

Transportation and Safety

Over the past 50 years, most roadways have been designed primarily for safer automobile and truck travel, which can make them less safe for pedestrians, older adults, children, people with disabilities, or bicyclists. More than 4,600 pedestrians and bicyclists died on U.S. roads in 2009 and more than 108,000 were injured.¹ People who do not drive or have access to private vehicles, such as children and older adults, are disproportionately represented.² Making roads safer for all users can have the added benefits of improving access jobs and services, reducing congestion, and sparking business and neighborhood investment.³

Complete Streets balance safety and efficiency. Complete streets are designed and operated to enable safe and efficient access for pedestrians, bicyclists, motorists and transit riders of all ages and abilities. A Federal Highway Administration safety review found that streets designed with sidewalks, raised medians, better bus stop placement, and traffic calming improve pedestrian safety.⁴ Some features, such as medians, improve safety for all users: they enable pedestrians to cross busy roads in two stages, reduce left-turning motorist crashes, and improve bicycle safety.⁵



Complete Street networks provide connections and choice. Street networks are the building blocks of a community. Compact, interconnected street networks are safer and more convenient than the “cul-de-sac and collector roads” approach; a traditional grid street network improves safety by encouraging motorists to drive at appropriate speeds.⁶ Slower vehicle speeds improve crash survivability. For an example a pedestrian hit at 40 mph has an 85 percent chance of being killed compared to only 5 percent chance at 20 mph.⁷ Creating communities with an interconnected roadway network of smaller streets offers multiple options for efficient local travel at moderate speeds, with safer, more direct routes for walking and bicycling.

Success Stories

Combining safety and revitalization in San Diego, CA. The reconstruction of La Jolla Boulevard in Bird Rock combined community revitalization and traffic calming to yield significant safety improvements and economic development. The plan included use of a road

The money saved by preventing bicycle and pedestrian injuries and fatalities more than offsets the costs of improving our streets and roads. The National Safety Council estimates the comprehensive cost for each traffic death at \$4.1 million and \$53,000 for injuries. For 2008 bicycle and pedestrian data, this equates to a cost of roughly \$26.8 billion in a single year. Source: “Estimating the Cost of Unintentional Injuries” (2007)

¹ National Highway Traffic Safety Administration. (2009). Traffic Safety Facts

² <http://www.nrd.nhtsa.dot.gov/Pubs/811386.pdf>

³ See related Factsheets on public health and economic development.

⁴ B.J. Campbell, et al. (2004). A Review of Pedestrian Safety Research in the United States and Abroad, Federal Highway Administration

⁵ M.R. King, et al. (2003). “Pedestrian Safety Through a Raised Median and Redesigned Intersections” Transportation Research Board

⁶ www.wyopass.org/Documents/Upload/File/CNUEmergency_Response_FINAL.pdf

⁷ Source: www.walkinginfo.org/problems/problems-motorists.cfm

Creating more livable communities through transportation choices



configuration to reduce the number of through travel lanes from five to two, and the addition of five modern roundabouts, improved sidewalks, medians, landscaping, increased angle parking in space gained from lane reductions, and traffic calming on side streets to avoid potential traffic diversion. Traffic incidents and crashes were reduced by 90 percent. The project has helped revitalize La Jolla Boulevard, acting as a catalyst to several new mixed-use developments, a 139-unit condominium development, and a major drugstore.⁸



*La Jolla Boulevard before and after road diet
(Paul Zykoofsky)*

Increasing walking and biking and improving safety in Orlando, FL.

Edgewater Drive serves as the main street for College Park, a downtown Orlando neighborhood. While the neighborhood itself is very walkable, in 2001 Edgewater Drive was not. As part of a neighborhood plan to transform the road into a pedestrian-friendly commercial district, Edgewater Drive reduced from 4 lanes to 3, with bike lanes and landscaping. A before-and-after evaluation demonstrated dramatic results: crashes were reduced by 35 percent, while bicycling and walking increased 23 percent and 30 percent respectively.⁹ The changes also helped spur economic development, breathing life into what was a pass-through commercial corridor to create a neighborhood focal point with a sense of place.



Bike-friendly cities are safer for everyone. Davis, CA, is recognized as one of the top bicycle friendly cities in the U.S. There are bike lanes on 95 percent of arterial roadways, and 14 percent of residents commute by bike (35 times the national average).¹⁰ What is less well known is that the traffic fatality rate (including drivers) in Davis is also unusually low, at about 1/10th of the CA Statewide rate. The experience of cities such as Cambridge, MA; Portland, OR; and New York, NY, which have been recognized for successfully increasing bike usage in recent years, has reinforced the finding that most bike friendly cities are safer than average for all roadway users. In all three cities the increase in bike ridership has corresponded with an equally dramatic decrease in traffic fatality rates.¹¹

Available Resources

FHWA Safety Program.

<http://safety.fhwa.dot.gov/>

FHWA. Safe Routes to School.

<http://safety.fhwa.dot.gov/>

Creating Walkable Communities – A Guide for Local Governments

www.bikewalk.org/pdfs/cbwpubwalkablecomm.pdf

National Complete Streets Coalition Website

www.completestreets.org

Pedestrian and Bicycle Information Center

www.pedbikeinfo.org/

⁸ FHWA, "The Role of FHWA Programs In Livability: State of the Practice Summary". March 2011. www.fhwa.dot.gov/livability/state_of_the_practice_summary/

⁹ www.cityoforlando.net/transportation/TransportationPlanningDiv/BikesPeds/eng/condition.htm

¹⁰ www.bicycling.com/news/featured-stories/5-small-bike-friendly-cities

¹¹ Garrick, Norman and Marshall, Wesley, "Beyond Evidence on Why Bike-Friendly Cities Are Safer for All Road Users". *Environmental Practice*, March 2011. <http://files.meetup.com/1468133/Evidence%20on%20Why%20Bike-Friendly.pdf>

