Yes	6	3	Yes	No	$ 16,707,626	$ 5,926,579
West Hollywood	985	2746	Yes	Yes	Yes	1,2	Yes	Yes	6	2	Yes	Yes	$ 9,677,439	$ 426,605
Westlake Village	239	666	Yes	Yes	No	6	Yes	Yes	6	6	Yes	No	$ 75,168	$ 223,064
Whittier	2313	6446	Yes	Yes	Yes	6	Yes	Yes	6	2	Yes	Yes	$ 20,929,239	$ 4,389,813
TOTAL:	**262,614**	**731,932**											**$ 399,622,002**	**$ 312,475,695**

Notes:
See Table 1 on page 6 for required BTA elements.
Source of information: Participating cities and County of Los Angeles.
Existing and future expenditures based on location of facility, not the actual owner or manager.
BTA = Bicycle Transportation Account
NP = Not participating NA = Not available NR = Not Received, No Response

EXISTING AND PROPOSED BIKEWAYS

Existing and proposed bikeways by city and classification are shown in Table 3. Based on this table, Los Angeles County will have a total bikeway system of 2,370 miles, of which 1,225 miles (52%) are currently completed. Bikeway mileage was calculated from data provided by the City and counties.Note that the Existing and Proposed Bikeways maps in the next section do not show all proposed bikeways for the City of Los Angeles, but the total mileage for the City is listed in the table below.

Table 3 – Existing and Proposed Class I, II, and III Bikeways

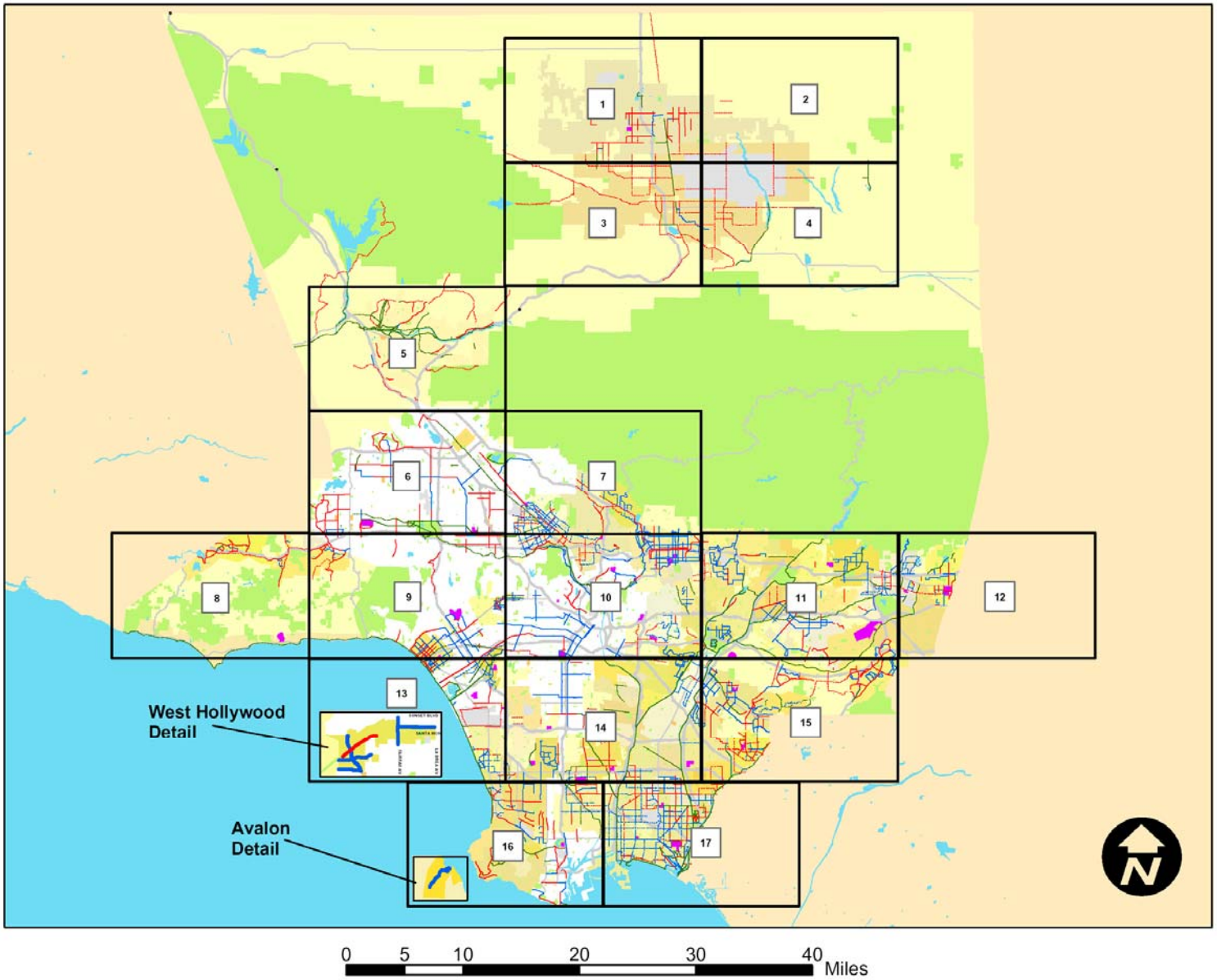
City	Existing Bikeways			Proposed Bikeways		
	Class I	Class II	Class III	Class I	Class II	Class III
Agoura Hills		9.81	0.94			
Alhambra				0.73		0.05
Arcadia	1.54	1.42	26.34	2.35	0.04	
Artesia					0.04	
Avalon			2.00			2.45
Azusa	3.94	0.51		0.97		
Baldwin Park	0.46	8.45		3.87	2.56	6.61
Bell	2.34			0.43		
Bell Gardens	1.45					
Bellflower	1.21	0.08		2.39		0.21
Beverly Hills		0.08	0.06			
Bradbury						
Burbank	3.31	3.32		4.55	14.60	46.31
Calabasas		6.74			11.06	4.12
Carson	2.33	6.27	2.28	10.20	5.56	12.42
Cerritos	5.54	4.44	0.39	0.47	5.26	
City of Commerce					0.55	
City of Industry	1.52	0.55	1.44	9.55	0.70	0.01
Claremont	5.28	13.70	0.90	3.50	17.16	2.20
Compton	3.48	10.25		0.68	0.99	
Covina		1.42	0.02	1.82	0.09	
Cudahy	0.08					
Culver City	3.16	0.45		0.73	0.91	17.08
Diamond Bar	1.36	18.48	15.23		2.62	0.64
Downey	2.20					
Duarte	1.64			0.54		
El Monte	5.76	2.24		0.26		

City	Existing Bikeways			Proposed Bikeways		
	Class I	Class II	Class III	Class I	Class II	Class III
El Segundo	1.12	1.26			0.45	
Gardena	1.04	1.84	12.58			0.09
Glendale	0.16	5.19			21.00	13.81
Glendora			20.79	4.33		
Hawaiian Gardens	0.19	1.26	0.45	0.76		0.33
Hawthorne	0.62				0.13	
Hermosa Beach	1.88					0.49
Hidden Hills					0.11	
Huntington Park				2.37		
Inglewood			0.18		1.04	
Irwindale	6.81	1.52		1.25		
La Canada Flintridge		0.22	0.15	0.36	5.16	13.12
La Habra Heights				4.91		4.96
La Mirada		9.93	0.18	1.79	6.55	3.35
La Puente			3.72		0.33	
La Verne	1.62	0.87	2.26	3.49	2.38	11.19
Lakewood	1.63	8.62	14.82	0.60	5.75	3.62
Lancaster	5.79	30.47	4.04		5.66	0.50
Lawndale						0.17
Lomita	0.65	1.19	3.34			
Long Beach	37.23	21.19	17.36	0.72	20.03	76.61
Los Angeles City	48.34	161.61	150.92	78.10	162.40	76.00
Los Angeles County	18.21	18.82	38.52	8.28	61.12	1.33
Lynwood		0.31				
Malibu			21.87	22.37		
Manhattan Beach	2.08				1.71	13.92
Maywood	0.10					
Monrovia		1.71	0.97	0.13		
Montebello	3.12	0.55	14.17		0.21	0.02
Monterey Park		0.69		0.92	3.46	8.70
Norwalk	2.02		0.27		0.58	1.90
Palmdale	7.22	5.55	4.15	1.94	72.12	
Palos Verdes Estates						
Paramount	2.23			1.45	1.39	1.02
Pasadena		18.12	54.28			
Pico Rivera	7.53	1.11	0.27		0.70	10.90

City	Existing Bikeways			Proposed Bikeways		
	Class I	Class II	Class III	Class I	Class II	Class III
Pomona		0.55		7.25	2.18	
Rancho Palos Verdes	1.91	7.02	0.02			
Redondo Beach	2.74	5.81		1.47		9.13
Rolling Hills	0.24					
Rolling Hills Estates	6.07	1.07	0.01			
Rosemead	0.21				.029	
San Dimas		4.01	13.80	1.07	7.70	
San Fernando	1.1.8			1.11		
San Gabriel			0.93	3.44	0.04	4.66
San Marino			0.13			
Santa Clarita	23.84	21.05	1.19	21.51	52.69	
Santa Fe Springs	2.79		7.31		17.68	0.70
Santa Monica	4.71	16.25	18.78	2.35		
Sierra Madre						
Signal Hill			0.28			3.43
South El Monte	0.58					
South Gate	5.92					
South Pasadena			0.77			
Temple City					0.43	
Torrance	0.41	13.28	14.95			20.78
Vernon	0.52			2.70		
Walnut		2.02				
West Covina	2.19	9.75	16.55	5.92	0.17	0.09
West Hollywood		2.29	9.67		6.60	19.34
Westlake Village	0.74	7.62		0.22		
Whittier	0.40	9.89	20.86	4.28	2.27	0.10
Grand Total	**250.64**	**480.85**	**520.14**	**228.13**	**524.21**	**392.36**

Note: Some existing and proposed bikeway miles may be geographically located within city jurisdictions but owned or operated by another agency. These miles are listed in city totals. For example, the San Gabriel, Rio Hondo, San Jose Creek River Trails, and other tributaries are owned by the County of Los Angeles, but the mileage is calculated in city totals.

Map 1 – Los Angeles County Key Map



Map 2 – Existing and Proposed Bikeways, Area 1

Map 3 – Existing and Proposed Bikeways, Area 2

Map 4 – Existing and Proposed Bikeways, Area 3

Map 5 – Existing and Proposed Bikeways, Area 4

Map 6 – Existing and Proposed Bikeways, Area 5

Map 7 – Existing and Proposed Bikeways, Area 6

Map 8 – Existing and Proposed Bikeways, Area 7

Map 9 – Existing and Proposed Bikeways, Area 8

Map 10 – Existing and Proposed Bikeways, Area 9

Map 11 – Existing and Proposed Bikeways, Area 10

Map 12 – Existing and Proposed Bikeways, Area 11

Map 13 – Existing and Proposed Bikeways, Area 12

Map 14 – Existing and Proposed Bikeways, Area 13

Map 15 – Existing and Proposed Bikeways, Area 14

Map 16 – Existing and Proposed Bikeways, Area 15

Map 17 – Existing and Proposed Bikeways, Area 16

Map 18 – Existing and Proposed Bikeways, Area 17

Map 19 – Land Use Map, Area 1

Map 20 – Land Use Map, Area 2

Map 21 – Land Use Map, Area 3

Map 22 – Land Use Map, Area 4

Map 23 – Land Use Map, Area 5

Map 24 – Land Use Map, Area 6

Map 25 – Land Use Map, Area 7

Map 26 – Land Use Map, Area 8

Map 27 – Land Use Map, Area 9

Map 28 – Land Use Map, Area 10

Map 29 – Land Use Map, Area 10a

Map 30 – Land Use Map, Area 11

Map 31 – Land Use Map, Area 12

Map 32 – Land Use Map, Area 13

Map 33 – Land Use Map, Area 14

Map 34 – Land Use Map, Area 15

Map 35 – Land Use Map, Area 16

Map 36 – Land Use Map, Area 17

APPENDIX A: SUMMARIES OF LOCAL AGENCY MATERIALS

Agoura Hills

City reports that it has a bicycle plan.
No materials received.

Alhambra

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Arcadia

The City has sent information to Metro to fulfill BTA requirements. This information is provided in the BTA maps and in the BTA Table. Several priority projects list were identified:

- Rancho Oaks Loop
- Hugo Reid Loop
- Arcadia Park Loop
- Lucky Baldwin Loop

Artesia

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Avalon

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Azusa

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Baldwin Park

The City has sent information to Metro to fulfill BTA requirements. Some of this information is provided in the BTA Maps and in BTA Table. Other information is provided below.

Baldwin Park Project List:

1. Baldwin Park Blvd from Ramona Blvd to Arrow Hwy
2. Maine Ave from Ramona Blvd to Arrow Hwy
3. Los Angeles St from West city limit to east city limit
4. Pacific Ave from Ramona Blvd to south city limit
5. Quente Ave from Badillo St south city limit
6. Franciscquito Ave from Ramona Blvd to south city limit

Bell

No response.

Bellflower

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Bell Gardens

City does not have a BTP. City indicated it has no existing or planned bikeways.
No materials received.

Beverly Hills

City does not have a BTP. City indicated interest in completing a BTP as part of future General Plan Update.
No materials received.

Bradbury

Not participating.

Burbank

City has a completed and adopted BTP. The BTP is available on the City's website.
List of proposed projects provided below.

Top Priority Projects

Class	Name	From	To	Mileage	Estimated Cost	Destinations
--	Citywide Bicycle Parking Program				$120,000	--
--	Bicycle Safety Education Program				$100,000	--
I	San Fernando Path	Los Angeles city limit	Burbank Metrolink Station	2.95	$3,927,744	Burbank Metrolink Station, Empire Center, Regional Route
I	Chandler Connector	Mariposa St	Burbank Metrolink Station	0.70	$695,989	Burbank Metrolink Station
I	Los Angeles River	Bob Hope Dr	Riverside Dr	2.10	$3,213,583	Equestrian Center, Johnny Carson Park, Regional Route
III	Mariposa St	Chandler Blvd	Clark Ave	1.80	$27,000	Chandler – LA River Regional Connector
III	Palm Ave	Mariposa St	Lake St			
III	Lake St	Palm Ave	Glendale city limit			
II	Victory Blvd	Clybourne Ave	Burbank Blvd	2.65	$116,750	Media City Center, Ralph Foy Park, Regional Route
II	Burbank Blvd	Victory Blvd	Victory Blvd/Pl			
III	Burbank Blvd	Victory Blvd/Pl	3rd Street			
II	3rd Street	Amherst Dr	Verdugo Ave	2.15	$91,750	Downtown District, Media City Center, McCambridge Park, Burbank High School
III	3rd Street	Verdugo Ave	Providencia Ave			
II	Amherst Dr	San Fernando Blvd	Glenoaks Blvd			
III	Amherst Dr	Glenoaks Blvd	6th Street			
II	Glenoaks Blvd	Providencia Ave	Glendale city limit			
III	Riverside Dr	Clybourne Ave	California St	1.15	$29,500	Media District, Regional Route
II	Riverside Dr	California St	Bob Hope Dr			
III	Beachwood Dr	Chandler Path	Valleyheart Dr	2.00	$255,000	Mountain View Park, Regional Connector
III	Valleyheart Dr	Beachwood Dr	Mariposa St			
III	Olive Ave	Lake St	Flower St	0.20	$3,000	Burbank Metrolink Station
III	Pacific Ave	Maple St	Keystone St	3.25	$123,750	Pacific Park, Residential Neighborhoods, Several Schools
III	Keystone St	Pacific Ave	Chandler Path			
III	Maple St	Pacific Ave	Chandler Path			
III	California St	Chandler Path	Riverside Dr	1.5	$22,500	Verdugo Park, Schools, Media District

Calabasas

Calabasas has a completed and approved BTP. Some of this information is provided in the BTA Maps and in BTA Table. Other information is provided below.

Calabasas Project List:

- Lost Hills Rd
- Park Sorrento
- Old Topanga Canyon Rd
- Malibu Hills Rd
- Calabasas Hills Rd
- Park Sienna
- Paul Revere Dr
- Thousand Oaks Blvd
- Las Virgenes Rd
- Mulholland Dr

Carson

The City of Carson completed a Pedestrian and Bike Plan that has been certified by Caltrans as BTA compliant. All required information is available in that plan.

Cerritos

The City of Cerritos reports that it has a bicycle plan. Cerritos has sent information to Metro to fulfill BTA requirements. The city does not have any priority bikeway projects at this time.

Claremont

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Commerce

Not participating.

Compton

The City reports that it has a bicycle plan.
No materials received.

Covina

The City reports that it has a bicycle plan. Covina has sent some information to Metro to fulfill BTA requirements. The city does not have any priority bikeway projects at this time, except for Class II bike lanes on Glendora

Cudahy

City does not have a BTP. City indicated interest in completing a BTP.
No materials received.

Culver City

Culver City has sent information to Metro to fulfill BTA requirements. The City does not have any bicycle related projects planned in the current or fiscal year. Priority projects include a critical link to the Exposition LRT Bikeway, Overland, Washington, and Culver Avenues.

Diamond Bar

The City reports that it has a Recreational Trail and Bicycle Route Plan (2001). Diamond Bar has sent information to Metro to fulfill BTA requirements. The City list of proposed projects including:

- Temple Ave
- Diamond Bar Blvd
- Golden Springs Dr
- Sunset Crossing Rd
- Sylvan Crossing Rd
- Sylvan Glen Rd
- Prospectors/Clearview Loop
- Amitos Pl
- Pantera/Leyland Loop
- Goldrush Dr

- Summitridge/Longview Loop
- Grand Ave

Downey

City does not have a BTP. City indicated interest in completing a BTP as part of their General Plan Update.
No materials received.

Duarte

No materials received.

El Monte

The City has sent partial information to Metro to fulfill BTA requirements. The City one proposed project: completion of the Emerald Necklace in conjunction with the Sierra Club and Amigos de Los Rios.

El Segundo

The City reports that it has a bicycle plan. City indicated interest in completing a BTA-compliant BTP.
No materials received.

Gardena

The city of Gardena has sent information to Metro to fulfill BTA requirements. This information is provided in the BTA Maps and in the BTA Table. No proposed project list was provided.

Glendale

The City reports that it has a bicycle plan. City indicated interest in completing a BTA-compliant BTP. Some BTA materials were received. No list of priority projects was received.

Glendora

The City reports that it has a bicycle route map. City indicated interest in completing a BTA-compliant BTP. Some BTA materials were received. No list of priority projects was received.

Hawaiian Gardens

The city of Hawaiian Gardens has sent information to Metro to fulfill BTA requirements. The city has one bicycle-related project planned at this time: Class I bike path on the Artesia/Norwalk Storm Drain.

Hawthorne

City indicated interest in completing a BTA-compliant BTP. Some BTA materials were received. No list of priority projects was received, other than completing the Dominguez Channel path and Green Line bikeway.

Hermosa Beach

City indicated interest in completing a BTA-compliant BTP. Some BTA materials were received. No list of priority projects was received.

Hidden Hills

Not participating.

Huntington Park

City indicated interest in completing a BTA-compliant BTP. Some BTA materials were received. No list of priority projects was received.

Industry

Not participating.

Inglewood

City indicated interest in completing a BTA-compliant BTP. Some BTA materials were received. No list of priority projects was received.

Irwindale

No materials received.

La Canada-Flintridge

The city of La Canada-Flintridge indicated that they have a completed bicycle plan as part of the City of Pasadena Plan. The City sent partial information to Metro to fulfill BTA requirements, including a bikeways map and bicycle ordinances. The city does not have any bicycle related projects planned at this time.

La Habra Heights

The city of La Habra Heights indicates that it has a completed bicycle plan as an element of its General Plan. The City sent partial information to Metro to fulfill BTA requirements. Some of this information is provided in the BTA Maps and in the BTA Table. Other information is provided below.

La Habra Heights Project List:

1. Hacienda Road: Develop a Class I bike path along Hacienda Rd from North City Limit to Avocado Crest Rd.
2. Harbor Blvd: Develop a Class I bike path along Harbor Blvd from North City Limit to South City Limit.
3. Corral Mountain Way: Develop a multi-use trail along Corral Mountain Way from La Habra Rd to Powder Canyon Right to Fullerton Rd.
4. West Road: Develop a Class III bikeway on West Rd from Santa Gertrudes Ave to Hacienda Blvd.
5. East Road: Develop a Class III bikeway on East Rd from Hacienda Rd to Fullerton Rd.
6. Multi-Use Trails: Develop a multi-use trail at the southern edge of the golf course with access off of East Rd to the east and west.
7. Multi-Use Trail: Develop a multi-use trail north of Murphy Ranch Park.

Lakewood

City indicates they have a completed bicycle plan. City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a bicycle route map. Projects identified include:

- South Street
- Delamo Blvd
- Woodruff Ave

La Mirada

City indicates they have a completed bicycle plan as part of a General Plan Update. City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a bicycle route map. One priority project was identified:

- Coyote Creek Channel Bicycle Trail

Lancaster

City indicates they are completing a trail map and general plan element. City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a bicycle route map of existing and proposed routes. One priority project was identified:

- Amargosa Trail project

La Puente

City indicates they have a BTA compliant BTP. No information was received.

La Verne

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a map of existing and proposed bicycle facilities. A list of priority projects includes:

- Bonita Ave

- Santa Fe Branchline
- Puddingstone Channel
- Wheeler Ave

Lawndale

No materials received.

Lomita

City indicated an interest in developing a BTA-compliant plan. All required BTA materials were received, and are shown in the BTA Maps and BTA Table. No list of priority projects has been developed.

Long Beach

The City has an approved BTA-compliant BTP (2001). BTA materials were received and included in the BTA maps and BTA Table. List of priority projects is presented below.

- Downtown-Alamitos Bay Bikeway
- Los Angeles River Access
- Midtown 10th Street Connection
- CSULB
- Alamitos Ave-Orange
- Westminster Ave Bikeway
- Pacific Avenue-San Antonio Dr Bikeway
- Del Amo Blvd Bikeway
- Pacific Center Boeing Site
- Harding Street
- Bikeway signing
- Bicycle parking
- Bicycle safety education

Los Angeles (City)

The City has an approved BTA-compliant BTP. BTA materials were received and included in the BTA maps and BTA Table. A list of proposed bikeways is presented below.

In addition to the designated bikeway shown on Maps A and B1-B5, the following corridors are indicated for further study during the 10 years following adoption of this Plan. Changes in traffic conditions, parking restrictions, roadway conditions, development patterns, and/or funding may provide future opportunities to designate and to develop Class I, Class II, or Commuter Bikeway facilities within these corridors:

CORRIDOR	EXTENT
Arlington Ave/Wilton Pl	(Franklin Ave to Harbor Subdivision RR ROW)
Broadway*	(Chavez Ave to Pico Blvd)
Bundy Dr - Centinela Ave	(San Vicente Blvd to Ballona Creek)
Canoga Ave**	(Victory Blvd to Ventura Blvd)
Crenshaw Blvd	(Venice Blvd to Harbor Subdivision RR ROW)
Fairfax Ave	(Hollywood Blvd to Venice Blvd)
Fountain Ave	(Sunset Blvd to Fairfax Ave)
Franklin Canyon Dr/Beverly Dr (cross mountain route)	(Mulholland Dr to Beverly Hills boundary)
Highland Ave	(Cahuenga Pass to Pico Blvd)
Hill St*	(Sunset Blvd to Pico Blvd)
Lincoln Blvd	(Santa Monica boundary to Sepulveda Blvd)
Pico Blvd	(San Vicente Blvd west to Exposition Bike Path)
First St (San Pedro)	(Gaffey St to Harbor Blvd)
Third St	(Vermont Ave to Doheny Dr)

Notes:
* These may involve bicycle use of bus-only or HOV lanes.
** Canoga Avenue is considered an alternate Class II bikeway should the Class II facility on DeSoto Avenue in this alignment become infeasible due to super major highway improvements mandated by the Warner Center Specific Plan.

Major bicycle facility projects indicated in the Bicycle Plan maps as Class I (bike path) facilities may ultimately be constructed as combinations of Class I, Class II, and Commuter Bikeway facilities due to topographic, right-of-way, and/or financial constraints. This Bicycle Plan supports flexibility in

implementation when confronting such factors. One of these major bicycle facility projects is the Los Angeles River Bike Path. This bike path would eventually link the area adjacent to Canoga Park High School with Long Beach Harbor, passing through Downtown Los Angeles, linking several activity centers and regionally significant open spaces within the City's most important Greenway Corridor. The magnitude of this project requires a firm long-term commitment to its implementation over the life of this Bicycle Plan and beyond.

Exposition Bike Path

This bike path, whether as a rails-to-trail conversion or a rails-with-trail alignment, offers direct bicycle access from the West Los Angeles area to Exposition Park; it is a critical link in the Bikeway System for an area of the City where few streets are viable for striping of bicycle lanes.

Beach Bike Path Extensions

This Bicycle Plan designates an extension of the Venice Beach Bike Path southerly to the Marina del Rey channel entrance, and an extension of the Will Rogers State Beach Bike Path northerly from Temescal Canyon Road to the City boundary. Implementation of these projects would provide a continuous bikeway from the westerly City limit on the coast to Marina del Rey through Santa Monica. A flexible approach to the northerly extension is endorsed, wherein beach bike path segments may be linked by bicycle lanes on Pacific Coast Highway or a bike path adjacent to Pacific Coast Highway.

Arroyo Seco

This Bicycle Plan endorses the concept of a bikeway paralleling the Arroyo Seco Channel/Pasadena Freeway and intersecting the Los Angeles River Bike Path. This ultimately would link northeast Los Angeles and the cities of Pasadena and South Pasadena to Downtown Los Angeles. The actual alignment may involve a veloway (elevated bikeway); alternatives include linking existing bikeways in the Arroyo Seco with new bike path and/or bike lane segments.

West Los Angeles Veloway

This Bicycle Plan designates Class I and Class II facilities in the vicinity of UCLA and the Veterans Administration complex in Westwood as an endorsement of the West Los Angeles Veloway. The ultimate alignment of this facility may vary from that shown on the Bicycle Plan map(s); final design is subject to the approval of responsible agencies. The elevated Class I portion of this bikeway would provide for direct bicycle access to and from Westwood Village/UCLA campus over Wilshire Boulevard, ultimately linking up with the Santa Monica Transit Parkway Bike Path at Sepulveda Boulevard. Bicycle access to Major Economic Activity Centers requires particular attention regarding the mapped Bicycle Plan Citywide Bikeway System.

Port of Los Angeles

The Port is one of the largest sources of employment in the South Bay area. Future expansion of the commercial and recreational facilities within the Port should address opportunities for expansion of the Bikeway System in the Port area and its vicinity. The Port should also consider the inclusion of bicycle facilities when designing streets which serve high employment areas. The 20-mile-long Alameda Corridor, extending from the Ports of Los Angeles and Long Beach to rail yards southeast of the DSP area, may provide opportunities for bicycle facilities on adjacent parallel streets or rights-of-way. Future studies are warranted to identify potential bikeway alignments and/or linkages in the vicinity of the Corridor. Cooperation with adjoining jurisdictions (including the County of Los Angeles) will be necessary to complete these linkages.

Los Angeles International Airport (LAX) Bicycle Plan

Citywide Bikeways provide for bicycle circulation at the periphery of LAX. In addition to provision of secure, convenient and adequate bicycle parking facilities at the Lot C Transit Center and at the Green Line Aviation Boulevard station, (1) direct bicycle access to the Lot C Transit Center; (2) support for the Harbor Subdivision railroad right-of-way bike path adjacent to Aviation Boulevard; and (3) bike lanes on World Way West should be incorporated into LAX Master Plan proposals to ensure bicyclist access to terminals and to employment areas on Airport property.

Los Angeles (County)

The County has an older (1976) bicycle plan. The County indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, and are shown in the BTA Maps and BTA Table. No list of priority projects was received.

Lynwood

Not participating.

Malibu

Pacific Coast Highway is a State Bicycle Route.

Manhattan Beach

City is in the process of developing a bicycle plan. Some BTA materials were received, and are shown in the BTA Maps and BTA Table. Priority projects include:

- Valley Dr
- Ardmore Ave
- Highland Ave
- Manhattan Ave
- Rosecrans Ave
- Marine Ave
- Pacific Ave
- Peck Ave
- 2nd St

Maywood

Not participating.

Monrovia

City indicated they had an existing bicycle plan and an interest in developing a BTA-compliant plan. No materials received.

Montebello

No materials received.

Monterey Park

The City indicates that it has a bicycle plan in progress, and has an interest in it being BTA-compliant. The City sent information to Metro to fulfill BTA requirements. Some of this information is provided in the plan maps and in BTA Maps and BTA Table. Other information is provided below.

Monterey Park Project List:

1. The ELAC Transportation Center: The city is awaiting federal appropriations to construct the Transportation Center that currently is in the planning stages. There is some limited funding to complete Phase I of this plan that includes the busway construction and essential amenities.
2. The Mixed-Use and Pedestrian Linkages Plan: This Plan is being taken to the Planning Commission for adoption and once adopted by City Council, the City will look for funding to implement the recommendations.

Norwalk

County indicated an interest in developing a BTA-compliant plan. Some BTA materials were received and are shown in the BTA Maps and BTA Table. No list of priority projects was received.

Palmdale

The City completed a bicycle plan in 1999 that has been certified by Caltrans as BTA-compliant. All required information is available in that plan, and summarized in the BTA Maps and BTA table. Priority projects include:

- Bicycle linkages with Transit Village Study
- Regional bicycle trail connecting Transportation Center and Park n' Ride lots

Palos Verdes Estates

Not participating.

Paramount City

County indicated an interest in developing a BTA-compliant plan. City indicated a 'no' to all BTA requirements. No list of priority projects was received.

Pasadena

City has a BTA-compliant BTP. All required information is available in that plan, and summarized in the BTA Maps and BTA table. Top priority projects are listed in the City's BTP.

Pico Rivera

City indicates it has a Bikeway System Study (2002). Some BTA materials were received, and are shown in the BTA Maps and BTA Table. A list of priority projects is shown below.

Pico Rivera Project List:

1. Woodford Street/Cate Roade Dufee Avenue. This segment encompasses three streets that would provide a connection between Streamland Park and the existing designate bike lane located on San Gabriel River Parkway.
2. Fairway Drive/San Gabriel River Parkway/Manning Road. This segment connects with the existing bike lane located on San Gabriel River Parkway.
3. Beverly Road. This segment connects with the San Gavriel River Parkway bike lane, and continues westerly to connect with a proposed bike route in Durfee Avenue and then ultimately connecting to the existing Rio Hondo River Trail on the west and to Rio Hondo Park on the south.
4. Durfee Avenue/Jackson Street. This segment is a major north/south segment that would provide a continuous link between the northern and southern portions of the City.
5. Passons Boulevard. This segment is a major north/south segment that provides a continuous link through the central portion of the City.
6. Mines Avenue. This segment, proposed within a median in Mines Avenue, extend both easterly and westerly from Passons Boulevard. The easterly portion of this segment connects to the San Gabriel River Trail.
7. Claymore Street. This relatively short segment serves as an east/west connection to Passons Boulevard and Serapis Avenue.
8. Serapis Avenue. This route extends northerly from Claymore Street, situated parallel to Passons Boulevard, and ultimately connects to Rex Road.
9. Rex Road. This segment extends easterly from Passons Boulevard, to connect with Paramount Boulevard.
10. Paramount Boulevard. This segment extends north from Rex Road to connect with Washington Boulevard.
11. Washington Boulevard. This segment, extending westerly from Paramount Boulevard, provides a connection to the Rio Hondo River Trail.
12. Slauson Avenue. This segment, extending easterly from Paramount Boulevard, provides connection to the Rio Hondo River Trail.

Pomona

The City has sent information to Metro to fulfill BTA requirements. Some of this information is provided in the BTA Maps and in the BTA Table. Other information is provided below.

Pomona Project List:

1. Four City Joint Project. This route would start in San Dimas traveling through La Verne and Pomona and end in Claremont with a connection to the Pacific Electric Bike Trail in San Bernadino County.

Rancho Palos Verdes

City indicated they had a completed bicycle plan. No materials received.

Redondo Beach

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including1994 Bay Cities Regional Bikeways Map. One priority project was identified: Bay Cities Regional Bikeway.

Rolling Hills

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a zoning map and open space plan. No list of priority projects was received.

Rolling Hills Estates

Not participating.

Rosemead

City indicated that it had some existing bikeways, but no proposed bikeways. No other materials received.

San Dimas

City indicated that it already had a BTA-compliant plan (1997 Bikeway Systems Plan). Some BTA materials were received, including a map of existing and proposed bicycle facilities. Priority projects include:

- Foothill Blvd
- Allen Ave
- Bonita Ave
- San Dimas Ave
- Walnut Ave
- Arrow Hwy
- Lone Hill Ave
- Via Verde

San Fernando

City indicated they had a 1993 bicycle plan. Indicated an interest in having a BTA-compliant plan. Some BTA materials were received, including a proposed facility on Pacoima Wash path. No list of priority projects was received.

San Gabriel

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received from General Plan Elements. No list of priority projects was received.

San Marino

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received from General Plan Element. No list of priority projects was received.

Santa Clarita

City indicated they had a bicycle plan. Indicated an interest in having a BTA-compliant plan. Some BTA materials were received, including digital files of bike routes, bus shelters, bus stops, rail stations, trail network, bicycle accident data, and bike locker inventory. No list of priority projects was received.

Santa Fe Springs

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a map of proposed bikeway facilities (shown in BTA Maps). Future projects include: Telegraph-Bloomfield, and Norwalk-Santa Fe Springs.

Santa Monica

City indicated that it already had a bicycle plan (1991) that was in the process of being updated. Some BTA materials were received, including a map of existing and proposed bicycle facilities. One priority project was identified: Exposition Bikeway from the City of Los Angeles boundary west to downtown Santa Monica.

Sierra Madre

No materials received.

Signal Hill

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received from General Plan Element. Two priority projects were identified:

1. Pacific Electric Right-of-way into Long Beach
2. Southwest to northeast bikeway

South El Monte

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received. No list of priority projects was received.

South Gate

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received. One priority project was received: Cesar Chavez Park extension along the Southern Avenue power line corridor.

South Pasadena

City indicated that it had a bicycle plan. No materials received.

Temple City

Not participating.

Torrance

City indicated that it already had a bicycle plan (1999). Some BTA materials were received, including a map of existing and proposed bicycle facilities. No list of priority projects was received.

Vernon

Not participating.

Walnut

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including a 2004 Trails Map. No list of priority projects was received.

West Covina

City indicated that it already had a bicycle plan. Some BTA materials were received, including a bikeways map. No list of priority projects was received.

West Hollywood

City indicated that it already had a BTA-compliant bicycle plan (2003). All BTA materials were received, including a map of existing and proposed bicycle facilities. Priority projects include:

- Santa Monica Blvd. Bikeway
- Fountain Ave
- Sunset Blvd
- La Brea Ave
- Cynthia-Palm-Holloway
- Advanced Stop Bars
- Parking lane striping
- Share-the-Road signs
- Bicycle parking
- Sweetzer-Rosewood-Ashcroft
- San Vincente Blvd
- Westmount-Huntley-Beverly Center

Westlake Village

City indicated an interest in developing a BTA-compliant plan. Some BTA materials were received, including existing and planned facilities. No list of priority projects was received

Whittier

City indicated that it already had a bicycle transportation plan (2002). Some BTA materials were received, including a bikeways map. Priority projects include:

- Greenway Trail
- Laurel Ave
- Greenleaf Ave
- Hadley St
- Mar Vista St
- Colima Rd
- Leffingwell Rd
- Worman Mill Rd
- Norwalk Blvd

APPENDIX B: BICYCLE COMMUTER ESTIMATING METHODOLOGY

Bicycle Ridership Demand Estimating Model

Estimates of existing and future bicycle commuter ridership for each of the 89 jurisdictions in Los Angeles County is based on a modeling technique originally developed for the Los Angeles County Metropolitan Transportation Authority in 1999 for the Long Range Plan. The model is used for the following purposes:

a. Project existing and future bicycle transportation usage (work, school, shopping) in a community;
b. Identify increases in usage from completion of all or part of a bikeway system;
c. Identify specific benefits of bikeway investments and bicycling, in terms of reduced vehicle trips, reduced vehicle miles traveled, and improvements in specific air quality components.

While the Bicycle Transportation Account (BTA) requirements identify estimates of bicycle commuters only, the 1999 model includes the total range of bicycle transportation trips in a community, including work, bike-transit users, school, and utility trips. This model has been used by a variety of agencies around the United States.

Establishing Baseline Bicycle Transportation Use

The most common measurement for determining bicycle commute mode share is through the U.S. Census Journey-to-Work data. Unfortunately, the U.S. Census undercounts bicycle commuters for the following reasons.

First, the Census includes only employed adults ages 16 and over in the modal analysis. This deletes the biggest group of bicyclists, students, who by bicycling are in many cases still saving a vehicle trip.

Second, bicyclists who ride to transit or commuter rail service may, in many cases, identify themselves as a transit user since the overall non-bicycling mileage is probably much higher.

Third, 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.

Finally, utilitarian bicycle trips for shopping and other reasons are not reflected in the U.S. Census figures, even though these trips were the highest trip purpose cited in the National Bicycling and Walking Study.

For the purposes of this analysis, students, bike-transit users, and utilitarian trips should be added to the estimate of baseline bicycle usage in your community.

The U.S. Census statistics are supplemented by the inclusion of school children. The total school aged population (ages 6-14) from the U.S. Census is factored by the estimated percent of school children who currently bicycle as their primary mode of transportation to school. In most communities, this will vary between 5% and 20% of all students.

College students are also identified in the 2000 U.S. Census. Use local college transportation surveys or a conservative estimate of the assumed mode split. For most communities, this will be between 5% and 20%, with the National Bicycling and Walking Study, FHWA, 1995, Case Study No. 1 showing an average college student bicycle commute rate of 40% and overall employed adult bicycle commute rate of 10%.

Bicycle commuters who connect with bus or rail transit also represent a pool of undercounted commuters. RTD of Denver completed a bike-n-ride survey in 1999 that showed 1.4% of total boardings being bike passengers. Of those people, 63% represent new bicycle commuters. This will translate into additional daily bicycle commuters once all of the buses and trains in your community either carry bicycles or provide adequate bicycle parking at all stations.

Utilitarian trips are also included in the baseline ridership figures. The National Bicycling and Walking Study, FHWA, 1995, Case Study No. 1, page 17, using data from seven different sources, identified utilitarian trips being made by 26.1% of active bicyclists versus 15% for work/school trip making. Thus, it is assumed that for every one work/school bicycle trip, there are approximately 1.74 utilitarian trips.

Estimating Current Ridership

Table A-1 – Estimating Existing Bicycle Transportation Usage, Los Angeles County, 2000

Employed Adults, 16 Years and Older	Input	Calculated Totals	Source(s)
2000 Population (1)	9,519,338		U.S. Census or other
2000 Employed Persons (1)	4,312,264		U.S. Census or other
2000 Bicycle Commute Share (1)	0.55%		U.S. Census or other
Travel Time Less than 9 Minutes (1)	322,789		U.S. Census or other
2000 est. Bicycle Commuters (1)		24,015	U.S. Census or other
School Children	**Input**	**Calculated Totals**	**Source(s)**
2000 Population, Ages 6-14 (1) K-8	2,200,762		U.S. Census or other
2000 Bicycle Commute Share (2)	3%		Default or local surveys
2000 est. Bicycle School Commuters (3)		55,019	
College	**Input**	**Calculated Totals**	**Source(s)**
2000 College Population (1)	2,200,762		U.S. Census
2000 Bicycle Commute Share (4)	2%		Local Surveys
2000 est. Bicycle College Commuters (5)		44,015	
Bike-Transit Users	**Input**	**Calculated Totals**	**Source(s)**
Average Daily Transit/Rail Exits (6)	1,171,832		
Average bike-transit boarding percentage (7)	0.7%		Bikemap.com survey of bike boardings on Caltrain
Bike-transit boardings in LA County (8)		7,734	Based on above
Utilitarian (non-work or school) Trips	**Input**	**Calculated Totals**	**Source(s)**
Percent of work/school bicycle trips (9)	174%		Local surveys or default
Estimated bicycle utility riders (10)		90,044	
Total Estimated Daily Bicycle Ridership (excl. recreation)		262,613	

NOTE: Every factor used in this model is documented in a series of detailed footnotes and sources at the end of this section. All assumptions are based on published data.

To derive an individual city estimate, its population as a proportion of the County total is derived and then applied to the total daily ridership figure of 262,613 above. A step-by-step explanation is provided below.

City of Los Angeles Population (2000)	3,694,820
County of Los Angeles population (2000)	9,519,338
% City of Los Angeles of County pop.	38.67% (3,694,820/9,159,338 = 38.67%)
% applied to total ridership	101,930 (38.67% x 262,613 = 101,930)

Estimating Future Ridership

Of all of the none-demographic factors influencing bicycle ridership, the availability of bicycle facilities is the most important factor. In order to estimate future ridership, a correlation between the existing and built-out bikeway system must be made with existing and future ridership. In other words, bicycle ridership in any community as a percentage of trips will typically not increase—regardless of demographic or population shifts—if there is no improvement in facilities. Before and after studies of bicycle usage on corridors that have had bikeway facilities offer the best empirical link between facilities and usage. A nationwide search for this data was conducted as part of this research, with summary findings described below.

City of Portland

The City of Portland is widely recognized as being one of the most progressive large cities in the United States in terms of promoting bicycle commuting and developing bikeways. The research and findings support the contention that the investment in bikeways contributes to an increase in bicycle commuting and ridership. The main conclusion of the research is that, even considering background factors such as density, configuration of the downtown, and weather, the completion in bridges has resulted in a substantial increase (over 500%) in ridership. For example, there was a 137% average increase in bicycle ridership before and after bike lanes were constructed at eight locations.

City of San Francisco

Figure 2 shows the increase in bicycle ridership at eight (8) locations in San Francisco after bike lanes were installed, ranging from 23% to 83% increases. The consistency of these increases appears to support the connection between the improvements and increases in usage.

City of Seattle

Research conducted by Stuart Goldsmith as part of the National Bicycle & Walking Study (Case Study No. 1) and also published in the FHWA document Guidebook on Methods to Estimate Non-Motorized Travel are based on extensive preference surveys and other research tools, designed to establish the potential bicycle ridership for specific corridor improvements. According to Goldsmith's projections, the potential bicycle commuter mode share in Seattle for areas within reasonable distance of a regional bikeway system was about 8%. This is used as another independent source for this section of analysis.

Before and after bicycle counts offer relatively solid evidence that improvements do increase bicycle usage. The use of empirical bicycle counts and preference surveys offers a unique opportunity to compare those increases between three different cities to verify if there is a general pattern.

Relevance of Study Cities

Some conclusions can be drawn from the research conducted in other cities. A comparison of key data on mode share between Los Angeles County, Multnomah County (Portland), King County (Seattle), and San Francisco County in 1990 is presented below in Table A-2, followed by mode share increases after completion of bikeway facilities.

Table A-2 – 1990 Comparison of Los Angeles County to Other Counties

	Los Angeles County	King County	Multnomah County	San Francisco County
Bicycle Commute Mode Share	.6%	.9%	.6%	.9%
Total Transit Commute Mode Share	6.4%	9.6%	8.6%	34%
Commute Travel Time Under 14 Minutes	21%	28%	22%	17%
Days of Rain Per Year	37	153	150	67
Population Density of Central Cities	7,495	2,975	6,146	14,776

Sources: 1990 U.S. Census and National Geographic World Atlas

Conclusions from this table are:

a. Los Angeles County has a more dispersed commute pattern than the three case studies (Multnomah County, King County, and San Francisco), which should be reflected in the transit usage figures since transit relies on concentrated corridor travel patterns. Transit usage is also correlated with population density. However, there does not appear to be any correlation between transit use, population density, and bicycle usage.
b. Travel time

c. Days of rain should influence bicycle usage. However, Los Angeles County has 75% fewer days of rain and yet about the same level of bicycle usage.
d. Studies of bicycle use in major metropolitan areas by the FHWA show little or no correlation between factors such as population density and bicycle use. The bicycle commute share is relatively consistent among all major metropolitan areas in the United States, and is relatively consistent between all case studies used in this analysis.

The percent completion of each bikeway system is used in the Bikeway Model. For example, Portland's system is about 50% complete. The adjusted increase in ridership assuming the bikeway system was 100% completed in each city is shown in the final column. For example, the usage of bicycles in Portland is expected to increase proportionately to the completion of the entire regional bikeway system. This assumes that the increases counted at the selected locations in Portland, for example, are limited by the fact that many of the existing bikeways are disconnected or separated by gaps in the system.

The average increase in ridership based on full completion of a bikeway system is estimated to be 279%, which represents the average of the three case study cities.

This connection between system completion and ridership has been crosschecked in the National Bicycling and Walking Study, Case Study No. 1. Studies of five (5) university communities (Davis, Madison, Gainesville, Boulder, and Eugene) showed a link between the quality of a bikeway system and ridership. For example, Davis has the most extensive bikeway system per capita and also the highest bicycle commute share. "There are still three times more commuter cyclists in cities with higher proportions of bike lanes," according to the National Bicycling and Walking Study (p. 41).

Following system completion, mode share increases were realized as shown in Table A-3.

Table A-3 – Estimate of System Completion and User Increases

Studies of Other Cities	Corridor Increases	System Completion	Adjusted Increase
City of Portland (1)	137%	50%	274%
City of San Francisco (2)	61%	20%	305%
City of Seattle (3)	90%	35%	257%
Average			279%
Projected Increases in Your Community	**Current (2000)**	**Buildout**	**Increment**
Bicycle Commute Mode Share (4)	0.55%	1.53%	0.98%
Total Daily Bicycle Commuters (5)	196,812	548,544	351,732
Total Daily Bicycle Trips (6)	393,624	1,097,088	703,463
Reduced Daily Vehicle Trips (7)	265,338	739,536	474,197
Reduced Daily Vehicle Miles (8)	857,232	2,389,229	1,531,996

Notes and Sources:

(1) Before and after bicycle counts conducted by the City of Portland.
(2) Before and after bicycle counts conducted by the City of San Francisco.
(3) Based on preference survey study conducted by Stuart Goldsmith for the City of Seattle.
(4-6) Corridor increases refers to the average increase in bicycling in the corridors in each city, before and after bikeways were installed. System completion refers to the percent completion of the bikeway network in each city. Adjusted increase reflects the projected amount of bicycling that will occur when the system is completed, based on studies of communities with completed or nearly completed bikeway systems (National Bicycling & Walking Study, Study No. 1, 1995). This translates into an average 279% increase upon system completion.
(7) Current bicycle commute mode share from U.S. census for LA County (.63%), adjusted to potential mode share when system is 100% complete (1.76%), and the increment (1.13%).
(8) Same as above except that it shows total bicycle commuters (school and college students).
(9) Total commuters from previous line times 2 (each commuter makes 2 trips).
(10) Total reduced trips by category (adult employed, students), times 279% increase (see notes 10-14 after Table A-1).
(11) Total reduced vehicle miles by category (adult employed, students), times 279% increase (see notes 10-14 after Table A-1).

Qualitative Factors Influencing Ridership

Aside from the quantitative changes in ridership caused by bikeway improvements, there are numerous qualitative improvements that simply cannot easily be measured. These include:

Livability

Bicycling helps support live-work patterns that are compact, with trips less than 10 miles in length. In areas where parking and traffic conditions are congested, bicycling may be attractive to people when costs and door-to-door travel times are considered. Bikeways may help calm traffic conditions on local streets, thus improving their livability, both by the physical presence of bike lanes and other devices, and by helping to reduce local vehicle trip making. The best measurement of this livability index may be in the range of options available to the average household, and the average trips made per household.

Safety

Bikeway improvements have a direct, measurable impact on crashes, injuries, and fatalities. The United States Department of Transportation has a Federal policy goal of reducing bicycle incidents by 50% in the next 20 years. A similar reduction in crashes, injuries, and fatalities in communities may also serve as a quantitative index measurement. There is also a significant public cost savings that can be measured in saved expenditures by reducing bicycle crashes.

Health

The poor health of Americans is a well-documented fact, with the public cost of this condition also identified. Bikeway improvements and the related increase in exercise would have a quantifiable improvement in health and related public costs.

Mobility

Mobility for those unable or unwilling to drive is another potential measurement. A significant proportion is unable to drive because of age, income, or other factors, making bicycling one of their few options. The linkage to transit vastly increases the potential benefits of bikeway improvements to this group.

Bicycle Parking

The provision of adequate bicycle parking should be an integral part of any bikeway master plan. his can be addressed by providing recommended (a) designs and specifications of bike racks and lockers, (b) zoning requirements for new and redeveloped properties, specifying the amount, type, and location of bicycle parking, and (c) identifying bicycle parking as a stand-alone project to be funded and implemented—possibly as a public-private partnership. Providing protected bicycle parking in congested employment areas and at major events should also be a priority.

Bike-Transit Improvements

Funding bike racks on buses is already underway in many communities. Bike-transit improvements should be continued by increasing bike capacity at transit centers, on transit and commuter rail cars, and possibly through innovative techniques such as the Bike Station concept.

Changing Facilities

Providing places for bicyclists to change and shower may be addressed through recommended zoning requirements. Innovative strategies for mature employment areas may include employer subsidies for membership to local health clubs.

Education and Marketing

Bicycle master plans should contain detailed strategies to improve bicycle safety education and training, setting specific criteria for curriculum and funding strategies. Strategies for marketing and promoting bikeways and bicycling should also be included, such as the provision of maps and brochures.

Security/Management

Other factors that influence bicycle ridership include security, type of facility, surrounding land uses, and connectivity. Security includes personal

security on facilities where safety is a real or perceived problem, and also the security of a bicycle once it is parked. A study of security and crime on multi-use trails by the Rails-to-Trails Conservancy concluded that security and crime were the same or less than in the surrounding community. Future updates of the sub-regional plans may address this issue by presenting facts on security, and strategies on how to effectively manage existing and proposed bikeways.

Land Use

Surrounding land uses also affect bicycle ridership. Bikeways that serve residential areas and major activity centers such as schools, commercial areas, and parks, attract more bicycle riders than bikeways that serve industrial and warehouse areas, for example. Higher density areas would also appear to be related to higher bicycle use, although there is a trade-off between greater accessibility and higher traffic volumes on available streets that are probably off-setting.

Model Development and Documentation

Projecting future bicycle usage with the development of new bikeways is very similar to projecting demand for TDM programs and virtually many alternative transportation systems in that it is based on numerous assumptions and limited empirical data. This is partially because:

a. There are no completed bikeway systems in the United States outside of a limited number of university and college towns on which to collect empirical data on bicycle usage.
b. There are few data collection efforts to measure before and after usage.
c. Bicycle usage, as all alternative transportation use, is highly subject to local physical, social, geographic, climate, and other patterns and conditions.

This section summarizes existing research and sources on bicycle ridership and projections on future demand, and provides a recommended methodology and future projections for each of the three funding scenarios.

Relatively little research has been done on projecting future bicycle demand, or on the relationship between bicycle improvements and demand. This section provides an overview of existing bicycle demand estimating tools, and identifies the relevance to methods used in this analysis.

The Guidebook on Methods to Estimate Non-Motorized Travel: Overview of Methods (FHWA-RD-98-165, July 1999) provides an in-depth review of existing bicycle demand methodologies, but endorses no specific methodologies. The report does provide some examples of demand forecasting methodologies, but no empirical information is provided in any of the models that suggests the estimates are based on anything but educated guesses. Most of the models reviewed make an arbitrary estimate of future bicycle ridership. The study does cite significant disadvantages, or concerns, with using any of the relative demand, supply quality analysis, or supporting tools and techniques methods. In short, the factors that govern a person's decision to bicycle to work or school are vastly more complex than the decision to drive or even take transit. For example, there are climate, topography, personal safety and security, carrying capacity, trip length, personal health and physical abilities, bicycle ownership, and other factors which influence this decision and which are difficult to model accurately.

Aggregate studies that compare the demographics, population density, and other statistics from one metropolitan area to another, and attempt to correlate potential changes in bicycle usage based on any one or combination of items and the state of the bikeway system, do not yield meaningful results according to the FHWA study. For example, there is no strong correlation between population density and bicycle ridership, although it seems that there should be given the increased proximity of people to their destinations. This could be because (a) walking is more efficient in dense areas, (b) street and traffic conditions are often intolerable to many people, and (c) there are typically enhanced transit services that may diminish the need to bicycle. A study of 30 California cities conducted in 1994 (Alta Planning + Design) plus results from the *National Bicycling and Walking Study* (FHWA, 1995) showed a significant correlation between bicycle ridership and average age and, to a lesser extent, average income. This can be explained by high bicycle ridership in university and college

communities and in lower income areas--both of which have lower than average ages.

Case Study Number 1 (Reasons Why Bicycling and Walking Area and Are Not Being Used More Extensively as Travel Modes) of the National Bicycling and Walking Study (FHWA, 1995) attempts to correlate the results of preference surveys and other data from cities with bicycle ridership. The study concludes that age is the strongest determinant to bicycle usage, followed by trip distance, perceptions of safety, and presence of support facilities such as showers and bicycle parking. The study also isolated environmental factors in a city related to bicycle usage, with the strongest factors (in order of importance) being: (a) presence of a university, (b) average commute distance, and (c) amount and quality of the bicycle system. "A mild inverse relationship exists between commute distance and bicycle commuting—but again if university towns are removed, this relationship all but disappears. Even when university towns are excluded from consideration, cities with higher levels of bicycle commuting have on average 70% more bikeways per roadway mile and six times more bike lanes per arterial mile. Given the considerable difference in the levels of bicycle commuting between the two groups, the presence of on-road facilities looms large. (FHWA, Case Study No. 1, p. 35)

Notes and sources from Table A-1:

Notes and Sources:

(1) 2000 U.S. Census and estimates utilizing 1990 percentages.

(2) Lamorinda School Commute Study (Fehr & Peers Associates, 1995) and San Diego County School Commute Study (1990).

(3) Estimated school children who commute by bicycle, as of 1990.

(4) National Bicycling & Walking Study, FHWA, Case Study No. 1, 1995. Review of bicycle commute share in seven university communities (5%) – Reduced based on Community College and size of Modesto.

(5) Estimated college students who commute by bicycle, as of 1990.

(6) American Public Transportation Associaction Statistics, first quarter 2002

(7) Bikemap.com survey of bike-transit ridership on Caltrain system, 6% of riders bike boardings

(8) Ibid.

(9) National Bicycling & Walking Study, Case Study No. 1, p.16

(10) Total work, college, and transit bicycle users times 174 percent

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APPENDIX C: GLOSSARY

AASHTO - American Association of State Highway and Transportation Officials. AASHTO is a nonprofit, nonpartisan association representing highway and transportation departments in the 50 states, the District of Columbia and Puerto Rico.

ADA - Americans with Disabilities Act

ADT - Average Daily Traffic

Bicycle Boulevard - Streets designed to limit or prohibit motor vehicle traffic, using barriers or other design elements, in order to enhance bicycle safety and enjoyment.

Bicycle Facilities - A general term for improvements and provisions made by public agencies to accommodate or encourage bicycling, including bike racks and lockers, bikeways, and showers at employment destinations.

BAC - Bicycle Advisory Committee

Bike Lane - A striped lane for one-way bike travel on a street or highway.

Bike Path - A right of way separate from a street or highway for bicycle travel, typically along rail, water, or utility corridors.

Bike Route - A travelway for bicycles through a community, providing a superior route based on traffic volumes and speeds, street width, directness, and/or cross-street priority, denoted by signs only.

Bikeway - All facilities developed primarily for use by bicycles.

Caltrans Highway Design Manual, Chapter 1000 - Chapter 1000 in the Caltrans Highway Design Manual provides engineering and design guidelines for bikeways.

Class I Bikeway - See Bike Path

Class II Bikeway- See Bike Lane

Class III Bikeway - See Bike Route

Clearance, Lateral - Width required for safe passage of a bicycle and emergency and maintenance vehicles as measured on a horizontal plane.

Congestion Management Program - A once state-mandated, now voluntary program recommending the monitoring and mitigation of increased congestion on regional highway routes and transit systems.

CMAQ - Congestion Management and Air Quality (TEA-21 funding program)

CMP - See Congestion Management Program

FHWA - Federal Highway Administration

Geometry - The vertical and horizontal characteristics of a transportation facility, typically defined in terms of gradient, degrees, super elevation, and travel speed.

Grade Separation - Vertical isolation of travelways through use of a bridge or tunnel so that traffic conflicts are minimized.

Loop Detector - A device placed under the pavement at intersections which can detect a vehicle or bicycle and trigger an actuated or semi-actuated signal to turn green.

Mode Split - Percentage of trips that use a specific form of transportation. A one percent bicycle mode split indicates that one percent of trips are made by bicycle.

MUTCD - Manual of Uniform Traffic Control Devices, adopted for use by Caltrans.

NPTS - National Personal Transportation Survey

Reversion - Process by which bicycle facilities are removed or converted to non-bicycle use (travel or parking lanes) in the future.

Right-of-Way - The right of one vehicle, bicycle, or pedestrian to proceed in a lawful manner in preference to another vehicle , bicycle, or pedestrian. Also, the strip of land over which a transportation facility is built.

SAFETEA-LU - The Safe, Accessible, Flexible, Efficient Transportation Equity Act – A legacy for Users (Federal Transportation Legislation)

Shared Pathway - A trail that permits more than one type of user, such as a trail designated for use by both pedestrians and bicyclists.

Shared Roadway - A type of bikeway (typically a bike route or bike boulevard) where bicyclists and motor vehicles share the same roadway with no striped bike lane.

Sight Distance - The distance a person can see along an unobstructed line of sight.

STP - Surface Transportation Program (TEA-21 funding program)

TAC - Technical Advisory Committee

TCM - Transportation Control Measure

TDA - Transportation Development Act

TDM - See Transportation Demand Management

TEA - Transportation Enhancement Activities

Traffic Calming - Changes in street alignment, installation of barriers, and other physical measures to reduce traffic speeds and/or cut-through volumes in the interest of street safety, livability, and other public purposes.

Traffic Control Devices - Signs, signals, or other fixtures, whether permanent or temporary, placed on or adjacent to a travelway by authority of a public body having jurisdiction to regulate, warn, or guide traffic.

Traffic Volume - The number of vehicles that pass a specific point for a specific amount of time (hour, day, year).

Transit Center - Any major transfer point for pedestrians and bicyclists who walk or bike to transit.

Transportation Demand Measures (TDM) - Generally refers to policies, programs, and actions that are directed towards increasing the use of high occupancy vehicles (transit, carpooling, and vanpooling) and the use of bicycling and walking with the express purpose of reducing or limiting vehicle cold starts and miles traveled for congestion and air quality purposes.

Utilitarian Trips - Trips that are not for work or recreational purposes, such as running errands.

VMT - Vehicle Miles Traveled

VT - Vehicle Trip

APPENDIX D: TECHNICAL RESOURCES FOR PLANNERS AND ENGINEERS

ISTEA

In 1991, The Intermodal Surface Transportation Efficiency Act (ISTEA) was passed by Congress, recognizing the increasingly important role of bicycling and walking in creating a balanced, intermodal transportation system. Important provisions were to require the State DOT's to fund a bicycle and pedestrian coordinator, and increase use of nonmotorized modes and public and safety programs. Other selected provisions were:

- When Federal-aid funds are being used to replace or rehabilitate bridge decks, except on fully access controlled highways, safe bicycle accommodations must be considered and provided where feasible.
- Construction of a pedestrian walkway or a bicycle transportation facility are deemed to be highway projects; hence, the Federal share is 80 percent.
- No motorized vehicles should be allowed on any trails except as necessary for maintenance.
- Bicycle projects must be principally for transportation rather than recreational purposes.

The National Bicycling and Walking Study, published in 1994, outlines a plan of action to promote bicycling and walking as viable transportation options. The goals of doubling the percentage of trips made by bicycling and walking, and reduce the number of casualties by 10 percent. (www.fhwa.dot.gov)

TEA-21

The Transportation Equity Act for the 21st Century (TEA-21), passed by Congress and signed into law in 1998 and expired in 2003, continued the integration of bicycling and walking into the transportation mainstream. TEA-21 required that local jurisdictions consider bicycling and walking in transportation plans and projects. Section 1202 states that bicycling and walking facilities "shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation facilities, except where bicycle and pedestrian use is not permitted."

Like ISTEA, bicycle projects could be funded through one of the TEA-21 programs, the Congestion Mitigation and Air Quality (CMAQ) Improvement Program, the Recreational Trails Program, the Regional Surface Transportation Program (RSTP), and the Transportation Enhancement Activities (TEA) programs.

SAFETEA-LU: TEA-21 REAUTHORIZATION

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed in 2005 and expires in 2009. The bill guarantees funding for highways, highway safety, and public transportation totaling $244.1 billion. SAFETEA-LU addresses challenges such as improving safety, reducing traffic congestion, improving efficiency in freight movement, increasing intermodal connectivity, and protecting the environment – as well as laying the groundwork for addressing future challenges. For more information refer to Metro's Bicycle Transportation Strategic Plan, Section 5, Funding, and www.fhwa.dot.gov/safetealu.

FEDERAL HIGHWAY ADMINISTRATION (US DOT)

Numerous resources and publications are listed on the FHWA Bicycle and Pedestrian Program website on legislation, design, and safety. There is a link to State Bicycle and Pedestrian Coordinators, the Pedestrian and Bicycle Information Center (PBIC), and the Association of Pedestrian and Bicycle Planners (apbp). Reference materials can be downloaded from http://www.fhwa.dot.gov/environment/bikeped/ in the areas of Planning and Design Guidance, Traffic Calming, Forecasting Demand, Shared Use Paths, Transit, and Benefits.

STATE DEPARTMENT OF TRANSPORTATION (CALTRANS) GUIDELINES

1. Deputy Directive Number 22: Context Sensitive Solutions

Caltrans approved DD-22 in November 2001. The statement reads, "The Department uses Context Sensitive Solutions as an approach to plan, design, construct, maintain, and operate its transportation system. These solutions use innovative and inclusive approaches that integrate and balance community, aesthetic, historic, and environmental values with transportation safety, maintenance, and performance goals. Context sensitive solutions are reached through a collaborative, interdisciplinary approach involving all stakeholders."

2. Deputy Directive Number DD-64: Accommodating Non-Motorized Travel

Caltrans approved DD-64 in June 2005. The statement reads, "The Department fully considers the needs of non-motorized travelers (including pedestrians, bicyclists and persons with disabilities) in all programming, planning, maintenance, construction, operations and project development activities and products. This includes incorporation of the best available standards in all of the Department's practices. The Department adopts the best practice concepts in the US DOT Policy Statement on Integrating Bicycling and Walking into Transportation Infrastructure." For the full text see the Caltrans website.

3. California Blueprint for Bicycling and Walking

The Blueprint describes Caltran's implementation goals to increase bicycling and walking, improve bicycling and walking safety, and develop appropriate funding for bicycle and pedestrian projects, pursuant to DD-64.

For more information on these items refer to www.dot.gov.

4. California Highway Design Manual

It is a requirement that California Highway Design Manual standards be followed for all federal and state funded bicycle projects.

Chapter 80, Application of Standards, includes Highway Design Manual Standards, Requirements for Approvals for Nonstandard Design, Use of FHWA and AASHTO Standards and Policies, and Mandatory Procedural Requirements.

Chapter 200, Geometric Design and Structure Standards, includes standards for Pedestrian Overcrossings and Undercrossings, and Bicycle and Bridge Railings.

Chapter 1000, Bikeway Planning and Design, includes General Planning Criteria, Design Criteria, and Uniform Signs, Markings and Traffic Control Devices.

5. Pedestrian and Bicycle Facilities in California: A Technical Reference and Technology Transfer Synthesis for Caltrans Planners and Engineers, July 2005

Included in this document are: DD-64, acronyms, Federal and State Statutes, design practices for bicycles and pedestrians, and other useful materials in the appendices.

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO)

The Guide for the Development of Bicycle Facilities was last updated in 1999 by AASHTO. This guide is designed to provide information on the development of facilities to enhance and encourage safe bicycle travel and to help accommodate bicycle traffic in most riding environments. Safe, convenient and well-designed facilities are essential to encourage bicycle use. The majority of bicycling will take place on ordinary roads with no dedicated space for bicyclists.