February 2010

Accommodating Bicyclists and Pedestrians on Rural Roads

Cornell Local Roads Program Tech Tips

With so much attention being paid to providing access for pedestrians and bicyclists on our roadways, when and how to safety accommodate their needs is not always easy to determine.

What are treatment options that are bicycle and pedestrian friendly?

Road shoulders are often deemed to be a preferred treatment to accommodate bicyclists and pedestrians on rural roads. Sidewalks and bike lanes are treatment alternatives in more urban and suburban environments where there is typically more traffic.

What purpose do road shoulders serve?

First of all – on some low-volume roads, shoulders are often not needed. As traffic volumes and speeds increase, however, their value becomes greater. In some situations, lack of space or certain soil conditions do not allow for a road shoulder.

Some of the benefits of shoulders include:

- Allowing for driver error and providing space to make evasive maneuvers
- Increasing the sight distance for through-vehicles and for those entering the roadway
- Providing structural support for the pavement
- Moving water farther from the travel lanes, reducing damage to the base and subgrade as well as reducing hydroplaning, splash and spray
- Providing space for snow storage, maintenance operations and signs
- Providing space for bicyclists and pedestrians
- Providing space for disabled vehicles, mail delivery and bus stops

What are shoulders made of and how wide should they be?

Shoulders can be graded, stabilized or paved. On rural roads, a two-foot shoulder is often adequate. If a shoulder is intended to be used by pedestrians or bicyclists, it should be paved and a minimum of four feet wide if possible.

CORNELL LOCAL ROADS PROGRAM
416 RILEY-ROBB HALL, ITHACA, NY 14853
PHONE: (607) 255-8033
FAX: (607) 255-4080
E-MAIL: *clrp@cornell.edu*
INTERNET: *www.clrp.cornell.edu*

Tech Tips are published by the Cornell Local Roads Program with support from the Federal Highway Administration, the New York State Department of Transportation, and Cornell University. The content is the responsibility of the Local Roads Program.

Does it help to apply a color treatment to road shoulders to make the corridor appear narrower?

The added cost of the special color treatment will have to be taken into consideration when weighing benefits to cost. Whether or not such a visual appearance will actually slow traffic any more than the design treatments will is questionable. Treatments that bring the possible presence of cyclists and pedestrians along a roadway to drivers' attention is a safety enhancement.

Can you mark road shoulders as bike lanes?

The V&T law definition of a bike lane is: A portion of the roadway, which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicycles. If rural road shoulders are to be used by bicyclists and pedestrians, it is advisable to not mark it as a bike lane. Doing so would pose a safety hazard, implying that bikes and pedestrians would be required (illegally) to share a bike lane.

Can't you just put a separate path along the way and tell bicyclists and pedestrians to go there?

Bicyclists (and in-line skaters) have the legal right to share the road on most public roadways. (They are prohibited on interstate highways and expressways.) Consequently, bicyclists cannot be required to use separate facilities such as a separate pathway. They may choose to use a separate path, if provided.

How about designating certain roads as safe bicycling roads?

You don't want to try to label roads as good or bad for bicycling. There are many factors that play into a road's suitability for bicycling. This can include posted speed limits, shoulder materials/width/condition, grade, pavement quality and amount of daily traffic. Cyclists may choose different roads at different times depending upon such factors as their skill level and goals for any given trip.

Producing a map for of the area for bicycling is a pretty big project, but worthy. There are many good examples of bicycle suitability maps to give you ideas.