

Circulation Plan Element

The Circulation Plan Element is amended to include the following new section on Bicycle and Pedestrian Linkages.

Bicycle and Pedestrian Linkages

Bicycle and pedestrian linkages are encouraged and should be provided to the maximum extent possible in all areas of the Township, and particularly between parks, recreation, and open space areas, and key destinations within the Warctown Town Center.

Providing such connections will not only help to make Ocean Township more sustainable by promoting non-motorized transportation, but also greatly improve the quality of life for Township residents. While sidewalks are an important pedestrian facility, the focus of this Circulation Plan Element is on dedicated and shared bicycle lanes, greenways and multipurpose trails.

To maximize the provision of bicycle and pedestrian linkages, this Circulation Plan Element does not specify the exact locations where they should be provided, but, rather, establishes a vision, discusses key principles of the design and maintenance of bicycle and pedestrian facilities, and outlines important goals and objectives for their provision.

Vision for Bicycle and Pedestrian Linkages

The Circulation Plan Element's vision is to develop and expand the Township's network of bicycle and pedestrian linkages and secure the recreation and transportation benefits of bicycling and walking for Township residents. The Circulation Plan Element envisions a network of bicycle and pedestrian linkages that connects the Township's residential developments with: open space and recreation areas; schools; shopping and employment centers; and, other key destinations in Ocean Township and neighboring municipalities.

The Circulation Plan Element also envisions that linkages will be provided in the form of: on-road bicycle lanes; lanes shared between bicycles and vehicles, where appropriate; greenways; and protected multipurpose trails. In all variations, bicyclists and pedestrians will be able to travel in a safe and efficient manner throughout the network, which will boost bicycling and walking for recreation, and increase their use as a means of transport.

Facility Design and Maintenance

When planning bicycle and pedestrian linkages, it is important to pay attention to the needs and expectations of users; the facility's visual appeal and design; and its upkeep.

The following section provides an overview of basic concepts to guide the planning and development of bicycle and pedestrian facilities within Ocean Township.

High Quality Experience

As a starting point, it is important to consider the elements that lead to a high quality experience. Examples of such elements include: visual appeal; pleasantness and convenience of location; presence of interconnections, residential areas, and community facilities; sufficient length; accessibility for users with limited mobility; and, the availability of special features, such as educational opportunities, benches, shelters, and similar amenities. When planning bicycle and pedestrian facilities, it is important to maximize the availability of these elements in order to provide a high quality experience.

User

It is also important to consider the needs and physical ability of the user. For example, the elderly and disabled will typically have different levels of ability than the remainder of the population. By giving consideration to the needs and physical ability of all users, use and success of the network will be maximized. Accommodating a broad cross section of users of all ages and abilities will help to maximize the use and success of the network.

Connectivity

Connectivity refers to the linkages a network provides from a given point to another. When planning bicycle and pedestrian facilities, it is important to consider possible connections between neighborhoods, business districts, parks, community facilities, and natural environments. By providing such connections, bicycle and pedestrian facilities can provide a viable route to a destination.

Facility Type

Facility type will affect its design. The basic types of bicycle and pedestrian facilities are: on-road bicycle lanes; shared lanes; greenways; and, multipurpose trails.

- **Dedicated, On-Road Bicycle Lanes:** On-road bicycle lanes provide dedicated space for cyclists where motorists are not allowed to park, stand or drive. They are designated with striping, signage and pavement markings, and make the movements of motorists and cyclists more predictable, thereby increasing safety. They are generally unidirectional, and travel in the same direction as the adjacent vehicle travel lanes. They are located on the right side of the roadway (i.e., along the curb), and, when on-street parking is available, are generally situated between vehicle travel and parking lanes. According to guidelines of the American

Association of State Highway and Transportation Officials, the minimum recommended width of an on-road bicycle lane is four feet. However, six feet is the preferred width recommended by this Circulation Plan Element. The additional width provides a greater degree of separation between bicycles and motor vehicles. Standards of the American Association of State Highway and Transportation Officials indicate that striping to separate on-road bicycle lanes from vehicle travel lanes should be six inches in width. Striping to separate on-road bicycle lanes from parking lanes should be four inches.

- **Shared Lanes:** Bicycle facilities may be provided in lanes shared between bicycles and motor vehicles. Shared lanes may be suitable on roadways with low traffic volumes or wide roadway shoulders, and are generally a low-cost solution because they can be provided without the requirement for physical changes to the roadway. Indeed, shared lanes only require bikeway network signage; they can, however, be supplemented with pavement markings. The width of a shared lane should, ideally, be 15 feet to allow for enough clearance between bicycles and large vehicles.
- **Greenways:** Greenways are long, linear open spaces that provide a setting for nature conservation and recreation. They often contain trails and link parks. The corridors of streams and rivers, and utility easements lend themselves to greenway development. Greenways are often the location of bicycle and pedestrian facilities.
- **Multipurpose Trails:** Multipurpose trails facilitate connections within the community. They provide for safe, non-motorized passage between residential and commercial areas, parks and open space areas, and other community features. A width of eight to ten feet is appropriate for multipurpose trails. In certain high-traffic areas, however, a tread width of ten to twelve feet may be appropriate. In all cases, the width should be wide enough to accommodate bidirectional passage. Multipurpose trails may be provided in roadway rights-of-way, but, when they are provided in such areas, are physically separated from motor vehicle traffic by open space or some other type of physical barrier (e.g., guard rail, curbing, etc.).

Signage

Signage serves a number of important functions. Most importantly, it helps a user to identify his or her location and conveys information about facility characteristics. As such, proper signage is an important part of bicycle and pedestrian facility design.

Signage at the trailhead should include: the name of the facility; a large-format map; length; permitted activities; and, information on connections. Signage should contain a minimal amount of text by making extensive use of icons and pictograms. Locational markers placed at regular intervals along the route should supplement this information.

Additionally, interpretative signage should be provided where significant natural or cultural features are present. All signage should be made of durable materials that resist fading, water damage, and vandalism.

With regard to traffic signage, it is noted that the Federal Highway Administration's Manual on Uniform Traffic Control Devices (MUTCD) provides standards for all traffic control devices nationwide, including signs for bicycle facilities. All traffic control devices nationwide must conform to its standards. It is, therefore, the recommendation of the Circulation Plan Element that the current MUTCD be consulted when planning traffic control signage.

Amenities

When planning bicycle and pedestrian facilities, it is important to provide appropriate amenities. The appropriateness of a particular amenity will be determined by the function, type, and anticipated users of the facility.

Amenities have a significant impact on a user's overall experience, and may include: bicycle racks; bicycle repair stations and air pumps; benches; picnic areas; drinking fountains; animal-proof refuse containers; observation areas; and shelters, among others.

Maintenance

The proper maintenance and upkeep of Ocean's bicycle and pedestrian facilities will ensure the public's continued use, safety, and enjoyment. As such, maintenance is an integral part of the bicycle and pedestrian facility planning process.

The maintenance required for a specific facility will be determined by type, surface, and amenities. Consequently, it is the recommendation of this Circulation Plan Element that a maintenance plan be written for the bicycle and pedestrian network in Ocean Township.

A facility's future maintenance needs must also be considered during the design process. For instance, off-road facilities should be designed to be accessible to maintenance vehicles. Additionally, benches and other amenities should be designed to be low maintenance. By giving forethought to maintenance in the design process, a facility's future maintenance requirements can be simplified.

Goals for Bicycle and Pedestrian Linkages

The Township's goals for bicycle and pedestrian linkages are as follows:

- Provide bicycle and pedestrian linkages between major destinations within the Township, and to neighboring municipalities.

- Establish a permanent advisory committee for bicycle and pedestrian facilities.
- To the greatest extent possible, develop bicycle and pedestrian linkages between dead-end streets and cul-de-sacs.
- Provide identification and guide signs for bicyclists and pedestrians.
- Provide safe and adequate bicycle parking options at key destinations, and in all public parks.
- Work with Ocean County to provide signage that alerts motorists of the presence of bicyclists along county roadways.
- Provide only bicycle-safe sewer grates in all areas of the Township.
- Provide adequate lighting to ensure safety for bicyclists and pedestrians.
- Ensure that all bicycle projects comply with recognized design standards, such as the *Guide for the Development of Bicycling Facilities* prepared by the American Association of State Highway and Transportation Officials.
- Investigate potential funding mechanisms for bicycle and pedestrian facilities, including grants and open space trust funds.
- Coordinate bicycle planning with Ocean County and the State of New Jersey.
- Develop a Township-wide bicycle and pedestrian facility map that is displayed at parks and other major destinations.
- Provide linkages with the Barnegat Branch Trail.
- Promote east-west bicycle and pedestrian access by improving crossings at key locations along Route 9.
- Provide traffic calming at key locations to improve bicycle and pedestrian safety and encourage use of facilities.