



Helping Communities face the challenges and impacts of growth while maintaining their character and sense of place.

Bicycle and Pedestrian Planning

iTRaC is the Nashua Regional Planning Commission's new approach to community planning that focuses on integrating transportation, land use and environmental planning. The program was developed to assist communities in dealing with the challenges of growth in a coordinated way that sustains community character and a sense of place.

Introduction

This Fact Sheet is intended to present some of the basic components that might be used to develop or update a local bicycle and pedestrian plan. In addition, standard bicycle design groups and types of bicycle facilities are provided. Regulatory and funding information is also provided. Some resources are provided at the end of this document. Examples of existing plans and review of Federal and State guidance documents is recommended.

Background

Post World War II, the focus in transportation planning was to provide a safe and efficient roadway network for automobiles and commercial trucks. Roadway design was from the centerline of the road outward to the right-of way. Little consideration was given to bicycle and pedestrian facilities. Advocates pushed for roadway design to be from the edge of right-of-way inward to the travel lanes. Designers and engineers were encouraged to lay out sidewalks and trails, paved shoulder or bike lanes and buffers first to insure integration into roadway designs, but this was not required.

In 1991 Congress enacted the Intermodal Surface Transportation Efficiency Act (ISTEA), and in 1998, the Transportation Equity Act for the 21st Century (TEA-21). Focus was shifting toward integrating non-motorized travel into transportation system design. Walkability and accessibility was now expected to be part of the design for transportation projects. The U.S. Department of Transportation (US DOT) developed policies and design guidance. Bicycling and walking accommodations were expected to be part of every transportation agency's design, construction, operation and maintenance activities; including better safety and access for people with disabilities.

Today, training for highway designers, consultants, planners, and local officials includes an understanding of bicycle and pedestrian issues. Public outreach and education is important too. "Safe Routes to School" encourages and facilitates children bicycling and walking to school through education and physical improvements to the transportation infrastructure.

Source: Design Guidance -Accommodating Bicycle and Pedestrian Travel: A Recommended Approach; A US DOT Policy Statement Integrating Bicycling and Walking into Transportation Infrastructure. (2010)



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www.pedbikeimages.org / Dan Burden

Before Integration

After Integration



www.pedbikeimages.org / Carl Sundstrom

FACTS

Percent of All Trips by Bicycle and Foot	NH 7.8%	National 9.6%
Percent of All Traffic Fatalities that are Bicycle or Pedestrian	NH 7.6%	National 13.0%
Percent of Federal Transportation Dollars Spent on Bike/Ped	NH 3.1%	National 1.2%
Percent of Federal Safety Dollars Spent on Bike/Ped	NH 0.8%	National 0.6%
Percent of Youth Ages 10-17 who are Obese or Overweight	NH 29.4%	National 34.6%

Source: Alliance for Biking and Walking's 2010 Benchmark Report

Basic Components of a Good Bicycle Pedestrian Plan

- ✓ Facilitate public participation
 - Public involvement and participation is a critical aspect of any planning process. Public participation helps planners to more clearly define the objectives and outcomes of a given project and may help build public support for the proposed bicycle and pedestrian plan or policy.
- ✓ Determine community vision and objectives
 - Community visions depict alternative futures that can be achieved through planning and policy. Identifying preferred visions is a first key step in drafting a bicycle or pedestrian plan.
- ✓ Create a fact-base; document locations of existing facilities and their use
 - A plan is built on a fact-base. Documenting the presence and status of bicycle facilities aids in identifying and prioritizing locations where improvements are needed. Knowing where current or potential bicycle use is high helps to focus planning efforts on areas where the benefits would be greatest. Having a strong fact-base can also help build political support for a plan by demonstrating an understanding of the opportunities and issues, which brings credibility to the plan and any recommendations.
- ✓ Identify and prioritize locations needing improvement
 - An important step in planning activities is to identify and prioritize locations in need of planning and policy attention. A systematic approach is needed to identify what (and where) countermeasures should be implemented. There will always be more areas that need support than funds available, therefore, a prioritization system needs to be developed to rank the various competing projects.
- ✓ Evaluate alternatives and determine solutions
 - Once locations for bicycle improvements are identified, alternative treatments need to be examined. The cost, anticipated impact, and feasibility of implementation will determine whether an alternative is attractive or not. Cost information is typically available from experts, firms, or others that have experience with a particular solution.
- ✓ Establish key design procedures
 - Having an established set of design procedures is an important consideration to ensuring continuity and proper facility design based on the many design and engineering principles of bicycle and pedestrian facilities. Examples are available from the many states, regions, and municipalities that have already developed design guides and manuals for bicycle and pedestrian facilities.
- ✓ Evaluate and revise plans
 - In order to stay applicable, plans should be evaluated and revised regularly. Plans may need revision for a number of reasons:
 - Conditions on the ground change
 - New priorities emerge
 - Innovative approaches become available
 - Information from evaluations indicate a the need for new directions for the plan
 - It's a good idea for plans to include a periodic schedule for revision; typically every five years and not exceeding 10 to 15 years

Major Bicycle Groups and Types of Facilities

MAJOR BICYCLE GROUPS:

American Association of State Highway and Transportation Officials (AASHTO) defines the following three groups:

Group A - Advanced Bicyclists

- Experienced riders who can operate under most traffic conditions. This group should be provided for on all roadways on which bicycles are permitted. Direct access to destinations and ability to operate at maximum speed is preferred.

Group B - Basic Bicyclists

- Casual and new adult and teen riders who have less experience and confidence. Direct access to destinations at lower speeds, lower traffic volumes or designated bicycle facilities and bike paths is preferred.

Group C - Children

- Preteen riders who may be monitored by parents or allowed independent access to roadways when more experienced. Access to key destinations nearby via residential streets at low speeds with low motor vehicle volumes is preferred. Well defined separation from traffic on major roadways or use of bicycle paths are also preferred.

Bicycle networks should be designed to accommodate and encourage Group B and C riders.

MAJOR TYPES OF BICYCLE FACILITIES:

<p>Shared Roadway (no official bikeway designation)</p>	<p>Most bicycle travel is on undesignated roadways. Road adequacy and condition vary. No signs or street markings are required. Some roads may be completely inadequate. Ideally adequate width would allow a 4-foot paved shoulder with a 4 inch wide edge stripe to separate bicycles from travel lanes. Shoulder maintenance for bikes would improve safety.</p>
<p>Signed Shared Roadway</p>	<p>Designated by bike route signs, but no pavement markings. Signs alert motorists and indicate to bicyclists that a road is suitable for bikes and they can expect a shared route that will be maintained with bicycles in mind. Typically local and collector roads (< 8,000 vehicles per day). No physical changes are made to roadways beyond maintenance.</p>
<p>Bike Lane</p>	<p>Appropriate pavement markings and signs are installed. The purpose is to improve conditions for bikers. Usually a 4-foot lane for bikes, which motor vehicles cannot drive, park, or stand in. Creating an environment where the actions of motor vehicles and bicyclists are predictable, and except for turning, lane sharing is not needed.</p>
<p>Shared Use Path</p>	<p>Physically separated from motor vehicles, shared paths are intended to serve as corridors not served by streets. Often utilizing old utility and railroad right-of-ways. With wider or offset roadway right-of ways, these paths can enhance the enjoyment and safety of users.</p>

Funding and Important Legislation

Some Federal Programs for bicycle & pedestrian funding*:

Transportation Enhancement (TE): The primary source of bicycle & pedestrian funding. - NH (95%); Nation (70%)

Congestion Mitigation and Air Quality Improvements Program (CMAQ): Secondary funding; bicycle facilities and pedestrian walkway projects that promote safety. - NH (3%); Nation (9%)

Surface Transportation Program (STP): Funds motorized transportation & independent bicycle and pedestrian projects. - NH (<0.1%); Nation (9%)

Other: NH (2%); Nation (12%)

* Percent of total bicycle and pedestrian funding

Safe Routes to School (SRTS): Funds programs and projects, from building safer street crossings to programs that encourage children and their parents to walk and bicycle safely to school. Based on student enrollment; no state receives less than \$1 million per year.

Important Federal Legislation: Key Bicycle and Pedestrian Highlights

ISTEA:
Intermodal Surface Transportation Efficiency Act
(1991-1997)

- New objectives, programs and planning requirements for bicycle and pedestrian activities
- State bicycle and pedestrian coordinator offices established

TEA-21:
Transportation Equity Act of the 21st Century
(1998-2004)

- Expanded program funding options and eligible activities

SAFETEA-LU:
Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
(2005-2009)

- Bicycle & pedestrian highlights: Safe Routes to School program funded to foster safe and active lifestyles for children and youth

Information Sources/Resources

Nashua Regional Planning Commission Regional Bicycle and Pedestrian Plan, June 2005
<http://nashuarpc.org/publications/transpo.htm>

Examples of Bicycle and Pedestrian Plans
<http://www.bicyclinginfo.org/develop/sample-plans.cfm>

Pedestrian and Bicycle Information Center - <http://www.bicyclinginfo.org/index.cfm>

National Safe Routes to School - <http://www.saferoutesinfo.org/>

NH Safe Routes to School - <http://www.nh.gov/dot/org/projectdevelopment/planning/srts/>

Federal Funding Programs for Bicycle and Pedestrian Programs: State Data Summaries - New Hampshire - March 2010 http://www.hsph.harvard.edu/research/http/files/transportation_policy_and_public_health_new_hampshire.pdf

National Complete Streets Coalition - <http://www.completestreets.org/>

Image Library - <http://www.pedbikeimages.org/index.cfm?CFID=11478894&CFTOKEN=48141825>

For more information on Transportation Planning, visit www.nashuarpc.org/transportation.

For an overview of the entire iTRaC program, visit www.nashuarpc.org/landuse or contact Camille Pattison, iTRaC Program Manager, at camillep@nashuarpc.org or 603-424-2240 x14. Produced by the Nashua Regional Planning Commission in partnership with the NH Department of Transportation and NH Office of Energy & Planning.

