



The Institute of Transportation Engineers  
Traffic Engineering Council  
presents TIPS on



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## Bicycling

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In the National Bicycling and Walking Study, the U.S. Department of Transportation set national goals for bicycling and walking. The goals proposed are:

- To double the current percentage (from 7.9% to 15.8%) of total trips made by bicycling and walking; and
- To simultaneously reduce by ten percent the number of bicyclists and pedestrians killed or injured in traffic crashes.

According to 1996 statistics from the National Highway Traffic Safety Administration, 761 bicyclists were killed and an additional 59,000 were injured in traffic crashes, whereas 5,412 pedestrians were killed and 82,000 were injured in traffic crashes.

Several actions can be taken to improve bicycling conditions and encourage the use of bicycles. The following are the steps for a model strategy that can be used to improve conditions for bicycling in your community:

- Develop policies and plans to support bicycling;
- Provide adequate infrastructure of bicycle travel and supporting facilities;
- Provide public education and awareness; and
- Provide incentives and eliminate disincentives for bicycling.

Federal funds are available for bicycle-pedestrian facilities through several categories within the federal transportation legislation (TEA-21), most notably the Transportation Enhancements and Congestion Mitigation/Air Quality categories. Nearly \$200 million of these federal funds have been spent every year since 1992 for bicycle and pedestrian facilities.



The following sections describe the steps of this model strategy.

***Develop policies and plans to support bicycling—***  
The development of policies and plans to support bicycling should be first and foremost in any bicycle strategy. The policy statements and plans will help set the direction of the remaining steps and actions to be taken. Policies and plans should be developed with input from various user groups in the area (e.g., bicycling clubs, advocacy agencies, etc.). Policy statements can be something as simple as “The City of Anywhere supports and encourages bicycling for

transportation and recreation, as it reduces congestion, improves air quality, and enhances this community's quality of life." Bicycle plans should address a number of issues, including a policy statement, goals and objectives, existing conditions and/or problem areas, and a recommended strategy (with action items and measurable benchmarks) for improving conditions for bicycling. Facility design guidelines are also commonly incorporated into bicycle plans.

***Provide adequate infrastructure of bicycle travel and supporting facilities***—Once the necessary bicycle policies and plans have been formulated, the bicycle travel and supporting infrastructure should be provided to support bicycling throughout the community. Bicycle travel and supporting facilities include:

- Shared roadway/wide curb lanes (Class IV);
- Signed bicycle routes (Class III);
- Bicycle lanes (Class II);
- Separated bicycle paths (Class I); and,
- Bicycle racks/parking.

The bicycle plan developed in the previous step should provide guidance on the type and design dimension for bicycle facilities. With bicycling, the quality of the trip is part of the motivation for bicycling, and is affected by vehicle interaction, route continuity, directness, and connection to desired land uses. These factors should be taken into consideration when providing bicycle facilities in your community. The resource section at the end of this article provides bicycle facility design guidelines. Bicycle racks/parking should be provided at popular bicycling destinations, such as public libraries, parks, shopping centers, schools,

and other locations where the existing presence of bicycles indicates a need for bicycle parking.

***Provide public education and awareness***—Public education and awareness efforts are necessary for several reasons:

- To encourage potential bicyclists by informing them of the benefits of bicycling;
- To provide information about bicycle safety and operating a bicycle in motor vehicle traffic;
- To inform bicyclists and motorists of their legal rights and obligations for operating under the same rules and regulations; and
- To provide training for potential bicyclists.

***Provide incentives and eliminate disincentives for bicycling***—At a minimum, various incentives can be provided to bicyclists, or disincentives can be eliminated, to encourage bicycling. Disincentives to bicycling that should be eliminated include things such as:

- muddy paths;
- no space for bicycles on high-speed roadways;
- hazardous roadway conditions such as debris or drainage grates; and
- no bicycle parking/racks.

Incentives that can be provided to encourage bicycling include things such as:

- travel time savings compared to motor vehicle travel (due to dedicated facilities, location of parking, etc.);
- aesthetic and/or recreational value, such as shared-use paths along greenways;
- convenient access to businesses; and
- shower and changing facilities at workplaces.

