

Complete Streets Ease Congestion



Complete Streets are designed and operated so they work for all users—pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Communities that adopt complete streets policies are asking transportation planners and engineers to consistently design and alter the right-of-way with all users in mind. Contact the National Complete Streets Coalition (www.completestreets.org) to learn about the diverse groups working together to enact complete streets policies across the country!

Incomplete Streets Breed Congestion

Designing streets only for automobiles reduces opportunities for safe travel choices that can ease traffic congestion: walking, bicycling, and taking public transportation. Americans drove almost three trillion miles in 2008,¹ and many of those trips were very short. Half of all trips in metropolitan areas are three miles or less and 28% are one mile or less.² In rural areas, 30% of all trips are two miles or less, and yet a vast majority of these trips are by automobile.³ Congestion is not solely an urban issue. Regions of all sizes have experienced increased congestion, costing the economy \$87.2 billion in hours lost to traffic jams and wasted fuel in 2007 alone.⁴ An evaluation of auto-dependent transportation systems found that their per-capita congestion costs are significantly higher than systems that provide alternatives to driving.⁵



Photo: Orian Virjiny, flickr.com | photoagency

Continuing to invest in incomplete streets will prevent people from using options such as walking, bicycling, or hopping on a bus or train. Networks of complete streets, with pedestrian and bicycle infrastructure and improved access to and efficiency of public transportation, are needed in our communities to reduce the burden of congestion on our roadways and improve travel times for all users, regardless of whether they walk, bike, drive, or take public transportation.

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Decades of investment in expanding automobile capacity have not succeeded in keeping congestion in check in the United States.⁶ Sixty to seventy percent of increased road capacity (additional lane-miles) on state highways in California counties was filled with new automobile traffic within just five years; at the municipal level, 90% was filled over the same period.⁷ Communities are now looking for new ways to meet their residents' travel needs, and help residents avoid getting stuck in congested traffic conditions. A comprehensive, complete streets approach to transportation planning and

- In response to increasing walking and bicycling across Burrard Bridge, a main connection to downtown, the City of Vancouver, BC transformed a southbound auto-only lane into a southbound bike-only lane on a trial basis. Pedestrians travel on the adjacent sidewalk, while the opposite sidewalk is reserved for bicycle riders heading northbound. The trial has increased bridge capacity: the number of pedestrians and vehicles moving across the bridge has remained constant, while the summer months brought 26% more bicyclists – an additional 70,000 trips. A public opinion survey of Vancouver residents conducted in September 2009 found strong broad support for making the reconfiguration permanent. The success of the trial means the city will not have to spend an extra \$30 million to retrofit the bridge for better pedestrian and bicyclist accommodation.⁸
- design will increase transportation choices and encourage efficient use of current roadways by offering alternatives to the automobile, especially during peak travel times.
- Providing travel choices – walking, bicycling, and public transportation – can reduce the demand for peak-hour travel in cars, the principal cause of daily congestion. About 44% of all vehicle trips in both congested areas and other areas made during the morning peak are not to work or related to a work trip. Instead, they are for shopping, going to school or the gym, or running errands. Many such trips are

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Complete Streets Steering Committee Organizations

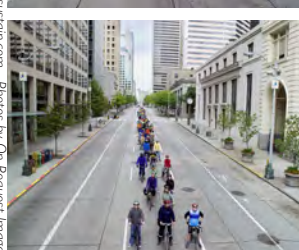
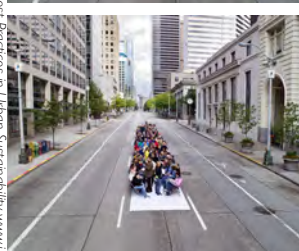
- AARP
- Alliance for Biking and Walking
- America Bikes
- America Walks
- American Council of the Blind
- American Planning Association
- American Public Transportation Association
- American Society of Landscape Architects
- Association of Pedestrian and Bicycle Professionals
- City of Boulder
- HNTB
- Institute of Transportation Engineers
- League of American Bicyclists
- McCann Consulting
- National Association of Area Agencies on Aging
- National Center for Bicycling and Walking
- Safe Routes to School National Partnership
- Smart Growth America

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short and could be made by walking, bicycling, or taking transit – if the streets are complete. Parents cite traffic as a primary reason for driving children to school, yet in doing so, they account for 7 to 11% of non-commuting vehicle traffic during morning rush hour.⁹

Currently, short bicycling and walking trips account for 23 billion miles traveled annually. Shifting even a small portion of travelers out of single occupancy vehicles can have a big effect on congestion. In 2008, when national vehicle miles traveled (VMT) dropped by 3.6%,¹⁰ congestion plunged 30% in the nation's 100 most congested areas.¹¹ Combined with the benefits of public transportation access and mixed-use development, modest increases in walking and bicycling could avoid 69 billion miles driven; more substantial increases in travel by walking and bicycling could avoid nearly 200 billion miles driven.¹² Avoiding these miles driven is a much more cost-effective option than continued expansion of highway infrastructure capacity.



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Many roadways already have untapped capacity; walking, bicycling, and public transportation all use less space to move more people. These photos show 200 people in 177 cars, in 3 buses, on 1 light rail train, and on 200 bikes.

In Boulder, Colorado, twenty years of consistent investment in a multimodal system and a network of complete streets has not only kept VMT from growing, but has resulted in huge increases in the share of people walking, bicycling, and taking public transportation. Since 1990, use of single-occupancy vehicles in work commutes has declined 13.9%.¹³ Additionally, the number of people walking to work is three times the national average, transit use is twice the national average, and the bicycle commuting share is eighteen times the national average.¹⁴

Increase Road Capacity

Planning and designing roads to make them safer for all users and more inviting to pedestrians, bicyclists, and transit users can increase overall capacity and efficiency without a negative impact on automobile travel. For example, improving intersections for pedestrian safety can reduce the time needed for a pedestrian crossing signal phase, keeping vehicular traffic flowing.

Paying attention to all modes in street planning can also create a more efficient system that responds better to travel demand. As the photographs on the previous page illustrate, complete streets can move more people while using less space. Public transportation is key to mitigating congestion because it carries more people in the same roadway. Getting more productivity out of the existing road and public transportation systems is vital to reducing congestion.¹⁵

Complete streets improve access to public transportation and assist transit vehicles in moving efficiently along the road, making it an attractive and viable option to more people. Increasingly popular are the use of bus rapid transit and bus priority signal systems, which allow buses to extend green lights and shorten red lights.

A road diet on San Francisco's Valencia Street reduced automobile through lanes from four to two, adding a center turn lane and two bike lanes. Following this change, collisions involving pedestrians declined 36%, accompanied by an increase in pedestrian traffic and a whopping 140% increase in bicycle riders – all without significantly altering automobile traffic capacity.¹⁶

Footnotes on following page or online at www.completestreets.org/factsheets



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¹ Federal Highway Administration. (2008). Traffic Volume Trends. <http://www.fhwa.dot.gov/ohim/tvtw/08dectvt/index.cfm>

² US Department of Transportation, Bureau of Transportation Statistics. (2002). National Household Travel Survey: Daily Travel Quick Facts.

³ Federal Highway Administration. (2001). National Household Travel Survey, 2001.

⁴ Schrank, David and Lomax, T. (2009) Urban Mobility Report. Texas Transportation Institute.

⁵ Litman, Todd. (2009). Smart Congestion Reductions: Evaluating Highway Expansion Benefits. Victoria Transport Policy Institute.

⁶ Schrank, David and Lomax, T. (2009).

⁷ Hansen, Mark and Yuanlin Huang. (1997). "Road Supply and Traffic in California Urban Areas," Transportation Research A, Vol. 31, No. 3, 1997, pp. 205-218.

⁸ Burrard Bridge Lane Reallocation Trial. (2009). <http://vancouver.ca/projects/burrard/index.htm>

⁹ U.S. Department of Transportation. (2007). NHTS Brief: Congestion: Who is Traveling in the Peak? <http://nhts.ornl.gov/briefs/Congestion%20-%20Peak%20Travelers.pdf>

¹⁰ Federal Highway Administration. (2008). Traffic Volume Trends. <http://www.fhwa.dot.gov/ohim/tvtw/08dectvt/index.cfm>

¹¹ INRIX National Traffic Scorecard Reveals Startling 30 Percent Decrease in Traffic Congestion in 2008. <http://www.inrix.com/pressrelease.asp?ID=65>

¹² Gotschi, Thomas, PhD, and Kevin Mills, JD. (2008). Active Transportation for America. Rails-to-Trails Conservancy.

¹³ (2007). Modal Shift in the Boulder Valley 1990-2006. National Research Center, prepared for the City of Boulder.

¹⁴ American Community Survey 2008.

¹⁵ Schrank, David and Lomax, T. (2009).

¹⁶ Sallaberry, Mike. (2001). Valencia Street Road Diet – Creating Space for Cyclists. San Francisco Department of Parking and Traffic.