Complete streets make healthier people: Reforming street design policies to combat obesity

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Abstract

Auto-oriented streets contribute to the obesity epidemic because they discourage walking and bicycling trips, and thus limit opportunities for physical activity. Complete streets policies can encourage physical activity and potentially lower obesity rates because they require the construction of sidewalks, bicycles lanes, and other multimodal facilities on all streets. This paper reviews the existing literature on health and the built environment, and provides case studies of complete streets policies from America's largest cities. Policies vary in form and scope, and this paper discusses the issues and obstacles cities face in creating a successful complete streets policy.

Introduction

It is no secret that the average American is becoming larger. According to the latest data from the Centers for Disease Control and Prevention (CDC), over two-thirds of Americans are overweight or obese, with obesity rates exceeding 25% in 31 states (Trust for America's Health and the Robert Wood Johnson Foundation 2009). The obesity rate in Colorado, the leanest state today, is 19.1%, which is 5% higher than the 1980 national average (Trust for America's Health and the Robert Wood Johnson Foundation 2009). By 2018, Colorado will be the only state where less than 30% of adults are overweight, and six states are expected to have more obese adults than non-obese adults (United Health Foundation 2009). While researchers, public health professionals, and government officials have traditionally blamed the nation's poor health on behavioral factors such as poor eating habits and lack of exercise, they are increasingly placing the blame on the built environment. As the nation's population has decentralized into suburbs designed around the automobile, people spend more time in their cars, leaving less time and

opportunities for physical activity. People living in conventional suburban developments comprised solely of residential, single-family detached homes have no choice but to get in their cars to do anything, and even if amenities are within walking distance, the existing infrastructure favors the efficient movement of cars, not people. Auto-oriented streets are less safe because of higher speed limits, large widths, and inadequate sidewalks and crosswalks. In the last fifteen years, more than 76,000 Americans have been killed crossing or walking along a street in their community, and the majority of these "accidents" were the result of poor street design (Ernst and Shoup 2009).

The rise in obesity and the rise in suburban sprawl are not mutually exclusive, and researchers in the public health and urban planning fields are beginning to coordinate with each other and explore this relationship in more detail. Planners and policymakers have increasingly focused attention on complete streets policies to combat the obesity epidemic. Complete streets policies require the construction of pedestrian and bicycle facilities on all streets, and aim to accommodate all users of all abilities on all streets as a routine practice. This paper will examine the existing research on health and the built environment, and determine whether or not complete streets policies can mitigate the unhealthy effects of auto-oriented development. By reforming street design policies and convincing public officials to support complete streets, American cities may start to see their obesity rates decline and physical activity levels increase as more people choose human-powered modes of transportation to navigate the built environment.

Review of literature

Physical activity used to be "woven into the fabric of life" (Frumkin *et al.* 2004, p. 90). Most jobs and household chores used to require manual labor and physical exertion. Before the automobile age, people had to travel by foot from place to place, and often lived close enough to

their place of work that walking was convenient. In the post-industrial economy, however, physical activity has been basically "engineered out of our daily lives" (American Public Health Association 2009). Machines, household appliances, escalators, elevators, and automobiles now expend more energy and burn most of the calories that humans used to expend (Frumkin *et al*. 2004, p. 91). The CDC estimates that over 55% of American adults do not meet the recommended levels of physical activity, with 25% reporting no physical activity at all (United States Department of Health and Human Services 2000). Wide roads and fast-moving cars are major barriers to outdoor physical activity, while land use and zoning patterns isolate many Americans from their primary destinations, making walking or bicycling infeasible for these trips (National Complete Streets Coalition 2009b).

Physical activity generated by active transportation may be helpful in weight control because it is moderate in intensity (Frumkin *et al*. 2004). The American College of Sports Medicine recommends that Americans engage in 150 minutes of physical activity per week, which translates to 30 minutes a day, five days a week (Pate *et al*. 1995). Most people can achieve this level by walking three miles a day. In fact, studies have found that public transit riders are up to three times more physically active than drivers because they walk to and from the transit station (Lachappelle and Frank 2009). Studies have also found that Americans who walk or bike to work are less likely to be obese, have high blood pressure, or be at risk for cardiovascular disease (Gordon-Larsen *et al*. 2009). An 11-country study found that people living in neighborhoods with sidewalks were more likely to walk to destinations (Sallis *et al*. 2009). Residents of walkable neighborhoods did about 35 to 45 minutes more of moderate physical activity per week and were substantially less likely to be overweight.

In most communities, however, things are too far to walk, and the infrastructure does not encourage walking. One survey found that the single largest reason (61%) that people did not walk more was that things were too far or inconvenient (Surface Transportation Policy Partnership 2003). A recent survey by Skufca (2008) on behalf of the American Association of Retired Persons (AARP) found that approximately 40% of older Americans have inadequate sidewalks and crosswalks in their neighborhoods, 55% do not have bike lanes or paths, and nearly 50% feel unsafe crossing streets near their homes. Over 50% would walk, bike, or take the bus more if the infrastructure was better. A survey of Atlanta residents found that almost 60% felt their neighborhood was not walkable (Goldberg *et al*. 2007). A follow-up study found that only one in 20 homes in Atlanta were in walkable neighborhoods (Levine and Frank 2007). A recent survey by the Fairfax County (Virginia) Economic Development Authority (2009) found that more than half of suburban residents want more walkable neighborhoods. Over half of those that desire such neighborhoods said they would consider moving or changing jobs to be in one.

The existing research establishes a strong case for intervening at the environmental level to combat obesity and promote physical activity. Surveys indicate a latent demand for more walkable communities, and doctors and health professionals have begun to advocate better street design as a route to better health outcomes. Professional organizations such as the American Academy of Pediatrics (2009), Centers for Disease Control and Prevention (Kahn *et al*. 2009), and the Institute of Medicine (2009) have all issued policy statements acknowledging the effect of the built environment on health and urging urban planners and policymakers to establish complete streets policies. The next section will outline the key elements of a complete streets policy and provide case studies of communities that have had success with them.

What is a complete streets policy?

Complete streets policies aim to plan, design, and operate streets so that they are "safe comfortable, and convenient" for users of all ages and abilities, including pedestrians, bicyclists, public transit riders, and motorists (National Complete Streets Coalition 2009c). The complete streets concept originated in early 2001 after the United States Department of Transportation's Federal Highway Administration (FHWA) issued a policy statement entitled "Integrating Bicycling and Walking into Transportation Infrastructure." It requires that "Bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas," with a limited number of exceptions. According to the National Complete Streets Coalition (2009a), over 124 jurisdictions have enacted complete streets policies as of March 2010. There are numerous proposals for complete streets policies in states and municipalities around the country, and there is also a federal Complete Streets Bill currently before Congress to "ensure that all users of the transportation system, including pedestrians, bicyclists, transit users, children, older individuals, and individuals with disabilities, are able to travel safely and conveniently on an across federally funded streets and highways." (United States Senate 2009, United States House of Representatives 2009). On March 15, 2010, United States Secretary of Transportation Ray LaHood issued a new Policy Statement, calling on all transportation agencies around the country, including the federal Department of Transportation, to:

> [I]ncorporate safe and convenient walking and bicycling facilities into transportation projects. Every transportation agency, including DOT, has the responsibility to improve conditions and opportunities for walking and bicycling and to integrate walking and bicycling into their transportation systems. Because of the numerous individual and community benefits that walking and bicycling provide — including health, safety, environmental, transportation, and quality of life — transportation agencies are encouraged to go beyond minimum standards

> to provide safe and convenient facilities for these modes (United States Department of Transportation 2010).

The new statement represents a shift in transportation policy away from favoring the automobile and toward routine accommodation of multiple modes, including pedestrians, bicyclists, and public transit riders. It is essentially a federal-level complete streets policy that will encourage states, counties, metropolitan planning organizations, and municipalities to adopt and implement their own policies to be incompliance with this new federal guidance on transportation planning (National Complete Streets Coalition 2010). The next section identifies the jurisdictions that are among the few that have already adopted and implemented complete streets policies.

Who has complete streets policies?

Methodology

This study focuses on complete streets policies in America's largest cities. The researcher collected 2008 population estimates for "places" from the United States Census Bureau (2009), and then added eight other cities that are anchors of larger metropolitan areas, or known for making pedestrian- and bicycle-friendly improvements to their streets. The study also includes three smaller cities from the State of Colorado (Boulder, Fort Collins, and Aurora) in order to provide nearby examples to the City and County of Denver. The researcher first collected the population estimates, and then used the National Complete Streets Coalition's (2009a) online atlas of complete streets policies to see which of these sixty-one cities had an officially recognized complete streets policy. In addition to city-level policies, the researcher also took note of policies at the county, regional, and state level that govern street design within these cities. After creating a list of cities with policies, the researcher then looked at the form and scope of these policies, categorizing them into five categories: (1) legislation/ordinance, (2) executive order, (3) resolution, (4) internal policy, and (5) plans, manuals, and design guidelines.

Finally the researcher analyzed the language of these policies to assess their comprehensiveness and enforceability.

Findings

Among the 61 cities part of this study, sixteen have complete streets policies at the city level as of August 1, 2009 (United States Census Bureau 2009, National Complete Streets Coalition 2009a). There are five county-level policies and nine regional-level policies that govern cities included in this sample. Twenty-six cities are within states with complete streets policies, and an additional nine cities are in states where a complete streets policy is under consideration. Twenty-two cities have no complete streets policies at any level of government. Of these 22 cities, one city has a pending complete streets ordinance (Cincinnati) and six are in states with pending complete streets legislation (Texas and Michigan). As a result, there are 15 states without any policy, representing 25% of the study sample. The three largest cities without complete streets policies at any level are Phoenix, Indianapolis, and Denver, although the latter has one under consideration. See Table 1 for information on all 61 cities that comprise this study

[insert Table 1 here]

Policies vary in form and scope. There are five ordinances, three resolutions, two executive orders, two internal policies, six plans, and four manuals or design guidelines. Four cities (Charlotte, Louisville, Sacramento, and Seattle) have more than one policy. In general, the ordinances contain the strongest language for complete streets. Ordinances require approval by the Mayor and City Council and involve a long planning process with a public engagement component, so they are the most comprehensive. Resolutions and executive orders tend to be the weakest, because they merely call for the creation of “complete streets” or set up a task force to explore the possibility of incorporating complete streets into transportation planning. Many

resolutions and executive orders also delegate the responsibility for creating a more comprehensive policy to the city's planning or public works department, so they are not really policies *per se*, but calls to create a policy. The strength of internal policies depends on the language, but they often lack enforcement because discretion is ultimately left to the director of the city's transportation or public works department. Plans, manuals, and design guidelines fall somewhere in the middle. Some cities have written "complete streets" policies and objectives into their comprehensive plans or transportation master plans, while others have created separate guidebooks addressing streetscape design.

Which cities have developed successful complete streets policies?

Seattle, New York City, Louisville, Boulder, and Charlotte have strong complete streets policies and have had success in implementing them. Seattle has two ordinances: a "complete streets" ordinance that requires multimodal transportation planning, design, and construction, and a separate tax ordinance that provides funding for complete streets projects (City of Seattle Department of Transportation 2007). In the first two years of implementation, the City's Department of Transportation estimates it made over 23,000 improvements to its streets. The City planning and transportation departments have also written complete streets principles into all subsequent plans and initiatives.

The metropolitan government of Louisville, Kentucky created a Complete Streets Manual in 2007 and then enacted an ordinance in 2008 requiring the accommodation and balancing of a "broad range of users" in all new and retrofit transportation projects, including people with disabilities (City and County of Louisville 2007). The policy contains four exceptions (prohibited by law, cost excessively disproportionate, severe topographic constraints, speed limit 25 mph or less). The ordinance is meant to carry out the goals of the City's comprehensive plan,

Cornerstone 2020, which calls for creating a multi-modal network throughout the Louisville metropolitan region. The manual also defines "complete streets" to include the roadside as well as the roadway.

New York City's Sustainable Streets Strategic Plan (2008) has led to a number of visionary projects in the city. The Department of Transportation (NYCDOT 2008, 2009) has constructed over 200 miles of bike lanes since 2006 and plans to construct 35 more miles in the next five years. The city saw a 35% increase in bicycle commuting between 2007 and 2008, and as a result, NYCDOT has accelerated its bike commuting targets in its 2009 progress report. The number of pedestrian crashes at the Park Avenue and 33rd intersection fell by half after a complete streets redesign, while the number of bicycle commuters on 9th Avenue between 16th and 23rd Streets increased by 57% after the installation of a separated bicycle lane. Moreover, the number of bike-automobile accidents has dropped precipitously. From 1998 to 2008, the number of bicyclists increased from 80,000 to 180,000, but the number of casualties fell from 100,000 in 1998 to under 3,000 in 2008 (Transportation Alternatives 2009).

The City of Boulder has had a great deal of success with their plans addressing complete streets principles. Boulder's Transportation Master Plan (2004) identified ten multimodal corridors (six east-west, four north-south) and called for improvements along these streets because they carry a majority of trips within Boulder and link important activity centers. The City then divided and prioritized the ten corridors into 42 segments. The first phase of funding is focused on eleven segments. Specific improvements included completing segments of missing sidewalks and bike trails, enhancing pedestrian crossings at strategic locations, constructing underpasses at high volume locations for bicycles, and improving signage. The City uses Broadway Street as the best example of a complete street. It is a major vehicular thoroughfare

that also has a high volume of bicycle and pedestrian traffic, due to its location on the periphery of the University of Colorado campus. The city estimates that if all travelers were required to travel on Broadway in automobiles, the level of service would drop from a D to a "very poor F condition."

The City and County of Charlotte's Urban Street Design Guidelines (2007) have also helped the growing city design streets that accommodate all users and support public transit. The Guidelines "describe the land uses and urban design elements that can best complement each type of street—with the intention that street design and land use/urban design decisions will reinforce each other" (p. 1). The City's six-step process for creating a network of context-based, complete streets ensures that all transportation projects consider existing and future land uses, urban design, and transportation contexts before designing streets. As a result, street design addresses the needs of all users and considers the trade-offs of not including adequate bicycle and pedestrian infrastructure. The guidelines contain a whole chapter on how to address trade-offs for each user of the road, which helps planners and engineers identify how a project will affect various modes of transportation. The guidelines also establish a system for evaluating Multimodal Level of Service. In 2009, the Environmental Protection Agency (EPA) awarded Charlotte the National Award for Smart Growth Achievement, which "recognizes approaches to development that respect the environment, foster economic vitality, and enhance quality of life." The City is now working to amend its zoning and subdivision ordinances to conform to the street design guidelines and guide private land development to support multiple modes of transportation (City and County of Charlotte 2010).

Evaluation

Despite the success of complete streets in these cities and the widespread adoption of complete streets policies around the country, there is a lack of uniformity among these policies and numerous struggles with implementation. Some address all streets and all users, while others only apply to certain users, certain types of streets, and/or certain types of funding sources. Many also contain exceptions that make it easy for transportation project planners to forego the requirements. Leadership is also an important factor, as NYCDOT has succeeded in transforming many streets into complete streets because its leaders, including Mayor Michael Bloomberg and Transportation Commissioner Jannette Sadik-Kahn, have made a conscious effort to address all users. Other cities with similar types of plans have not had much success in implementing their policies because their leaders are not fully committed to the movement.

In addition, there has been no research to date examining the link between complete streets policies and health outcomes. Most public health officials and urban planners agree that this type of intervention can increase physical activity levels and combat obesity, but most policies are still too new to evaluate, and most are too limited in scope to address the adjacent land uses that may or may not be pedestrian-friendly as well. Future researchers can evaluate the effectiveness of complete streets policies in improving health outcomes once these policies have been in place for several years, or cities can establish their own performance criteria to assess public health outcomes as streets are redesigned.

Conclusion

Auto-oriented street design served its purpose in the 20th century, when people desired suburban living and the economics of building high-density, mixed-use development was not as profitable as building low-density conventional suburban developments on the fringes of

metropolitan areas. In the 21st century, however, conventional suburban development is contributing to America's health problems in ways planners and policymakers never imagined fifty to sixty years ago. The built environment may not be the primary determinant of obesity and physical inactivity in America, but the available research suggests that it is part of the conceptual model. If American communities can start reforming their street design standards and convince public officials and traffic engineers to routinely accommodate multiple modes instead of just one, then more people may be able to walk and bike in their communities and thereby get more physical activity. The case studies mentioned above show that some cities have already made significant efforts to design complete streets, but the majority of cities have not even begun to think about this issue. Funding complete streets can be difficult in hard economic times and when funding mechanisms favor the automobile, but over the long-term, communities will improve the health of their citizens by completing their streets and making it safer for people to walk and bike to their destinations.

REFERENCES

American Academy of Pediatrics, Committee on Environmental Health, 2009. The built environment: Designing communities to promote physical activity in children. *Pediatrics*, 123 (6), 1591-1598.

American Public Health Association, 2009. *At the intersection of public health and transportation: Promoting healthy transportation policy*. Washington, DC: Author.

City of Boulder, 2004. *Transportation master plan* [online]. Available from: http://www.bouldercolorado.gov/index.php?option=com_content&task=view&id=331&Itemid=1201 [Accessed 8 November 2009].

City and County of Charlotte, 2007. *Urban street design guidelines policy summary* [online]. Available from: http://www.charmeck.org/NR/rdonlyres/ei3v2nwquip4bzhm24slnohxonytremty3kvenszxbqz6objdrwtqnle5kffeoq7bsnx5b5tov6wycjwnen7wyqrdaa/USDGPolicyRecommendationsOctober2607.pdf [Accessed 25 February 2010].

City and County of Charlotte, 2010. *USDG updates and related news* [online]. Available from: http://www.charmeck.org/Departments/Transportation/USDG+Updates.htm [Accessed 22 March 2010].

City and County of Louisville, 2007. *Metro Louisville complete streets manual* [online]. Available from: http://services.louisvilleky.gov/media/complete_streets/complete_streets_manual.pdf [Accessed 25 February 2010].

City of Seattle Department of Transportation, 2007. *Bridging the gap nine year goals* [online]. Available from: http://www.seattle.gov/Transportation/docs/BTG%20Work%20Plan%20Handout.pdf [Accessed 8 November 2009].

Ernst, M. and Shoup, L., 2009. *Dangerous by design: Solving the epidemic of preventable pedestrian deaths (and making great neighborhoods).* Washington, DC: The Surface Transportation Policy Partnership and Transportation for America. Available from: http://t4america.org/resources/dangerousbydesign/ [Accessed 11 December 2009].

Fairfax County Economic Development Authority, 2009. *Many suburban workers and residents covert cities' attributes, Fairfax County EDA national survey finds* [online]. Available from: http://www.fairfaxcountyeda.org/pressrelease/many-suburban-workers-and-residents-covet-cities'-attributes-fairfax-county-eda-nation-0 [Accessed 14 September 2009].

Frumkin, H., Frank, L., and Jackson, R., 2004. *Urban sprawl and public health.* Washington, DC: Island Press.

Goldberg, D., *et al*., 2007. *New data for a new era: A summary of the SMARTRAQ findings: Linking land use, transportation, air quality and health in the Atlanta region* [online]. Atlanta, GA: Author. Available from: http://www.acttrans.ubc.ca/smartraq/files/smartraq_summary.pdf [Accessed 25 February 2010].

Gordon-Larsen, P., *et al*., 2009. Active commuting and cardiovascular disease risk. *Archives of Internal Medicine*, 169 (13), 1216-1223.

Institute of Medicine and National Research Council of the National Academies, (2009. *Local government actions to prevent childhood obesity.* Washington, DC: The National Academies Press.

Kahn, L.K., *et al*., 2009. Recommended community strategies and measurements to prevent obesity in the United States. *Morbidity and Mortality Weekly Report,* 58 (RR07), 1-26.

Lachappelle, U. and Frank, L.D., 2009. Transit and health: Mode of transport, employer-sponsored public transit pass programs. *Journal of Public Health Policy*, 30, S73-S94.

Levine, J. and Frank, L.D., 2007. Transportation and land use preferences and residents' neighborhood choices: The sufficiency of compact development in the Atlanta region. *Transportation*, 34 (2), 255-274.

National Complete Streets Coalition, 2009a. *Complete streets atlas* [online]. Available from: http://www.completestreets.org/complete-streets-fundamentals/complete-streets-atlas/ [Accessed 11 December 2009].

National Complete Streets Coalition, 2009b. *Complete streets fact sheet: Health* [online]. Available from: http://www.completestreets.org/complete-streets-fundamentals/factsheets/health/ [Accessed 11 December 2009].

National Complete Streets Coalition, 2009c. *Complete streets fundamentals* [online]. Available from: http://www.completestreets.org/complete-streets-fundamentals [Accessed 11 December 2009].

National Complete Streets Coalition, 2010. *New USDOT policy statement endorses complete streets: On to implementation* [online]. Available from: http://www.completestreets.org/policy/federal/new-usdot-policy-statement-endorses-complete-streets-on-to-implementation/ [Accessed 22 March 2010].

New York City Department of Transportation, 2008. *Sustainable streets strategic plan* [online]. Available from: http://www.nyc.gov/html/dot/html/about/stratplan.shtml [Accessed 8 November 2009].

New York City Department of Transportation, 2009. *Sustainable streets 2009 progress report* [online]. Available from: http://www.nyc.gov/html/dot/html/about/stratplan.shtml [Accessed 22 March 2010].

Pate, R.R., *et al*., 1995. Physical activity and public health: A recommendation from the CDC and the ACSM. *Journal of the American Medical Association*, 273, 402-07.

Sallis, J.F., *et al*., 2009. Neighborhood environments and physical activity among adults in 11 countries. *American Journal of Preventive Medicine*, 36 (6), 484-490.

Skufca. L., 2008. Is the cost of gas leading Americans to use alternative transportation? *AARP Knowledge Management* [online]. Available from: http://www.aarp.org/research/housing-mobility/transportation/gas_costs.html [Accessed 16 November 2009].

Surface Transportation Policy Partnership, 2003. *Americans' attitudes toward walking and creating more walkable communities* [online]. Available from: http://www.transact.org/library/reports_html/pedpoll/pedpoll.asp [Accessed 14 September 2009].

Transportation Alternatives, 2009. Safety in numbers. *StreetBeat*, 4 June [online]. Available from: http://www.transalt.org/files/newsroom/streetbeat/2009/June/0604.html#safety_in_numbers [Accessed 24 November 2009].

Trust for America's Health and the Robert Wood Johnson Foundation, 2009. *F is for fat: How obesity policies are failing in America* [online]. Available from: http://healthyamericans.org/reports/obesity2009/ [Accessed 24 February 2010].

United States Census Bureau, 2009. *Population estimates, Incorporated places and minor civil divisions* [online]. Available from: http://www.census.gov/popest/cities/cities.html [Accessed 8 July 2009].

United States Department of Health and Human Services, 2000. *Healthy people 2010, 2nd edition*. Washington, DC: U.S. Government Printing Office.

United States Department of Transportation, 2010. *Policy statement on bicycle and pedestrian accommodation regulations and recommendations* [online]. Available from: http://www.fhwa.dot.gov/environment/bikeped/policy_accom.htm [Accessed 22 March 2010].

United States Department of Transportation, Federal Highway Administration, 2001. *Design guidance: Accommodating bicycle and pedestrian travel: A recommended approach* [online]. Available from: http://www.fhwa.dot.gov/environment/bikeped/design.htm#d1 [Accessed 8 November 2009].

United States Environmental Protection Agency, 2009. *2009 National Award for Smart Growth Achievement* [online]. Available from: http://www.epa.gov/smartgrowth/awards/sg_awards_publication_2009.htm#about_award [Accessed 22 March 2010].

United States House of Representatives, House Bill H.R. 1443 (2009).

United States Senate Bill S.584 (2009).

United Health Foundation, American Public Health Association, and Partnership for Prevention, 2009. *National and state estimates of the impact of obesity on direct health care expenses* [online]. Available from: http://www.fightchronicdisease.org/pdfs/CostofObesityReport-FINAL.pdf [Accessed 17 November 2009].

Table 1. Listing of Complete Streets Policies in Cities by Population

- **KEY:**
  - P=plan
  - L/O=legislation or ordinance
  - R=resolution
  - EO=executive order
  - M/G=manual or guidelines
  - *=pending or under consideration
  - Shaded cities indicate a complete streets policy at the city level

	CITY	2008 POPULATION	2008 MSA POPULATION	"OFFICIAL" COMPLETE STREETS POLICY?		OTHER PROGRAM OR POLICY FOCUSED ON STREETS THAT ARE COMPLETE, LIVING, GREAT, GREEN, ETC…
				CITY	REGIONAL, COUNTY, OR STATE LEVEL	
1	New York City	8,363,710	19,006,798	City (P) City (M/G)	State (L/O)*	"World Class Streets"
2	Los Angeles	3,833,995	12,872,808	NONE	State (L/O) State DOT (IP)	Green L.A. Transportation Working Group
3	Chicago	2,853,114	9,569,624	City (IP)	State (L/O) Suburban county (DuPage) (R)	Streetscape Program Green Alleys Landscaped Medians
4	Houston	2,242,193	5,728,143	NONE	State (L/O)*	
5	Phoenix	1,567,924	4,281,899	NONE	Suburban city (Scottsdale) (P)	
6	Philadelphia	1,447,395	5,838,471	City (EO)	State DOT (IP)	
7	San Antonio	1,351,305	2,031,445	NONE	State (L/O)* MPO (R)	
8	Dallas	1,279,910	6,300,006	NONE	State (L/O)*	
9	San Diego	1,279,329	3,001,072	City (M)	State (L/O) State DOT (IP)	
10	San Jose	948,279	1,819,198	NONE	MPO (R) State (L/O) State DOT (IP)	
11	Detroit	912,062	4,425,110	NONE	State (L/O)*	
12	San Francisco	808,976	4,274,531	NONE	MPO (R) Suburban county (Marin) (IP) State (L/O) State DOT (IP)	Better Streets SF Initiative
13	Jacksonville	807,815	1,313,228	NONE	State (L/O)	
14	Indianapolis	798,382	1,715,459	NONE	NONE	
15	Austin	757,688	1,652,602	NONE	MPO (P)	Downtown Great Streets Master Plan
16	Columbus	754,885	1,773,120	City (R)	MPO (IP)	
17	Fort Worth	703,073	6,300,006	NONE	State (L/O)*	

18	Charlotte	687,456	1,701,799	City & County (P; M/G)	State (R) State DOT (IP)	
19	Memphis	669,651	1,285,732	NONE	State (IP)	
20	Baltimore	636,919	2,506,626	NONE	State (L/O) Suburban county (Montgomery) (L/O)	
21	El Paso	613,190	742,062	NONE	State (L/O)*	
22	Boston	609,023	4,522,858	NONE	State DOT (M/G) State (L/O)	Crossroads Initiative
23	Milwaukee	604,477	1,549,308	NONE	State (L/O)	
24	Denver	598,707	2,506,626	NONE	NONE	Living Streets Initiative
25	Seattle	598,541	3,344,813	City (2 L/Os)	County—King (R) County—Pierce (R) Neighboring city—Tacoma (P) Suburb—University Place (L/O)	Green Streets Program Street Edge Alternatives Project Transportation Strategic Plan Update Sidewalk Development Program Sidewalk Improvement Initiative Pedestrian Master Plan Green Factor ROW Improvements Manual Neighborhood Business District Strategy
26	Nashville	596,462	1,550,733	NONE	State (IP)	
27	Washington, DC	591,833	5,358,130	NONE	2 Suburban Counties—Arlington , VA (P) and Montgomery, MD (L/O) 1 suburban city—Rockville, MD (L/O)	Great Streets Initiative
28	Las Vegas	558,383	1,865,746	NONE	NONE	
29	Portland	557,706	2,207,462	NONE	State (L/O)	Green Street Program
30	Louisville	557,224	1,244,696	City & County (L/O; M/G)	State (IP)	
31	Oklahoma City	551,789	1,206,142	NONE	NONE	

32	Tucson	541,811	1,012,018	NONE	NONE	
33	Atlanta	537,958	5,376,285	NONE	Suburban county (Cobb) (IP) Suburban city (Decatur) (P)	Connect Atlanta: Transportation Action Plan Beltline Project
34	Albuquerque	521,999	845,913	NONE	NONE	Great Streets Facility Plan 2030 Metropolitan Transportation Plan (MPO)
35	Fresno	476,050	909,153	NONE	State (L/O) State DOT (IP)	
36	Sacramento	463,794	2,109,832	City (R; M/G)	County (L/O) State (L/O) State DOT (IP)	
37	Long Beach	463,789	12,872,808	NONE	State (L/O) State DOT (IP)	
38	Mesa	463,552	4,281,899	NONE	Neighboring city (Scottsdale) (P)	
39	Kansas City	451,572	2,002,047	NONE	NONE	
40	Omaha	438,646	837,925	NONE	NONE	Urban Design Element of Comprehensive Plan Great Streets Handbook Streetscape Design Handbook
41	Cleveland	433,748	2,088,291	NONE	MPO (IP)	
42	Virginia Beach	433,746	1,658,292	NONE	NONE	
43	Miami	413,201	5,414,772	City (R)	State (L/O)	
44	Oakland	404,155	4,274,531	NONE	MPO (R) Suburban county (Marin) (IP) State (L/O) State DOT (IP)	
45	Raleigh	392,552	1,578,527	NONE	State (R) State DOT (IP)	
46	Tulsa	385,635	916,079	NONE	NONE	
47	Minneapolis	382,605	3,229,878	NONE	County (R; L/O) State (L/O)*	Great Streets Neighborhood Business Development Program
48	Colorado Springs	380,307	617,714	City (P)	NONE	
49	St. Louis	354,361	2,816,710	NONE	MPO (P)	Great Streets Initiative (MPO)
50	Tampa	340,882	2,733,761	NONE	State (L/O)	
51	Cincinnati	333,336	2,155,137	City (IP)*	NONE	
52	Aurora, CO	319,057	2,506,626	NONE	NONE	Urban Street

						Standards in TODs & Urban Centers
53	Pittsburgh	310,037	2,351,192	NONE	State DOT (IP)	
54	St. Paul	279,590	3,229,878	City (R)	County (R)* State (L/O)*	
55	St. Petersburg	245,314	2,733,761	NONE	State (L/O)	
56	Madison	231,916	561,505	NONE	MPO (P) State (L/O)	
57	Orlando	230,519	2,054,574	NONE	State (L/O)	
58	Salt Lake City	181,698	1,115,692	City (EO)	NONE	
59	Fort Collins	136,509	292,825	City (P)	NONE	
60	West Palm Beach	98,779	1,265,293	City (P)	State (L/O)	
61	Boulder	94,171	293,161	City (P)	NONE	