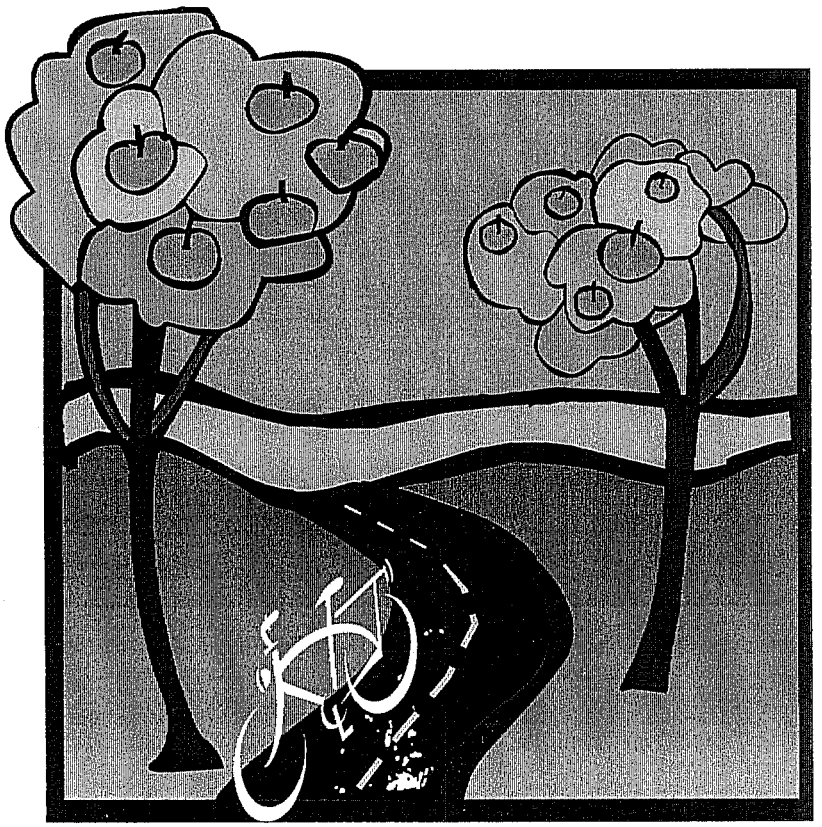
Town of
LOOMIS



Bikeway Master Plan

Adopted by Loomis Town Council
February 11, 2003

Prepared by
Placer County Transportation Planning Agency

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I. INTRODUCTION

TOWN OF LOOMIS BIKEWAY MASTER PLAN PURPOSE

The purpose of the Town of Loomis Bikeway Plan is to develop a city wide bikeway network that coordinates with the regional bikeway plan and complies with the requirements of the California Bicycle Transportation Act (Appendix B). Bicycling is becoming an increasingly popular transportation mode for commuting, running errands, fitness, and recreation.

PREVIOUS BIKEWAY PLANNING EFFORTS

Prior to this document, the Town of Loomis had not developed a bicycle plan. The Loomis General Plan recognizes bicycling as a valid form of transportation, and provides a goal to increase usage.

RELATIONSHIP TO OTHER DOCUMENTS

1. Regional Transportation Plan (RTP) for Placer County

The RTP for Placer County was recently updated and was adopted in December of 2001. The 2001 RTP contains a description of non-motorized facilities, accompanied by a needs assessment and short and long range action plans. Regional project priorities are identified in the appendix, and projects within the Loomis Town limits have been included in this plan. Future updates within the RTP non-motorized section may include regional routes within the Loomis Town limits.

2. County General Plan

Placer County's General Plan was last updated in 1994. It includes a section on non-motorized transportation that incorporates an overall goal of providing a safe, comprehensive, and integrated system of facilities for non-motorized transportation. The policies call for development of a comprehensive and safe system of recreational and commuter bicycle routes and coordination of County bikeways with neighboring jurisdictions.

3. Loomis General Plan

The Loomis General Plan provides guidelines for development within the Town of Loomis. The circulation element of the Town of Loomis General Plan includes a goal to "Implement additional bicycle facilities that result in increased bicycle usage." Other references to bikeways are made in the Parks and Recreation element of the General Plan. Secret Ravine is recognized as an opportunity for a Class I bicycle facility, as well as Antelope Creek. All bicycle related suggestions within the General Plan were taken into account during the development of this plan.

4. I-80 Corridor Bicycle Plan

The goal of the I-80 corridor study is to make bicycling a real travel option in the I-80 corridor by developing continuous and safe bicycle facilities. The Town of Loomis Bikeway Master Plan has been developed consistent with this goal. The areas in the Town of Loomis that are relevant to the I-80 corridor are consistent with the I-80 corridor bicycle plan.

5. Placer County Regional Bikeway Plan

The Placer County Regional Bikeway plan provides for a regional system of bikeways for transportation and recreation purposes. The plan divides the eastern and western portions of the County at Colfax and the Tahoe basin, emphasizing regional connections between and within cities in the two areas. The Regional Bikeway Plan provides suggestions for jurisdictions to follow within city limits, as regional bikeways are frequently multi-jurisdictional. Suggestions within the Regional Bikeway Plan were utilized in the development of this document. The Regional Bikeway Plan was accepted by the PCTPA Board in August of 2001 and was adopted by the Placer County Board of Supervisors in September 2002.

PAST BICYCLE FACILITY PROJECTS

Placer County completed all of the projects listed below prior to the incorporation of the Town of Loomis.

- Class I bike path and Class II bike lane on King Road
- Class I bike path and Class II bike lane on Taylor Road
- Class II bike lane on Sierra College Boulevard

PLAN DEVELOPMENT AND PUBLIC PARTICIPATION

The plan was developed in conjunction with the development of the County wide Regional Bikeway Plan. The PCTPA Bicycle Advisory Committee provided input toward development of the plan. The following steps are being implemented in order to maintain consistent involvement with the members of the public.

- Issue Administrative Draft Plan (Completed, April 2002)
- Issue Final Administrative Draft Plan for public review.
- Finalize Plan, incorporating comments to the extent feasible.
- Present Plan to Loomis Town Council for adoption.
- Present Final Plan to PCTPA Board for acceptance.

II. GOALS & OBJECTIVES

OVERALL GOAL FOR THE TOWN OF LOOMIS BIKEWAY MASTER PLAN:

To promote safe, convenient, and enjoyable cycling by establishing a comprehensive network of bikeways that link the Activity Centers of Loomis and provides regional connections with the Placer County Regional Bikeway Plan.

OBJECTIVES AND POLICIES:

1. Create a safe and efficient network of bikeways that enhances bicycle use as a viable alternative mode of transportation for commuter and recreational use and for the avid cyclists as well as the "weekend" rider.

   Policy: Implement the bikeway network by working closely with Placer County jurisdictions, bicycle advisory committees, and Town Residents.

2. Encourage the Town to consider the needs of cyclists when designing new or reconstructing existing facilities.

   Policy: Work with the Placer County jurisdictions to incorporate state-of-the-art bicycle design guidelines into their overall policies for roadway and interchange design.

3. Coordinate with Placer County jurisdictions to create continuity and consistency with existing and planned bikeway systems.

   Policy: Develop a prioritized list of bikeway projects for implementation throughout the Town Limits.

4. Provide for bikeways that connect to work, school, shopping, transit transfer points, and recreational areas.

   Policy: Implement directional signage along bikeways to indicate connections to key destinations.

5. Create a bikeway system that takes advantage of the scenic qualities in Loomis for both resident and visitor to enjoy.

   Policy: Encourage Placer County jurisdictions to work with developers and bicycle groups to dedicate easements for bikeways.

6. Integrate bicycle planning with other community planning, including land use and transportation planning.

   Policy: Include bikeways in Town planning efforts.

7. Provide for an ongoing bikeway planning process.

   Policy: Update the prioritized project list as bikeway projects are implemented.

8. Maintain bikeways and related facilities in a condition favorable to safe and efficient use by cyclists.

   Policy: Develop an ongoing funding source for maintenance of bikeways.

9. Ensure safe conditions for cyclists through signage, traffic controls, engineering, and law enforcement efforts.

   Policy: Encourage addition of safety signage on shared roadways, and support safety education programs for bicyclists.

10. Promote awareness and use of the bikeway system through distribution of a map of all bicycle facilities.

    Policy: Working with the PCTPA, provide updated information for the regional bicycle map. Work with local groups to provide wide distribution to everyone including low income and minority communities.

11. Pursue all possible sources of funding for timely implementation of the bicycle master plan.

    Policy: Apply for all possible sources of funding including: Safe Routes to Schools, Congestion Mitigation and Air Quality, Transportation Development Act, State Bicycle Transportation Account.

III. PLAN ELEMENTS

DEFINITIONS

The Town of Loomis uses Caltrans' design standards, as described in Chapter 1000 of the Caltrans Highway Design Manual, dated February, 2001.

Class I Bike Path provides a completely separated facility designed for the exclusive use of bicycles and pedestrians with minimal crossflows by motorists. Caltrans standards call for Class I bikeways to have 8 feet (2.4 meters) of pavements with 2 foot (0.6 meters) graded shoulders on either side, for a total right-of-way of 12 feet (3.6 meters). These bikeways must also be at least 5 feet (1.5 meters) from the edge of a paved roadway.

Class II Bike Lane provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted. Caltrans standards generally require a 4 foot (1.2 meters) bike lane with a 6-inch (150 mm) white strip separating the roadway from the bike lane.

Class III Bike Route provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists. Roadways designated as Class III bike routes should have sufficient width to accommodate motorists, bicyclists, and pedestrians. Other than a street sign, there are not special markings required for a Class III bike route.

SETTING

Loomis is a small semi-rural community located in western Placer County. Loomis maintains a distinct small town accompanied by semi-rural character through large residential lots with continuing agricultural activities, rural streets, equestrian trails, and a compact downtown "village" area conducive to bicycling. The Loomis Town Center Master Plan calls for a pedestrian-oriented commercial village, which includes the rehabilitation and reuse of historic structures. The climate is mostly Mediterranean, with hot summers and mild winters just below the snow line. In addition to having splendid scenery, Loomis is very conducive to cycling with terrain varying from hilly to flat, with most of the flat terrain lying near activity centers.

LAND USE PATTERNS

An efficient bikeway network connects residents with schools, hospitals, government, business, parks and shopping centers. Activity centers such as these are found in several areas throughout the Town of Loomis. An emphasis has been put on roadways that connect these Activity Center areas, consistent with our goal of developing a city wide bicycle network. Figure 2 displays various activity center locations throughout the Town of Loomis.

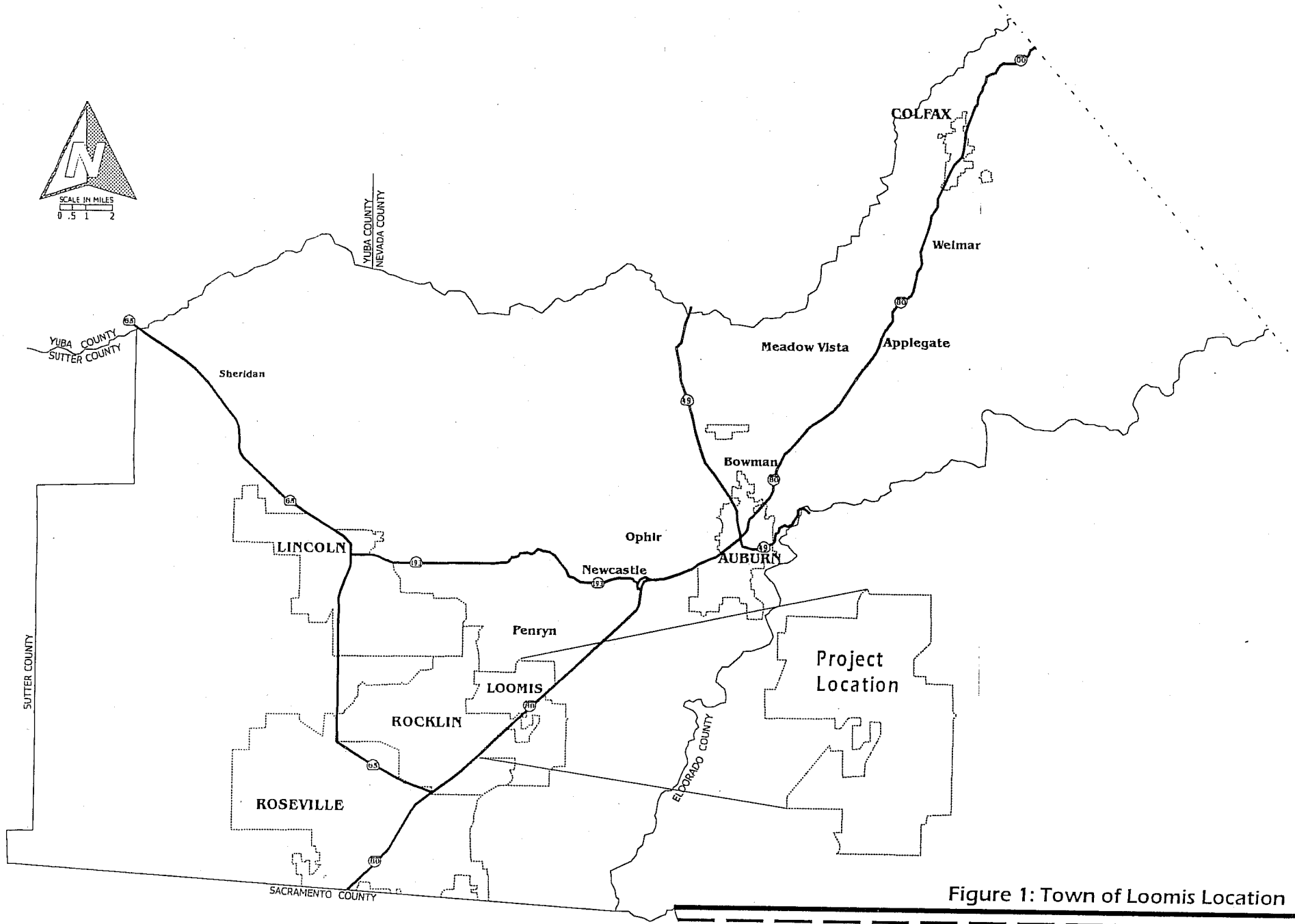


Figure 1: Town of Loomis Location

SUPPORT FACILITIES

Support facilities such as bicycle parking, shower and locker facilities can encourage bicycling by reducing the threat of theft and making bicycling more convenient. Properly designed bike racks should be considered near major shopping and employment centers. These facilities should be considered for new developments that are likely to receive bicycle traffic including, but not limited to commercial centers, recreational facilities, and employment centers. Where possible, existing activity centers should be encouraged to add parking facilities if they are lacking. Bicycle parking facilities should be chosen based on (a) cost (b) ease of use (c) ability to prevent theft and (d) aesthetics.

Access to shower and locker facilities may help encourage people to commute by bicycle. Many occupations require specific uniforms or formal attire such as suits and ties. Shower and locker facilities provide employees with the option to shower and dress at work. This is an important consideration for bicycle commuters, as the environmental conditions a bicycle commuter will encounter may vary.

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

- Encourage the installation of bicycle parking, shower and locker facilities where appropriate.
- Actively pursue state and federal funding to install bicycle parking, shower, and locker facilities at existing activity and employment centers.

Major Activity Centers to be considered for support facility improvements in the Town of Loomis:

Employment:

- Swetzer Road and Rippey Road Industial Area

Commercial:

- Raley's Center
- Downtown Core

Multi - Modal Centers:

- Proposed Multi-Modal center in Downtown Loomis Core.

CROSSING IMPROVEMENTS

The following improvements should be targeted for major intersections on the proposed bikeway system, and at locations where students cross busy streets to gain access to campus facilities.

The following steps are recommended to build upon this effort:

- Use signing, striping, flashing beacons, standard and international standard crosswalks, and pedestrian actuated signals at street crossings with high levels of pedestrian and bicycle demand.
- Consider installing bicycle detectors at signalized intersections along the bikeway system as intersections are upgraded. Detectors should be located within the striped bike lane or between the right turn lane and through lane.

BICYCLE COMMUTER PROJECTIONS

Bicycling is becoming an increasingly popular mode of travel in Placer County – both as an alternative to the auto commute and as a form of recreation. There are several bicycle clubs and advocacy groups that have sprung up to encourage more use of bicycles and to work with local governments to provide safe and adequate facilities.

The 1990 Census surveyed 2,590 people in the Town of Loomis regarding how they make the journey to work. The results of the Census concluded that there were no reports of individuals using a bicycle to travel to work. The low number of bicycle commuters is likely to increase given employment growth, retail development, and increasing traffic congestion. Another source of increased ridership is better facilities. A study performed in the development of the Roseville Bikeway Master Plan reported that if better facilities existed, 94 percent of adults would commute by bicycle. The same study showed that 26 percent of children in the Roseville area use a bicycle to commute to school.

Bicycle ridership levels are not easily measured or projected for an entire City without extensive data collection efforts. The Census records only journey-to-work data and thus, home-to-school and other transportation related trips remain unaccounted for.

Capitol Corridor Train service for Loomis currently stops in nearby Rocklin. Plans for a multi-modal station including a train stop are being studied for the Town of Loomis. The train service provides bicyclists with an alternative commute option by riding the short trip to the station, and taking the train to their destination in the Sacramento Valley or Bay area.

BICYCLE SAFETY AND EDUCATION

1. Placer County Sheriff/California Highway Patrol

The Placer County Sheriff's law enforcement agency has primary responsibility for bicycle safety in the Town of Loomis. Community service officers have developed a curriculum that teaches the basics of bicycle safety, helmet fit, use, and laws. Bike safety programs are performed on request, primarily at schools. Local bike shops often participate with a mechanic on duty to perform minor repairs and to notify bicycle owners of any necessary major repairs.

The California Highway Patrol also has officers dedicated to bicycle safety. They often work in a collaborative effort with the Placer County Sheriffs office and participate in bike education and safety programs.

2. California Law

California Law requires minors under the age of 18 to wear bicycle helmets. Officers may give citations or a type of "fix it ticket" in which violators will not be fined upon providing a helmet proof of purchase. On some occasions helmets are provided to those without them.

IV. EXISTING BIKEWAY FACILITIES

In conjunction with the development of the Regional Bikeway Plan, PCTPA conducted field observations to identify existing bikeway facilities throughout Placer County. The table below describes the existing bikeway facilities within the Town of Loomis.

Existing Bikeway Facilities		
ROADWAY	**SEGMENT**	**SHOULDER CONDITION**
Sierra College Blvd.	Del Mar Ave. to Taylor Road	Class II Bike Lanes Overlay - Summer 2002
Taylor Road	Oak St. to Sierra College Blvd.	Class II Bike Lanes
Taylor Road	King Road to Del Oro High School.	Class I Bike Path
Taylor Road	King Road to Oak St.	Class III Bike Route
King Road	Boyington Rd. to Taylor Rd.	Class II Bike Lanes
King Road	4 Segments between Sierra College Blvd. and Humphrey Rd.	Class I paths that do not meet the Caltrans standards
Humphrey Road	Several segments of on-road and off-road bikeways between King Rd. and No Name Rd.	Class I paths that do not meet the Caltrans standards and some Class III Routes

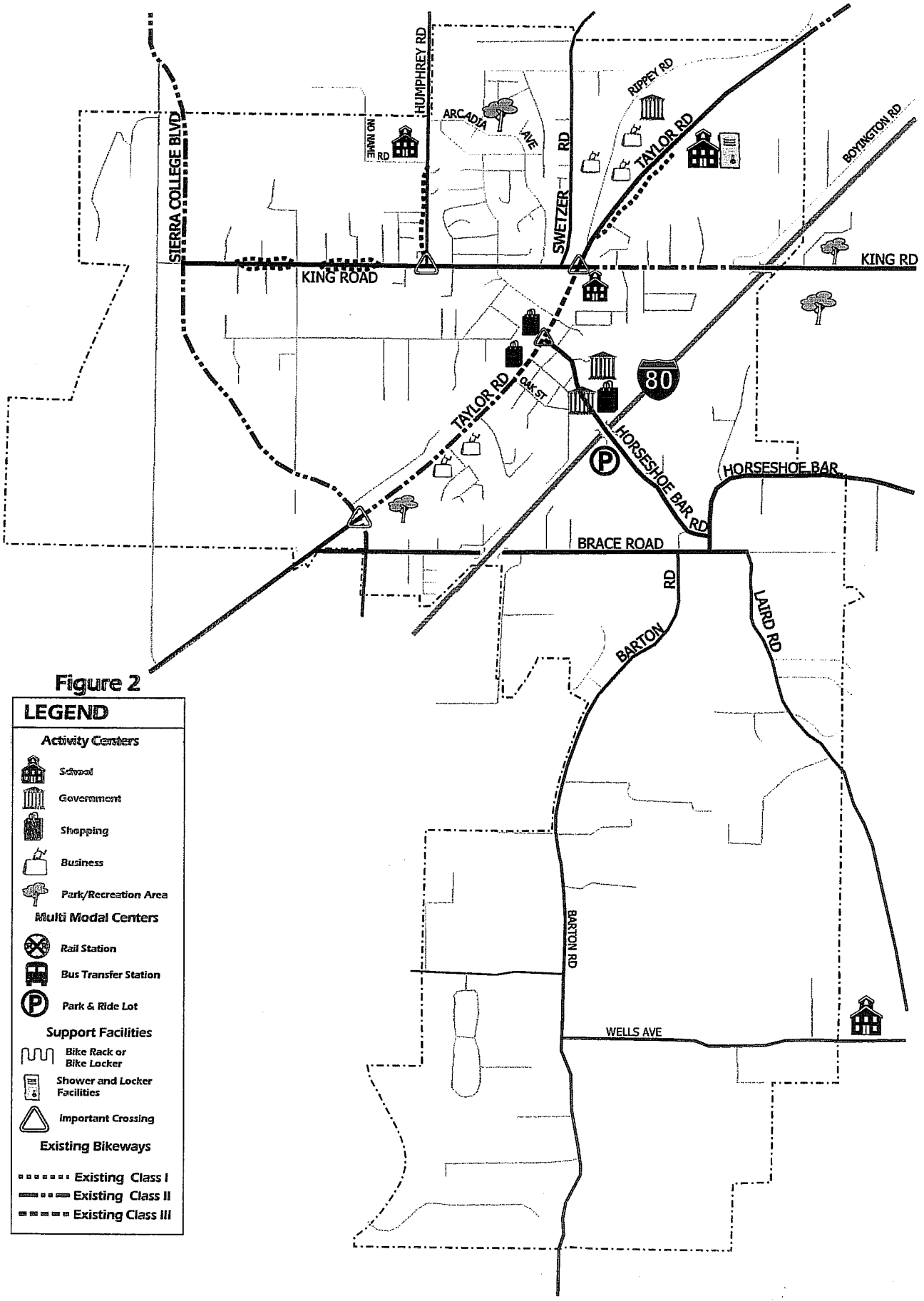

SIERRA COLLEGE BLVD
HUMPHREY RD
NO NAME RD
ARCADIA AVE
SWETZER RD
RIPPEY RD
TAYLOR RD
BOYINGTON RD
KING ROAD
KING RD
80
TAYLOR RD
OAK ST
HORSESHOE BAR RD
HORSESHOE BAR
BRACE ROAD
BARTON RD
LAIRD RD
BARTON RD
WELLS AVE
LEGEND
Activity Centers
School
Government
Shopping
Business
Park/Recreation Area
Multi Modal Centers
Rail Station
Bus Transfer Station
Park & Ride Lot
Support Facilities
Bike Rack or Bike Locker
Shower and Locker Facilities
Important Crossing
Existing Bikeways
Existing Class I
Existing Class II
Existing Class III

Figure 2

V. PROPOSED IMPROVEMENTS

Improvements must be made to accomplish our goal of developing a comprehensive bikeway network. This chapter offers suggestions for improvements based on the following criteria:

- **Coverage** - The system should provide balanced access from locations outside and within the Town for both commuting and recreation purposes.

- **Safety** - The network should provide the highest level of safety possible for bicyclists and pedestrians while minimizing major safety concerns such as narrow roadways, bicycle/pedestrian conflicts, and auto/bike conflicts.

- **Connectivity** - The system should provide bikeway/pedestrian connections to major activity centers, multi-modal centers, and to regional routes that leave/enter the Town limits. Activity centers include residential areas, regional parks, shopping centers, employment centers, government centers, transit centers, and recreational areas.

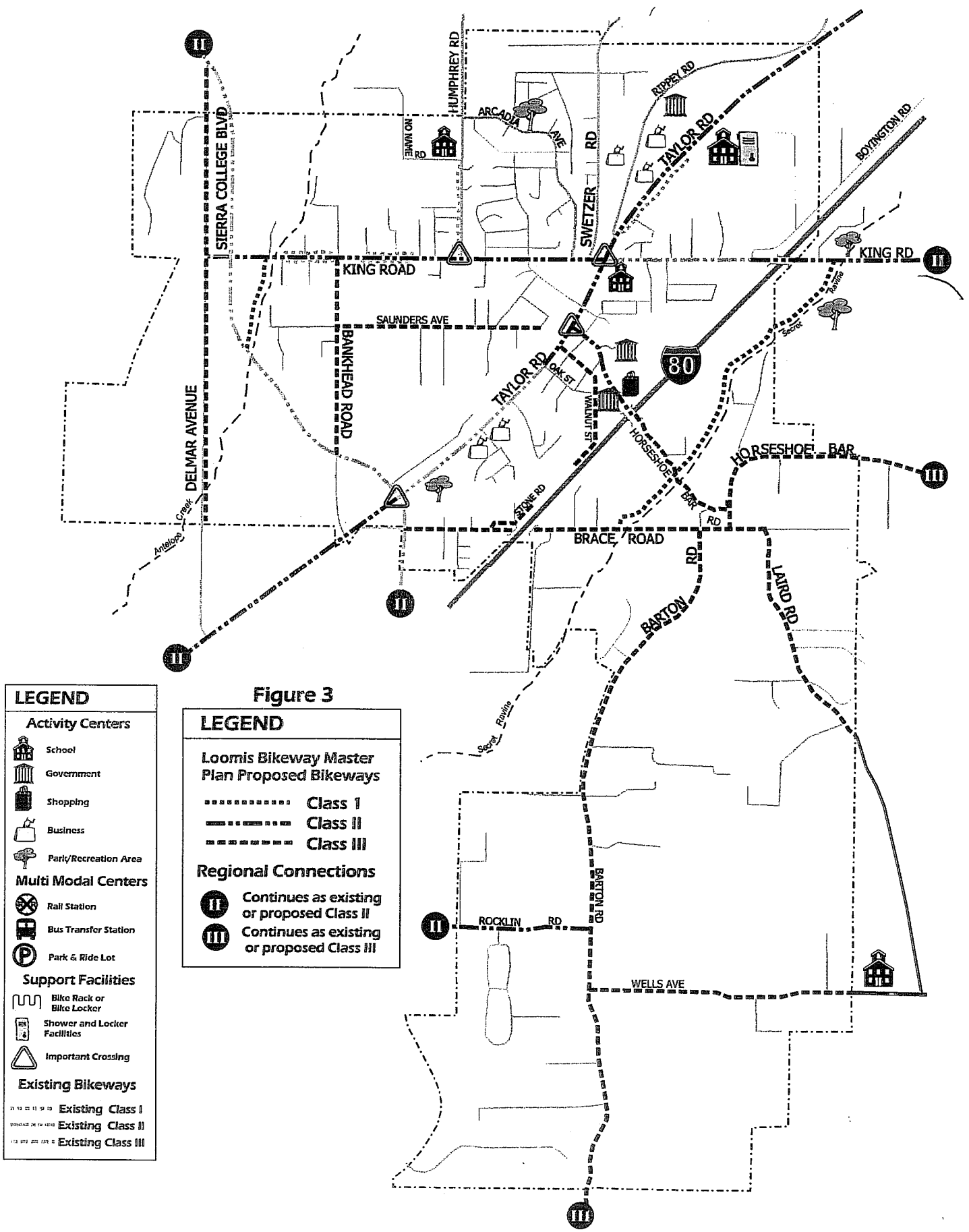
Two tables are provided for description of the Town of Loomis proposed bikeway network. Table A on page 15 shows the bikeways proposed in the Town of Loomis General Plan. Table B provides a list of proposed bikeways that are recommended based on their inclusion in the Regional Bikeway Plan adopted by the Placer County Board of Supervisors in 1988 and updated in 2002.

REGIONAL CONNECTIONS

An important element of the purpose of this plan is to consider the proposed bikeway system outside of the Town Limits. Figure 3 on page 16 shows how the Loomis Bikeway network interfaces with regional bikeways.

Town of Loomis - General Plan Proposed Bikeways Table A			
ROADWAY	**SEGMENT**	**SEGMENT DISTANCE**	**UPGRADED CONDITION**
Taylor Road	East Town Limit to Sierra College	1.5 Miles	Class II Bike Lanes/Maint.
Taylor Road	Sierra College Blvd. to West Town Limit	.25 Mile	Class II Bike Lanes
Sierra College Blvd	Within Town of Loomis	1.75 Miles	Class II Maintenance
Delmar Ave.	From Sierra College Blvd. south to Town Limits	1.5 Miles	Class III Bike Route
Rocklin Road	Within entire Town Limits	.5 Mile	Class II Bike Lane
Horseshoe Bar Road	Taylor Road to Raley's Shopping Center	.5 Mile	Class II Bike Lanes
Bankhead Road	King Road. to Sierra College Blvd.	1 Mile	Class III Bike Route
Saunders Ave.	Entire Length	1 Mile	Class III Bike Route
South Walnut Road	Entire length, including extension to Stone Road when completed.	1 Mile	Class III Bike Route
Stone Road	Entire length, including extension to South Walnut when completed.	.5 Mile	Class III Bike Route
Brace Road	Sierra College Blvd to Laird Road	1 Mile	Class III Bike Route
Laird Road	Within Town Limits	1 Mile	Class III Bike Route
N/A	Along Secret Ravine from King Road to Brace Rd. (or Town Limits if City of Rocklin connects)	1.5 Miles	Class I Bike Path
N/A	Along Antelope Creek from King Road to Sierra College Blvd (or to Town Limits if City of Rocklin connects)	.5 or 1 Mile	Class I Bike Path

Town of Loomis Bikeway Master Plan Proposed Bikeways (based on inclusion in Regional Bikeway Plan) Table B			
ROADWAY	**SEGMENT**	**SEGMENT DISTANCE**	**UPGRADED CONDITION**
King Road	Taylor Road to Delmar Avenue	1.5 Miles	Class II Bike Lanes
Horseshoe Bar Rd.	Raley's Shopping Center to Town Limit	.5 Mile	Class III Bike Route
Barton Road	Brace Road to Town Limit	2.5 Miles	Class III Bike Route
Wells Ave.	Barton Road to Town Limit	1 Mile	Class III Bike Route


SIERRA COLLEGE BLVD
HUMPHREY RD
NO NAME RD
ARCADIA AVE
SWETZER RD
RIPPEY RD
TAYLOR RD
BOYINGTON RD
KING ROAD
KING RD
SAUNDERS AVE
BANKHEAD ROAD
DELMAR AVENUE
TAYLOR RD
OAK ST
WALNUT ST
80
HORSESHOE BAR RD
HORSESHOE BAR
Secret Ravine
Antelope Creek
STONE RD
BRACE ROAD
BARTON RD
LAIRD RD
ROCKLIN RD
WELLS AVE
LEGEND
Activity Centers
School
Government
Shopping
Business
Park/Recreation Area
Multi Modal Centers
Rail Station
Bus Transfer Station
Park & Ride Lot
Support Facilities
Bike Rack or Bike Locker
Shower and Locker Facilities
Important Crossing
Existing Bikeways
Existing Class I
Existing Class II
Existing Class III
Figure 3
LEGEND
Loomis Bikeway Master Plan Proposed Bikeways
Class I
Class II
Class III
Regional Connections
Continues as existing or proposed Class II
Continues as existing or proposed Class III

VI. BIKEWAY FUNDING

A variety of funding sources are available for bikeways and related facilities. In order to be eligible for state funds, a Bikeway Master Plan must be in compliance with Streets and Highways Code Section 891.2 (see Appendix A). Federal and state sources applicable to the Town of Loomis are provided below.

FEDERAL SOURCES

Regional Surface Transportation Program, Transportation Enhancements Program, and Congestion Mitigation and Air Quality funds are authorized under the Federal Transportation Efficiency Act for the 21st Century (TEA-21). TEA-21 funds are distributed over a six-year period. As of January 2001, all TEA-21 funds available in the Sacramento region have been programmed. The next re-authorization of funds for transportation (including bicycle) projects will occur in 2003.

Regional Surface Transportation Program (RSTP)

Placer County will receive approximately 7.5 million in RSTP funds over the six-year period of TEA-21. RSTP funds are distributed to incorporated cities and the unincorporated County per a population formula adopted by the PCTPA Board of Directors. Traditionally in Placer County this source of funds has been used for road overlay projects. As with other TEA-21 programs, projects must be included in an approved Federal Statewide Transportation Improvement Program (FSTIP), and a 20 percent local match is required for bicycle projects.

Transportation Enhancement Activities Program (TEA)

TEA funds are to be used for transportation related capitol improvement projects that enhance quality of life in or around transportation facilities. Projects must be over and above required mitigation and normal transportation projects, and must be directly related to the surface transportation system. The projects must have a quality of life benefit, while providing the greatest benefit to the greatest number of people. Projects must be within one of twelve categories, seven of which can be or are related to bicycle and pedestrian projects:

1. Provision of facilities for pedestrians and bicycles
2. Provision of safety and educational activities for pedestrians and bicyclists
3. Acquisition of scenic easements and scenic/historic sites
4. Scenic or historic highway programs
5. Landscaping and other scenic beautification
6. Historic preservation

7. Rehabilitation and operation of historic transportation facilities (including historic railroad facilities and canals)

Regional Transportation Planning Agencies (RTPA's), such as PCTPA, receive 75 percent of the $60 million in TEA dollars available California. Project sponsors should submit projects to RTPA's. In the previous funding cycle, Placer County received approximately $6 million in TEA funds.

Congestion Mitigation/Air Quality Program (CMAQ)

CMAQ funds are directed to transportation projects and programs which contribute to the attainment or maintenance of National Ambient Air Quality Standards in non-attainment or air quality maintenance areas for ozone, carbon monoxide or particulate matter under provisions for the Federal Clean Air Act. In Placer County (mostly a non-attainment area), programming of CMAQ funds is emphasized on projects that can make a significant impact on the reduction of Nitrogen Oxide (NOx) emissions. Eligible projects must show a low cost per pound of NOx reduction. Historically, bicycle projects have been fairly high cost, due in part to low bicycle commute numbers. Placer County received approximately $8 million in CMAQ funds during the last cycle. Project sponsors should submit projects to PCTPA.

Safe Routes to School Program (SR2S)

During the fiscal years of 2000 and 2001, the SR2S program was designed as a demonstration project for the construction of bicycle and pedestrian safety and traffic calming projects. To be eligible, the projects had to correct an identified safety hazard or problem on a route that students use for trips to and from school. In October 2001, Governor Davis signed SB10 extending the SR2S bill for 3 more years. SB10 is expected to provide approximately $70,000,000 over the next three years for new sidewalks, bike lanes, trails and other projects which encourage students to walk or bike to school. Caltrans will be the agency conducting a call for projects.

STATE SOURCES

Bicycle Transportation Account (BTA)

The BTA is intended to provide funds for bicycle transportation and to enhance bicycling for commuting purposes. Available funding has increased in recent years, and is now up to $7.2 million annually for five years beginning in Fiscal year 2001/02. After that time the fund will revert to $5 million annually. These funds are available for bicycle projects statewide on a competitive basis

for any jurisdiction that has prepared and adopted a bicycle plan that complies with state guidelines.

Applicants provide a local match of at least 10 percent of total project cost. No applicant may receive more than 25 percent of the total funds transferred into the BTA in a single fiscal year. The Bicycle Facilities Unit in the Caltrans Local Assistance Program selects projects for funding.

Pedestrian Safety Program (PSP)

Projects eligible for PSP funding include, but are not limited to, traffic calming measures, intersection safety improvements and any traffic safety or enforcement program authorized by law. Projects must correct an identified pedestrian safety hazard or problem. In 1999/2000 $8 million was provided in a one-time appropriation of funds. In order for the funding to continue, an appropriation must be included in the future State Budget Act or other legislation.

Environmental Enhancement and Mitigation Program (EEM)

The purpose of the EEM program is to mitigate the environmental impacts of new or modified public transportation facilities beyond the level required by the project's environmental document. Projects must demonstrate a direct or indirect relationship with the environmental impact of modifying an existing transportation facility or construction of a new facility after January 1, 1990. One category, which in some cases may be applicable to bicycle projects, is known as 'Roadside Recreational.' Roadside Recreational projects provide roadside recreational opportunities, including roadside rests, scenic overlooks, trails, trailheads, sno-parks and parks. Statewide, $10 million are available; applicable projects are to be submitted to the Resources Agency of California for evaluation.

LOCAL SOURCES

Local Transportation Fund (LTF)

Under Article 3 of the Transportation Development Act (TDA), up to two percent of the LTF allocation to cities and counties can be used for bicycle and pedestrian projects. Revenues to the LTF program are derived from 1/4 cents of statewide sales tax.

New Construction

In some cases, portions of the proposed network will be completed as part of future development, construction or widening projects within the Town of

Loomis. To ensure that roadway construction projects provide these facilities where needed, roadway design standards need to include minimum cross-sections that have sufficient pavement for on-street bikeways, and the review process for new development should include input pertaining to consistency with the proposed bikeway network. Future development in the Town of Loomis will contribute to implementation of new bikeway facilities only if projects are conditioned and roadway design standards are updated to include bikeway facilities (see Appendix C for Caltrans Deputy Directive DD-64).

VII. PRIORITY BIKEWAY PROJECTS

Priority routes were chosen based on connectivity, anticipated use, facility type, and potential safety improvements. The following routes have the highest priority for implementation, in no specific order.

Class II Bike Lanes on Taylor Road: The addition of Class II Bike Lanes on Taylor Road would fill the existing gap between the East Loomis Town Limits and Oak Street. This critical linkage is part of the I-80 bicycle-pedestrian corridor, and serves as the primary commute route for students of both Del Oro High school and Loomis Elementary.

SEGMENT DISTANCE	EXISTING CONDITION	ESTIMATED COST
1.5 Miles	Major roadway improvement necessary	$450,000

Class II Bike Lane and Class III Bike Route on Horseshoe Bar Road: This roadway provides an important connection to the town center. The project includes designating a route over the I-80. A park and ride lot exists on this route, in which potential users could benefit from the route by utilizing the park and ride lot, and riding the short trip into town to connect with the proposed multi-modal center. In addition, this route connects two major activity centers.

SEGMENT DISTANCE	EXISTING CONDITION	ESTIMATED COST
1.0 Mile	Major Roadway Improvement Necessary	$150,500

Class II Bike Lanes on King Road: The existing paths on King Rd. are more conducive to pedestrian use. The one-way facilities cross many private drives, and allow little room for safe interaction between bikes and pedestrians. Improving the shoulders to Class II from Taylor Road to Sierra College will alleviate the problem, and provide a connection to existing lanes on Sierra College Blvd.

SEGMENT DISTANCE	EXISTING CONDITION	ESTIMATED COST
1.5 Miles	Segmented One Way Class I paths	$450,000

COST ESTIMATES

The table below provides a conceptual cost estimate summary for constructing bikeways included in the proposed network. These cost estimates are based on costs experienced in various other California communities and previous bikeway expenditures in Placer and other counties. Due to variances in the nature of individual projects, these estimates should be used only to develop generalized construction cost estimates and project priorities. More detailed estimates can be developed after preliminary engineering is complete for each project.

Conceptual Cost Estimates for Bikeway Construction		
Bikeway Facility	Estimated Cost Per	
	Mile	Kilometer
Class I Bike Path • Cost to grade and pave an 8-foot wide surface with 2-foot wide shoulders on each side. (Does not include amenities such as landscaping, lighting, irrigation, phones etc...)	$400,000	$252,000
Class II Bike Lane **Moderate Shoulder Improvement:** • Cost to install pavement striping, markings, and signs on both sides of an existing 4-foot roadside shoulder.	$5,000	$3,120
Major Shoulder Improvement: • Cost to install four-foot strips of pavement, pavement striping, markings and signs on both sides of a roadway.	$300,000	$187,000

Class III Bike Route **Signs Only:** • Cost to install signs on both sides of the roadway. **Moderate Shoulder Improvement:** • Cost to install 2-3 foot strips of pavement, a 6-inch fog line and signs on both sides of the roadway.	$1,500 $150,000	$984 $93,500

BIKEWAY DESIGN STANDARDS

The Caltrans Highway Design Manual gives extensive detail on the design for bikeways. The Caltrans standards provide a good framework for future implementation, but may not always be possible due to topographic constraints. Local jurisdictions must be protected from liability so most agencies adopt the Caltrans guidelines as a minimum standard. Examples of typical standard design treatments for Class I, Class II, and Class III bikeways are provided in Appendix C. This information is provided to assist local agency staff in the design and construction of future bikeway facilities.

COMPLIANCE WITH BICYCLE TRANSPORTATION ACT

Section 891.2 items A-K.

BTA REQUIREMENT	LOCATION IN TOWN OF LOOMIS BIKEWAY MASTER PLAN
a. Bicycle Commuters	Page 10
b. Map and description of land use patterns	Description: Page 7 Map: Figure 2, Page 13
c. Map and description of existing and proposed bikeways	Existing Bikeways; Description: Chapter 4, Page 12 Map: Figure 2, page 13
	Proposed Bikeways; Description: Chapter 5, Pages 14-15 Map: Figure 3, page 16
d. Map and description of existing and proposed parking facilities	Description: Page 9 Map: Figure 2, page 13
e. Map and description of existing and proposed connections to other transportation modes	Description: Page 9 Map: Figure 2, page 13
f. Map and description of existing and proposed changing facilities	Description: Page 9 Map: Figure 2, page 13
g. Description of safety and education programs	Page 11
h. Citizen and community involvement in plan development	Page 3
i. Relationship to other documents/coordination	Pages 1-2
j. Proposed project priorities	Page Chapter 6, Pages 20-21
k. Past expenditures and future financial needs	Past: Page 3 Future: Appendix A

Appendix A
Loomis Bikeway Master Plan Project Summary Sheet

LOOMIS BIKEWAY MASTER PLAN : PROPOSED PROJECT SUMMARY

BIKEWAY CLASSIFICATION	ROADWAY	SEGMENT	DISTANCE IN MILES	EXISTING CONDITION	*COST PER MILE	*INDIVIDUAL PROJECT TOTAL
Class II	King Road	Taylor Rd. to Delmar Ave.	1.5	Insufficient Width	$ 300,000.00	$ 450,000.00
Class II	Taylor Road	Loomis Town Limit to Sierra College Blvd.	1.5	Insufficient Width	$ 300,000.00	$ 450,000.00
Class II	Taylor Road	Sierra College Blvd. to City Limit	0.25	Insufficient Width	$ 300,000.00	$ 75,000.00
Class II	Horseshoe Bar Rd.	Taylor Rd. to Raley's Shopping Ctr.	0.5	Insufficient Width	$ 300,000.00	$ 150,000.00
Class II	Sierra College Blvd.	Within Town Limits	1.75	Sufficient Width	$ 5,000.00	$ 8,750.00
Class II	Rocklin Rd.	Within Town Limits	0.5	Insufficient Width	$ 300,000.00	$ 150,000.00
OVERALL PROPOSED CLASS II DISTANCE			6			
TOTAL ESTIMATED COST OF CLASS II BIKEWAYS:						$ 1,283,750.00

BIKEWAY CLASSIFICATION	ROADWAY	SEGMENT	DISTANCE IN MILES	EXISTING CONDITION	*COST PER MILE	*INDIVIDUAL PROJECT TOTAL
CLASS I	N/A	Along Secret Ravine from King Road to Brace Rd. or Town Limits	1.5	N/A	$ 400,000.00	$ 600,000.00
CLASS I	N/A	Along Antelope Creek from King Rd. to Sierra College Blvd. or Town Limits	1	N/A	$ 400,000.00	$ 400,000.00
OVERALL PROPOSED CLASS I DISTANCE			2.5			
TOTAL ESTIMATED COST OF CLASS I BIKEWAYS:						$ 1,000,000.00

BIKEWAY CLASSIFICATION	ROADWAY	SEGMENT	DISTANCE IN MILES	EXISTING CONDITION	*COST PER MILE	*INDIVIDUAL PROJECT TOTAL
Class III	Bankhead Rd.	King Rd. to Sierra College Blvd.	1	N/A	$ 1,000.00	$ 1,000.00
Class III	Laird Rd.	Winthin Town Limits	1	N/A	$ 1,000.00	$ 1,000.00
Class III	Brace Rd.	Sierra College Blvd. to Laird Rd.	1	N/A	$ 1,000.00	$ 1,000.00
Class III	Barton Rd.	Brace Rd. to Town Limit	2.5	N/A	$ 1,000.00	$ 2,500.00
Class III	Wells Ave.	Barton Road to Town Limit	1	N/A	$ 1,000.00	$ 1,000.00
Class III	Saunders Ave.	Entire Length	1	N/A	$ 1,000.00	$ 1,000.00
Class III	South Walnut Road	Entire Length, plus extension	1	N/A	$ 1,000.00	$ 1,000.00
Class III	Stone Road	Entire Length, plus extension	0.5	N/A	$ 1,000.00	$ 1,000.00
Class III	Delmar Ave.	Sierra College Blvd. to south Town Limits	1.5	N/A	$ 1,000.00	$ 1,500.00
Class III	Horseshoe Bar Rd.	Raley's Shopping Ctr. to Town Limit	0.5	N/A	$ 1,000.00	$ 500.00
OVERALL PROPOSED CLASS III DISTANCE			11			
TOTAL ESTIMATED COST OF CLASS III BIKEWAYS:						$ 11,500.00

TOWN OF LOOMIS BIKEWAY MASTER PLAN OVERALL COST ESTIMATE:				
MILES OF CLASS I		2.5	$ 1,000,000.00	
MILES OF CLASS II		6	$ 1,283,750.00	
MILES OF CLASS III		11	$ 11,500.00	
MILES OVERALL BIKEWAY IMPROVEMENTS :		19.5	TOTAL $ 2,295,250.00	

LEGEND:	
Class I Bikeway	
Class II Bikeways	
Class III Bikeways	

*Cost estimates are conceptual. More detailed estimates should be developed after preliminary engineering is complete for each individual project.

Appendix B
California Bicycle Transportation Act

STREETS AND HIGHWAYS CODE
California Bicycle Transportation Act
Sections 890-894.2

890. It is the intent of the Legislature, in enacting this article, to establish a bicycle transportation system. It is the further intent of the Legislature that this transportation system shall be designed and developed to achieve the functional commuting needs of the employee, student, business person, and shopper as the foremost consideration in route selection, to have the physical safety of the bicyclist and bicyclist's property as a major planning component, and to have the capacity to accommodate bicyclists of all ages and skills.

890.2. As used in this chapter, "bicycle" means a device upon which any person may ride, propelled exclusively by human power through a belt, chain, or gears, and having either two or three wheels in a tandem or tricycle arrangement.

890.3. As used in this article, "bicycle commuter" means a person making a trip by bicycle primarily for transportation purposes, including, but not limited to, travel to work, school, shopping, or other destination that is a center of activity, and does not include a trip by bicycle primarily for physical exercise or recreation without such a destination.

890.4. As used in this article, "bikeway" means all facilities that provide primarily for bicycle travel. For purposes of this article, bikeways shall be categorized as follows:

(a) Class I bikeways, such as a "bike path," which provide a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

(b) Class II bikeways, such as a "bike lane," which provide a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted.

(c) Class III bikeways, such as an onstreet or offstreet "bike route," which provide a right-of-way designated by signs or permanent markings and shared with pedestrians or motorists.

890.6. The department, in cooperation with county and city governments, shall establish minimum safety design criteria for the planning and construction of bikeways and roadways where bicycle travel is permitted. The criteria shall include, but not be limited to, the design speed of the facility, minimum widths and clearances, grade, radius of curvature, pavement surface, actuation of automatic traffic control devices, drainage, and general safety. The criteria shall be updated biennially, or more often, as needed.

890.8. The department shall establish uniform specifications and symbols for signs, markers, and traffic control devices to designate bikeways, regulate traffic, improve safety and convenience for bicyclists, and alert pedestrians and motorists of the presence of bicyclists on bikeways and on roadways where bicycle travel is permitted.

891. All city, county, regional, and other local agencies responsible for the development or operation of bikeways or roadways where bicycle travel is permitted shall utilize all minimum safety design criteria and uniform specifications and symbols for signs, markers, and traffic control devices established pursuant to Sections 890.6 and 890.8.

891.2. A city or county may prepare a bicycle transportation plan, which shall include, but not be limited to, the following elements:

(a) The estimated number of existing bicycle commuters in the plan area and the estimated increase in the number of bicycle commuters resulting from implementation of the plan.

(b) A map and description of existing and proposed land use and settlement patterns which shall include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, and major employment centers.

(c) A map and description of existing and proposed bikeways.

(d) A map and description of existing and proposed end-of-trip bicycle parking facilities. These shall include, but not be limited to, parking at schools, shopping centers, public buildings, and major employment centers.

(e) A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These shall include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.

(f) A map and description of existing and proposed facilities for changing and storing clothes and equipment. These shall include, but not be limited to, locker, restroom, and shower facilities near bicycle parking facilities.

(g) A description of bicycle safety and education programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the Vehicle Code pertaining to bicycle operation, and the resulting effect on accidents involving bicyclists.

(h) A description of the extent of citizen and community involvement in development of the plan, including, but not limited to, letters of support.

(i) A description of how the bicycle transportation plan has been coordinated and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, programs that provide incentives for bicycle commuting.

(j) A description of the projects proposed in the plan and a listing of their priorities for implementation.

(k) A description of past expenditures for bicycle facilities and future financial needs for projects that improve safety and convenience for bicycle commuters in the plan area.

891.4. (a) A city or county that has prepared a bicycle transportation plan pursuant to Section 891.2 may submit the plan to the county transportation commission or transportation planning agency for approval. The city or county may submit an approved plan to the department in connection with an application for funds for bikeways and related facilities which will implement the plan. If the bicycle transportation plan is prepared, and the facilities are proposed to be constructed, by a local agency other than a city or county, the city or county may submit the plan for approval and apply for funds on behalf of that local agency.
(b) The department may grant funds applied for pursuant to subdivision (a) on a matching basis which provides for the applicant's furnishing of funding for 10 percent of the total cost of constructing the proposed bikeways and related facilities. The funds may be used, where feasible, to apply for and match federal grants or loans.

891.8. The governing body of a city, county, or local agency may do all of the following:
(a) Establish bikeways.
(b) Acquire, by gift, purchase, or condemnation, land, real property, easements, or rights-of-way to establish bikeways.
(c) Establish bikeways pursuant to Section 21207 of the Vehicle Code.

892. (a) Rights-of-way established for other purposes by cities, counties, or local agencies shall not be abandoned unless the governing body determines that the rights-of-way or parts thereof are not useful as a nonmotorized transportation facility.

(b) No state highway right-of-way shall be abandoned until the department first consults with the local agencies having jurisdiction over the areas concerned to determine whether the right-of-way or part thereof could be developed as a nonmotorized transportation facility. If an affirmative determination is made, before abandoning the right-of-way, the department shall first make the property available to local agencies for development as nonmotorized transportation facilities in accordance with Sections 104.15 and 887.6 of this code and Section 14012 of the Government Code.

892.2. The Bicycle Lane Account is continued in existence in the State Transportation Fund, and, notwithstanding Section 13340 of the Government Code, the money in the account is continuously appropriated to the department for expenditure for the purposes specified in Section 892.4. Unexpended moneys shall be retained in the account for use in subsequent fiscal years.

892.4. The department shall allocate and disburse moneys from the Bicycle Lane Account according to the following priorities:

(a) To the department, the amounts necessary to administer this article, not to exceed 1 percent of the funds expended per year.

(b) To counties and cities, for bikeways and related facilities, planning, safety and education, in accordance with Section 891.4.

892.6. The Legislature finds and declares that the construction of bikeways pursuant to this article constitutes a highway purpose under Article XIX of the California Constitution and justifies the expenditure of highway funds therefor.

893. The department shall disburse the money from the Bicycle Lane Account pursuant to Section 891.4 for projects that improve the safety and convenience of bicycle commuters, including, but not limited to, any of the following:

(a) New bikeways serving major transportation corridors.

(b) New bikeways removing travel barriers to potential bicycle commuters.

(c) Secure bicycle parking at employment centers, park-and-ride lots, rail and transit terminals, and ferry docks and landings.

(d) Bicycle-carrying facilities on public transit vehicles.

(e) Installation of traffic control devices to improve the safety and efficiency of bicycle travel.

(f) Elimination of hazardous conditions on existing bikeways.

(g) Planning.

(h) Improvement and maintenance of bikeways.

In recommending projects to be funded, due consideration shall be given to the relative cost-effectiveness of proposed projects.

893.2. The department shall not finance projects with the money in accounts continued in existence pursuant to this article which could be financed appropriately pursuant to Article 2 (commencing with Section 887), or fully financed with federal financial assistance.

893.4. If available funds are insufficient to finance completely any project whose eligibility is established pursuant to Section 893, the project shall retain its priority for allocations in subsequent fiscal years.

893.6. The department shall make a reasonable effort to disburse funds in general proportion to population. However, no applicant shall receive more than 25 percent of the total amounts transferred to the Bicycle Lane Account in a single fiscal year.

894. The department may enter into an agreement with any city or county concerning the handling and accounting of the money disbursed pursuant to this article, including, but not limited to, procedures to permit prompt payment for the work accomplished.

894.2. The department, in cooperation with county and city governments, shall adopt the necessary guidelines for implementing this article.

Appendix C
Caltrans Deputy Directive DD-64

DEPUTY DIRECTIVE

Number:	DD-64
Refer to Director's Policy	05 - Multimodal Alternatives Analysis 06 - Caltrans' Partnerships
Effective Date:	3-26-01
Supersedes:	New

Title: Accommodating Non-Motorized Travel

POLICY

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

DEFINITION/ BACKGROUND

The planning and project development process seeks to provide the people of California with a degree of mobility that is in balance with other values. They must ensure that economic, social and environmental effects are fully considered along with technical issues, so that the best interest of the public is served. This includes all users of California's facilities and roadways.

Attention must be given to many issues including, but not limited to, the following:

- Safe and efficient transportation for all users of the transportation system
- Provision of alternatives for non-motorized travel
- Support of the Americans with Disabilities Act (ADA)
- Attainment of community goals and objectives
- Transportation needs of low-mobility, disadvantaged groups
- Support of the State's economic development
- Elimination or minimization of adverse effects on the environment, natural resources, public services, aesthetic features and the community
- Realistic financial estimates
- Cost effectiveness

Individual projects are selected for construction on the basis of overall multimodal system benefits as well as community goals, plans and values. Decisions place emphasis on making different transportation modes work together safely and effectively. Implicit in these objectives is the need to accommodate non-motorized travelers as an important consideration in improving the transportation system.

RESPONSIBILITIES

Deputy Director, Planning and Modal Programs:

- Ensures that the needs of non-motorized travelers are incorporated into the program element of Transportation Planning and the modal elements of the statewide strategy for mobility.
- Ensures that liaison exists with non-motorized advocates to incorporate non-motorized needs into all program areas including project and system planning.
- Ensures that the needs of the non-motorized travelers are incorporated in Personal Movement Strategies.

Deputy Director, Project Delivery:

- Ensures that projects incorporate best practices for non-motorized travel in the design and construction of Capital projects.

Deputy Director, Maintenance and Operations:

- Ensures that the transportation system is maintained and operated in a safe and efficient manner with the recognition that non-motorized travel is a vital element of the transportation system.
- Ensures that the needs of non-motorized travelers are met in maintenance work zones.

District Directors:

- Ensure that best practices for non-motorized travel are included in all district projects and project planning.
- Ensure that best practices for non-motorized travel are implemented in maintenance and travel operations practices.

Chief, Division of Design:

- Ensures that project delivery procedures and design guidance include the needs of non-motorized travelers as a regular part of doing business.
- Ensures that all Project Delivery staff is trained and consider the needs of the non-motorized traveler while developing and designing transportation projects.

Chief, Division of Planning:

- Ensures incorporation of non-motorized travel elements in transportation plans, programs and studies prepared by Transportation Planning.
- Ensures planning staff understand and are trained in the principles and design guidelines, non-motorized funding sources and the planning elements of non-motorized transportation.
- Coordinates Caltrans projects with non-motorized interest groups.
- Ensures incorporation of non-motorized travel elements in Corridor Studies prepared by Transportation Planning.

Chief, Division of Environmental Analysis:

- Ensures that non-motorized travel groups potentially affected by Caltrans projects are identified and have the opportunity to be involved in the project development process.
- Advocates effectively for all reasonable project-specific best practices that support or promote non-motorized travel.

Chief, Division of Maintenance:

- Ensures State-owned facilities are maintained consistent with the needs of motorized and non-motorized travelers.
- Provides guidance and training to those maintaining roadways to be aware of and sensitive to the needs of non-motorized travel.

Chief, Division of Traffic Operations:

- Ensures that the transportation system is operated in accordance with the needs of all travelers including non-motorized travel.
- Provides training and guidance on the operation of the transportation facility consistent with providing mobility for all users.

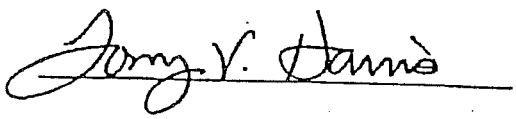
- Recommends safety measures in consideration of non-motorized travel on California's transportation system.

Chief, Division of Local Assistance:

- Ensures that Local Assistance staff, local agencies and interest groups are familiar with funding programs that are available for non-motorized travelers.
- Ensures that program coordinators responsible for non-motorized travel modes are familiar with non-motorized issues and advocate on behalf of non-motorized travelers.

APPLICABILITY

All Caltrans employees who are involved in the planning, design, construction, maintenance and operations of the transportation system.



TONY V. HARRIS
Chief Deputy Director

Appendix D
Bikeway Planning and Design from Highway Design Manual

Figure 1003.1A

Two-way Bike Path on Separate Right of Way

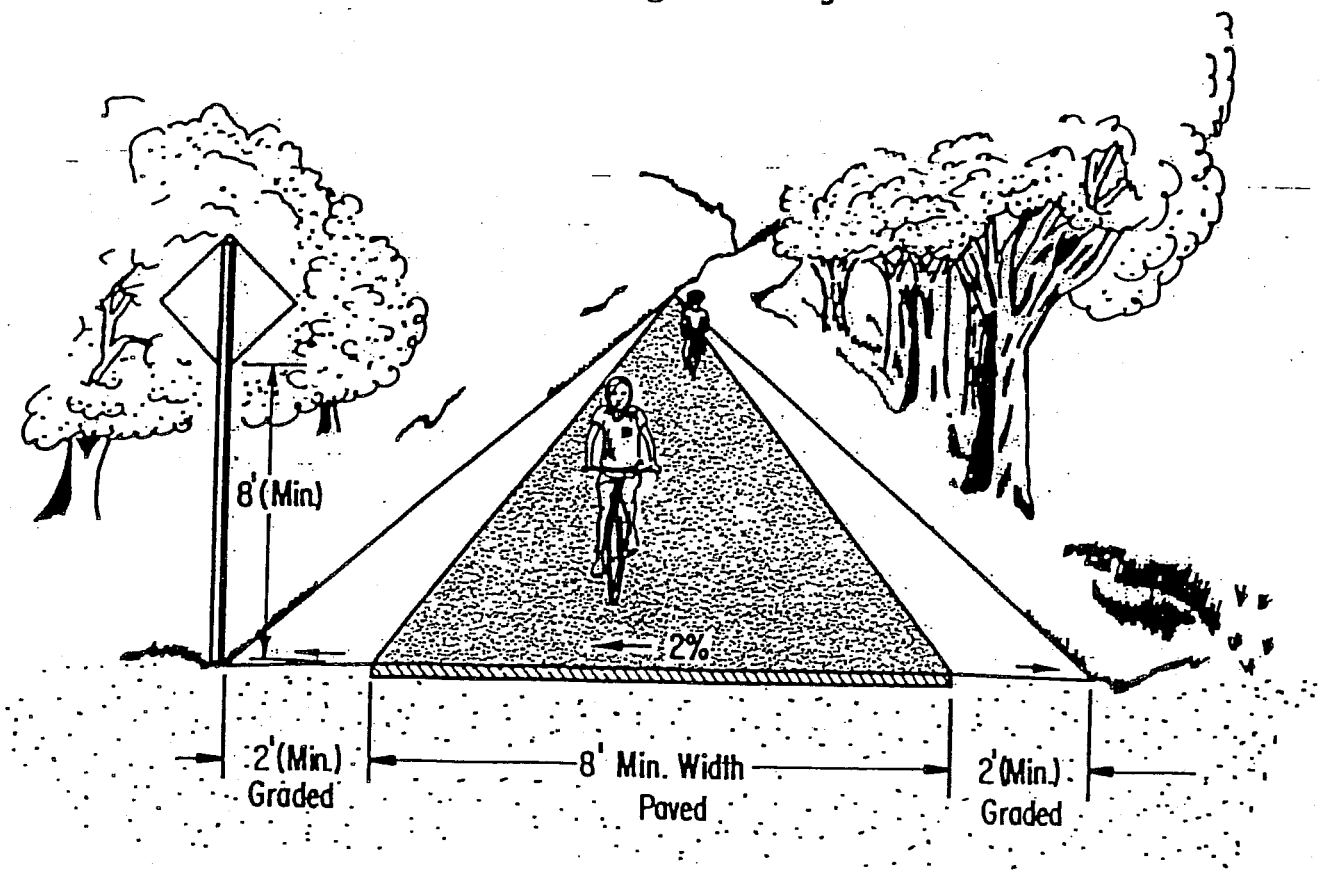
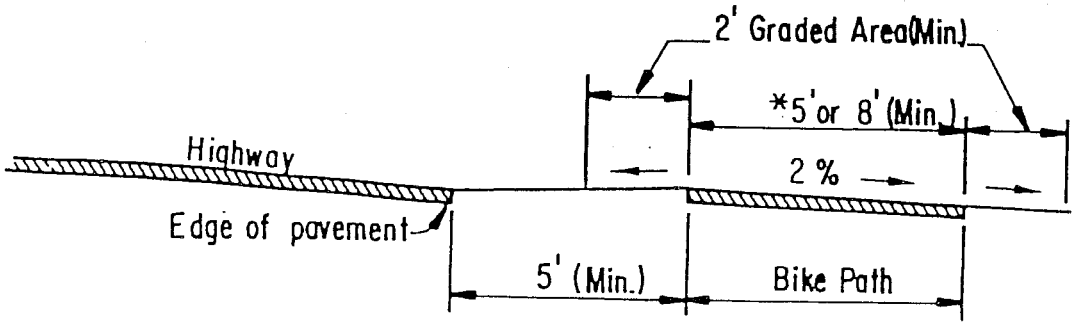


Figure 1003.1B

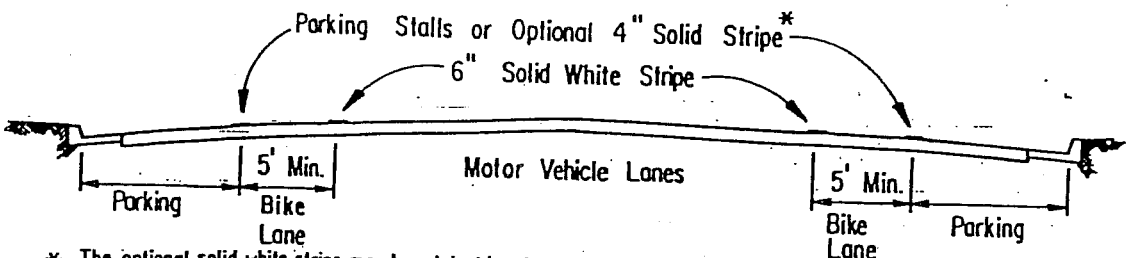
Typical Cross Section of Bike Path Along Highway



*One-Way: 5' Minimum Width
Two-Way: 8' Minimum Width

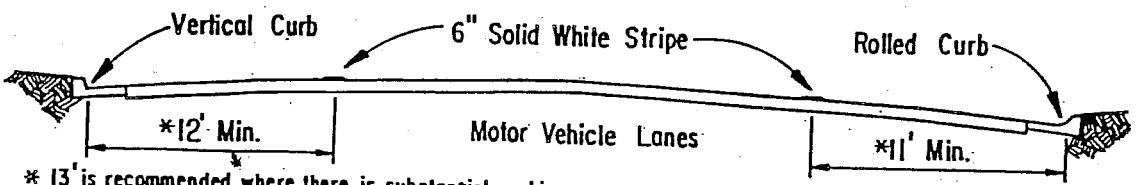
Figure 1003.2A

Typical Bike Lane Cross Sections (On 2-lane or Multilane Highways)



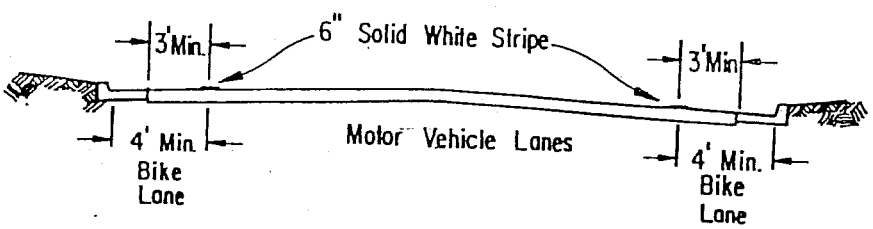
* The optional solid white stripe may be advisable where stalls are unnecessary (because parking is light) but there is concern that motorists may misconstrue the bike lane to be a traffic lane.

(1) STRIPED PARKING

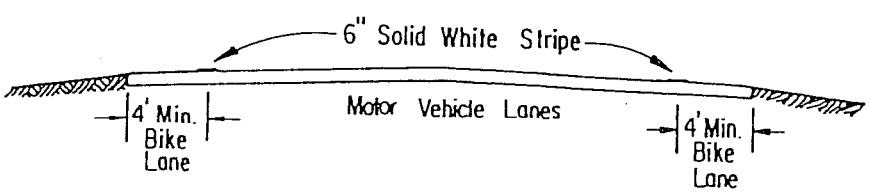


* 13' is recommended where there is substantial parking or turnover of parked cars is high (e.g. commercial areas).

(2) PARKING PERMITTED WITHOUT PARKING STRIPE OR STALL



(3) PARKING PROHIBITED



(4) TYPICAL ROADWAY IN OUTLYING AREAS
PARKING RESTRICTED

Figure 1003.2B

Typical Bicycle/Auto Movements at Intersections of Multilane Streets

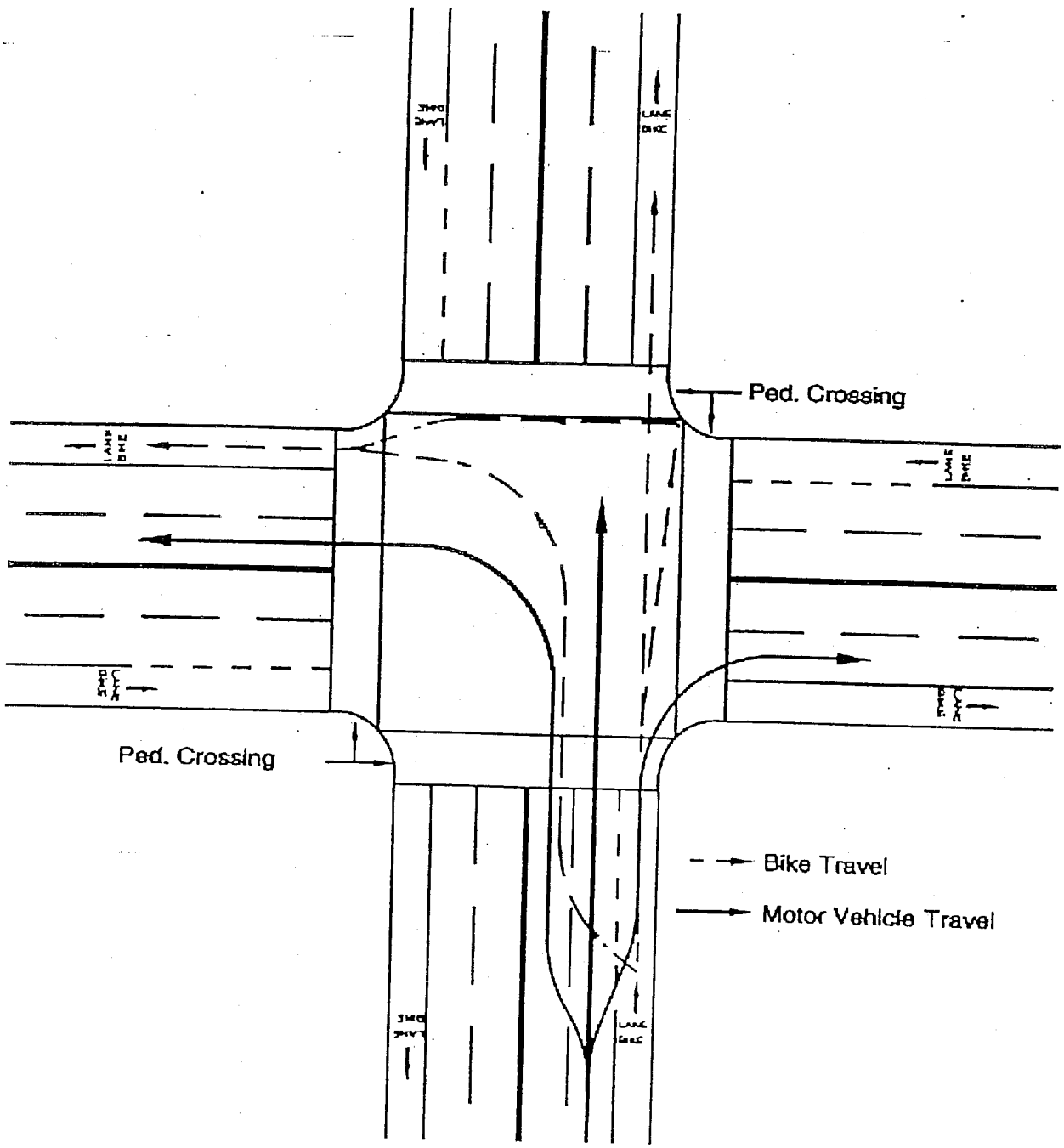
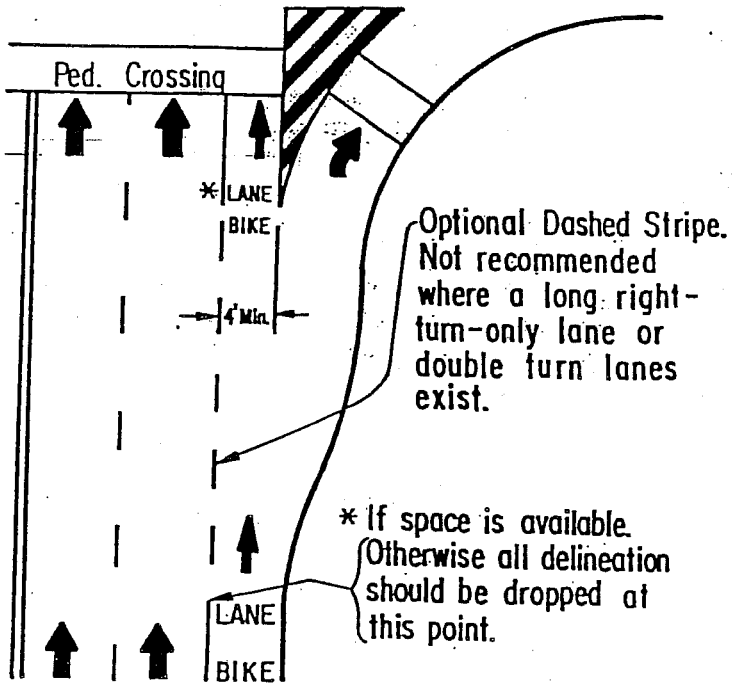
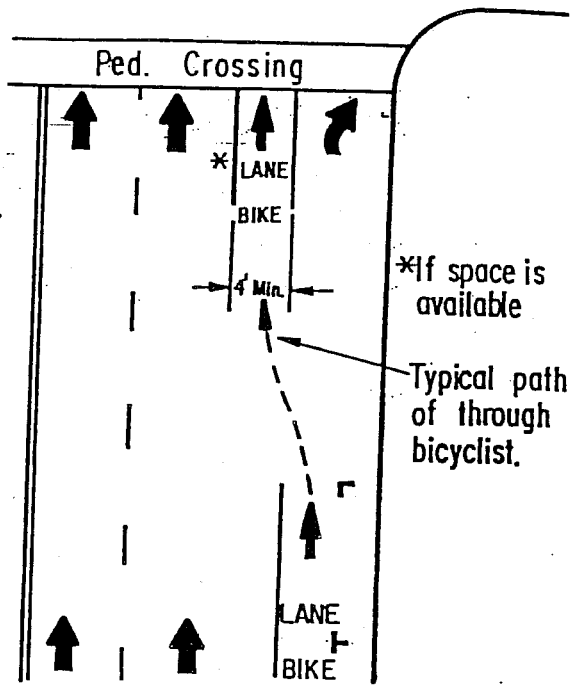


Figure 1003.2C

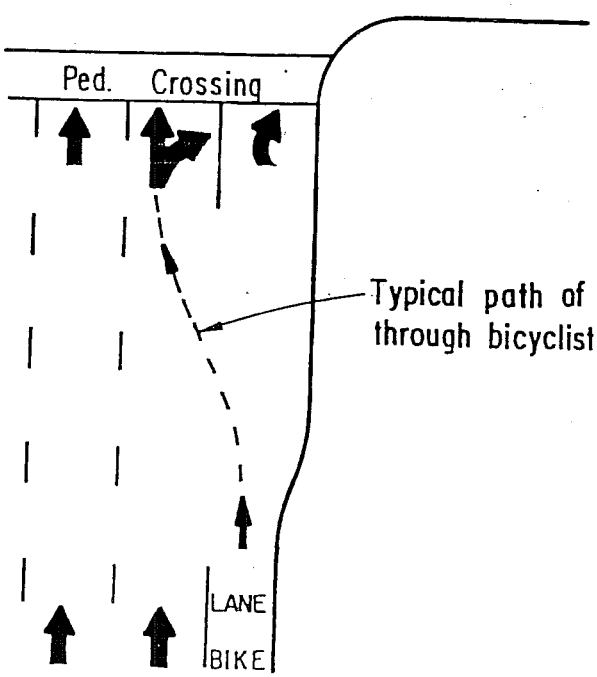
Bike Lanes Approaching Motorist Right-turn-only Lanes



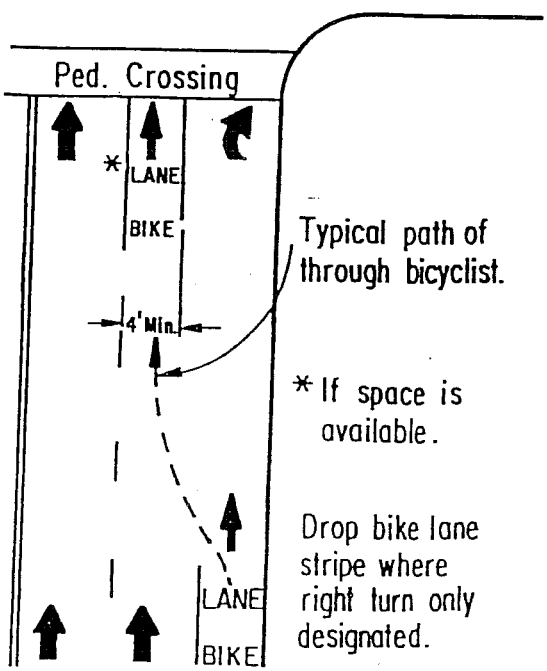
RIGHT-TURN-ONLY LANE



PARKING AREA BECOMES RIGHT-TURN-ONLY LANE

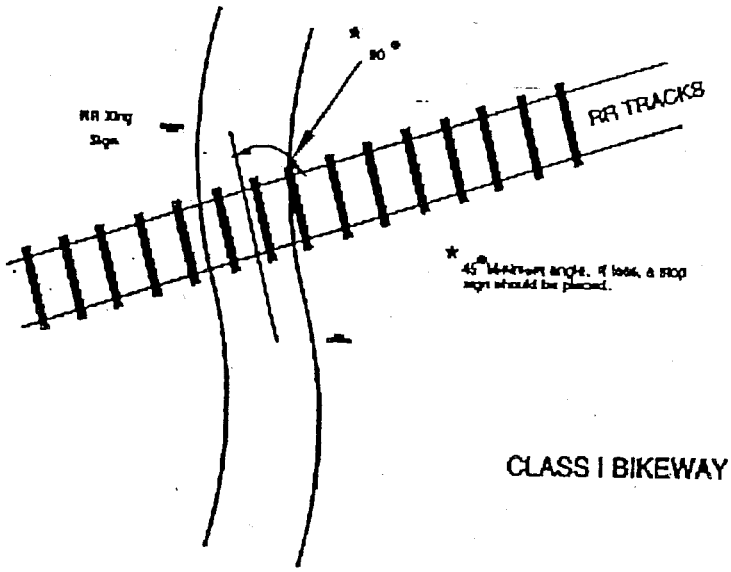


OPTIONAL DOUBLE RIGHT-TURN-ONLY LANE



RIGHT LANE BECOMES

Figure 1003.6A
Railroad Crossings



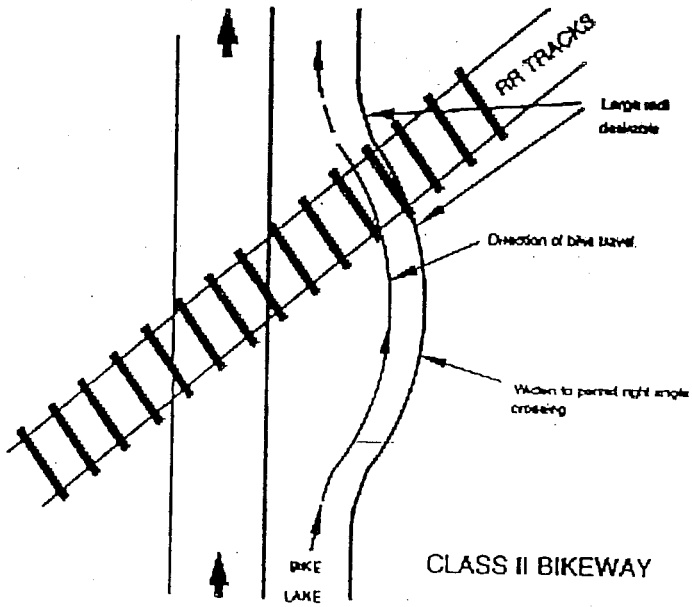


Figure 1003.6B
Obstruction Markings

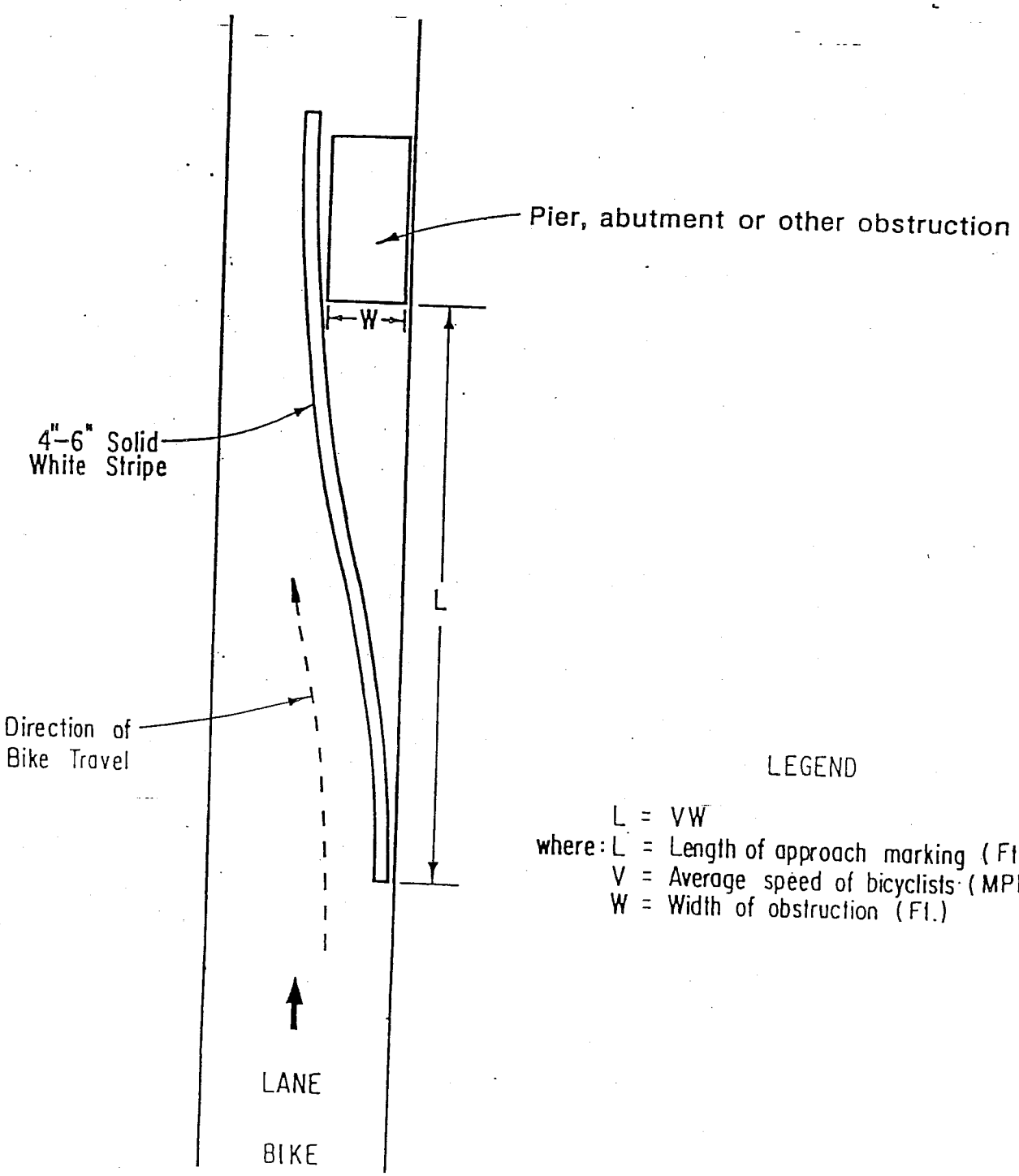


Figure 1003.2D
Bike Loop Detector Pavement Marking

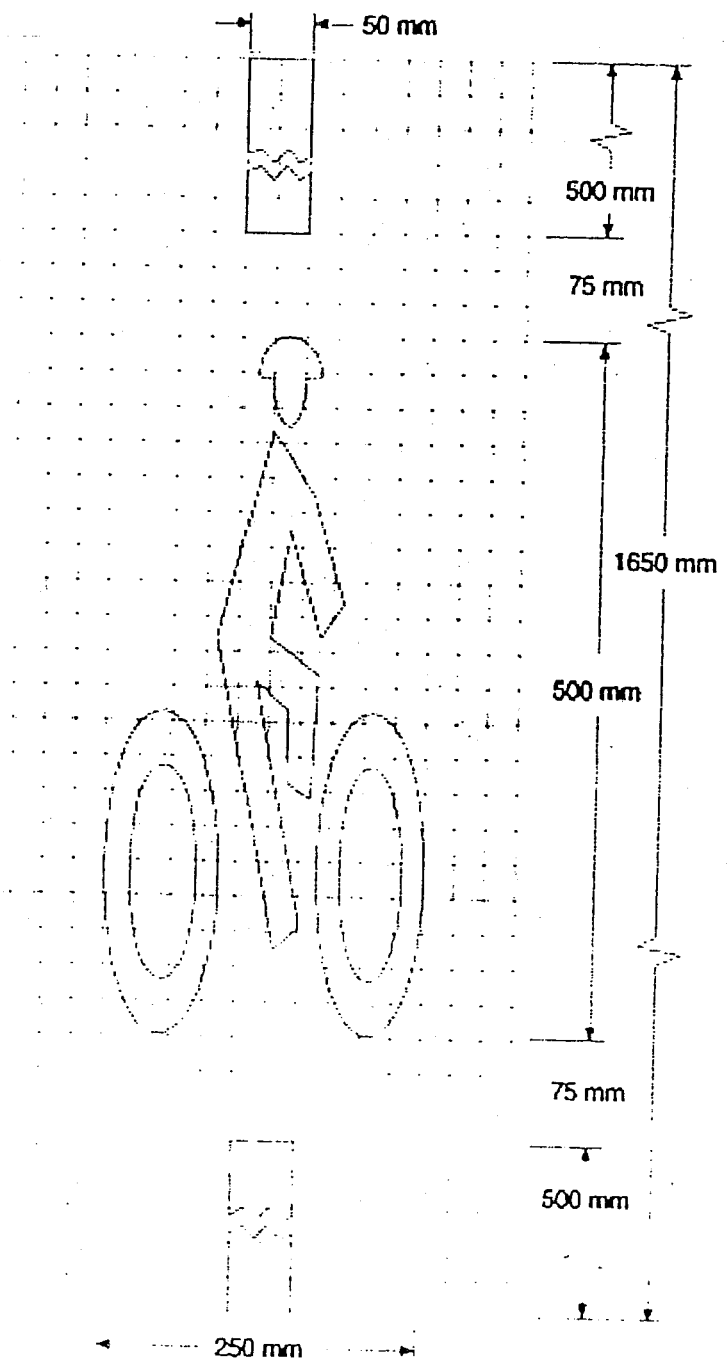
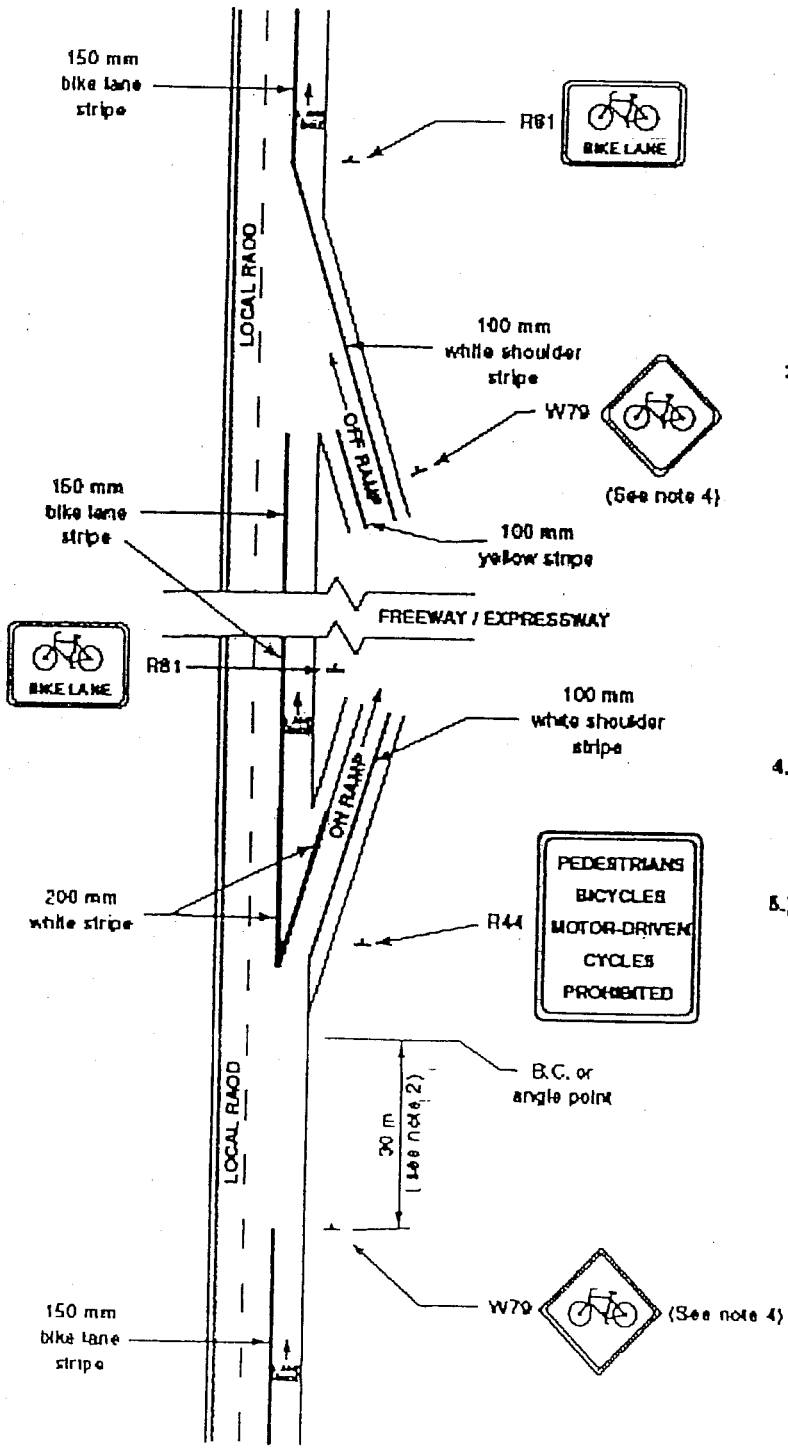


Figure 1003.2E

Bike Lanes Through Interchanges



Notes:

1.) See Index 1003.2 (4) for additional information.

2.) At additional on-ramps within the interchange the signing & striping as shown shall be repeated. Where the on-ramps intersect at the local road at or near 90 degrees, the striping should follow Figure 1003.2C.

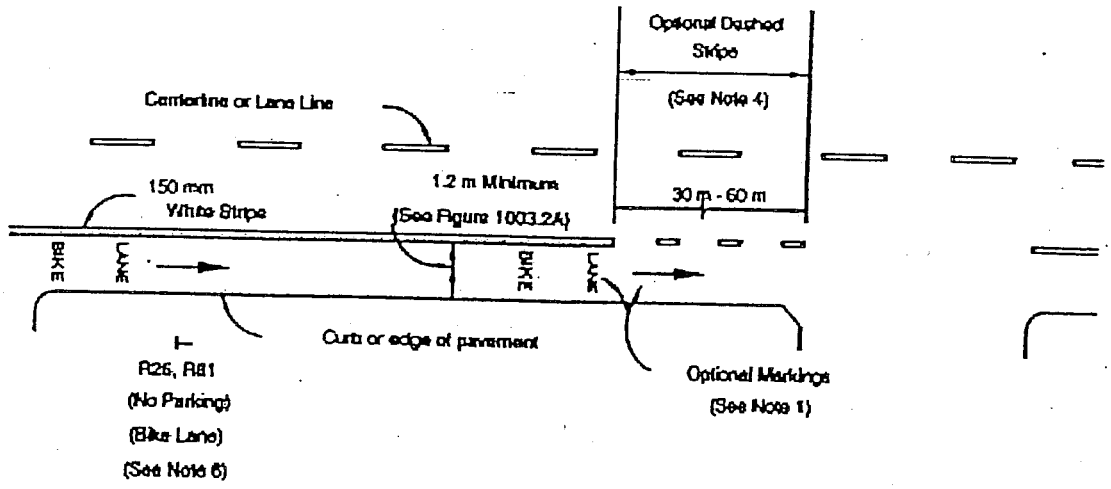
3.) The shoulder width shall not be reduced through the interchange area. The minimum shoulder width shall match the approach roadway shoulder width, but not less than 1.2 m or 1.5 m if a gutter exists. If the shoulder width is not available, the designated bike lane shall end at the previous local road intersection.

4.) The W79 signs are optional and should be used only when determined appropriate by the Engineer.

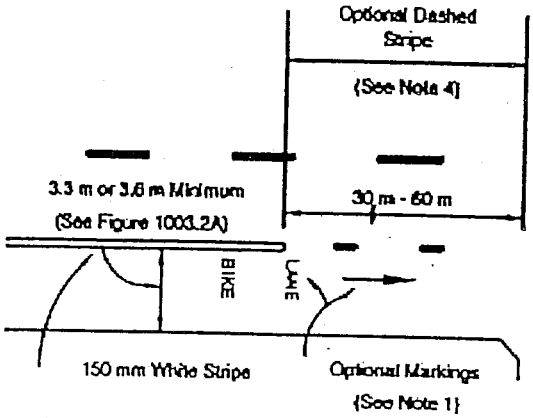
5.) See Index 1003.1 (4) for information on Bike Routes Through Interchanges.

Figure 1004.3
Bike Lane Signs and Markings

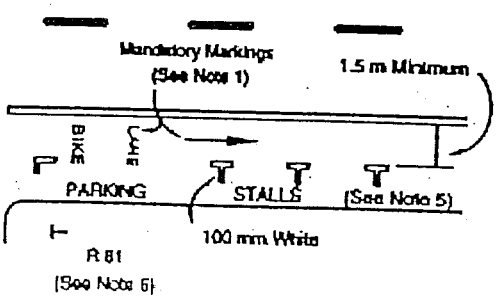
WHERE VEHICLE PARKING IS PROHIBITED



WHERE VEHICLE PARKING IS PERMITTED



NO STALLS



STALLS

NOTES:

1. The Bike Lane pavement markings shall be placed on the far side of each intersection, and may be placed at other locations as desired.

2. The use of the bicycle symbol pavement marking to supplement the word message is optional.

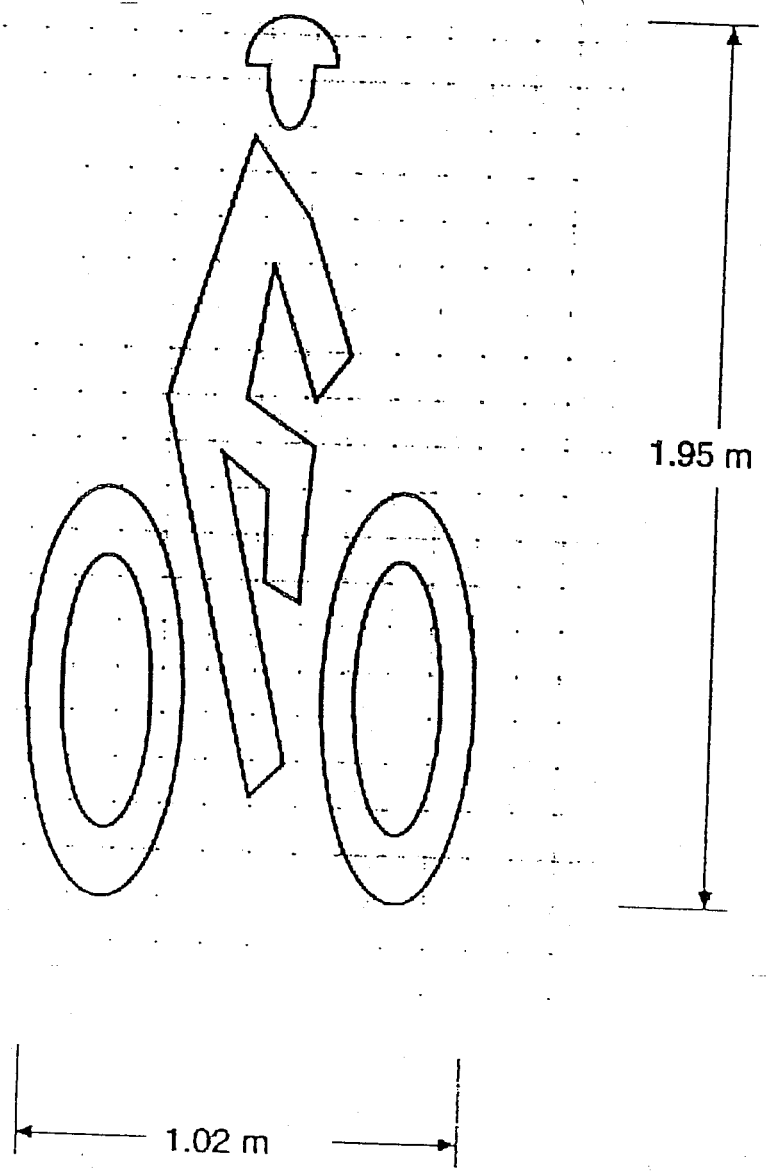
3. The G93 Bike Route sign may be placed intermittently along the bike lane if desired.

4. Where motorist right turns are permitted, the solid bike lane line shall either be dropped entirely, or dashed as shown, beginning at a point between 30 m and 60 m in advance of the intersection. Refer to Detail 38A in the Traffic Manual for striping pattern dimensions.

5. In areas where parking stalls are not necessary (because parking is light), it is permissible to paint a 100 mm solid white stripe to fully delineate the bike lane. This may be advisable where there is concern that motorists may misconstrue the bike lane to be a traffic lane.

6. The R81 bike lane sign shall be placed at the beginning of all bike lanes, on the far side of every arterial street intersection, at all major changes in direction, and at maximum 0.8 km intervals.

Figure 1004.4
Bike Lane Symbol

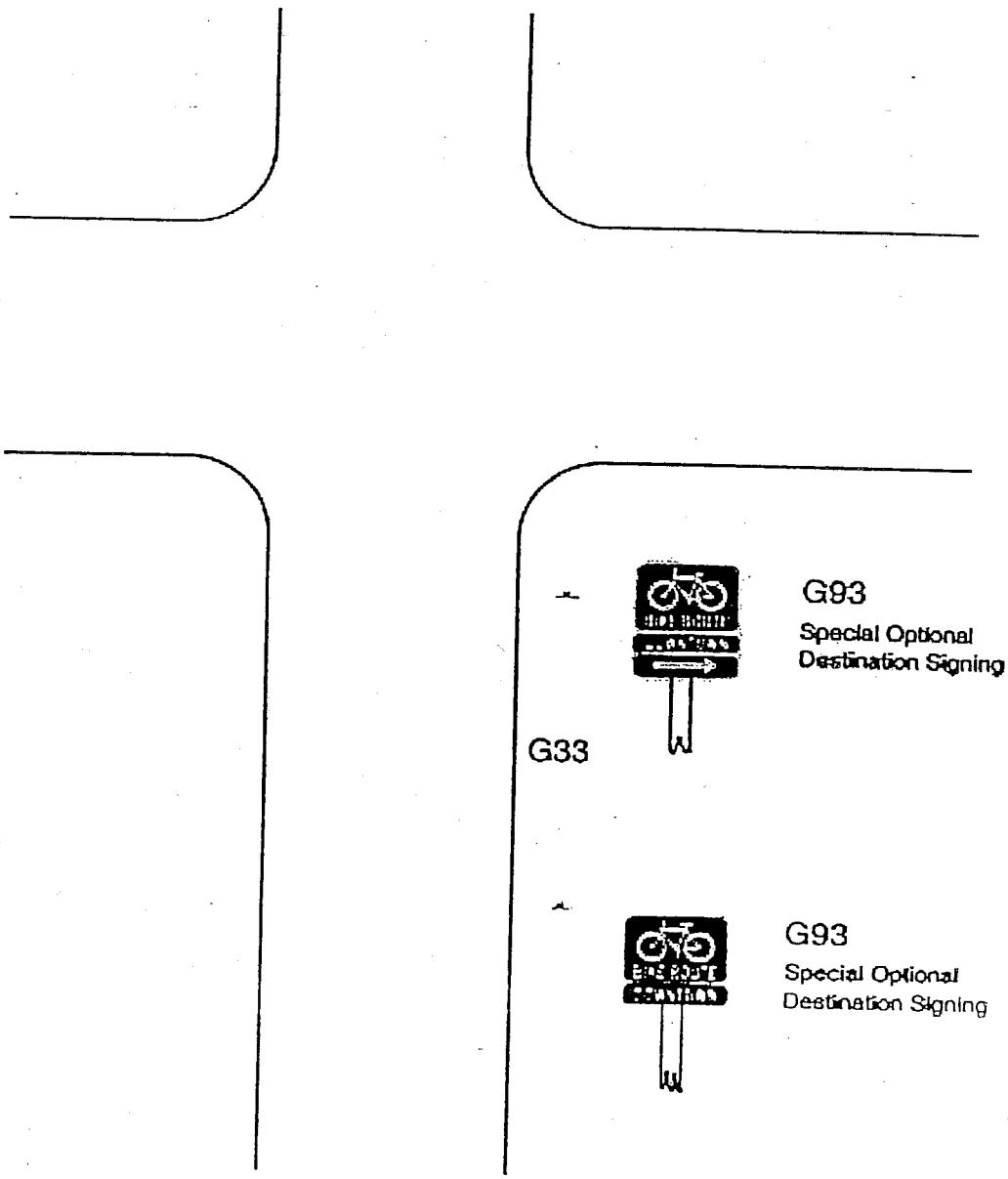


100 mm GRID

Area = 0.65 m_2

Figure 1004.5

Bike Route Signing



NOTES: The G93 Bike Route signs shall be placed at all points where the route changes direction and periodically as necessary.