

# City of Thousand Oaks Bicycle Facilities Master Plan

**November  
2010**



## **RIDE SAFELY — TEACH SAFETY**

MONTE CON CUIDADO — ENSEÑE SEGURIDAD



- **Ride on the street going the same direction as motor vehicles.**

En la calle, monte su bicicleta en la misma dirección que el tráfico.

- **Pay attention and follow all traffic laws.**

Preste atención y siga todas las leyes de tráfico.

- **Always wear a helmet and bright clothing.**

Siempre lleve un casco y ropa de color brillante.



For more safety tips and a free bilingual brochure, visit [www.toaks.org/bike](http://www.toaks.org/bike) or call 805-449-2416.

Para más consejos sobre seguridad y un folleto bilingüe gratis, visite [www.toaks.org/bike](http://www.toaks.org/bike) o llame al 805-449-2416.



**CITY OF THOUSAND OAKS**  
**2010 BICYCLE FACILITIES MASTER PLAN**

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**FINAL Report**



**City of Thousand Oaks**

Public Works Director      Mark D. Watkins PE

Project Manager      Kathy Lowry, City Bicycle Coordinator

**November 2010**

**RESOLUTION NO. 2010-098**

**RESOLUTION OF THE CITY COUNCIL OF THE  
CITY OF THOUSAND OAKS APPROVING THE  
2010 BICYCLE FACILITIES MASTER PLAN**

WHEREAS, the State Legislature encourages the establishment of bicycle transportation systems, and authorizes cities to prepare their own bicycle transportation plan; and

WHEREAS, adoption of a bicycle transportation plan will assist the City in meeting the needs of commuter and recreational bicycle users, and will assist the City in efforts to obtain local, state, and federal funds for bikeways and related facilities; and

WHEREAS, the 2010 Bicycle Facilities Master Plan has been prepared pursuant to that Legislative authority and for these purposes; and

WHEREAS, the Thousand Oaks City Council adopted the Bicycle Facilities Master Plan on May 17, 2005; and

WHEREAS, from 2005 to 2010 the Bicycle Advisory Team, staff and interested citizen members of the bicycling community met on many occasions to review and discuss the bicycle facilities needs of commuter and recreational bicycle users; and

WHEREAS, beginning in the mid 1990's the Traffic and Transportation Advisory Commission developed three Scenic Bike Routes in the City consisting of approximately 30 miles of bike lanes and routes. Each Scenic Bike Route formed a loop of bike lanes and interconnected routes for the benefit of commuters and recreational bicyclists; and

WHEREAS, in the last ten-year period, approximately 20 additional miles of new bike lanes and routes have been added to the City's bikeways; and

WHEREAS, the City has installed bike detectors and easy-to-reach bike push-buttons at many signals, attractive City Bike Loop road advisory signs, bike racks at bus shelters and the Community Transportation Center, bike lockers at the Civic Arts Plaza, a pocket-size Scenic Bike Route Map for citizens, bike safety information brochures and bike rack carriers on all City-owned buses in order to enhance and expand bikeways to be more bike-user friendly; and

WHEREAS, the Bicycle Advisory Team determined that the Bicycle Facilities Master Plan will provide the connections between the Community Transportation Center, area Park and Ride lots, transit stops, employment

centers, commercial areas, residential developments, and trails and bikeway systems in neighboring cities, trailheads and scenic areas; and

WHEREAS, the 2010 Bicycle Facilities Master Plan is anticipated to provide the required guidelines for future transportation development planning, circulation element expansion and updates, and for bicycle grant applications; and

WHEREAS, the 2010 Bicycle Facilities Master Plan provides guidelines for bicycle safety improvements, design standards, implementation processes, operation and maintenance of bike facilities, educational programs, performance standards, and funding options; and

WHEREAS, the 2010 Bicycle Facilities Master Plan will help meet the transportation needs of bicyclists in the years ahead and will help establish the use of bicycles as a safe and viable mode of travel thereby improving air quality and reducing traffic congestion on roadways and parking facilities; and

WHEREAS, on October 20, 2010, the Bicycle Advisory Team voted unanimously to recommend the adoption of the Bicycle Facilities Master Plan to provide the planning tool to expand the City's bikeway system and integrate it with connections to other regional bike systems and other modes of transportation.

\*\*\*\*\*

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Thousand Oaks does hereby adopt the 2010 Bicycle Facilities Master Plan, dated November 16, 2010 as a City guideline for prioritizing future bicycle facility improvement projects, grant applications, and bicycle project funding options.

PASSED AND ADOPTED this 16th day of November, 2010.

CITY OF THOUSAND OAKS



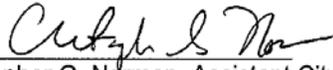
Dennis C. Gillette, Mayor

ATTEST:

  
Linda D. Lawrence, City Clerk

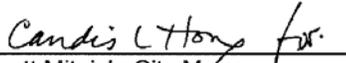
**APPROVED AS TO FORM:**

Office of the City Attorney



Christopher G. Norman, Assistant City Attorney

**APPROVED AS TO ADMINISTRATION:**



Scott Mitnick, City Manager

**CERTIFICATION**

STATE OF CALIFORNIA     )  
COUNTY OF VENTURA    ) SS.  
CITY OF THOUSAND OAKS    )

I, LINDA D. LAWRENCE, City Clerk of the City of Thousand Oaks, DO HEREBY CERTIFY that the foregoing is a full, true, and correct copy of Resolution No. 2010-098, which was duly and regularly passed and adopted by said City Council at a regular meeting held November 16, 2010, by the following vote:

AYES:     Councilmembers Irwin, Bill-de la Peña, Fox and Mayor Gillette

NOES:     None

ABSENT:   Councilmember Glancy

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the City of Thousand Oaks, California.



Linda D. Lawrence, City Clerk  
City of Thousand Oaks, California

# Table of Contents

<b>RESOLUTION.....</b>	<b>3</b>
<b>TABLE OF CONTENTS .....</b>	<b>6</b>
<b>LIST OF FIGURES .....</b>	<b>7</b>
<b>LIST OF TABLES .....</b>	<b>7</b>
<b>EXECUTIVE SUMMARY .....</b>	<b>8</b>
BACKGROUND.....	8
KEY FINDINGS.....	8
MAJOR RECOMMENDATIONS – 20 YEAR PLAN .....	8
PHASE 1 RECOMMENDATIONS – 5 YEAR PLAN.....	9
<b>CREDITS AND ACKNOWLEDGMENTS .....</b>	<b>10</b>
<b>1.0 INTRODUCTION.....</b>	<b>11</b>
<b>2.0 GOALS AND OBJECTIVES.....</b>	<b>13</b>
2.1    RELATIONSHIP BETWEEN THIS PLAN AND OTHER PLANNING EFFORTS IN THOUSAND OAKS .	13
2.2    GOALS OF THE BICYCLE FACILITIES MASTER PLAN .....	13
<b>3.0 EXISTING CONDITIONS.....</b>	<b>15</b>
3.1    DEFINITION OF BIKEWAYS .....	15
3.2    EXISTING BICYCLE FACILITIES AND ACTIVITY AREAS.....	15
3.3    RELEVANT LEGISLATION AND POLICIES .....	18
3.4    BICYCLE PARKING.....	19
3.5    PAST BICYCLE PROGRAM EXPENDITURES.....	19
<b>4.0 NEEDS ANALYSIS.....</b>	<b>20</b>
4.1    COMMUTER AND RECREATIONAL NEEDS.....	21
4.1.1    BICYCLE COMMUTER NEEDS AND BENEFITS.....	22
4.1.2    RECREATIONAL NEEDS.....	24
4.2    ACCIDENT ANALYSIS.....	24
<b>5.0 RECOMMENDED BIKEWAY SYSTEM .....</b>	<b>26</b>
5.1    BIKEWAY NETWORK.....	26
5.2    BICYCLE SUPPORT FACILITIES/PROGRAMS.....	30
<b>6.0 PRIORITIZATION STRATEGY .....</b>	<b>34</b>
<b>7.0 IMPLEMENTATION/FUNDING STRATEGY .....</b>	<b>36</b>
7.1    PROJECT IMPLEMENTATION.....	36
7.2    PROJECT COST AND FUNDING BREAKDOWN .....	36
7.3    FUNDING SOURCES .....	36
<b>8.0 MONITORING AND MAINTENANCE .....</b>	<b>40</b>
8.1    MAINTENANCE.....	40
8.2    SECURITY .....	40
<b>9.0 PROMOTING AND ENCOURAGING BICYCLE TRAVEL .....</b>	<b>41</b>
9.1    BICYCLE SAFETY EDUCATION PROGRAMS .....	41
9.1.1    EDUCATION .....	41
9.2    COMMUNITY AND EMPLOYEE OUTREACH .....	43
9.2.1    BICYCLE DONATION PROGRAM.....	44
9.2.2    BICYCLE CLUNKER AND PARTS PROGRAM, BICYCLE REPAIR PROGRAM .....	44
9.2.3    COMMUNITY ADOPTION .....	44
9.2.4    BIKE FAIRS AND RACES INCLUDING AMGEN TOUR OF CALIFORNIA.....	44
9.2.5    EMPLOYER INCENTIVES .....	44
9.2.6    BIKE TO WORK AND BIKE TO SCHOOL DAYS.....	45
9.2.7    MARKETING THE BICYCLE FACILITIES MASTER PLAN .....	45

# List of Figures

FIGURE 1: BIKE PATHS, LANES, ROUTES ..... 15  
FIGURE 2: EXISTING BIKEWAY NETWORK AND ACTIVITY CENTERS ..... 16  
FIGURE 3: BICYCLE ACCIDENT LOCATIONS ..... 25  
FIGURE 4: RECOMMENDED BIKEWAY NETWORK..... 27

# List of Tables

TABLE 1: EXISTING BIKEWAYS..... 17  
TABLE 2: DEMOGRAPHICS AND BICYCLE TRANSPORTATION IN THOUSAND OAKS..... 23  
TABLE 3: BIKEWAY PROJECTS (SHORT TERM-YEARS 1-5) ..... 34  
TABLE 4: BIKEWAY PROJECTS (LONG TERM-YEARS 6-20)..... 35  
TABLE 5: SUMMARY OF FUNDING PROGRAMS ..... 36

## Executive Summary

### Background

This Executive Summary and the 2010 **Thousand Oaks Bicycle Facilities Master Plan**, represents the 20 year long range bicycle plan for the City. It identifies the recommended bicycle facilities needed to interconnect Thousand Oaks neighborhoods and programs to serve all bicyclists' needs.

The main purpose of this Plan is to encourage the development of an integrated bicycle system throughout Thousand Oaks with connections to other regional bike systems. Projects shown on the 20-Year Bicycle Facilities map will be given priority for various state and federal funding sources prioritized through the City and the Ventura County Transportation Commission (VCTC).

The planning process utilized for this study included two public workshops, and regular meetings with the Bicycle Advisory Team that included members of City staff, the City's Traffic and Transportation Commission and the Conejo Recreation and Park District. Through this process a bicycle system was devised that reflects bicyclists' needs and physical, operational, and financial opportunities and constraints.

Thousand Oaks offers many qualities favorable to bicycling, including areas of moderately flat terrain, temperate climate, and scenic recreation destinations. Natural and man-made obstacles exist as well, including the topography of the nearby hills and mountains and the U.S. 101 and S.R. 23 freeways.

Bicycling is one of the most cost-effective and achievable means of reducing traffic congestion and improving air quality in Thousand Oaks. While bicyclists represent about one percent of peak hour commuters now, a recent national survey found that over 30 percent of all workers would consider riding a bicycle to work if there were safe and convenient bikeways available. Add this to the TEA-21 federal funding which identifies bicycling as a major sub-program, and the impetus is there to construct a system of paths and lanes for Thousand Oaks.

The City currently provides about 76 miles of bikeways, of which 2 miles are bike paths, 54 miles are bike lanes, and the remaining 20 miles are formal or informal bike routes.

### Key Findings

The recreation and commuter needs analysis showed existing deficiencies in system continuity, linkage to regional destinations, and concerns about safety. A demand analysis based on a survey of workshop participants, found that most people own bicycles and the average owner rides for casual recreation.

Comments and suggestions from the public workshops included requests that the highest priority segments be targeted for improvements, and many specific recommendations such as improving the safety of major arterial streets. Many of these suggestions were incorporated into the plan.

An opportunity and constraints analysis resulted in several key findings. *First*, the existing network of bike lanes is well used, but the lanes are frequently disconnected and require improved signage and markings. *Second*, several of the arterial streets do not have bike lanes, which force bicyclists to negotiate heavy traffic or ride on the sidewalks. *Third*, the barriers of the U.S. 101 and S.R. 23 freeways, and other roadways result in bicyclists having to use congested overcrossings and busy intersections. *Fourth*, there is a need for directional signage at specific locations.

### Major Recommendations – 20 Year Plan

The overall concept for the bicycle system is a linkage between Thousand Oaks neighborhoods and key destinations such as schools, parks, transit connections, and employment/shopping centers.

The planned system is based on a broad range of criteria including access, traffic conditions, right-of-way availability, and connection to major destinations, cost and implementation constraints, and level of support expressed at the public workshops.

The system will serve all neighborhoods in Thousand Oaks, linking people with schools, parks, shopping areas, work centers, and other destinations. Bike paths will provide important linkages and allow bicyclists to travel without having to ride along busy streets. Bike lanes and routes will provide an extra level of comfort for bicyclists negotiating city streets and avenues. Crossing improvements will help minimize conflicts between motorists and bicyclists. New bicycle racks will encourage bicycle commuters.

This Bicycle Mater Plan outlines the planning and design criteria used to select the high and low priority projects. Detailed descriptions of each proposed bikeway segment are provided, along with implementation issues. The Plan provides specific recommendations on safety improvements, design standards, implementation, operations and maintenance, educational programs, performance standards, and funding.

Specific recommendations include:

- A. Design Standards
  - Adhere to Caltrans Highway Design Manual Chapter 1000
  - Where bike lanes are not provided on collector and arterial streets, the City should attempt to maximize the curb lane widths to accommodate bicyclists
  - Provide 12 feet (3.66m) width on bike paths where feasible
  - Meet ADA requirements
  - Prefer Class II (Lanes) over Class III (Routes) on primary system
- B. Support Facility Standards
  - Provide bike racks at regional activity centers
  - Apply performance standards to new development for the provision of bicycle storage facilities based on Gross Leasable Area (GLA) and/or employees
- C. Programs and Operations
  - Maintain the Bicycle Coordinator position who's primary responsibilities are to implement the program and project contained in the Bicycle Facilities Master Plan
  - Teach bicycle education to primary grade school children

Much of the system should be implemented as feasible over the next 10-20 years through road improvements and new development. This ultimate system is designed to meet the needs of bicyclists over the long term and help establish bicycling as a viable travel mode in Thousand Oaks.

### **Phase 1 Recommendations – 5 Year Plan**

(The following list is presented in alphabetical order, not in priority order)

Short-term projects include:

Projects:

- Borchard Road Bike Lanes Study – Michael Drive to Reino Road
- Conejo Creek South Class I Bike Path (under construction)
- Erbes Road Bike Lanes Project (under design)
- Hillcrest Drive Bike Lanes Project (under design)
- Kimber Road Bike Lane – West End to Wendy Drive
- Lynn Road Bike Lanes Project (under design)
- Read Road Bike Path (under design)
- Wendy Drive – 101 Overpass Bike Lanes (under design)
- Willow Lane Bike Lanes study – Conejo School Road to Hampshire Road

Programs:

- Enhance bicycle and pedestrian education programs for students and adults including helmet education and enforcement
- Improve directional signage to improve route locations
- Implement Citywide bike rack program
- Increase marketing activities to promote bicycling as a viable commute option
- Conduct a study of freeway interchanges and make recommendations to improve safety.

## **Credits and Acknowledgments**

### **City of Thousand Oaks City Council**

Dennis C. Gillette, Mayor  
Andrew P. Fox, Mayor Pro Tem  
Claudia Bill-de la Peña, Councilmember  
Jacqui V. Irwin, Councilmember  
Thomas P. Glancy, Councilmember

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Jim Biega, AllianceJB  
David Chambers, Commuter Cyclist  
Mike Cicchi, Newbury Park Bicycle Shop  
Kristin Foord, Planning/Open Space  
Sharon McMahon, Traffic and Transportation Advisory Commission  
Katie Menees, Old Kranks  
April Parise, Family Cyclist  
Daryl Reynolds, Planning Commission  
J. C. Simmons, Conejo Valley Cyclists  
Bruce Wilkoff, Cyclist

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Diana Lockyer, Engineer Associate Capital Project Division

### **Cover Photos**

Ventura County Star  
Thousand Oaks Police Department C.O.P.P.S. Unit/Bike Patrol Team

## 1.0 Introduction

### ***Why Does Thousand Oaks Need a Bicycle Facilities Master Plan?***

The City of Thousand Oaks is a growing Southern California city, along with other communities along the U.S. 101 corridor in the Conejo Valley. People are moving to Thousand Oaks for the enhanced quality of life – including access to the many recreational destinations, good schools and parks, and less traffic congestion. Quality of life means many things to many people, but surveys around the country show that concerns about the safety of school children, access to recreational facilities, and specifically, the presence of trails and bikeways figure prominently in how many people define the phrase.

Residents of the City have access to the nearby mountains, canyons, creeks and beaches, as well as local cultural amenities. The City is also a transportation hub, situated between the L.A. basin and the Oxnard plain on the fast growing U.S. 101 corridor. The City is on the visitor route along the Central Coast, and is close to the Santa Monica Mountains National Recreation Area, Point Mugu State Park, and the beaches of Malibu, Oxnard, and Ventura. The City is connected to other regional centers by scheduled transit service provided by VISTA. The City also provides a local transit service, Thousand Oaks Transit (TOT), operating four buses on three routes serving the Newbury Park, Thousand Oaks, and Westlake areas. Scheduled air service is available at Oxnard, Los Angeles, or Burbank airports.

Since the City's incorporation in 1964, Thousand Oaks has developed into a high quality community, integrating citizen involvement with effective planning. The City of Thousand Oaks has grown to nearly 56 square miles with a population of more than 128,000 while remaining dedicated to offering a quality lifestyle.

Why does Thousand Oaks need a Bicycle Facilities Master Plan? One reason is the continuing growth and expansion due to the commercial and residential opportunities available to the area, combined with a desire for a higher quality of life by residents. One important facet of this quality of life is the provision of places for people of all abilities and interests to walk and ride, whether it is for commuting or recreational purposes.

Studies have shown that walking and bicycling facilities are the two most requested facilities in all new communities. Since bicycling is one of the most popular forms of recreational activity in the United States (with 46% of Americans bicycling for pleasure), we can assume that about 57,000 residents in Thousand Oaks would like to bicycle purely for pleasure.

Safety is a primary reason to improve bicycling conditions in Thousand Oaks. Concerns about safety are the single greatest reason people don't commute by bicycle, according to a 1991 Lou Harris Poll.

Addressing those concerns for bicyclists through physical and program improvements is a major objective of the Master Plan.

### ***What Are the Four Issues Thousand Oaks Must Address to Increase its "Bicycle Friendliness"?***

Safety, access, quality of life, and effective implementation are imperative elements for Thousand Oaks' success to continue to be a bicycle friendly city.

**Safety** is the number one concern of citizens, whether they are avid or casual recreational cyclists or bicycle commuters. For the most part, bicyclists can use back streets to avoid busy streets such as Thousand Oaks Boulevard or Moorpark Road. However, a consistent bicycle network with either bike lanes or wider curb lanes and signing would improve the safety of bicycling in the City.

**Access** for bicycling to shopping, work, recreation, school, and other destinations is somewhat hampered by major transportation corridors such as U.S. 101, S.R. 23, Thousand Oaks Boulevard, Lynn Road, Moorpark Road, and the varied topography of the area. Movement across major interchanges and arterial streets is hampered by the high volume of traffic (especially during the pm peak period), even at signalized intersections.

This Plan allows Thousand Oaks to take measurable steps toward the goal of improving the **Quality of Life**, creating a more sustainable environment, reducing traffic congestion, vehicle exhaust emissions, noise, and energy consumption. The importance of developing a comprehensive bicycle system is a key element in marketing Thousand Oaks as a city where people want to live, work, and visit. The attractiveness of the environment not only invites bicyclists to explore the City, but more importantly, a beautiful environment helps to improve everyone's positive feelings about the quality of life in Thousand Oaks.

Education, enforcement, engineering, and funding are the basic components of an **Effective Implementation Program** for this Master Plan. Education must be targeted to the bicyclist as well as to the motorist regarding the rights and responsibilities of the bicyclist, and automobile driver. Comprehensive enforcement of existing traffic and parking laws, coupled with the implementation of sound design and engineering principles for bike corridors is also critical. This plan also proposes systematic review of all new development projects, including public works efforts, to assure compliance with planning and building codes and the principles of this Master Plan. Finally, this plan proposes an aggressive strategy for obtaining grants and competing for other funding sources in order to realize the physical improvements identified as the highest priorities.

#### ***Expected Benefits of the Bicycle Facilities Master Plan***

Save lives. Reduce the incident and fatality rate for bicyclists through design standards and guidelines, improved maintenance, education, and enforcement.

Provide needed facilities and services. Meet the demand for increased use of bicycles as a means of travel around the City. With a goal of doubling bicycling in the next ten years the daily bicycle commute for both adults and school children will increase substantially. When combined with non-commute trips, the total number of daily bicyclists could be over 3,900 by 2020.

Improve the quality of life in Thousand Oaks. Design and build people-friendly streets, paths, trails, and activity centers available to everyone, and support sustainable community development. Reduce traffic congestion, vehicle exhaust emissions, and noise and energy consumption. Encourage visitors to stop and enjoy Thousand Oaks on bicycle.

Maximize funding sources for implementation. Position Thousand Oaks to successfully compete for state and Federal funding, by meeting the requirements of the California Bicycle Transportation Act and SAFETEA-LU.

#### ***Major Recommendations of the Bicycle Facilities Master Plan***

The Master Plan recommends the development of a comprehensive bikeway system in Thousand Oaks, comprised of Class I bike paths, Class II bike lanes, and Class III bike routes. The system effectively connects all residential neighborhoods with the major activity centers in the City, such as the Amgen campus, the Oaks Mall, the U.S. 101 Freeway commercial areas, the City's Transportation Center, schools, parks, the Community Center, and the libraries in Newbury Park and Thousand Oaks. The major components of the plan are:

- An integrated and comprehensive network of bikeway facilities and programs totaling approximately \$12,639,100 to be invested over 20 years. A portion of the investment may be expected to come from existing Federal, State, and Regional funding sources.
- Adoption of the goals, policies, design standards and guidelines, and recommendations in the Plan.

Short-term projects include:

- Borchard Road Bike Lanes Study – Michael Drive to Reino Road
- Conejo Creek South Class I Bike Path (under construction)
- Erbes Road Bike Lanes Project (under design)
- Hillcrest Drive Bike Lanes Project (under design)
- Kimber Road Bike Lane – West End to Wendy Drive
- Lynn Road Bike Lanes Project (under design)
- Read Road Bike Path (under design)
- Wendy Drive – 101 Overpass Bike Lanes (Old Conejo Road to Grande Vista Drive) (under design)
- Willow Lane Bike Lanes study – Conejo School Road to Hampshire Road
- Enhanced bicycle and pedestrian education programs for students and adults including helmet education and enforcement
- Improved directional signage to improve route locations
- Implement Citywide bike rack program
- Increase marketing activities to promote bicycling as a viable commute option
- Conduct a study of freeway interchanges and make recommendations to improve safety.

## 2.0 Goals and Objectives

The Update to the 2005 Bicycle Facilities Master Plan has been created through the diligent efforts of the City and citizens interested in improving the Thousand Oaks bicycling environment. Without the sustained efforts of these people, this Plan would not have been conceived and written.

### 2.1 Relationship between this Plan and other Planning Efforts in Thousand Oaks

The Bicycle Facilities Master Plan has the comprehensive scope and jurisdictional authority required to coordinate and guide the provision of all bicycle-related plans, programs, and projects. Many current planning efforts provide recommendations regarding one element or aspect of the bicycle network; the task of the Bicycle Facilities Master Plan is to ensure compatibility of all of these efforts, while attending to planning for areas of the City not already targeted by other studies. The studies or planning efforts listed below have been reviewed and consulted, studied for consistency, and where appropriate, folded into Thousand Oaks Bicycle Facilities Master Plan:

#### Open Space Element – Thousand Oaks General Plan (1996)

The Open Space Element contains numerous relevant sections, including guidelines to promote the appropriate use of open space for recreation, such as the development of a trails system for use by hikers, equestrians, and bicyclists, and to promote responsible use of lands for public health and safety.

#### Ventura County General Plan – Area Plan for the Thousand Oaks Area (1992)

The General Plan sets as one of its goals to promote ‘safe pedestrian and bicycle pathways throughout the unincorporated Thousand Oaks area,’ and to ‘ensure that road improvements are compatible with existing and planned equestrian trails and bicycle pathways.’

#### Ventura County Bikeway Plan (1996/7)

The 2007 Ventura Countywide Bicycle Master Plan, produced by the Ventura County Transportation Commission, contains a detailed inventory of bikeways, needs analysis, and specific recommendations. A Primary Bikeway System is proposed that includes routes in the Thousand Oaks area. The primary system in the County Plan and the final system developed in this plan are largely consistent, although there are some differences based on the more detailed evaluation performed as part of this study. The Plan provides a blueprint for bicycle transportation and recreation in Ventura County.

#### Simi Valley Bicycle Master Plan (2008)

The plan documents the latest bikeway improvements, it also identified the facilities and programs required to provide residents and visitors with convenient and safe bicycling to, from and within Simi Valley.

### 2.2 Goals of the 2010 Bicycle Facilities Master Plan

Goals provide the context for the specific policies and recommendations discussed in the Bicycle Facilities Master Plan. The goals provide the long-term vision and serve as the foundation of the plan. The goals are broad statements of purpose that do not provide details, but show the plan’s direction and give overall guidance. Objectives provide more specific descriptions of the goal. Policy actions, identified in subsequent sections of this Bicycle Facilities Master Plan, provide a bridge between general goals and actual implementation guidelines, which are provided in the Implementation chapters.

The following Goals and Objectives are intended to guide bicycle planning, design, and implementation.

#### **Goal 1.0 Plan for the development of bicycle facilities and programs in Thousand Oaks as a viable alternative to the automobile.**

Objectives:

- 1.1 Develop a viable bicycle commuter system.
- 1.2 Link residential areas, work and transit centers.
- 1.3 Integrate bicycles into other modes.

**Goal 2.0      Improve bicycle safety.**

Objectives:

- 2.1      Develop comprehensive education and safety programs for bicyclists and drivers of cars
- 2.2      Monitor bicycle incidents and target needed improvements.
- 2.3      Manage bicycles on sidewalks through appropriate measures.

**Goal 3.0      Maximize opportunities for bicycle use.**

Objectives:

- 3.1      Accommodate bicycling needs as identified in the Master Plan public workshop process.
- 3.2      Develop a user-friendly bicycle system for all levels of experience and abilities.
- 3.3      Develop a bicycle system map for public use.
- 3.4      Integrate the local bikeway system into the regional bikeway system.
- 3.5      Overcome major barriers and gaps in the existing bikeway system with a specific focus on freeway crossings
- 3.6      Keep the bikeway system well maintained.

**Goal 4.0      Design a feasible implementation plan.**

Objectives:

- 4.1      Use accepted design standards.
- 4.2      Maximize funding opportunities.
- 4.3      Retain existing bikeway system and utilize existing opportunities.
- 4.4      Phase and prioritize projects for orderly implementation, coordinated with the capital improvement program.

### 3.0 Existing Conditions

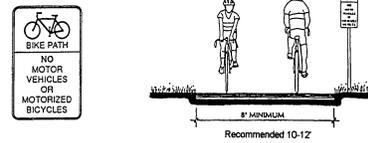
#### 3.1 Definition of Bikeways

The bikeway types identified in this Bicycle Facilities Master Plan are based on those described by Caltrans in Chapter 1000 of the Highway Design Manual, which includes references to four types of facilities: 1) Class I Bikeway (Bike Path), 2) Class II Bikeway (Bike Lane), 3) Class III Bikeway (Bike Route), and 4) Shared roadway (no bikeway designation). A pictorial description of bike paths, lanes, and routes is shown in Figure 1. The system of bikeways in the Thousand Oaks bikeway network is classified into the following categories (see Figure 2):

**FIGURE 1: BIKE PATHS, LANES, ROUTES**

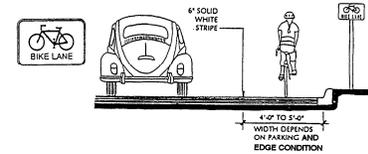
**Class I Bike Paths:** Bicycle or multi-use paths separate from roadways, with at-grade or grade-separated roadway crossings. Bike paths are typically located along long uninterrupted corridors such as rivers, creeks, flood control channels, railroad right-of-ways, etc.

Class I Bike Path



**Class II Bike Lanes:** Striped bicycle lanes located to the right of each direction of vehicle traffic along a roadway. Bike lanes are typically located along collector and arterial roadways that provide direct connections through the City street system.

Class II Bike Lane



**Class III Bike Routes:** Low-volume roadways that provide shared use with pedestrian or motor vehicle traffic and are identified only by bike route signing. Bike routes are typically along high demand corridors.

Class III Bike Route



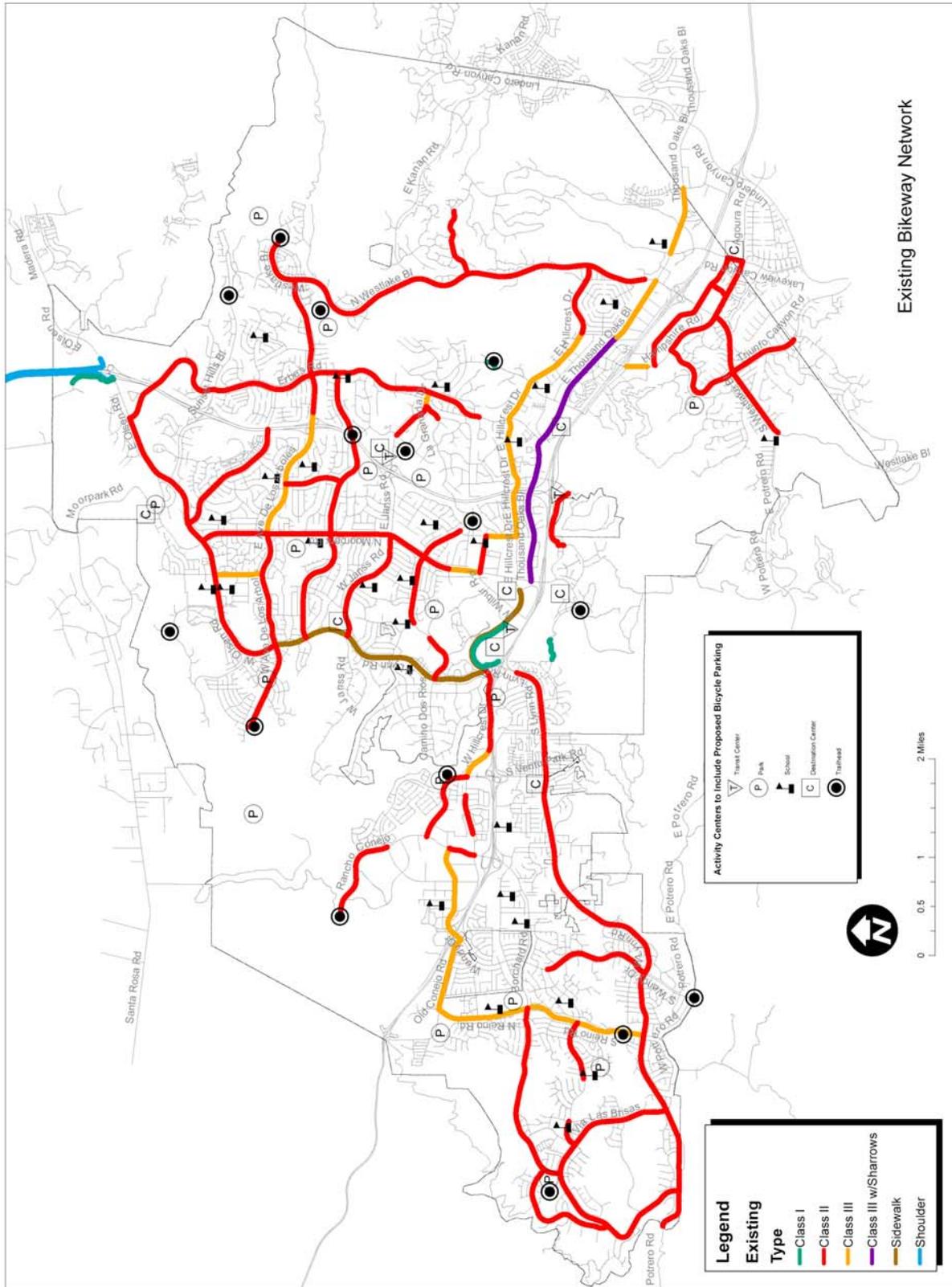
**Sidewalk Bike Routes:** Bicyclists may ride on any sidewalk in the City in the same direction as traffic and are required to yield the right-of-way to any pedestrians or equestrians.

**Shoulder Bike Routes:** Shared roadways with no bikeway designation signing that provide continuous striped shoulders to improve safety and convenience for bicyclists and motorists. The shoulder bike routes are typically located along State routes and major arterial corridors.

#### 3.2 Existing Bicycle Facilities and Activity Areas

The existing Thousand Oaks bikeway system and major activity centers are shown in Figure 2. The bikeway system elements are listed on Table 1 and consist of approximately 1.6 mile of Class I bike paths, 54 miles of Class II bike lanes, and 13 miles of Class III bike routes, totaling some 68 miles of bicycle facilities.

**FIGURE 2: EXISTING BIKEWAY NETWORK AND ACTIVITY CENTERS**



**Table 1 - Existing Bikeways**

Name	Start	End	Class	Length (miles)
Avenida de las Flores	Lynn Road	Erbes Road	2	2.9
Avenida de los Arboles	Big Sky Drive	Westlake Boulevard	2/3	4.8
Avenida de los Arboles	Lynn Road	SR23	3	2.4
Avenida de los Arboles	SR23	Westlake Boulevard	2	1.5
Borchard Road	Via Las Brisas	Reino Road	2	1.9
Camino Dos Rios	Calle Arroyo	Lynn Road	3	0.9
Conejo School-La Granada	Conejo School Road	La Granada Drive	3	0.2
Erbes Road	E Hillcrest Drive	Olsen Road	3	4.6
Greenmeadow	Greenmeadow	Greenmeadow	1	0.5
Hampshire Road	Foothill Drive	NB US101 On-ramp	3	1.3
Hillcrest Drive (W)	100ft W of Artisan Road	San Carlos Drive	2	0.5
Hillcrest Drive (W)	Ventu Park Road	Conejo Boulevard	3	2.3
Hillcrest Drive (W)	Hodencamp Road	Westlake Boulevard	3	3.2
Hodencamp Road	Hillcrest Drive	Wilbur Road	3	0.3
Janss Road	Lynn Road	Moorpark Road	2	1.4
Janss Road	El Monte Drive	Erbes Road	2/3	0.7
Lynn Road	W Hillcrest Drive	Avenida de los Arboles	2	2.4
Lynn Road	Via Las Brisas	US101	2	5.3
Moorpark Road	Thousand Oaks Boulevard	W Olsen Road	3	3.4
Mountclef Boulevard	Avenida de los Arboles	W Olsen Road	3	0.5
Oaks Mall Bike Path			1	0.8
Olsen Road	Spring Meadow Avenue	Erbes Road	2	1.6
Potrero Road	W City Limit	Via Las Brisas	2	1.3
Rancho Conejo Boulevard	W End	Lawrence Drive	2	0.9
Rancho Conejo Boulevard	Hillcrest Drive	Teller Road	2	0.3
Read Road Connector	Olsen Road	Read Road	1/3	0.5
Reino Road	Lynn Road	Old Conejo Road	3	3.0
Rolling Oaks Drive Extension	Rolling Oaks Drive End	Rancho Road	2	0.8
S.R. 23	Olson Road	City Limit	3	1.2
Thousand Oaks Boulevard	N Moorpark Road	Westlake Boulevard	3	3.5
Thousand Oaks Boulevard	Lakeview Canyon Road	City Limit	2	0.6
Triunfo Canyon Road	City Limit	Hampshire Road	2	1.7
Ventu Park Road	Hillcrest Drive	Lawrence Drive	2	0.3
Ventu Park Road	Rancho Conejo Boulevard	Lawrence Drive	2	0.6
Wendy Drive	W Potrero Road	Kimber Drive	2	1.7
Westlake Boulevard (N)	Meadow Gate Street	Oak Valley Lane	2	4.5
Westlake Boulevard (S)	Triunfo Canyon Road	Agoura Road	2	0.6
Wilbur Road	N Moorpark Road	Hodencamp Road	2	0.4

The existing Thousand Oaks bikeway system provides a significant number of bike lanes on major corridors, especially in the eastern part of the City. A network of Bike Loops consisting of three circular routes is interconnected throughout the City, providing scenic routes through the heart of the City's residential and commercial areas. These Bike Loops are generally in good condition, although some small gaps were identified.

A lack of a completed bikeway system does not mean that people are not riding. The bicycling community, ranging from experienced club riders to school children, has developed its own system of streets and routes, which provide connectivity and safety for their purposes.

Key observations on existing bicycling conditions include:

- Thousand Oaks has many preferable areas for enjoyable bicycle riding. The climate, layout, and topography mean that many residents are within a few minutes bicycle ride of several key destinations, whether they are for work or play.
- The U.S. 101 and S.R. 23 freeways and other roadways effectively act as barriers due to the heavy traffic volumes. U.S. 101 traverses the south side of the City and effectively separates Newbury Park from the northern portion of the City. S.R. 23 effectively separates the western portion of the City from the remainder of the City.
- The southern portion of Lynn road, Thousand Oaks Boulevard and Hampshire Road serve as the prime east-west routes through the City, connecting with the eastern and western portions of the regional system. Moorpark Road and the northern portion of Lynn Road serve as the major north-south routes through the City, connecting with the northern portion of the regional system. In certain

parts of the City, these roadways often do not provide usable outside travel lanes, which serve to constrain bicycle riding.

- The various elementary schools, middle schools, and high schools are located such that many students who walk or ride a bicycle must cross major streets such as Thousand Oaks Boulevard, Moorpark Road, Reino Road, and Erbes Road. Observations of students also revealed a substantial number of bicyclists riding on the wrong side of the street and crossing major streets at unprotected locations.
- Due to a broken residential neighborhood pattern of streets, almost all bicycling movement by cyclists must travel on one of the arterial collectors and cross at major arterial intersections.

### **3.3 Relevant Legislation and Policies**

There are several City, state, regional, and federal requirements for master plans, which are primarily related to funding.

The Air Pollution Control District (APCD) has various Transportation Demand Management (TDM) policies and regulations related to bicycles. For example, specific reductions in vehicle trips and related Particulate Matter (PM10), Nitrogen Oxide (NOX) and reactive organic gases (ROG), are provided for the construction of bike paths, lanes, and bike parking. A City off-site TDM fund has been established for those projects, which cannot fully mitigate the impacts of increased vehicle trips with on-site improvements. The amount of contribution to the TDM fund for bicycle facilities should be based on the actual cost of the appropriate emission reduction factors. For example, a project, which pays for the construction of 1 mile of Class II bike lanes, would theoretically receive credit for 80 reduced trips per day. This, in turn, would reduce the cost of traffic and parking costs to the project proportionally.

The 2010 Thousand Oaks Bicycle Facilities Master Plan should be consistent with the Ventura County Regional Bicycle Master Plan (through the VCTC) especially since the VCTC is the main funding conduit for bikeway funds into Thousand Oaks.

Caltrans has an oversight and review role for TEA-21 funding programs for bicycle projects. Each of the TEA-21 programs requires approval of a Bicycle Master Plan with specified elements in order to qualify.

On a state level, according to the California Bicycle Transportation Act (1994), all cities and counties should have an adopted bicycle master plan that contains:

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

In addition to these required elements, the Caltrans Highway Design Manual contains specific design guidelines, which must be adhered to in California. 'Chapter 1000: Bikeway Planning and Design' of the Manual sets the basic design parameters for on-street and off-street bicycle facilities, including mandatory design requirements.

### 3.4 Bicycle Parking

Bicycle parking includes bike racks, lockers, and corrals. Racks are low cost devices that typically hold about eight bicycles, allow bicyclists to securely lock their frames and wheels, are secured to the ground, and are located in highly visible areas. Bike lockers are covered storage units that typically accommodate one bicycle per locker, and provide additional security and protection from the elements.

Bike racks are most often found in commercial areas where regular commuters can take advantage of the multi-modal connections and feel safe in leaving their bicycle. Bike corrals can be found at schools, stadiums, special events, and other locations, and typically involve a movable fencing system that can safely store numerous bicycles. Either locking the enclosure or locating it near other activities so that it can be supervised provides security.

A field review of Thousand Oaks revealed bicycle-parking facilities at several parks, schools, major employment centers and major commercial centers. Otherwise, bicyclists visiting other stores, restaurants, places of employment, and community facilities park their bicycles against trees, sign poles or other fixtures. The lack of secure bike parking has become a major consideration in Thousand Oaks and around the country, the result of the increased value of bicycles. Most bicycles today range in value from \$250 to over \$2,000. Bicycles are one of the top stolen items in all communities, with components being stolen even when a bicycle is securely locked. Specific recommendations on the bicycle storage type, amount, location, and other details are provided in the ensuing chapters.

The 2010 California Green Building Standards Code has specific guidelines for the provision of bicycle parking for new development. The code is stricter than the City's Municipal Code (Zoning Ordinance) Off-Street Parking Chapter which has specific guidelines for the provision of bicycle parking so the City needs to comply with the Green Building Standards. These standards are:

#### SECTION 5.106 SITE DEVELOPMENT

**5.106.4 Bicycle parking and changing rooms.** Comply with Sections 5.106.4.1 and 5.106.4.2, or meet local ordinance or the University of California Policy on Sustainable Practices, whichever is stricter.

**5.106.4.1 Short-Term bicycle parking.** If the project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 100 feet of the visitors' entrance readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

**5.106.4.2 Long-Term bicycle parking.** For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include: 1 Covered, lockable enclosures with permanently anchored racks for bicycles; 2. Lockable bicycle rooms with permanently anchored racks; and 3. Lockable, permanently anchored bicycle lockers.

The City recommends the installation of the inverted U shaped bike rack or a similar design i.e. Oak Leaf or bicycle shaped as found on Thousand Oaks Boulevard.

### 3.5 Past Bicycle Program Expenditures

Prior to adoption of the 2005 City of Thousand Oaks Bicycle Facility Master Plan, the City funded most bikeway projects, with the exception of the Class I Green Meadow Bike Path behind the Los Robles Golf Course which was funded by high priority TEA-21 funds, using developer air quality fees and State Gas Tax Funds. Since the adoption of the Master Plan, the City has seen an increase in the number of miles of Class I, II and III facility in the City. Most of these projects continue to be funded by local air quality fees and State Gas Tax Funds.

Table 1.2

Facility Type	Prior to 2005 Total Miles	2010 Total Miles	Added Miles	Costs To add facilities
Class I	1.17	1.63	0.46	\$300,000
Class II	45.15	54.09	8.94	\$50,000
Class III	14.13	13.72	-0.41	0



**U Shaped Bike Rack**

#### **4.0 Needs Analysis**

Bicycle Advisory Meetings, which are open to the public, are held quarterly. Two meetings, one in September 2010 and one in October 2010, were held specifically to discuss the update to the 2010 Bicycle Master Plan. The meetings were attended by citizens who do not normally attend the BAT meetings. The purpose of meetings was to identify bicycling needs. Attendees were asked to comment and show on a large-scale map of the City, their current riding habits, and their views on bicycling opportunities and constraints in Thousand Oaks. Results of the workshop, incorporating subsequent correspondence and field review, are presented below:

- The U.S. 101 and S.R. 23 freeways act as barriers between neighborhoods and destinations, with crossings at freeway interchanges being a major concern.
- A lack of adequate short or long-term secure bicycle parking is a concern.
- There are concerns about bicyclists and pedestrians sharing sidewalks, especially adult and teenage riders who travel at higher speeds.
- There is an interest in developing a comprehensive network of Class II bike lanes serving all major activity centers.
- Lower traffic volume arterial streets, such as Hillcrest Drive, offer an alternative to using major arterials, such as Thousand Oaks Boulevard, for less experienced bicyclists.
- The surrounding hills and mountains are close to most neighborhoods, and offer the excitement of off-road bicycling and hiking, and views of the Conejo Valley.
- The numerous community centers, libraries, and parks serve as major attractors to residents, especially children who have the opportunity to ride their bicycles to events.
- Some streets provide no bike lanes or wider curb lanes for bicyclists which, when combined with on-street parking and/or higher traffic speeds and volumes, represent a safety concern for users.
- The lack of a street grid system results in confusing routes for visitors.

This list represents a summary and sample of opportunities and constraints in Thousand Oaks, and can be updated as part of future plan revisions.

## 4.1 Commuter and Recreational Needs

The purpose of reviewing the needs of recreational and commuter bicyclists is twofold: (a) it is instrumental when planning a system which must serve both user groups and (b) it is useful when pursuing competitive funding and attempting to quantify future usage and benefits to justify expenditures of resources. According to a May 1991 Lou Harris Poll, it was reported that “...nearly 3 million adults--about one in 60--already commute by bike. This number could rise to 35 million if more bicycle friendly transportation systems existed.” In short, there is a large reservoir of potential bicyclists in Thousand Oaks who don't ride (or ride more often) simply because they do not feel comfortable using the existing street system and/or don't have appropriate bicycle facilities at their destination.

General observations about bicycling needs in Thousand Oaks include:

- **Bicyclists are typically separated between experienced and casual riders.** The U.S. Department of Transportation identifies thresholds of traffic volumes, speeds, and curb lanes where less experienced bicyclists begin to feel uncomfortable. For example, on an arterial street with traffic moving between 30 and 40 miles per hour, less experienced bicyclists require bike lanes while more experienced bicyclists require a 14-15 foot wide curb lane.
- **Casual riders include those who feel less comfortable negotiating traffic.** Some riders, such as children and the elderly, may have difficulty gauging traffic, responding to changing conditions, or moving rapidly enough to clear intersections. Other bicyclists, experienced or not, may be willing to sacrifice time by avoiding heavily traveled arterial streets and using quieter side streets. In some cases, casual riders may perceive side streets (or sidewalks) as being safer alternatives than major through routes, when in fact they may be less safe. Attributes of the casual bicyclist include shorter distances than the experienced rider and unfamiliarity with many of the rules of the road.
- **The casual bicyclist will benefit from route markers, bike lanes, wider curb lanes, and educational programs.** Casual bicyclists may also benefit from marked routes that lead to parks, museums, historic districts, and other visitor destinations.
- **Experienced bicyclists include those who prefer the most direct, through route between origin and destination, and a preference for riding within or near the travel lanes.** Experienced bicyclists negotiate streets in much the same manner as motor vehicles, merging across traffic to make left turns, and avoiding bike lanes and shoulders that contain gravel and glass. The experienced bicyclist will benefit from wider curb lanes and loop detectors at signals. The experienced bicyclist who is primarily interested in exercise will also benefit from loop routes, such as those that are in place in Thousand Oaks, that lead back to the point of origin.
- **Bicycles range in cost from about \$250 to over \$2,000 for adult models.** The most popular bicycle type today is the hybrid mountain bike or BMX. These relatively lightweight bicycles feature wider knobby tires that can handle both on-road and off-road conditions, from 10 to 27 gears, and upright handlebars. Advanced versions have features such as front and rear shocks to help steady the rider on rough terrain. The 10-speeds of years past have evolved into a sophisticated ultra-light 'road bicycle' that is used primarily by the serious long distance adult bicyclists. These expensive machines feature very narrow tires that are more susceptible to flats and blowouts from debris on the roadway.
- **Who rides bicycles?** While the majority of Americans (and Thousand Oaks residents) own bicycles, most of these people are recreational riders who ride infrequently. School children between the ages of about 7 and 12 make up a large percentage of the bicycle riders today, often riding to school, parks, or other local destinations on a daily basis, weather permitting. The serious adult road bicyclist who may compete in races, 'centuries' (100 mile tours) and/or ride for exercise, makes up a small but important segment of bikeway users, along with serious off-road mountain bicyclists who enjoy riding on trails and dirt roads. The single biggest adult group of bicyclists in Thousand Oaks is the intermittent recreational rider who generally prefers to ride on pathways or quiet side streets.

## 4.1.1 Bicycle Commuter Needs and Benefits

### Bicycle Commuter Needs

Commuter bicyclists in Thousand Oaks range from employees who ride to work to children who ride to school. Millions of dollars nationwide have been spent attempting to increase the number of people who ride to work or school, with moderate success. Bicycling requires shorter commutes, which run counter to most land use and transportation policies that encourage people to live some distance from where they work. Access to transit helps extend the commute range of cyclists, but transit systems also face an increasingly dispersed live-work pattern that is difficult to serve. Despite these facts, Thousand Oaks has a great potential to increase the number of people who ride to work or school because of (a) the relatively small size of the City, (b) moderate density residential neighborhoods near employment centers, (c) a favorable topography and climate, and (d) a high percentage of work trips that are less than 15 minutes.

Key bicycle commuter characteristics in Thousand Oaks are summarized below.

- Commuter bicyclists typically fall into one of two categories: (1) adult employees, and (2) younger students (typically ages 8-15).
- Commuter trips range from several blocks to 1 or more miles.
- Commuters typically seek the most direct and fastest route available, with regular adult commuters often preferring to ride on arterial streets rather than side streets.
- Commute periods typically coincide with peak traffic volumes and congestion, increasing the exposure to potential conflicts with vehicles.
- A place to safely store bicycles is of paramount importance to all bicycle commuters.
- Major commuter concerns include changes in weather (rain), riding in darkness, personal safety and security.
- Rather than be directed to side streets, most commuting adult cyclists would prefer bike lanes or wider curb lanes on direct routes.
- Unprotected crosswalks, uncontrolled intersections (no stop sign or signal control), free right turn lanes and narrow travel lanes adjacent to parked cars are the primary concerns of all bicycle commuters.
- Commuters generally prefer routes where they are required to stop as few times as possible, thereby minimizing delay.
- Many younger students (ages 8-11) use sidewalks for riding to schools or parks, which is acceptable in areas where pedestrian volumes are low and driveway visibility is high. Where on-street parking and/or landscaping obscures visibility, sidewalk riders may be exposed to a higher incidence of accidents. Older students (12 years or older) who consistently ride at speeds over 10 mph should be directed to ride on-street wherever possible.
- Cyclists riding the wrong-way on streets are common and account for about 45 percent of recorded collisions with motor vehicles in Thousand Oaks, pointing to the need for education.

## Traffic and Air Quality Benefits

A key goal of the 2010 Bicycle Facilities Master Plan is to maximize the number of bicycle commuters in order to help achieve large transportation goals such as reducing traffic congestion and air pollution. In order to set the framework for these benefits, national statistics and policies are used as a basis for determining the benefits to Thousand Oaks.

- Currently, nearly 3 million adults (about 1 in 60) commute by bicycle. This number could rise to 35 million if adequate facilities were provided (according to a 1991 Lou Harris Poll). The poll was conducted as part of a study funded by the Federal Highway Administration for the purpose of planning and designing bicycle facilities.
- Mode split refers to the type of transportation people choose for work or non-work trips. Currently, the average household in the U.S. generates about ten vehicle trips per day. Work trips account for less than 30% of the total trips.
- According to the 2000 U.S. census, slightly less than 1 percent of all employed Thousand Oaks residents commute primarily by bicycle. This does not include those who ride less than 50 percent of the time. The bicycle commute rate in Thousand Oaks is roughly the same as the rate in California and the United States as a whole.
- The U.S. Department of Transportation, in its publication entitled “National Walking and Bicycling Study” (1995), set a national goal of the doubling of the current bicycling mode shares by the year 2010, assuming that a comprehensive bicycle system is in place. Using future population estimates for Thousand Oaks, this will translate into a bicycle commute mode share of about 1.3 percent or 750 commuters for Thousand Oaks. Add to these numbers commuters who bicycle occasionally and students at local schools, and the average number of daily bicyclists in Thousand Oaks increases to an estimated 3,200 bicycle commuters by 2010. These bicyclists will be saving an estimated 2,600 vehicle trips per day, 949,000 trips per year, and 1,369,400 vehicle miles per year (see Table 2).
- The combined benefit of these future bicycle commuters over the next 20 years is an annual reduction of about 25,200 lbs. of PM10, 68,300 lbs. of NoX, and 99,400 lbs. of ROG (see Table 2).
- Walking and bicycling are two of the most popular forms of recreational activity in the United States, with 84 percent of Americans walking for pleasure and 46 percent bicycling for pleasure. These figures indicate that about 104,200 residents in Thousand Oaks would like to walk for pleasure and 57,000 would like to bicycle for pleasure. If nothing else, this indicates a latent demand for facilities and a potent constituency to push for better facilities.

**Table 2 - Demographics and Bicycle Transportation in Thousand Oaks**

Population (2010 Department of Finance estimate)	128,564
Land Area (estimated)	56 square miles
Population per Square Mile	2,296
Estimated Thousand Oaks Residents who Bicycle for Pleasure	57,000
2000 Census Bicycle Commute Mode Share	500 commuters (0.9%)
Future Bicycle Commute Mode Share	750 commuters (1.3%)
School-related bicycle commuters	3,200 commuters
Total future bicycle commuters	3,950 commuters
Reduced Vehicle Trips/Year	949,000
Reduced Vehicle Miles/Year	1,369,400

**Table 2 - Demographics and Bicycle Transportation in Thousand Oaks**

Reduced PM10/lbs./Year	25,200
Reduced NoX/lbs./Year	68,300
Reduced ROG/lbs./Year	99,400

**4.1.2 Recreational Needs**

The needs of recreational bicyclists in Thousand Oaks must be understood prior to developing a system or set of improvements. While it is not possible to serve every neighborhood street and every need, a good plan will integrate recreational needs to the extent possible. The following points summarize recreational needs:

- Recreational bicycling in Thousand Oaks typically falls into one of three categories: (1) exercise, (2) non-work destination such as a park or shopping, or (3) touring.
- Recreational users range from healthy adults to children to senior citizens. Each group has their own abilities, interests, and needs.
- Recreational bicyclists, similar to commuter bicyclists, prefer routes with improved safety features and minimal delays.
- Directness of route is typically less important than routes with less traffic conflicts. Visual interest, shade, protection from wind, moderate grades, or other features are more important.
- People exercising or touring often (though not always) prefer a loop route rather than having to backtrack.

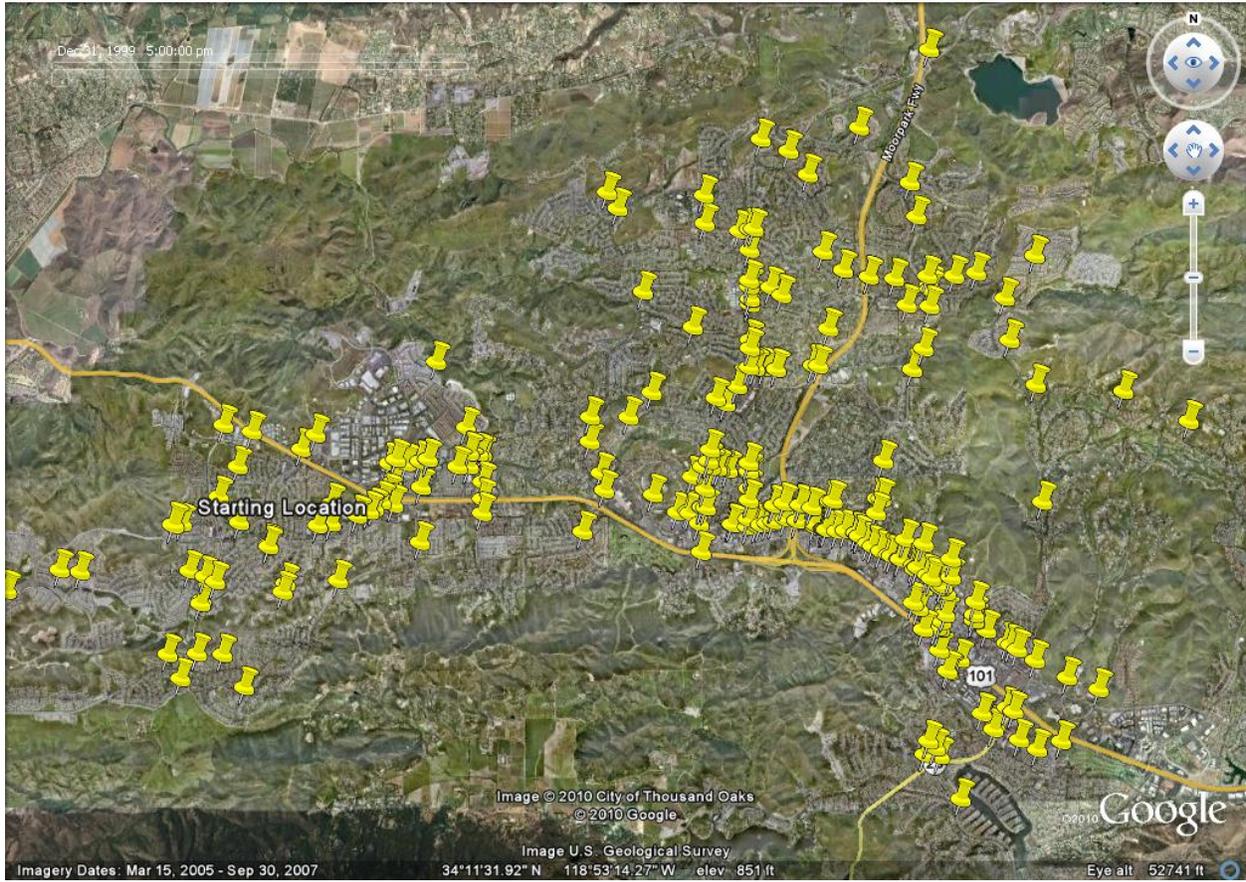
**4.2 Accident Analysis**

Bicycle-related incidents were collected for the past five years in Thousand Oaks, and analyzed by incident type and location (see Figure 3). The most notable pattern was the high number of incidents clustered on Thousand Oaks Boulevard. The incident pattern is not unusual considering that these are the same locations where people are riding or walking in direct conflict with higher traffic volumes. Design recommendations are included in this report that address bicycle visibility at intersections. Thousand Oaks is different than many other cities in that bicycle-related incidents are not clustered around schools and parks. This indicates several possibilities, including a low number of children riding to school, the presence of crossing guards and/or adequate crossing protection. While statistics do not point to an abnormally high number of incidents on sidewalks, sidewalk safety was identified as a concern in the Bicycle Advisory Team and public workshop process.

Thousand Oaks had 268 bicycle related accidents from 2004-2009, which is an average of 45 accidents per year. This is a 27 percent decrease in accidents compared the previous seven years when there were 479 reported bicycle-related accidents (1996 to 2003), which is an average of 68 accidents per year. This translates into an annual average of 0.35 accidents per 1,000 persons, which is at the lower end of the average for 30 other communities around California. Most suburban communities average between 0.5 and 1 accident per 1,000 persons per year, indicating that while safety is a concern in Thousand Oaks the accident rate does not point to any unusual safety problems for the community.

The most important information out of this analysis was the fact that the common bicycle riding practice pertinent to most incidents was a bicyclist riding against traffic, either on a roadway or on a sidewalk. Of the 268 bicycle related accidents 45 percent were related to wrong way bicycle riding. As indicated on Figure 3, wrong way bike riding occurs throughout the City with approximately 20 percent of the wrong way riding accidents occurring on Thousand Oaks Boulevard. This is related to the fact that motorists turning into or leaving a driveway are not expecting to see, or even in the habit of looking for, a bicyclist coming from this direction. It points to the importance of good roadway visibility, and the need to get children who ride faster than 10 miles per hour off the sidewalks. It also points toward the need for a program focused on reducing the number of bicyclists riding in the opposite direction of adjacent vehicle traffic.

**FIGURE 3: BICYCLE ACCIDENT LOCATIONS (2005-2009)**



## 5.0 Recommended Bikeway System

The recommended bikeway system for the City of Thousand Oaks consists of a bikeway network and bicycle support facilities/programs. The bikeway network connects residential neighborhoods in Thousand Oaks with the schools, parks, community centers, libraries, shopping centers, Thousand Oaks Boulevard, and other destinations. The recommended bicycle support facilities/programs include parking facilities, sidewalks, signal programs, and promotional/educational programs.

### 5.1 Bikeway Network

A bikeway 'network' is a system that, for a variety of reasons, including safety and convenience, provides a superior level of service for bicyclists and/or is targeted for improvements by the City due to existing deficiencies. It is important to recognize that, by law, bicyclists are allowed on all streets and roads regardless of whether they are a part of the bikeway network. **The bikeway network is a tool that allows the City to plan for the future and to focus and prioritize implementation efforts where they will provide the greatest benefit to the bicycling community.**

The system of bikeways in the recommended bikeway network (see Figure 4) is classified into the categories that were previously discussed:

**Class I Bike Paths** - Bicycle or multi-use paths separate from roadways, with at-grade or grade-separated roadway crossings. Bike paths are typically located along uninterrupted corridors such as rivers, creeks, flood control channels, etc.

**Class II Bike Lanes** - Striped bicycle lanes located to the right of each direction of vehicle traffic along a roadway. Bike lanes are typically located along collector and arterial roadways that provide direct connections through the City street system.

**Class III Bike Routes** - Low volume roadways that provide shared use with pedestrian or motor vehicle traffic and are identified only by Bike Route signing. Bike routes are typically located along high demand corridors. In Thousand Oaks, some are located along residential streets providing bikeway network connectivity.

**Sharrows** - A shared-lane marking or sharrow is a roadway marking installed at location where there is parallel parking, 35 mph or lower posted speed limits and no bike lanes. The name "Sharrow" is a combination of shared lanes and arrow.

**Sidewalk Bike Routes** - The Thousand Oaks Municipal Code, Section 4-3.1003 says "**Operation of bicycles on roadways and bicycle routes.** (a) A person operating a bicycle may ride on any sidewalk or off-street bicycle path, but shall yield the right-of-way to any pedestrians or equestrians. No person shall ride a bicycle upon any sidewalk or off-street bicycle path that has been posted with signs prohibiting such riding. The definition of pedestrian and bicycle shall be as defined in the California Vehicle Code. (b) A person operating a bicycle on a roadway shall ride in the same direction, as the vehicles are required to be driven on the roadway. A person operating a bicycle on a sidewalk or off-street bicycle path shall ride on the right side of such sidewalk or path unless indicated otherwise by posted signs."

**Shoulder Bike Routes** - Shared roadways with no bikeway route designation signing that provide continuously striped shoulders to improve the safety and convenience for bicyclists and motorists. The shoulder bike routes are typically located along state routes and major arterial corridors.



There is an established methodology for selecting a bikeway network for any community. This involves receiving input from the local bicycling community and local staff familiar with the best routes and existing constraints and opportunities. Input is typically received through the public workshop format. Surveys of bicyclists and the community as a whole can also serve a valuable role in this process as well. Public workshops were held in Thousand Oaks in May 2000, where citizens were asked to identify the routes they regularly ride plus corridors they saw as either opportunities or constraints.

The following criteria were used to develop the bicycle network:

1. **Existing Bicycling Patterns** - Public workshop participants identified preferred bicycling patterns.
2. **Connectivity** - System connectivity, providing access from one bikeway corridor to the next, is important.
3. **Traffic volumes and travel speeds** - Higher volume and higher speed roads are typically acceptable to more experienced cyclists; lower volume and lower speed roads are typically preferred by the less experienced cyclists.
4. **Amount of side friction (driveways, minor streets)** - Bicyclists prefer roads that minimize potential minor street conflicts.
5. **Curb-to-curb width** - Bicyclists prefer roads with wider riding areas.
6. **Pavement condition** - Bicyclists prefer smooth roadways.
7. **Access from residential areas** - Corridors that provide access from residential areas are preferred.
8. **Number of destinations served** - Corridors that maximize the number of destinations served are preferred:
  1. Schools
  2. Parks
  3. Employment Centers
  4. Multi-Modal Terminals such as the Community Transportation Facility
9. **Topography** - Flatter corridors that are on level ground or follow the contours of hills are preferred.
10. **Integration into the regional system** - Connectivity to a regional system is preferred.
11. **Adjacent land use** - The compatibility with adjacent land uses is important.
12. **On-street parking** - Bicyclists prefer roads that minimize potential conflicts with parked vehicles.
13. **Incident data and safety concerns** - Corridors that maximize safety are preferred.
14. **Existing opportunities such as planned roadway improvements** - Integrating recommended bike facility improvements into planned roadway improvements are preferred.
15. **Routes with intersection protection and minimal delay** - Bicyclists prefer corridors that minimize stopping requirements for the bicyclists while maximizing stopping requirements for conflicting vehicle traffic.

The recommended Thousand Oaks bikeway network shown in Figure 4 focuses on connecting existing segments of bike lanes, addressing routes used by bicyclists, and focusing on specific opportunities and constraints. The street pattern offered several distinct through corridors, which connected residential areas with activity centers such as the Amgen complex, the Oaks Mall, the Moorpark Road commercial area, and the Thousand Oaks Boulevard commercial area.

The recommended network is characterized by a system of Class II bike lanes on all major arterial streets throughout the City, Class III bike routes are proposed on a variety of local routes and regional connecting routes. Class III bike route improvements will include intersection protection where needed, wider curb lanes where possible, and signing. Shoulder bike routes are proposed on Moorpark Road at the Norwegian Grade. New Class I bike paths are proposed to provide system connectivity at key locations, with several of these segments to be implemented as part of future development in the area.

A list of the proposed new bikeway facility segments, categorized by bikeway type, is provided as follows:

### **Recommended Class I Bike Paths**

*Project Currently Under Construction*

<b>Name</b>	<b>Start</b>	<b>End</b>	<b>Proposed Class</b>	<b>Length (miles)</b>
Conejo Creek Park South Trail	La Granada Drive	Gainsborough Road	1	1.5

### **Recommended Class I Projects**

<b>Name</b>	<b>Start</b>	<b>End</b>	<b>Proposed Class</b>	<b>Length (miles)</b>
Via Rio-Kimber Trail	Via Rio Terminus	Kimber Drive Terminus	1	0.0
Wildflower Canyon Trail	Wildwood Avenue	Avenida de Los Arboles	1	0.7
Willow Lane Extension Trail	Rancho Road	Willow Lane	1	1.5

### **Recommended Class II Bike Lanes**

*Projects Currently In Design*

<b>Name</b>	<b>Start</b>	<b>End</b>	<b>Proposed Class</b>	<b>Length (miles)</b>
Erbes Road	Thousand Oaks Blvd.	Falmouth Street	2	0.8
Hillcrest Drive	Teller Road	Dusenber Drive	2	4.9
Lynn Road	Hillcrest Drive	Avenida De Los Arboles	2	3.0
Wendy Drive (101 overpass)	Old Conejo Road	Grande Vista Drive	2	0.1

### **Recommended Class II Projects**

<b>Name</b>	<b>Start</b>	<b>End</b>	<b>Proposed Class</b>	<b>Length (miles)</b>
Avenida de los Arboles	Moorpark Road	NB SR23 onramp at Avenida de los Arboles	2	1.3
Borchard Road	Reino Road	Michael Drive	2	1.7
Conejo School Road	Willow Lane	N End	2	0.9
Dusenber Drive	Thousand Oaks Boulevard	Hillcrest Drive	2	0.3
Erbes Road	Thousand Oaks Blvd.	Falmouth Street	2	0.8
Gainsborough Road	Grand Oak Lane	Camino Manzanias	2	0.2
Greenmeadow Street	Lynn Road	End	2	0.3
Hampshire Road	Thousand Oaks Boulevard	Agoura Road	2	1.4
Hodencamp Drive	Thousand Oaks Boulevard	Wilbur Road	2/3	0.5
Janss Road	Moorpark Road	El Monte Drive	2	1.0
Kanan Road	Westlake Boulevard	Lindero Canyon Road	2	2.5
Kimber Drive	W End of Kimber Drive	Wendy Drive	2	1.2
La Granada Drive	Janss Road	S End	2	1.1
Lakeview Canyon Road	Townsgate Road	Thousand Oaks Boulevard	2	0.6
Lawrence Lane	Hillcrest Drive	Rancho Conejo Boulevard	2	1.3
Lindero Canyon Road	City Limit	Kanan Road	2	1.1
Lynn Road (101 Overpass)	SB 101 On-ramp	Hillcrest Drive	2	0.1
Moorpark Road	Greenmeadow Avenue	Rolling Oaks Drive	2	0.4
Moorpark Road	Lynn Road	Calle Contento	2	0.7
Newbury Road	Michael Drive	Ventu Park Road	2	1.0
Old Conejo Road	Reino Road	Wendy Drive	2	0.8
Olsen Road	Avenida De Los Arboles	City Limit	2	1.7
Pederson Road	Calle Almendro	Erbes Road	2	0.8
Potrero Road	Reino Road	City Limit	2	0.6
Potrero Road	City Limit	Westlake Boulevard	2	0.8
Rancho Conejo Boulevard	Teller Road	Lawrence Drive	2	1.3
Rancho Road	SB 101 Off-ramp	E Hillcrest Drive	2	0.4
Reino Road	Potrero Road	Old Conejo Road	2	2.3

Rolling Oaks Drive Extension	Rolling Oaks Drive End	Rancho Road	2	0.8
Sunset Hills Boulevard	Olsen Road	Windridge Avenue	2	2.0
Teller Road	Grande Vista Drive	Hillcrest Drive	2	0.2
Thousand Oaks Boulevard	Westlake Boulevard	Lakeview Canyon Road	2	0.3
Ventu Park Road	N End of 101 Bridge	Lawrence Drive	2	0.5
Ventu Park Road (101 Overpass)	Newbury Road	N End of 101 Bridge	2	0.1
Wendy Drive	Borchard Road	Old Conejo Road	2	0.8
Wilbur Road	W Hillcrest Drive	Moorpark Road	2	0.6
Willow Lane	Conejo School Road	Hampshire Road	2	0.6

### **Recommended Class III Bike Routes**

*Project Currently In Design*

Name	Start	End	Proposed Class	Length (miles)
Read Road Bike Route	Olsen Road	Read Road	3	0.1

### **Recommended Class III Projects**

Name	Start	End	Proposed Class	Length (miles)
Greenmeadow Avenue	End	Moorpark Road	3	0.4
Greenmeadow Street	Newbury Road	Lynn Road	3	0.4
Keats Avenue	Avenida De Las Flores	Avenida De Los Arboles	3	0.3
Madrid Avenue	Mapleleaf Avenue	Michael Drive	3	0.3
Mapleleaf Avenue	Lynn Road	Madrid Avenue	3	0.2
Michael Drive	Wendy Drive	Nellie Court	3	0.3
Michael Drive	West End	Madrid Avenue	3	0.9
Newbury Road	Ventu Park Road	Green Meadow Avenue	3	0.8
Rolling Oaks Drive	Moorpark Road	Los Padres Drive	3	0.5
Via Rio	Calle Del Prado	West End	3	0.5
Windsor Drive	Gainsborough Road	Janss Road	3	0.6

## **5.2 Bicycle Support Facilities/Programs**

Bicycle support facilities and programs are an important component of a bikeway system. Support facilities, such as bicycle parking racks, and programs such as sidewalk management, signing, and promotional/educational programs further improve safety and convenience for bicyclists, motorists and pedestrians. Recommended bicycle programs and support facilities are discussed as follows:

### **Sidewalk Management**

The City of Thousand Oaks Municipal Code permits bicycles to be ridden on any sidewalk or off-street bicycle path, but bicycle riders shall yield the right-of-way to any pedestrians or equestrians and must ride in the direction of traffic. The key problems to be addressed through design and operational improvements are bicyclists riding at speeds over 7-8 mph and in an unsafe manner (particularly, riding the opposite direction of adjacent vehicle traffic) on sidewalks. Younger bicyclists using the sidewalks to reach school presented fewer problems.

The following actions are recommended to address this problem:

#### ***Action #5.1:***

*Implement Enforcement - The City should implement an enforcement measure targeted at bicyclists riding in the opposite direction of adjacent vehicle traffic. This can be enforced by the Thousand Oaks Police Department per the California Vehicle Code Section 21650.1. The police should be instructed to cite the bicyclists riding in the opposite direction of adjacent vehicle traffic. Persons under the age of 14 cannot be cited. A warning should be handed out for the first infraction, including a letter sent to the minor's parents. On the second infraction, the police could fine the bicyclist (or meet with minor's parents).*

*Signing and Stenciling - Signing and stenciling should be used at certain locations as appropriate to prohibit bicycle riding on sidewalks, prohibit bicyclists riding in the opposite direction of vehicle traffic on sidewalks, or require bicyclists to walk their bicycle:*

- a. *In high pedestrian activity areas where there has been a documented bicycle-pedestrian collision pattern (as determined by the City Traffic Engineer), the City should install stenciling or signing (such as “No Bicycling on Sidewalk”). This signing and stenciling would primarily be recommended for commercial areas where the buildings are located directly on the public sidewalk (no setbacks) and people exiting the building have no opportunity to see bicyclists.*
- b. *An option to prohibiting bicyclists over 12 years old from using sidewalks is to post signs reading “Bicyclists Yield to Pedestrians” with a symbol of a pedestrian on a sidewalk and a bicyclist walking their bicycle next to that figure. This sign may be posted where there have been conflicts in the past.*
- c. *At locations where there are numerous driveways and documented incidents of bicyclists riding in the opposite direction of adjacent vehicle traffic, the City should install signing and stenciling (such as “No Bicycles, Wrong Way” or “No Bicycling this Direction”).*

*Action #5.2:*

*Provide Education or Training - As part of bicycle training or education, school children should be taught the rules of the road for bicycle riding in the streets and especially at intersections. Students should also be taught applicable bicycle laws. Students at or under the age of 12 (6th grade) should be instructed that sidewalks are permissible for bicycle riding, unless specifically prohibited by stencils or signs. The education should include how to ride with caution near driveways, how to ride when there are pedestrians present, and how to negotiate intersections. Students over the age of 12 should be instructed to ride on streets, how to choose the appropriate street for riding, and how to ride on sidewalks when there is absolutely no other means of reaching their destination. All students should be taught how to gauge their own speed and how to ride when pedestrians are present (i.e., yielding to pedestrians, ‘calling out’, passing on the left, dismounting when needed).*

*Sometimes grants become available to provide the funding for educational training. For the past eight years, the Bike Patrol Detail has been honored as an innovative way to reduce crime, especially along our business and retail corridors. This program, established by the City Council, in partnership with Thousand Oaks Boulevard business leaders, is a high profile component of our Community Oriented Placing and Problem Solving strategy. The four Bike Team officers are also effective in patrolling high-density housing units and apartment complexes.*

*The bike Patrol Detail is more than just an enforcement tool; it is a very effective community resource. Bike officers reach out to our children by hosting bicycle rodeos, giving safety speeches at our local schools, and encouraging good riding habits and an awareness of safety rules.*

*Action #5.3:*

*Adopt some of Caltrans recommendations to existing City policies for sidewalk management and specifically allow school children to use sidewalks. Consider the use of stencils and signs (supported by a City-adopted resolution) to prohibit bicycle riding on sidewalks in areas where shop or car doors open directly onto sidewalks (sidewalks located within shopping centers, etc.). Also, consider the use of stencils and signs (supported by a City-adopted resolution) to prohibit bicycle riding (in the opposite direction of adjacent vehicle traffic) on sidewalks.*

Bicycle Parking Facilities

Bike racks are provided at most local schools and various other locations in Thousand Oaks, but overall the lack of safe and secure bicycle parking is a concern of bicyclists who may wish to ride to work or shops in town. Theft and vandalism of bicycles is a major constraint to bicycle riding. Bicycle parking includes standard bike racks, covered lockers, and corrals. A systematic program to improve the quality and increase the quantity of bicycle parking facilities is required in Thousand Oaks. The proposed recommendations to supplement grant programs are presented in the following policies:

*Action #5.4:*

*Bike racks should be provided at all public destinations, including the Community Transportation Center, park and ride lots, bus stops, community center, parks, schools, and City Hall. All bicycle parking should be in a safe, secure, covered area (if possible). Commuter locations should provide secure outdoor*

and/or indoor parking. A program to fund and install these facilities should begin as a joint-agency project between the City of Thousand Oaks and the Ventura County Transportation Commission.

#### Action #5.5

Continue to implement bicycle-parking policies contained in the Thousand Oaks Municipal Code (Zoning Ordinance) Off-Street Parking Chapter and the 2010 California Green Building Standards Code. Through the entitlement process, an applicant may be required to provide bicycle parking spaces for planned development. Bicycle parking may be located in a vehicle parking space in existing or proposed developments if it does not adversely impact the parking of vehicles on the lot.

#### Action #5.6:

A special program to provide bike racks and bicycle corrals at all elementary, middle, and high schools in Thousand Oaks should be suggested to the school district. These simple enclosed facilities are locked from the beginning to the end of school, and address the theft and vandalism concerns of students.

#### Signing and Striping

All bikeway signing on public roadways in Thousand Oaks should conform to the signing identified in the Caltrans Traffic Manual and/or the Manual on Uniform Traffic Control Devices (MUTCD). These documents give specific information on the type and location of signing for the primary bike system.

#### Action #5.7:

Use Caltrans recommendations for bikeway signing and striping including the installation of Sharrows, Share the Road Signs and the installation of Bicycle Loop Detector Symbols. The pavement indicators indicated the correct bicycle position at intersections, for safety and to automatically trigger traffic signs. They should be installed in the right most through lane and the right most left turn lane. When the right most through lane is 12' or less (which is too narrow for a bicyclist to share with a car) the optimum symbol positions is in the center of the lane. Otherwise, optimum symbol is 2' from right side of lanes. When there is no right turn lane, the symbol position in the through lane should be shifted left if it allows cars to pass the cyclist on the right in preparation for a right turn.

#### Action #5.8:

The installation of bikeway signs can be done rather easily compared to major striping revisions or bike path construction and should be given a high priority. An example is on existing Class III Bike Routes where installation of several signs will complete a designated route. When approved by Caltrans, the City should install "Bicycle May Use Full Lane" signage at locations where there is a narrow outside lane (12' or less) and not bike lane. "Share the Road" signage should be installed on all streets with speed limits of 35 mph or greater and no bike lanes. Additional signage should include pavement markings and signage for arterial streets the encourage cyclist to ride in the same direction as traffic, ride on the street and not the sidewalk, ride out the door zone and to take safe lane positions at intersections.

#### Promotional/Educational Programs

Recommended promotional/educational programs for bicycle use are covered in Chapter 9.

#### Action #5.9:

Develop a set of promotional/educational programs as discussed in Chapter 9.

#### Interchange Treatments

It is recommended that evaluating and treating each of the freeway interchanges on an individual basis will improve bikeway access across the U.S. 101 and S.R. 23 freeways.

#### Action #5.10:

Evaluate and incorporate interchange bikeway access in conjunction with scheduled interchange improvements.

## Driveway Sight Distance

It is recommended that appropriate sight distance be provided at driveways to permit motorists to see bicyclists riding on sidewalks and to allow the bicyclists to see motorists pulling out from driveways. The visibility requirements should consider a minimum bicycle approach speed of 7-8 mph, corresponding to a horizontal sight distance of approximately 20 feet measured along the sidewalk from a point starting at the driveway. A vehicle pulling out from a driveway should be assumed to stop at the sidewalk in accordance with the California Vehicle Code requirements, corresponding to a 10 feet visibility distance measured along the driveway from a point starting at the sidewalk. These sight distance standards should be implemented in conjunction with the construction of new driveways for developments within the City.

### *Action #5.11:*

*Implement a driveway sight distance triangle standard to provide a 20-foot by 10-foot visibility triangle (20 feet measured along the sidewalk and 10 feet measured along the driveway) at new driveways as part of the development plan approval process.*

## 6.0 Prioritization Strategy

This chapter identifies recommended projects, conceptual cost estimates, and project phasing for the Thousand Oaks Bikeway System.

Once a bikeway system has been identified, the challenge is to select the projects that will offer the greatest benefit to bicyclists in the next five years. Aside from the criteria used in developing the system as a whole, selection of the high priority projects is based on (a) cost and construction feasibility given existing traffic, safety, and environmental constraints, (b) need and benefit, and (c) strength of the project as measured by specific funding criteria.

Finally, it is important to remember that the bikeway system and the top projects are flexible concepts that serve as guidelines to those responsible for implementation. The system and segments themselves will change over time as a result of changing bicycling patterns and implementation constraints and opportunities.

All proposed bikeway projects are listed and prioritized in Table 3 (short term - years 1-5) and Table 4 (long term - years 6-20). These projects were selected by staff, the public and consultants based on the City's five-year Capital Improvement Program (CIP), cumulative personal experience, the orientation of funding programs, the timing of scheduled City roadway improvement projects, and the planning criteria outlined in the Master Plan (coverage, connectivity, user groups, implementation, local input, funding sources). Table 3 and Table 4 include a complete breakdown of projects, cost and timing. The short term projects shown in Table 3 meet immediate needs in Thousand Oaks, help overcome existing barriers, serve virtually all of the City's activity centers, provide improved public safety, and link all quadrants of the community.

**Table 3 - Bikeway Projects (Short Term-Years 1-5)**  
**Project s currently in design or under construction**

Name	Start	End	Class	Length (mi)	Cost
Conejo Creek Park Trail	Janss Road	Gainsborough Road	1	1.5	\$900,000
Erbes Road (just bike lanes)	Thousand Oaks Blvd	Falmouth Street	2	0.8	\$300,000
Hillcrest Drive	Teller Road	Dusenbergl Drive	2	4.9	\$500,000
Lynn Road	Hillcrest Drive	Ave. De los Arboles	2	2.4	\$1,300,000
Read Road Connector	Olsen Road	Read Road	1	0.5	\$250,000

### Additional Short Term Projects

Name	Start	End	Class	Length (mi)	Cost
Rancho Road	SB 101 Off-ramp	E Hillcrest Drive	2	0.4	\$7,000
Borchard Road Study	Michael Drive	Reino Road	2	1.5	\$25,000
Via Rio-Kimber Trail	Via Rio Terminus	Kimber Drive Terminus	1	0	\$3,000
Wendy Drive (101 overpass)	Old Conejo Road	Grande Vista Drive	2	.1	n/a
Willow Lane Study	Conejo School Rd	Hampshire Road	2	.75	\$25,000
Education Program/Marketing	N/A	N/A			\$30,000
Interchange Study – various locations					\$50,000
Wrong Way Signage Program	N/A	N/A			\$40,000
Citywide Bike Rack Program					\$20,000
Improved Directional Signage					\$10,000
Total Costs:					\$3,460,000
Total Miles :					12.85

**Table 4 - Bikeway Projects (Long Term-Years 6-20)**

Name	Start	End	Class	Length (mi)	Cost
Avenida de los Arboles	150ft E of Moorpark Road	NB SR23 onramp at Avenida de los Arboles	2	1.3	\$7,000
Borchard Road	Reino Road	600ft N of Newbury Rd	2	1.7	\$53,200
Conejo School Road	Willow Lane	N End	2	0.9	\$187,500
Dusenber Drive	Thousand Oaks Boulevard	Hillcrest Drive	2	0.3	\$172,700
Gainsborough Road	Camino Manzanas	Grand Oak Lane	2	0.2	\$136,100
Greenmeadow Street	Lynn Road	End	2	0.3	\$12,600
Hampshire Road	Thousand Oaks Boulevard	Agoura Road	2	1.4	\$180,200
Hodencamp Drive	Thousand Oaks Boulevard	Wilbur Road	2	0.5	\$17,400
Janss Road	Moorpark Road	El Monte Drive	2	1.0	\$406,500
Kanan Road	Westlake Boulevard	Lindero Canyon Road	2	2.5	\$94,000
Kimber Drive	W End of Kimber Drive	Wendy Drive	2	1.2	\$45,800
La Granada Drive	Janss Road	S End	2	1.1	\$43,100
Greenmeadow Street	Lynn Road	End	2	0.3	\$12,600
Hampshire Road	Thousand Oaks Boulevard	Agoura Road	2	1.4	\$180,200
Hodencamp Drive	Thousand Oaks Boulevard	Wilbur Road	2	0.5	\$17,400
Janss Road	Moorpark Road	El Monte Drive	2	1.0	\$406,500
Kanan Road	Westlake Boulevard	Lindero Canyon Road	2	2.5	\$94,000
Kimber Drive	W End of Kimber Drive	Wendy Drive	2	1.2	\$45,800
La Granada Drive	Janss Road	S End	2	1.1	\$43,100
Lakeview Canyon Road	Townsgate Road	Thousand Oaks Boulevard	2	0.6	\$20,400
Lawrence Drive	Hillcrest Drive	Rancho Conejo Boulevard	2	0.6	\$46,100
Lindero Canyon Road	City Limit	Kanan Road	2	1.1	\$41,400
Madrid Avenue	Mapleleaf Avenue	Michael Drive	3	0.3	\$1,900
Mapleleaf Avenue	Lynn Road	Madrid Avenue	3	0.2	\$1,200
Michael Drive	Wendy Drive	Madrid Avenue	3	1.2	\$8,200
Moorpark Road	Greenmeadow Avenue	Rolling Oaks Drive	2	0.2	\$197,400
Moorpark Road	Olsen Road	City Limit	2	0.3	\$968,000
Newbury Road	Michael Drive	Ventu Park Road	2	1.0	\$224,500
Old Conejo Road	Reino Road	Wendy Drive	2	0.8	\$332,600
Olsen Road	Calle Zocalo	City Limit	2	1.3	\$195,100
Pederson Road	Calle Almendro	Erbes Road	2	0.8	\$8,500
Potrero Road	Reino Road	City Limit	2	0.6	\$321,200
Potrero Road	City Limit	Westlake Boulevard	2	0.8	\$27,700
Rancho Conejo Boulevard	Teller Road	Lawrence Drive	2	1.3	\$4,900
Reino Road	Potrero Road	Old Conejo Road	2	2.3	\$440,700
Rolling Oaks Drive	Rolling Oaks Drive	Rancho Road	3	0.8	\$3,100
Sunset Hills Boulevard	Olsen Road	Windridge Avenue	2	2.0	\$77,300
Teller Road	Grande Vista Drive	Hillcrest Drive	2	0.2	\$93,400
Thousand Oaks Boulevard	Westlake Boulevard	Lakeview Canyon Road	2	0.3	\$11,200
Ventu Park Road	N End of 101 Bridge	Lawrence Drive	2	0.5	\$8,700
Wendy Drive	Borchard Road	Old Conejo Road	2	0.8	\$29,100
Westlake Boulevard	Hampshire Road	Meadow Gate Street	2	1.0	\$354,500
Wilbur Road	W Hillcrest Drive	Moorpark Road	2	0.6	\$89,700
Wildflower Canyon Trail	Wildwood Ave	Avenida De Los Arboles	1	0.7	\$304,800
Willow Lane	Conejo School Road	Hampshire Road	2	0.6	\$7,400
Willow Lane Bike Path	Rancho Road	Willow Lane	1	1.0	\$4,000,000
Windsor Drive	Gainsborough Road	Janss Road	3	0.6	\$3,900
<b>Total Cost:</b>					<b>\$9,978,600</b>
<b>Total Miles:</b>					<b>42.9</b>

**PROJECTS SUMMARY**

	COSTS	LENGTH (Mi)
Short Term Project	\$3,460,000	12.85
Long Term Project	\$9,978,600	42.90
<b>Totals</b>	<b>\$13,438,600</b>	<b>55.75</b>

## 7.0 Implementation/Funding Strategy

### 7.1 Project Implementation

The translation of a bikeway system map to actual improvements in the field is generally under the purview of the City's Public Works Department. Aside from meeting specific design standards for bicycle, pedestrian, and motor vehicle traffic, the Public Works Department must consider on-street parking, drainage, pedestrian movement, signals, traffic volumes and speeds, roadway capacity and level of service, mixture of trucks, maintenance, among a variety of items.

### 7.2 Project Cost and Funding Breakdown

The total cost of the Thousand Oaks bikeway system over 20 years is estimated at \$12.5 million. The costs do not include numerous bike lanes and shoulder improvements that will be constructed as part of new roadway projects. Many of the projects can be funded with federal, state, and regional transportation, safety, and/or air quality grants; others are recreational in nature and must be funded by local or private sources. Many of these projects are also on the Capital Improvement Plan and will be constructed as part of future roadway projects. As project move forward within the specific funding programs they will be programmed for design and construction.

### 7.3 Funding Sources

There are a variety of potential funding sources including local, state, regional, and federal programs that can be used to construct the proposed bicycle improvements. Many of the federal, state, and regional programs are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Local funding for bicycle projects typically comes from Transportation Development Act (TDA) funding, which is prorated to each community based on gasoline taxes. Funding for many of the projects listed in Table 5 would need to come from either TDA, general fund (staff time), or possibly private grants. Table 6 presents a summary of available funding along with timing, criteria, and funding agency.

<b>Table 5: Summary of Funding Programs</b>			
<b>Funding Programs</b>	<b>Modes (Bicycle, Pedestrian Walkways and Trails, both)</b>	<b>Trip Types (Commute/Transportation, Recreational, both)</b>	<b>Project types (Construction, Non-construction, both)</b>
<b>Federal Funding</b>			
Safe Routes to school	Both	School Trips	Both
Surface Transportation Program (STP)	Both	Commute/Transportation	Both
Transportation Enhancement Activities (TEA-21)	Both	Commute/Transportation	Construction
CMAQ	Both	Commute/Transportation	Both
National Highway System (NHS)	Both	Commute/Transportation	Both
Federal Lands Highway Funds	Both	Commute/Transportation	Construction
Scenic Byways Program	Both	Both	Construction (including planning design and development)

**Table 5 (continued): Summary of Funding Programs**

<b>Funding Programs</b>	<b>Modes (Bicycle, Pedestrian Walkways and Trails, both)</b>	<b>Trip Types (Commute/Transportation, Recreational, both)</b>	<b>Project types (Construction, Non-construction, both)</b>
National Recreation Trails Fund	Both	Both	Both
Highway Safety Program	Both	Commute/Transportation	Non-construction
Highway Safety and Development	Pedestrian Walkways and Trails	Commute/Transportation	Non-construction
Recreational and Public Purposes Act	Both	Both (Primarily Recreational)	Both
Schools and Roads Grants to States	Both	Commute/Transportation	Construction
Section 3 Mass Transit Capital Grants	Both	Commute/Transportation	Both
Section 3 Mass Transit Capital Grants	Bicycle	Commute/Transportation	Construction
<b>State Funding</b>			
Bicycle Transportation Act	Bicycle	Commute/Transportation	Construction
Environmental Enhancement and Mitigation program	Both	Commute/Transportation	Construction
Flexible Congestion Relief	Both	Commute/Transportation	Construction
Habitat conservation Fund Grant Program	Both	Both	Construction
Kapiloff Land Bank Funds	Both	Commute/Transportation	Construction (Land acquisition)
Land and Water conservation Fund	Both	Both	Construction (Including land acquisition)
Mello-Roos Community Facilities Districts	Both	Both	Both
Local Transportation Fund (LTF) TDA Article 3	Both	Commute/Transportation	Both

**Federal**

SAFETEA-LU, 2005

The **Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users** (Public Law 109-59; **SAFETEA-LU**) is a funding and authorization bill that governs United States federal surface transportation spending. It was signed into law by President George W. Bush on August 10, 2005 and expired as of September 30, 2009. Congress is expected to begin working on a replacement bill for the next six-year period during its 2009 session.

The \$286.4 billion measure contains a host of provisions and earmarks intended to improve and maintain the surface transportation infrastructure in the United States, including the interstate highway system, transit systems around the country, bicycling and pedestrian facilities, and freight rail operations.

With an active and effective regional agency such as the VCTC, Thousand Oaks is in a good position to secure more than its fair share of SAFETEA-LU funding. It will be critical to get the local state

assemblyman and senator briefed on these projects and lobbying Caltrans and the California Transportation Commission for these projects.

## **State**

### *TDA Article III (SB 821)*

Transportation Development Act (TDA) Article III funds are state block grants awarded annually to local jurisdictions for bicycle and pedestrian projects in California. These funds originate from the state gasoline tax and are distributed to local jurisdictions based on population. Thousand Oaks may use its TDA funds for bicycle projects, and compete for additional TDA funding from VCTA.

### *AB 434*

AB 434 funds are available for clean air transportation projects, including bicycle projects, in California. These funds are distributed on the regional level through the Air Pollution Control District.

### *Bicycle Transportation Account*

The State Bicycle Transportation Account (BTA) is an annual statewide discretionary program that is available through the Caltrans Bicycle Facilities Unit for funding bicycle projects. Available as grants to local jurisdictions, the emphasis is on projects that benefit bicycling for commuting purposes. The BTA has 7.2 million dollars available to city and county agencies in 2005. Thousand Oaks may apply for these funds through the Caltrans Office of Bicycle Facilities.

## **Regional**

### *Clean Air Funds*

Clean Air Funds are generated by a surcharge on automobile registration. The Board may allocate some of these funds for external projects. The grants are generally in the \$50,000 to \$200,000 range and are highly competitive based on a cost-benefit formula developed by the District. Awards are made to those projects that most closely meet the intent of the legislation and the requirements in the RFP. Projects must be shown to have a direct and positive effect on the air quality from the transportation sector within Ventura County.

## **Local**

### *New Construction*

Future road widening and construction projects are effective ways of providing bike lanes. To ensure that roadway construction projects provide bike lanes where needed, it is important that an effective review process is in place to ensure that new projects meet the standards and guidelines presented in this master plan.

### *Impact Fees*

Another potential local source of funding is developer air quality mitigation fees, which are typically tied to trip generation rates. A developer may reduce the amount of the fee owed by paying for on-site and off-site bikeway improvements, which will encourage residents to bicycle rather than drive. Establishing a clear connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit.

### *Mello Roos*

Bike paths, lanes, and pedestrian facilities can be funded as part of a local assessment or benefit district. Defining the boundaries of the benefit district may be difficult unless the facility is part of a larger parks and recreation or public infrastructure program with broad community benefits and support.

### *Other*

Local sales taxes, fees, and permits may be implemented, requiring a local election. Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of groups such as the California Conservation Corp (who offer low cost assistance) will be effective at reducing project costs. Local schools or community groups may use the bikeway or pedestrian project as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right of way where needed. A local construction company may donate or discount services and materials. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and maintain the facility.

Other opportunities for implementation may appear over time, which can be used to implement the system.

## 8.0 Monitoring and Maintenance

Once the Bikeway Facilities Master Plan has been adopted, a monitoring effort is required to ensure that the recommendations are enforced and the system is maintained over time. The following actions are suggested:

- Action #8.1: Plan Review. All development and infrastructure improvement plans should be reviewed by the Public Works Department to ensure that bikeway segments are implemented, developer requirements are being met, and design standards adhered to in accordance with this document.*
- Action #8.2 Commercial Driveway Sight Distance. Driveway Sight Distance to provide appropriate visibility to see bicycles riding on sidewalks should be checked as part of the plan review process.*
- Action #8.3: Accident monitoring. Bicycle-related accident data should be collected annually and evaluated to determine potential problem areas.*

### 8.1 Maintenance

The total annual maintenance cost of the proposed bikeway system is estimated to be approximately \$40,000 when it is fully implemented. About two-thirds of the maintenance costs are associated with the proposed off-road bike paths. Class I bike path maintenance costs are based on \$8,500 per mile, which covers labor, supplies, and amortized equipment costs for weekly trash removal, monthly sweeping, and bi-annual resurfacing and repair patrols includes cleaning, resurfacing and re-striping the asphalt path, repairs to crossings, cleaning drainage systems, trash removal, landscaping, underbrush and weed abatement (performed once in the late spring and again in mid-summer).

Maintenance access on the Class I bike path will be achieved using standard pick-up trucks on the pathway. Sections with narrow widths or other clearance restrictions should be clearly marked. Suggested Class I bike path maintenance actions:

- Action #8.4: Maintenance. The Public Works Department should track long term bike path maintenance, schedule repairs on all City bike facilities, and respond to calls from the public or staff regarding maintenance needs.*
- Action #8.5: Identify a reliable source of funding to cover all new Class I bike path construction. All proposed designs should be closely examined to minimize future maintenance costs.*

### 8.2 Security

Security may be an issue along portions of the proposed Class I bike paths. The following actions are recommended to address these concerns.

- Action #8.6: Enforcement of applicable laws on bike paths will be performed by the Police Department, using both bicycles and vehicles. Enforcement of vehicle statues relating to bicycle operation will be enforced on Class II and Class III bikeways as part of the department's normal operations. No additional manpower or equipment is anticipated for Class II or III segments.*
- Action #8.7: Normal bike path hours of operation should be 6AM to 9PM, unless otherwise specified*

## **9.0 Promoting and Encouraging Bicycle Travel**

### **9.1 Bicycle Safety Education Programs**

The Thousand Oaks Bicycle Master Plan provides recommendations for both physical improvements (such as bike lanes) and education/information programs. This section covers future efforts to educate bicyclists and motorists, and efforts to increase the use of bicycles as a transportation alternative.

#### *9.1.1 Education*

The Conejo Valley Unified School District, Thousand Oaks Police Department, and the Public Works Department have a long history of trying to improve safety conditions for bicyclists. Despite these efforts, the lack of education for bicyclists, especially younger students, is a leading cause of incidents. For example, the most common type of reported bicycle incident in California involves a younger person (between 8 and 16 years of age) riding on the wrong side of the road in the evening hours. Studies of incident locations around California consistently show the greatest concentration of incidents is directly adjacent to elementary, middle, and high schools. Many less-experienced adult bicyclists are unsure how to negotiate intersections and make turns on City streets.

Motorist education on the rights of bicyclists and pedestrians is virtually non-existent. Many motorists mistakenly believe, for example, that bicyclists do not have a right to ride in travel lanes in some circumstances and that they should be riding on sidewalks. Many motorists do not understand the concept of 'sharing the road' with bicyclists, or why a bicyclist may need to ride in a travel lane if there is no shoulder or it is full of gravel or potholes.

The Traffic Bureau of Ventura County Sheriff's Department provides educational programs in schools. These programs are provided once a year to 3rd, 4th, and 5th graders.

#### *Action #9.1: Continue the work of the School Safety Traffic Committee*

A Joint City/School District Safety Committee work together to solve school related traffic issues. The Committee consists of appointed parents, teachers, administrators, police, and engineering services staff whose task would be to identify problems and solutions, ensure implementation, and submit recommendations to the School Board or City Council.

#### *Action #9.2: Continue to Develop Educational Program Materials and Curriculum*

Education materials should be expanded to promote the benefits of bicycling, the need for education and safety improvements, the most recent educational tools available in the country (including the use of low-cost safety videos), and directives to parents on the proper school drop-off procedure for their children. Incentive programs to reward good behavior should be developed. Educational programs, and especially on-bike training, should be expanded to more grades and for more hours per year. Education curriculum should, at a minimum, cover the following lessons:

- on-bike training or bicycle 'rodeos'
- how to adjust and maintain a bicycle
- night riding (clothes, lights)
- rules of the road
- riding on sidewalks
- how to negotiate intersections
- riding defensively
- use of hand signals

A standard safety handbook format should be developed incorporating the best of those elements currently in use, and made available to each school on disk so they may be customized as needed. Each school should develop a circulation map of the campus and immediate environs to include in the handbooks, clearly showing the preferred circulation and parking patterns and explaining in text the reason behind the recommendations. This circulation map should also be a permanent feature in all school newsletters. Bicycle helmet subsidy programs are available in California, and should be used to provide low-cost approved helmets for all school children that ride bicycles.

*Action #9.3: Continue to Develop an Adult Education Program*

Establish an adult bicycle education program through the City departments that (a) teaches adults how to ride defensively, (b) how to ride on a variety of City streets, and (c) encourages adults to feel more confident to ride to work or for recreation. Work with local bicycling groups who could provide the training expertise, and possibly lead organized bicycle-training sessions, tours and rides.

*Action #9.4: Continue to Educate Motorists*

Educate motorists about the rights and characteristics of bicyclists through a variety of means including: (a) producing a brochure on bicycle safety and laws for public distribution, and (b) install signs that read 'Share the Road' (recently adopted by Caltrans) at the beginning and then every 1,000 feet on segments of the proposed bikeway system where bicyclists will need to ride in travel lanes (12 feet wide or less) due to the lack of shoulders or bike lanes, where visibility is poor, and where traffic volumes exceed 15,000 vehicles per day.

*Action #9.5: Continue to Maintain School Commute Route Improvement Plan*

Identifying and improving routes for children to bicycle to school is one of the most cost effective means of reducing the morning peak traffic congestion and addressing existing safety problems. The most effective school commute programs are joint efforts of the school district and City, with parent organizations adding an important element.

Maintain a procedure that can be used to evaluate safety conditions on school commute corridors to determine if conditions are within acceptable bounds. This can be done using state or City incident data, surveys of parents on their school commute habits, surveys of students who walk or ride to school, and other sources. Maintain specific thresholds by which meaningful comparisons can be made.

Maintain a toolbox of measures that can be implemented by the school district and City to address safety problems. This may include maps of preferred school commute routes, warning signs, enhanced education, additional crossing guards, signal treatments (longer cycles, pedestrian activated buttons, etc.), enhanced visibility at key locations (lighting, landscaping abatement), crosswalks, bike lanes, and other measures.

The following process is recommended for developing a Safe Routes to School Program in Thousand Oaks for bicycle commuters:

1. Expand the School Safety Team to include not just representatives from the school district, the City's Public Works and Police Departments, but also the local neighborhood, parent-teachers or other similar groups, and the school itself.
2. Set objectives and a reasonable schedule for this Task Force to accomplish its goals.
3. Determine the preferred basic travel routes to the school based on (a) parent and student input, (b) a survey of parent and student community patterns, (c) City Public Works Department and police input, and (d) observations of actual travel patterns.
4. Are there any efforts to guide students who wish to walk or bicycle to school? Does the school provide a map of recommended routes?
5. Does the school wish to encourage more students to walk or bicycle to school? Parents insist on driving their children even a few blocks instead of encouraging them to ride their bicycles.
6. Study the parking lot and drop off areas of the school. Is there a pattern where students are walking between cars or through parking lots or drop off areas to reach the school? Are there management efforts to get parents to follow any specific drop-off protocol?
7. Are there adequate sidewalks and bike lanes on the streets directly serving the school? Are there school access points which encourage students to cross mid-block or at other less desirable locations?

8. Where are the first major street crossings on the main school commute routes? Many accidents occur at these intersections. Are they signalized? Is the signal timing adequate even for younger students? Are right turns on red allowed? Are there crossing guards?
9. Are there any locations where students are crossing major or minor streets at mid-block or unprotected locations, i.e., no stop signs or signals? Because children are sometimes hard to see and have difficulty in gauging vehicle speed, these locations can be the focus of improvements.
10. Do students have to cross intersections that have very wide turning radii, unrestricted right turn movements, where vehicles can accelerate and merge while turning? These are problematic because drivers are focused to their left at merging traffic rather than in front at crosswalks.
11. Do all intersections have properly designed crosswalks? The crosswalks should be located so that students can wait safely on the sidewalk prior to seeing if they can cross. Is there adequate visibility and lighting given the speed of traffic? Are there adequate warning signs in advance of the crosswalk?
12. What are the 85th percentile speeds of traffic on the major school commute corridors? Are they significantly above or below the posted speed limits? When was the last speed survey conducted? What is the level of police enforcement, and does it occur only at the beginning of the school year? It is possible to lower speed limits near schools. In other locations, it may be necessary to make physical changes, such as narrowing travel lanes, to slow traffic. It may also be preferable to accept slightly more congestion on a two-lane street, and have slower speeds, than have free flowing high-speed traffic on a four-lane street.
13. School commute projects involve numerous, often small incremental changes to sidewalks and roadways, such as adjustments to signal timing or new signing or lighting. In other cases, innovative-lighted crosswalk treatments or even grade separation may be warranted. Working with the Task Force will help a school determine the best mix of improvements suitable for each corridor, and compatible with local traffic conditions.
14. Once the improvements have been identified, a preliminary design or plan must be completed which describes the project and its cost. For example, a crosswalk improvement would need to be designed so that it can be reviewed and approved by the local agency. Again, a professional may be engaged for this effort.
15. With a plan and cost estimate, the project still needs a sponsor. Typically this would be the City's Public Works Department, which is best connected to available funding sources. The project sponsor will need an official authorization, and confirmation that (a) the right-of-way is publicly owned, (b) local staff have reviewed and approved the project, and (c) no negative impacts have been identified. With this in hand, the project sponsor can seek funding, which usually requires a 10 percent or greater local matching amount.
16. Programs that may be implemented include a "Walking School Bus Program" which involves parents taking turns walking (or bicycling) with groups of children to school.

## **9.2. Community and Employer Outreach**

Without community support, a bicycle plan lacks the key resources that are needed to ensure implementation over time. While the City's Public Works Department may be responsible for designing and constructing physical improvements, strategies for community involvement will be important to ensure broad-based support--which translates into political support--which can help secure financial resources. Involvement by the private sector in raising awareness of the benefits of bicycling range from small incremental activities by non-profit groups, to efforts by the largest employers in the City. Specific programs are described below.

### *9.2.1 Bicycle Donation Program*

A fleet of lender bicycles available to employees to use as a commute alternative has proved successful in Portland, Oregon and other U.S. cities. The bicycle may be purchased new or obtained from police auctions, repaired, painted and engraved with ID numbers, and made available free of charge to employees. Depending on demand, bicycles may be available through reservations or on a rotating basis. The bicycles themselves should be lower-end heavy-duty bicycles that have minimal re-sale value. Employer's responsibilities would be limited to an annual maintenance inspection and repairs as necessary. The objective of the program is to encourage employees to try bicycling to work as an alternative, without making a major investment. Employers may wish to allow bicycle commuters to leave 15 minutes early from work, or some other type of incentive to encourage use of the bicycles.

### *9.2.2 Bicycle Clunker and Parts Program, Bicycle Repair Program*

This program ties directly into the previous program by obtaining broken, stolen, or other bicycles and restoring them to working condition. The program's dual mission is also to train young people (ages 12-18) how to repair bicycles as part of a summer job training effort. Bicycles are an excellent medium to teach young people the fundamentals of mechanics, safety, and operation. Young people can use these skills to maintain their own bicycles, or to build on related interests. The program is often staffed by volunteers from local cycling organizations and bicycle shops, who can help build an interest in bicycling as an alternative to driving. The seed money to begin this program often comes from a local private funding source. The proposal submitted to this source should clearly outline the project objectives, operating details, costs, effectiveness evaluation, and other details. The bicycles themselves could be derived from unclaimed stolen bicycles from the police department, or from donated bicycles. The program will need to qualify as a Section 501C (3) non-profit organization to offer tax deductions.

### *9.2.3 Community Adoption*

Programs to have local businesses and organizations 'adopt' a pathway such as the Greenmeadow Connection Trail have proven effective around the country, similar to the adoption of segments of the Interstate Highway system. Small signs located along the pathway would identify supporters, acknowledging their contribution. Support would be in the form of an annual commitment to pay for the routine maintenance of the pathway, which in general costs about \$8,500 per mile. The City or other groups may administer this program.

### *9.2.4 Bike Fairs and Races including the Amgen Tour of California*

The City can assist the growing interest in bicycle races. Events would need to be sponsored by local businesses, and involve some promotion, insurance, and development of adequate circuits for all levels of riders. It is not unusual for these events to draw up to 1,000 riders, which could bring some additional expenditure into the town.

The City can assist in developing these events by acting as a co-sponsor, and expediting and possibly underwriting some of the expense of, for example, police time. The City should also encourage these events to have races and tours that appeal to the less experienced cyclist. For example, in exchange for underwriting part of the costs of a race, the City could require the event promoters to hold a bicycle repair and maintenance workshop for kids, short fun races for kids, and/or a tour of the route led by experienced cyclists who could show less experienced riders how to safely negotiate City streets.

### *9.2.5 Employer Incentives*

Beyond programs described earlier, such as the Bicycle Donation Program, additional employer incentives to encourage employees to try bicycling to work could include sponsoring bike fairs and races, providing bicycle racks and shower facilities, and offering incentives to employees who commute by bicycle by allowing for more flexible arrival and departure times, and possibly paying for transit or taxis during inclement weather. The City may offer incentives to employers to institute these improvements through air quality credits, lowered parking requirements, or other measures.

### 9.2.6 *Bike to Work and Bike to School Days*

In addition to the existing annual regional bike-to-work days, the City could help promote a local bike-to-work day. Bike-to-school days could be jointly sponsored with the School District, possibly in conjunction with bicycle education programs.

### 9.2.7 Marketing the Bicycle Facilities Master Plan

The success of the Bicycle Facilities Master Plan depends largely on the community's acceptance and promotion of the Plan's contents. The following are steps that will help ensure it becomes a living document, helping shape the City's future.

Most of these education and encouragement programs and activities will likely be cooperative efforts between various City departments, private sponsors, and community groups. These are suggestions for marketing the Bike Plan:

- Develop and hold bicycle planning and design training for all transportation engineers and planners.
- Implement Bicycle Friendly Businesses Program.
- Work with towing companies and emergency cleanup crews so they better understand the needs of bicyclists.
- Work with contractors, subcontractors, and City maintenance and utility crews to help them better understand the needs of bicyclists.
- Develop, promote and publicize bicycle commuter services, such as bike shops selling commute gear and regular escorted commute rides.
- Create an annual commuter challenge for area businesses.
- Create events such as "bicycle to the grocery store" days, when cyclists get vouchers for, or coupons off items in the store, or "walk to the movies" days, when cyclists and pedestrians receive free popcorn or a discount on a movie or refreshments.
- Create public service announcements on radio and TV to promote the health and livability benefits of bicycling, as well as the detrimental effects of excessive motor vehicle use (e.g. pollution, traffic noise, congestion, loss of life and mobility).
- Work with Parks Department to deliver a "benefits of bicycling and walking message" to youth that are working on water, air, and general pollution activities.
- Hold an annual community event to encourage residents to replace one car trip a week with a bicycle trip.
- Promote and publicize new and existing education and encouragement efforts by community groups and businesses.
- Support planning and implementation of an annual mass bicycling ride in Thousand Oaks to attract new riders, showcase new projects, and demonstrate the benefits of bicycling.
- Develop and implement a public education campaign to encourage bicycling and walking, such as ads on movie screens, City bench, bicycle locker and billboard advertising, and videos on cable access television.