1500 PEDESTRIAN AND BICYCLE ACCOMODATIONS

HIGHWAY DESIGN	*Chapter* PEDESTRIAN AND BICYCLE ACCOMMODATIONS
	Subject Guidelines for Pedestrian & Bicycle Accommodations

HD-1501.1 OVERVIEW

It is the Kentucky Transportation Cabinet's policy to enhance operational efficiency, promote program goals, and enrich the quality of life through the implementation of the *Pedestrian and Bicycle Travel Policy*. The following guidance describes the most appropriate inclusion of pedestrian and bicycle facilities for roadway projects. The design executive summary (DES) should document the decision of whether or not to include pedestrian and bicycle facilities.

AASHTO's *Guide for the Planning, Design, and Operation of Pedestrian Facilities* and *Pedestrian Right of Way Access Guidance* (PROWAG) should be consulted for the design of pedestrian facilities. AASHTO's *Guide for the Development of Bicycle Facilities* provides guidance on the design of bicycle facilities.

HD-1501.2 PEDESTRIAN FACILITIES ON URBAN ROADWAYS

Incorporation of pedestrian facilities will be considered on all new or reconstructed state-maintained roadways in existing and planned urban and suburban areas if the roadway project involves one or more of the following factors:

- A pedestrian facility already exists on the current roadway.
- The recommended roadway cross-section is urban (curb and gutter).
- Project limits are adjacent to an existing residential, commercial, industrial, institutional, public, or semi-public use area, or are adjacent to an area planned to develop one of these uses within the next 20 years. Planned development may be determined by zoning designations, a local comprehensive plan, or the public-involvement process.

- A state, locally, or regionally adopted pedestrian network or policy has designated pedestrian improvements in the area of the specific roadway project or for that classification of roadway.

- A KYTC Small Urban Transportation Study has specific pedestrian improvements recommended for the roadway project.

- Pedestrian traffic exists along the current roadway. This may be determined by the observation of pedestrian traffic or by the public-involvement process.

- Public interest in and demand for pedestrian facilities are determined at the planning and preliminary engineering public-involvement stages.

Other factors that should be considered when determining the need for pedestrian facilities include the following:

- Project-level decisions will complement local pedestrian plans to the maximum reasonable extent.

- Project-level decisions will evaluate future connections to close gaps in parallel connectivity between projects and developed areas/community destinations or existing pedestrian facilities within 300 feet beyond normal project limits and within existing publicly owned rights of way.

- Project-level decisions will evaluate future connections to close gaps in perpendicular connectivity to developed areas/community destinations or existing pedestrian facilities within 100 feet of the roadway edge of pavement and within existing publicly owned rights of way.

- Project-level decisions will consider pedestrian access to existing and planned transit stops.

HD-1501.3 PEDESTRIAN FACILITIES ON RURAL ROADWAYS

Incorporation of pedestrian facilities will be considered on all new or reconstructed roadways in rural areas if the roadway project involves one or more of the following factors:

- Pedestrian traffic exists along the current roadway. This may be determined by the observation of pedestrian traffic or by the public-involvement process.

- Project limits are adjacent to planned or anticipated development within the next 20 years of residential subdivisions; commercial, industrial, institutional, public, or semi-public use area; or other projects necessitating pedestrian connectivity. Planned development may be determined by zoning designations from a local comprehensive land use plan, interviews with local political and economic leaders to gauge anticipated growth in the project area, or the public-involvement process.

- A state, locally, or regionally adopted pedestrian network or policy has designated pedestrian improvements in the area of the specific roadway project or for that classification of roadway.

- Gaps in connectivity exist between two or more developed areas/community destinations currently separated by no more than 1.5 miles.

- Public interest in and demand for pedestrian facilities are determined at the planning and preliminary engineering public-involvement stages.

HD-1501.4 CHOOSING TYPES OF PEDESTRIAN FACILITIES

After determining that a pedestrian facility is necessary, the type of facility will be selected and common practices for both urban and rural areas will be considered.

HD-1501.4.1 Common Practices for Urban Areas

- 5’ sidewalks with 2’ buffer strip on both sides of the roadway (desirable)

- 5’ minimum, 6’-10’ desirable for sidewalks in heavily traveled pedestrian areas, Central Business Districts (CBDs), and other special applications

- 10’ desirable, 8’ minimum shared use path (two-way directional travel)

- Shoulders (for rural cross-section in urban areas): minimum width based on KYTC policy as stated in **HD-700,** “Geometric Design Guidelines”

- 10’ shared use path with 5’ sidewalk on opposite side

HD-1501.4.2 Common Practices for Rural Areas

- Shoulders: minimum width based on KYTC policy as stated in *Highway Design Manual,* **HD-700, “**Geometric Design Guidelines”

- 10’ desirable, 8’ minimum shared use path (two-way directional travel)

- 5’ sidewalk with 2’ buffer strip on both sides of the roadway (desirable for urban cross-section in rural areas)

HD-1501.4.3 OPTIONS TO COMMON PRACTICES

Other options may be chosen if they satisfy a need supported by data or public input. Additional guidance concerning pedestrian facilities may be found in AASHTO’s *Guide for the Planning, Design, and Operation of Pedestrian Facilities,* AASHTO’s *Guide for the Development of Bicycle Facilities,* and *Pedestrian Right of Way Access Guidance* (PROWAG).

HD-1501.5 SHARED USE PATH

A shared use path serves as part of a transportation circulation system and supports multiple modes, such as walking, bicycling, and inline skating. A shared use path typically has a surface that is asphalt, concrete, or firmly packed crushed aggregate. The AASHTO *Guide for the Development of Bicycle Facilities Current Edition* defines a shared use path as being physically separated from motor vehicular traffic with an open space or barrier. Shared use paths are best utilized in areas where driveway and road access crossings are limited, in order to minimize the number of motor vehicle–path-user conflicts.

HD-1501.6 BICYCLE FACILITIES

In the Commonwealth of Kentucky, bicycles are considered, by statute, to be legal vehicles, and as such are permitted on all roadways within the state, except on those where they are specifically prohibited (e.g., parkways and interstate highways). Bicycles can safely share the roadways with motor vehicles when appropriate consideration is made during the design and construction of new or reconstructed roadways. Bicycle traffic may be expected on all roadways except interstate highways and other fully controlled access highways, but each location merits a different type of accommodation. Accommodation includes signage, rumble-strip design, bicycle-friendly grates, wide curb lanes, shoulder bikeways, bicycle lanes, and shared use paths.

Incorporation of bicycle facilities will be considered on all new or reconstructed roadways (including the resurfacing of roadways and shoulders) in existing and planned urban, suburban, and rural areas when the roadway project involves one or more of the following factors:

- A bicycle facility already exists on the current roadway.

- Project limits are adjacent to an existing residential, commercial, office, industrial, institutional, public, or semi-public use area or adjacent to an area planned to develop into one of these uses within the next 20 years. Planned development may be determined by a local comprehensive plan or the public-involvement process.

- A state, locally, or regionally adopted bicycle plan has designated bicycle improvements or a bikeway in the area of the specific roadway project or for that classification of roadway.

- A KYTC Small Urban Transportation Study has specific bicycle improvements recommended for the roadway project.

- Bicycle traffic exists along the current roadway. This may be determined by the observation of bicycle traffic or by the public-involvement process.

- Public interest in and demand for bicycle accommodations are determined at the planning and preliminary engineering public-involvement stages.

Other factors that should be considered when determining the need for bicycle facilities include:

- Project-level decisions will complement local bicycle plans to the maximum reasonable extent.

- Project-level decisions will evaluate future connections to close gaps in parallel connectivity between projects and developed areas/community destinations or existing bicycle facilities within 300 feet beyond normal project limits and within existing publicly owned rights of way.

- Project-level decisions will evaluate future connections to close gaps in perpendicular connectivity to developed areas/community destinations or existing bicycle facilities within 100 feet of the roadway edge of pavement within existing publicly owned rights of way.

HD-1501.7 CHOOSING TYPES OF BICYCLE FACILITIES

After determining that a bicycle facility is necessary, the type of facility will be selected. Following are brief descriptions of typical bicycle facilities.

HD-1501.7.1 Shared Lanes

Width is the most critical variable affecting the ability of a roadway to accommodate bicycle traffic. In order for bicycles and motor vehicles to share the roadway without compromising the level of service and safety for either, the facility should provide sufficient paved width. Bicycle-safe drainage inlets shall be used when bicyclists are anticipated in roadways with curb and gutters.

HD-1501.7.2 Paved Shoulders

Adding or improving paved shoulders often can be the best way to accommodate bicyclists in rural areas and benefit motor vehicle traffic.

HD-1501.7.3 Kentucky Shoulder Bikeways

Bikeway is a generic term for any road, street, path, or way that in some manner is specifically designated for bicycle travel, regardless of whether such facilities are designated for the exclusive use of bicycles or are to be shared with other transportation modes.

- Shoulder bikeways should have a minimum of 4 feet of paved surface beyond rumble strips, 5 feet when guardrail is present; however, 6 feet is preferred.

- No additional striping should be applied to designate a shoulder bikeway. See the MUTCD for appropriate signing.

- The bicycle lane symbol should not be used as pavement marking on a shoulder bikeway. The bicycle lane symbol is used to designate facilities exclusive to bicycle use and is not appropriate on a shoulder bikeway.

HD-1501.7.4 Wide Curb Lanes

It may be appropriate to add additional width to the outside lane to accommodate bicycles. Wide curb lanes for bicycle use are usually preferred where shoulders are not provided, such as in restrictive urban areas. An outside or curb lane wider than 12 feet can better accommodate both bicycles and motor vehicles in the same lane. In many cases where there is a wide curb lane, motorists will not need to change lanes to pass a bicyclist. Bicycle-safe drainage inlets shall be used in conjunction with widened pavements.

In general, 14 feet of usable lane width is the recommended width for shared use in a wide curb lane. Usable width normally would be from edge stripe to lane stripe or from the longitudinal joint of the gutter pan to lane stripe (the gutter pan should not be included as usable width).

Restriping to provide wide curb lanes may also be considered on some existing

multi-lane facilities by making the remaining travel lanes and left-turn lanes narrower. An engineering analysis based on applicable design criteria and a careful review of traffic characteristics will be provided to aid any decision for restriping existing facilities.

HD-1501.7.5 Bicycle Lanes

Bike lanes can be incorporated into a roadway when it is desirable to delineate available road space for preferential use by bicyclists and motorists and to provide for more predictable movements by each. Bike lanes should be one-way facilities and carry bike traffic in the same direction as adjacent motor vehicle traffic. On one-way streets, bike lanes should generally be placed on the right side of the street. Bike lanes on the left side are unfamiliar and unexpected to most motorists.

The recommended width of a bike lane is generally 5 to 6 feet from the face of a curb or guardrail to the lane stripe (the width of the gutter pan is included). For roadways with no curb and gutter or guardrail, the minimum width of a bike lane should be 4 feet.