

APPENDIX 2

BICYCLE COMMUTING

Most of the recommended projects and programs in this plan update are intended to accommodate bicycle use within the existing roadway system and as a component of an intermodal transportation system. As mentioned in Chapter 2, the 1995 Nationwide Personal Transportation Survey reported that 60% of the bike trips were for social and recreational purposes. The other 40% can be considered as utilitarian trips where the bicycling mode is secondary to the trip purpose. Eight percent of these were work trips. Also reported in Chapter 2 was the 1991 Harris poll result that half of the adult cyclists would consider biking to work if safe facilities were available.

One of the plan objectives, 2B, proposes the use of bicycles by adult cyclists to replace motor vehicles for more of their utilitarian trips. These include trips for shopping, work, church and personal business. This appendix addresses some of the regional constraints to bicycle travel and presents some incentives for encouraging bicycle use for additional purposes.

CONSTRAINTS TO BICYCLE TRAVEL

Many people who are active bicyclists do not currently use their bikes for utilitarian purposes but might, if given the appropriate incentives and conditions. When people are asked why they do not bike, the responses are fairly similar¹:

- Length of trip and travel time
- Absence of bike lanes or other safe places to bike
- Lack of secure bicycle parking and/or showers at work
- Fear of crime

The following discussion focuses on these and other constraints related to bicycle commuting.

Some constraints to bicycle travel involve interaction with motor vehicle traffic. One of these is roadsharing skills. Many motorists perceive bicycles as toys associated with their childhood. As a result, they are uncertain how to cope with cyclists in traffic and may believe that bicycles are not entitled to use the roads, or that automobiles have the right-of-way over bicycles. This often results in passing bicycles in unsafe conditions and not seeing cyclists in the traffic stream. For cyclists, experience handling the bike, compliance with the rules of the road, riding on public roads with motor vehicles, and knowledge of their own physical capabilities, are necessary for coping with rush-hour traffic.

The "toy bike" attitude also affects some bicycle riders who believe that they can disregard traffic laws even though most are licensed motor vehicle operators. These attitudes on the part of both motorists and cyclists create unsafe traffic conditions and a lack of respect which have a greater impact on the cyclists' safety because of their greater vulnerability.

An additional constraint to cycling for utilitarian purposes is the lack of secure parking facilities at common destinations. Bicycles have evolved over the years into technologically complex machines costing hundreds to thousands of dollars. As such bicycles and their components are easy and popular targets for theft and vandalism. Lack of secure parking is an often cited deterrent to bicycle commuting.

In the Cincinnati region, climatic conditions are also a constraint to bicycle use. Winter temperatures below freezing--with the associated risks of icy conditions--are a deterrent, as is rain throughout the year. In the summer there are occasional problems with air quality standard violations which create health risks that are aggravated by physical activity. Ironically, these air quality problems can actually be improved through bicycle transportation.

A constraint related to weather conditions that affects bicycle commuting is a lack of facilities for cleaning up and changing clothes at workplaces. Standard restrooms are usually inadequate for these purposes and lack showers and space for storing a change of clothes. With the increasing emphasis on physical fitness and exercise, however, some companies are providing employee showers and lockers. This is less of a problem for personal errand trips where casual clothing is appropriate and travel time is more flexible.

Lastly, travel routes routinely taken when commuting by car may be unsuitable for a cyclist, or prohibited in the case of Interstate highways. Often a route between home and work can be found along streets that are more compatible with bicycle use. Lower traffic volumes and speeds are desirable as is the need to safely cross barriers such as rivers, expressways, or areas susceptible to crime. At the same time, it is important that these constraints not be addressed at the expense of adding significant time or distance to the trip.

INCENTIVES FOR BICYCLE TRAVEL

The following is a discussion of incentives to encourage residents of the region to use bicycles for utilitarian transportation and to reduce the effects of the constraints listed above. It is important to repeat that the most bicycling will take place on ordinary public roads with, as yet, little dedicated space for bicyclists. Bicyclists can be expected to ride on all roadways, except where prohibited by law.

1. An educational program is needed to inform both motor vehicle and bicycle operators about roadsharing.

This would include a legal component stressing that a bicycle is legally a "vehicle", and that bicyclists are entitled to the same rights to use the roads as motorists. It would also stress that the cyclist is required to operate according to the same rules of the road as motorists. It should further include measures to promote an attitude of tolerance, courtesy and respect between cyclists and motorists. Formal instruction courses for school children are available from the Bicycle Federation of America. The League of American Bicyclists has safety programs for children and adults. An "Effective Cycling

Program" is offered by the Bicycle Transportation Institute with vehicular cycling courses for adults and children focusing on cycling with traffic.

The media can also be effective by creating an awareness of potential traffic conflicts and the need for roadsharing by motorists and cyclists. An opportunity for publicizing this issue is during the summer smog alerts when bicycling can be promoted as one of several alternate forms of transportation for reducing motor vehicle air pollution.

2. An enforcement program is needed in support of education.

Many of the misconceptions about bicycle operation mentioned above also exist in law enforcement and the courts. Motorists at fault in accidents with cyclists have not been prosecuted or have been exonerated at the expense of cyclists' rights. Also, police are sometimes reluctant to warn and/or ticket cyclists for traffic law violations. This is particularly true in the case of child riders. Equitable law enforcement is a most effective tool for education.

3. The roadway system should be improved to reduce the friction between motor vehicles and bicycles.

Current policies in bicycle facilities engineering advocate wider shared travel lanes (minimum of 14'), separate striped bike lanes (minimum of 4' on both sides), or paved shoulders (minimum of 4' on both sides) as the most significant and cost effective means for accommodating bicycle traffic. This provides adequate room for motorists to pass bicycles without interfering with other traffic in adjacent lanes. Other improvements include bicycle safe storm water grates, traffic signal sensors that respond to bicycles, smooth and clean pavement, and, where these conditions exist, bike route signs or "share the road" signs to indicate that bicycles belong on the road. All of these roadsharing improvements can be economically provided as new roads are built and existing roads maintained and reconstructed.

Within the region, areas of suburban development should be targeted to incorporate bicycle travel as development patterns are established and streets built. Existing areas of significant bicycle travel, such as the University of Cincinnati and the hospital complex, should also be targeted for improvements. In order to recognize the opportunities for bicycle travel and implement these recommendations, it is also necessary to incorporate bicycle facility planning into existing local and regional transportation planning processes. The objectives should include more compact urban development to reduce trip lengths, and streets designed with the appropriate bicycle facilities.

4. Parking facilities are needed at major destinations.

These destinations include central business districts, shopping centers, schools and universities, and parks. Many industrial and office employment centers have been developed at densities which preclude centrally located parking facilities. In these situations, provision of bicycle parking would be the responsibility of the respective businesses or building managers. Where parking garages are available, adequate

sheltered bicycle parking can be provided at the expense of only two or three automobile spaces. Bicycle parking facilities are also recommended at designated park-and-ride lots and at selected transit stops to encourage bicycle use in conjunction with carpooling and transit for additional fuel efficiency.

5. Other incentives to encourage bicycle transportation.

It is likely that future transportation policies being developed to achieve air quality standards in the OKI Region will include disincentives to discourage single occupant automobile use. Correspondingly, incentives should be developed to encourage the use of more efficient modes of travel, including bicycling. Information should be provided through news articles and brochures describing commuting techniques for route selection, appropriate bicycles and accessories, clothing, and riding techniques. Public service announcements (PSAs) are recommended for promoting bicycle use and roadsharing.

A technique used by over 200 public transit agencies to integrate cycling and transit is to provide bicycle racks on buses. This allows "sandwich" commuting where transit can be used between bike trips from the trip origin to the bus stop, and from the bus stop to the trip destination. This also serves to extend the service area radius around each bus stop. In 1999, Metro studied the feasibility of adding bike racks to their fleet of 400 buses. They reached a favorable conclusion based on their review of bike racks on buses programs at other transit authorities, and the testing of a rack-equipped Metro coach on all routes in Cincinnati. Implementation is scheduled for 2001.

Bicycle travel for work and personal trips should also be marketed to the public similar to the promotional campaigns now used for carpooling and transit. A bicycle marketing program should emphasize cycling as a healthful and pleasurable activity, as a way to reduce vehicle emissions, and should also address solutions to the constraints listed previously.

There are also incentives that can be offered by employers and businesses to generally encourage bicycle commuting or to achieve compliance with local trip reduction ordinances. These incentives may include merchandise, services, or time off based on number of days of bicycle commuting; shower and locker facilities for changing clothes; guaranteed rides home in case of inclement weather; emergency repairs and pick-up in case of breakdown; company discounts at bike shops; and gifts such as helmets, mirrors, lights, or gift certificates.

¹ HDR Engineering, Inc., National Bicycling and Walking Study: Interim Report, University of North Carolina, Highway Safety Research Center, for the Federal Highway Administration, US Department of Transportation, November 1991, p.12