

Philadelphia and Bicycles – Elements in Green Design

Bicycling is an efficient means of commuting in many cities and, thus, contributes significantly to the green design of that city. In some European cities where specific bike-friendly policies have been enacted they have reached ridership of between 30 and 60% depending upon location and length of ride.¹ In the United States, while the health benefits of biking as a form of exercise are well known, the additional environmental benefits garnered from the increased use of bicycles as transit and for daily commuting are less widely considered in day to day transportation policy-making. Bicycles are integral, however, in any plan to increase the green design of a city.

The bicycle's ecological impact on the environment (after the manufacture of the bike) is virtually non-existent aside from periodic maintenance. Its contributions to the green design of a city are significant, such as reducing congestion (and thus car pollutants), encouraging bike paths and additional traffic calming measures (from which pedestrians benefit) and aiding in the general better health and well-being of a society through increased exercise and the decreased anonymity of car use.

In many ways, however, the ability of bicycles to be used to their fullest potential as an element of green design in a city first depends upon the initial city structure itself, and then, secondly, city policies that take into account the city structure and what is necessary to encourage bicycle use. A city such as Los Angeles, due to the sheer distance between services, residents and workplaces, could require massive developments and improvements to its long-distance mass transit services first, before bicycles could be considered as a viable mode of transport. In this case, the bicycle must be considered in the design process of the transit, such as places to store bikes on trains or buses, and then would ultimately be a supplemental mode of transport to other forms of mass transit rather than primary.

In a city such as Philadelphia, however, a city core exists from which neighborhoods, services and workplaces are contained and branch out.² The distance between the city center and many outlying suburbs are relatively short. Philadelphia also benefits from the national trend of continued migration of people from outside of the city, inward.³ This offers a great potential for bicycles to become a significant mode of mass transit and further the green design of the city.

Philadelphia is an example of a city that has begun to encourage increased bicycle ridership and take advantage of many structural advantages it has over other cities to become bicycle friendly. In

¹ Timothy Beatley, *Green Urbanism: Learning from European Cities*, page 168

² All aboard for Philadelphia!, Historical Society of Pennsylvania

³ www.fanniemaefoundation.org/programs/hpd/pdf/HPD_1203_sanchez.pdf, page 608-609

response to, and in conjunction with, several organized bicycle groups within Philadelphia,⁴ and under guidance of a national plan and funding, the city is working to increase its bicycle friendly infrastructure. Philadelphia is in the process of “developing a city-wide network of ‘bike friendly’ streets to serve bicyclists as part of a comprehensive program which gives full recognition to the bicycle as a viable mode of transportation.”⁵

Several measures have been taken in this process. Philadelphia now contains 170 miles of roads with bike lanes and 80% of buses contain bike racks. Where bike lanes must cross a car lane, bike lanes have been enhanced with bright blue paint to alert cars to this potentially dangerous intersection. More bike lanes are planned as roads are re-paved. More bike racks on buses are expected to equip the full bus fleet.

While the city seems to be making some significant strides in this area (see map 1), it is unclear how much of the \$3.7 million federally allocated funds has already been spent and thus how much is left to continue developing this element of green design in Philadelphia. The city’s website is also lacking dates: when they began the project, by when they hope to complete some of their target goals, and when some of their unfinished website resource pages will be completed.⁶ Further follow-up with the city official contact listed on the site may reveal this information, but it is not currently readily accessible on the site.

An additional feature supporting Philadelphia’s goal to increase ridership is several active local bicycle organizations. Their websites contain route and trail maps, tips on safety and using bikes to commute to work, rules, group bike rides, and city resources for biking including instructions for reporting potholes and using bus bike racks.⁷

Currently, 1% of Philadelphia’s population commutes to work. A higher percentage use bicycles for recreation. The city is above the national average, where only slightly over .5% nationally bike to work. With the improvements to the roads and developments in the ability to combine bicycles with other forms of mass transit, Philadelphia has potential to increase this number significantly. Still, some barriers exist.

Structural changes to city streets are not the only developments necessary to increase bicycle commuting. There are several public and private policy changes and partnerships that are needed which are strikingly absent from the Philadelphia literature. Firstly, many of the cars populating city

⁴ <http://www.bicyclecoalition.org/>, <http://www.phillybikeclub.org/>, <http://www.neighborhoodbikeworks.org/>

⁵ http://www.phila.gov/streets/the_bicycle_network.html

⁶ http://www.phila.gov/streets/the_bicycle_network.html

⁷ <http://www.bicyclecoalition.org/>, <http://www.phillybikeclub.org/>, <http://www.neighborhoodbikeworks.org/>

streets are from suburban commuters. While many suburban towns are only about an hour bike ride to the city center, suburban communities seem to be slower to commit to making their streets more bicycle friendly. For example, the commute from the Conshohocken area to downtown Philadelphia is only about an hour, however the route options involve a bike trail which is beautiful, but desolate during the weekdays, or dangerous streets and limited bike lane networks which often disappear when lanes narrow.

Two barriers for both long and short distance commuters are a lack of areas to shelter and securely store bikes and a lack of facilities for showering and changing after longer rides. There is also a general lack of incentives from policy changes or from employers to make bicycle commuting “worth it” for average residents who must encounter these added difficulties in addition to the challenges car traffic poses. While the city has incurred great expense to develop paths on roadways, it is questionable whether this will encourage additional commuter ridership, or whether it will merely be a boon to those already commuting by bicycle.

As is clear in examples set by European projects, public/private partnerships and local/national policy changes are necessary to give bicycles an equal footing to cars on roadways. For example, in Munster, Germany, bicyclists are given exemptions to certain laws and rules that cars are bound by such as the ability to go the other way on one-way streets.⁸ Likewise, in the Danish city Arhus, bicycles are actually given priority over cars on certain roadways and have less restrictions in terms of where they can go.⁹

A commitment to dealing directly with car traffic is also a necessity that many U.S. policy-makers are reluctant to pursue. Alterations in traffic flow and additional traffic calming methods have significantly impacted the safety, and feeling of safety, in several European cities in order to increase bicycle ridership.¹⁰ This situation creates somewhat of a chicken and egg scenario for the U.S. – due to the sheer volume of car use in the U.S., many people are fearful of riding, especially during rush hour. In order to push traffic calming measures, however, political leaders will need considerable support and demand from the general public,

This last point is an example of why private/public partnerships are becoming more and more important. While bicycle coalitions and the general public may advocate for bicycles, political leaders may encounter resistance to change from both the public, as well as large and well-funded lobbies supporting cars and highways. The private sector, however, may be receptive to incorporating bicycles

⁸ Timothy Beatley, *Green Urbanism: Learning from European Cities*, Page 173

⁹ Timothy Beatley, *Green Urbanism: Learning from European Cities*, Page 169

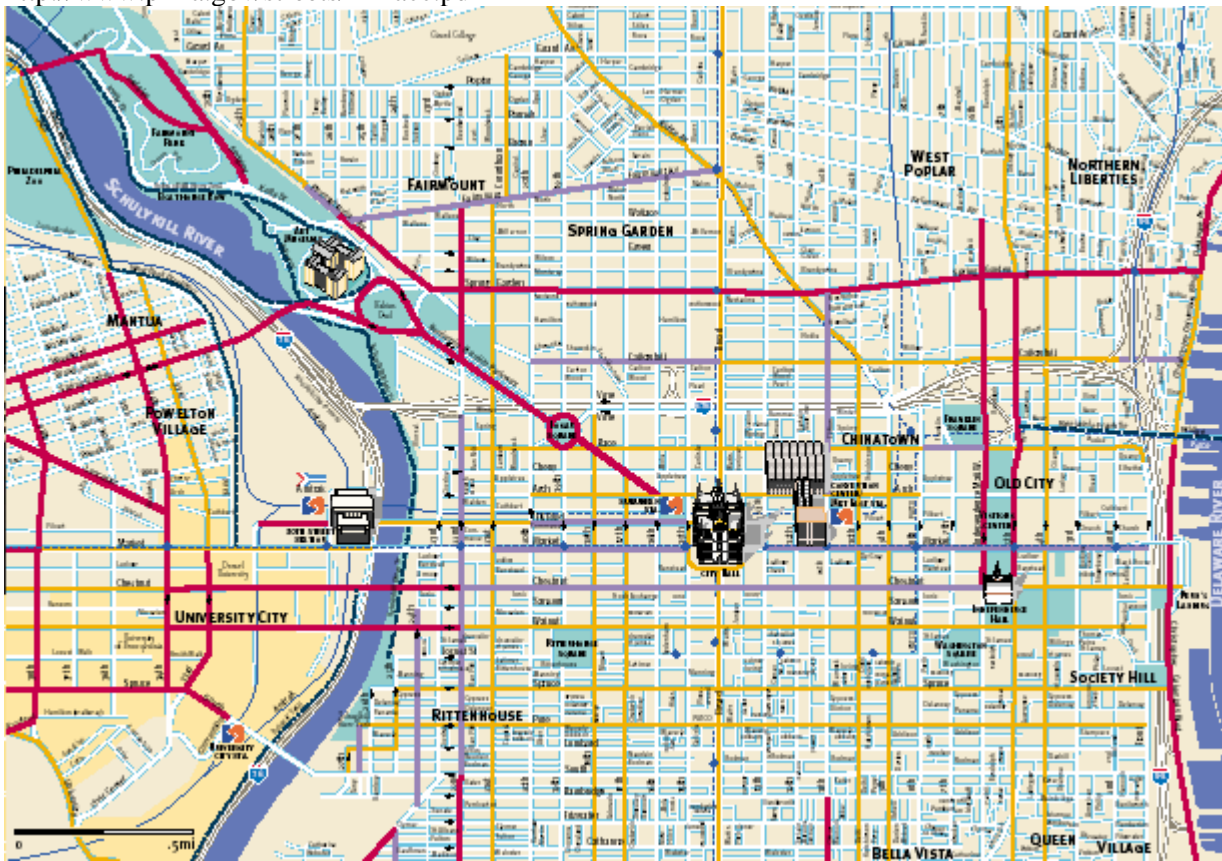
¹⁰ Timothy Beatley, *Green Urbanism: Learning from European Cities*, Chapter 6

into design features if market demand increases. While the market can also be subject to the chicken and egg difficulties, it is another facet in the attempt to make cities, towns and roadways, bicycle friendly. As in Europe, developers can be forced to take into account transit options other than the car and serve these options through design features. For example, in the Netherlands, new developments must include bicycle networks in their designs, clearly showing how bicycles can connect safely and efficiently with the city center before any ground is broken.¹¹

While Philadelphia is far from this model, it is clear that it has taken a number of steps to make Philadelphia safer for cyclists. This, coupled with the basic structural advantages that Philadelphia has for cyclists, and strong advocacy organizations looking out for the welfare of cyclists, make the city a more friendly place to bike. Residents will hopefully respond by increasing ridership, thereby helping to make Philadelphia a greener and less polluted city.

¹¹ Timothy Beatley, *Green Urbanism: Learning from European Cities*, Page 170

Map 1:
<http://www.phila.gov/streets/Philacc.pdf>



Red lines indicate already existing bicycle lanes

Purple lines indicate "Bicycle Friendly Network Streets" rated "above-average" for cycling