



Town of Cary Bicycle Plan Implementation (Bicycle Facilities – Phase 2)

Frequently Asked Questions

What is the Cary Bicycle Plan?

The Cary Bicycle Plan is part of the Town's Comprehensive Transportation Plan (Chapter 4, Bicycle Element). The Bicycle Element describes several issues regarding bicycle transportation and states recommendations for incorporating bicycles into the Town's overall transportation mix.

Why does Cary have a Bicycle Plan?

Among the goals of Cary's [Comprehensive Transportation Plan](#) are to *create a safe, convenient, and efficient multi-modal transportation system* and *provide safe and convenient facilities and services for people who choose not to use an automobile*. Bicycles are an essential component of a balanced, multi-modal transportation system.

Why are bicycles important, anyway?

Bicycles are enormously popular: bicycling is the 3rd most common recreational activity in America, behind walking and swimming. They're also earth-friendly: the human-powered, non-polluting bicycle can be an efficient means of transport in an urban environment. Every trip made on a bicycle means **one less car**.

What is a 'bicycle facility'?

A bicycle facility is a structure that enhances accessibility, use, and convenience of bicycle transportation.

Noted bicycle transportation engineer Richard Moeur describes these 'principles of good design' for bicycle facilities:

- ❑ Treat bicyclists as operators of vehicles
- ❑ Encourage operation in accordance with traffic flow and traffic law
- ❑ Connect destinations in a continuous network
- ❑ Accommodate cyclists without inconvenience or extra travel distance/time

While they most often refer to roads and road modifications, bicycle facilities can consist of other infrastructure improvements such as bicycle parking, bicycle-sensitive traffic signals, and compatible road markings, drain grates, and the like. Bicycle Facilities – Phase 2 implementation includes **wide outside lanes** and **striped bike lanes**.

How wide is a 'wide outside lane'?

The NCDOT standard for a wide outside lane as a bicycle facility is 14 feet. The Town of Cary will apply this standard to all new thoroughfares. (For example, NW Cary Parkway from Evans Road to High House Road is a designated bicycle route with a 14' wide outside lane.) For existing thoroughfares, the Town will begin restriping outside lanes of multi-lane roads (at least two lanes in each direction) to create a 13-foot outside lane and an 11-foot inside line. This will create additional width for bicycles.

What exactly is a 'striped bike lane'?

A bike lane is defined as "a portion of the roadway that has been designated by striping, signage, and pavement marking for the preferential or exclusive use of bicyclists." Bike lanes are typically 4 feet wide.

Will there be a 'Phase 3' implementation of bicycle facilities?

The Town's Capital Improvement Plan requests a Phase 3 project budget of \$600,000 for FY 2007, and a Phase 4 budget of \$900,000 in FY 2011 to add bicycle facilities. Interest in the Cary Bicycle Plan could result in funding becoming available sooner, if the Town Council deems Bicycle Plan Implementation to be a priority issue.

How many miles of bicycle facilities are being proposed?

Bicycle Facilities - Phase 2 Implementation identifies approximately 46 miles of Signed Bicycle Routes and 10 miles of Striped Bike Lanes.

Why were these particular roads selected as bicycle facilities?

In addition to certain engineering standards (road width), the Town of Cary staff selected these roads as Phase 2 facilities because we believe it is important to:

- ❑ Include roads identified as 'proposed bicycle routes' in the adopted Bike Element of the Comprehensive Transportation Plan
- ❑ Include both neighborhood streets with low traffic volumes as well as major thoroughfares that could be 'retrofitted' with a wide outside lane
- ❑ Locate bicycle facilities throughout the Town of Cary
- ❑ Create a network of 'loop' routes for both recreation and transportation purposes

Wide outside lanes, are they safer and/or better than striping a bicycle lane?

The issue of bike lanes versus wide outside lanes is the subject of considerable debate among bicycle transportation advocates. The bottom line is that there have been too few studies to answer this question definitively.

While cyclists and motorists may perceive a higher comfort level on roads with striped bike lanes, wide outside lanes tend to be preferred among experienced cyclists. Why? Because with very few exceptions, the safest way to ride is as part of the traffic, going with the flow of the normal traffic pattern. According to the tenets of *Effective Cycling*, promoted by the League of American Bicyclists, the national bicycling advocacy organization, bicyclists fare best when they act as drivers of vehicles and adhere to the rules of the road.

Wide outside lanes have other benefits

- Wide outside lanes are more cost-efficient because they can be integrated into new road construction and road improvements. In other words, they don't have to be designated as 'separate facilities' when considering funding for new roads.
- Wide outside lanes require less maintenance than a striped bike lane because they are narrower than a regular road lane with a bike lane. Since there is no stripe to keep motorists away from curbside, in the absence of bicyclists, the sweeping action of motor vehicles clears debris from wide outside lanes continuously, pushing it closer to the edge and out of bicyclists' way. (The Town will continue to sweep routes with wide outside lanes routinely and on an 'as needed' basis.)
- Wide outside lanes have one very important intangible: they accommodate bicyclists in the travel lane as equal *drivers of vehicles*. Since North Carolina law regards bicycles as vehicles, bicycle riders have the same rights and responsibilities as motorists. Bicyclists properly using wide outside lanes demonstrate that **bikes belong**.

What about striped bike lanes? Do they make a street safer for cyclists?

According to the Pedestrian and Bicycle Information Center (PBIC; www.pedbikeinfo.org), available evidence suggests that striping bike lanes on the roadway has a positive impact on the perceived safety of bicyclists. However, bike lanes have never shown an increase in safety over wide outside lanes. Both facilities simply provide additional space (and thus comfort) to bicyclists and ease of passing for motorists. Bicyclists using striped lanes must exercise extreme caution when approaching intersections and making left-hand turns by re-entering the flow of traffic and acting as drivers of vehicles. Striped bike lanes do provide a 'traffic calming' effect by narrowing travel lanes.

The PBIC cites a 1999 study by the Federal Highway Administration comparing roads with striped bike lanes and wide outside lanes. (The study is available on the Web at http://www.walkinginfo.org/pdf/r&d/widelanes_counter.pdf.) The study confirms that in addition to creating more orderly traffic flow, the striped lanes encouraged safer behavior by cyclists. Cyclists using the roads with a striped bike lane were less likely to ride on the sidewalk, were less likely to ride against the flow of traffic and were more likely to obey stop signs and signals. **Riding on the sidewalk, riding against traffic,**

and failing to stop or yield at intersections are by far the most significant causes of bicycle/motor vehicle crashes.

Prior surveys of bicyclists have shown a preference for bike lanes. Bicycle lanes may have the positive effect of encouraging people to bicycle more. Many bicycle riders, especially less-experienced or casual cyclists, tend to prefer bike lanes. These facilities, then, when properly combined with wide outside lanes, serve to encourage the use of bicycles for transportation and increase the amount of bicycling in the community.

What about other ‘bicycle facilities’ – bike parking, traffic signals, etc.?

Phase 2 does not earmark funds for other types of facilities, but the Town of Cary is addressing these as part of bicycle plan implementation.

Consideration of bicycles in the planning and review process. Planning for bicyclists, pedestrians, and transit users is one of the Seven Guiding Principles of the Design Guidelines, which are applied to every site plan reviewed by the Town. The Guidelines Tool Kit stipulates that **new developments will**

- **provide for bicycle traffic** along major commuting corridors and between major destinations, with particular emphasis on connecting residential areas to schools, recreation areas, and activity centers
- **provide facilities to store or lock bicycles** at appropriate sites, including schools, major recreation areas, transit stations, office parks, public institutions, and activity center focus areas (retail and commercial sites)

Making traffic signals sensitive to bicycles. To address this recommendation of the Cary Bicycle Plan, the Town will begin a pilot project to install Loop Detector Symbols at selected Town-owned signals along Cary Bicycle Routes (Phase 2 Facilities). These symbols will be placed in the travel lane to indicate proper lane placement for signal detection. Also, the Town will illustrate proper lane positioning for signal detection in its bicycle educational materials (maps, brochures, etc.)

If I have other questions or comments, whom do I contact?

You can visit the Cary Planning Department at 318 N. Academy Street, Building B, or write to us at:

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