Complete Streets: Guide to Answering the Costs Question
The **National Complete Streets Coalition**, a program of Smart Growth America, brings together public interest groups and practitioner organizations to work for the adoption and effective implementation of Complete Streets policies at the local, state and federal levels. Complete Streets is a planning and design process that ensures most roads are planned, designed, constructed, operated, and maintained for the safe access for all users, regardless of age, ability, or mode of transportation.

**Smart Growth America** is the only national organization dedicated to researching, advocating for and leading coalitions to bring smart growth practices to more communities nationwide. From providing more sidewalks to ensuring more homes are built near public transportation or that productive farms remain a part of our communities, smart growth helps make sure people across the nation can live in great neighborhoods. For additional information, visit www.smartgrowthamerica.org.

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Guide to Answering the Cost Question

“We cannot afford to build Complete Streets.”

“We can’t afford to build Complete Streets. Where will the money come from for all these extras? Our budget is tight as it is!”

“Gas taxes pay for our roads. What will fund Complete Streets?”

“How much more will it cost to build Complete Streets?”

Just about every Complete Streets supporter has heard these questions, often coming from department directors, transportation professionals, and officials responsible for keeping an eye on city budgets. We designed this guide to help respond to these questions.

Using this guide

This guide provides four overarching points to make in answering cost questions. The effectiveness of each depends upon the listener—some will resonate more with one audience than another. We give general guidance to the most appropriate audiences for each point, as well as general tips when discussing these topics in your community. We encourage you to use these examples as a starting point. Look for similar facts and stories from your own state or region and add those local examples to your presentations, fact sheets, and discussions.

Each point made below is illustrated in a companion PowerPoint slide. A thumbnail image of the slide and its corresponding slide number appear next to the text examples. You should not use the whole PowerPoint presentation to make your case locally. Instead, select the slides that are appropriate to your audience and situation and augment those slides with local facts and stories. Please read the entire guide before referring to the PowerPoint so that you may benefit from the guidance we offer in making each point.

For this section, please refer to Part 1 of the companion PowerPoint slides.

A glossary of selected terms begins on page 22.

Why answering these questions effectively is so difficult

The National Complete Streets Coalition is asked often for a specific monetary figure in response to questions such as: “How much does a mile of sidewalk cost?” or “How much more will a project cost if it includes ‘Complete Streets’ features?” There are several reasons such figures are not available:

- Costs vary by location, topography, and geography.
- Costs vary by year, and even by season. In some jurisdictions, materials costs vary by as much as 15–20 percent every year.
- Even if there were a way to get local, current numbers, they likely would not help to resolve the concern. Very often, the assumptions behind the costs concern are incorrect; trepidation often is a result of an assumption that the Complete Streets approach requires expensive add-ons to every street or that they ‘new’ money will be required. It also may stem from a belief that safe facilities for road users who are not in motorized vehicles are unnecessary luxuries or only for special projects—not fundamental components of community streets. Providing a dollar figure fails to correct these assumptions. Answers to concerns about cost are most effective when answers address fundamental concerns such as the following:
• “Is it worth it to build multimodal streets?”

• “How can we afford to add ‘extra’ features when our budget is tight?”

• “You do not understand the constraints of my profession or the goals we are trying to achieve.”

Typically, supporters of Complete Streets recognize that expressed concerns over cost stem from not being sure whether Complete Streets are “worth it.” They spend a lot of time letting transportation planners and engineers know about how Complete Streets will reduce spending on health care costs or add economic value to neighborhoods. The trouble is, this “value” does nothing to help an administrator balance the transportation budget. All of these other savings or value-adds will not show up on the transportation bottom line, so they are not likely to be convincing. Such points may resonate more with elected officials than with agency staff, but they still avoid the practical question of how to pay for Complete Streets. What is the best way to answer this question effectively? Make sure you understand the underlying concerns. When you talk with transportation professionals, address those concerns and share new ideas from some of the examples below. (Slide 1:2)

The issue of credibility: why examples help

A fundamental principle of answering these questions consists of drawing on real-world, and preferably local, examples. Stakeholders who are not transportation professionals do not have a lot of credibility about something as technical as cost. Planners and engineers have spent their professional lives grappling with these issues, so the most effective approach is to share the experiences of their professional peers who are already working under Complete Streets policies. Similarly, statements of support from respected figures such as mayors and public works directors are helpful. We have provided some examples here. (Slide 1:3)

Stakeholders using this guide should feel comfortable using transportation terminology. Understanding the transportation system and its terms is important for stakeholders to be taken seriously and their points as credible. Beyond this, outside stakeholders should build relationships with the transportation department workers who are implementing Complete Streets – both from their own community and others in the area. Such relationships boost credibility by diversifying the voices heard throughout the process. You also will be able to talk about nearby successes – and perhaps put local planners and engineers in touch with their peers. (Slide 1:4)

Readers may find it useful to refer to the official policy statements issued by professional associations as they relate to multimodal street planning and design: the American Planning Association, the American Public Works Association, the American Society of Civil Engineers, and the Institute of Transportation Engineers.

American Planning Association: The American Planning Association, its Chapters and Divisions, and planners support a policy of Complete Corridors, ensuring that transportation corridors can accommodate all modes for people of all ages and abilities to provide access to destinations along the corridor. Ensuring that every mode provides access throughout a corridor allows opportunities to tailor land uses and streets to different configurations and efficiencies, while enabling a choice of travel options between logical origins and destinations throughout corridors. Network continuity, connectivity, and safety for all users are essential principles for making this policy effective. APA supports planning and design policies that ensure the nation’s streets and roadways are designed and operated with all users in mind — including bicyclists, public transportation vehicles and riders, and pedestrians of all ages & abilities.2
American Public Works Association: Complete Streets is a concept that recognizes the importance of meeting the needs of all transportation system users and APWA recommends its implementation on all appropriate public works projects.³

American Society of Civil Engineers: The American Society of Civil Engineers (ASCE) supports Complete Streets policies that require that the safety, interests, and convenience of all users — drivers, bicyclists, transit users and pedestrians of all ages and abilities — be considered in the design, construction, operations, and management of transportation projects. ASCE believes that America’s transportation system should be designed, built, operated, and managed for safe travel by everyone.⁴

Institute of Transportation Engineers: Encourages the development of cost-effective design guidelines for local roads and residential streets by appropriate agencies. These guidelines should reflect a proper balance of accommodation of all modes, safety and residential street management while addressing traffic operational, environmental and development issues...The safe and efficient movement of pedestrians and bicycles should be an integral part of the planning, design, operation, management and maintenance of transportation facilities.⁵ (Slide 1:5)

Answering the Question

Through research, interviews with community stakeholders, and discussions with transportation planners and engineers, four overarching responses to cost questions emerged:

1. Complete Streets policies are necessary to safely accommodate existing users.
2. Complete Streets can be achieved within existing budgets.
3. Complete Streets can lead to new transportation funding opportunities.
4. Complete Streets add lasting value. (Slide 1:6)

Point 1: Complete Streets policies are necessary to safely accommodate existing users

Please refer to Part 1 of the companion PowerPoint slides.

At the most basic level, a Complete Streets approach is necessary to safely accommodate existing users of the road. The Centers for Disease Control and Prevention names improved traffic safety, and Complete Streets policies specifically, as an important strategy in tackling the obesity epidemic.⁶ Safety is a powerful point to make to transportation professionals who view safety as fundamental to their jobs and to officials who feel a sense of responsibility for ensuring that taxpayer investments provide for all of their constituents. (Slide 1:7)

Use when talking to: transportation professionals, officials, and the general public. (Slide 1:8)
Helping others understand: (Slide 1:9-11, not shown):

- Include photos of “goat trails” or of people in your local community walking, riding bicycles, or catching buses in obviously unsafe conditions where there are no facilities.
- Provide Census statistics showing how many residents do not drive or showing the modal split in the community.
- Include a map of pedestrian injuries and fatalities in your community.

Examples:

- ILLINOIS. The state legislature approved a Complete Streets law after a teenager trying to get to work was killed while bicycling across a bridge built with no sidewalk or bicycle path. His family sued, and the State had to spend $882,000 to put in a separate sidepath when it could have been built with safe space for people on foot or bicycles—and likely for less—the first time. (Slide 1:12-13)

- COBB COUNTY, GEORGIA. An Atlanta mother of three was convicted of vehicular homicide when a hit-and-run driver killed her youngest son while she was crossing a street with her children from a bus stop to her apartment complex. To get from the bus stop, located directly across the street from the family’s home, the mother would have needed to walk more than half a mile with her young children and bags of groceries in the dark to cross at a traffic signal. If roadway designers had considered the need to cross the street at the bus stop, her son might still be alive and a disastrous legal issue avoided. (Slide 1:14)

- NEW ORLEANS, LOUISIANA. In the public engagement done around the city’s Complete Streets policy initiative, stakeholders noted census data that revealed 10.3 percent of residents did not have access to a car and that 8.4 percent already walked, bicycled, or took transit to work in the metro New Orleans area. (Slide 1:15)

Quotes

- “If you ever saw someone in a wheelchair going down a busy lane of traffic, it scares you to death. You can see their vulnerability.”—Rhonda Frisby, of the Anderson, South Carolina, chapter of the Physically Handicapped Society (Slide 1:16)

- “The idea of making streets more accessible to walkers, bikers, wheelchairs, bus riders, and everyone else isn’t about service to ‘special interests.’ Complete Streets is about being inclusive—recognizing that quality of life requires more than four-lane arterials and chip sealed avenues.”—Billings Gazette Editorial Board, July 25, 2011 (Slide 1:17)
Point 2: Complete Streets can be achieved within existing budgets

Please refer to Part 2 of the companion PowerPoint slides.

This point can be both reassuring and eye opening to transportation professionals. It is especially powerful when it is made by saying, “This jurisdiction is implementing a Complete Streets policy without breaking the bank!” This section includes information and examples that support three subpoints:

- Many Complete Streets improvements are modest in size and cost.
- A Complete Streets approach means thinking ahead and thinking smart—and that can lead to decisions that save money and avoid costly mistakes.
- The incremental cost of features such as bicycle lanes and sidewalks is dwarfed by much bigger cost concerns, such as variable labor and materials. (Slide 2:2)

Use when talking to: concerned or receptive transportation professionals and engaged officials. (Slide 2:3)

(a) Many Complete Streets improvements are modest in size and low cost.

This point is helpful if your audience thinks of Complete Streets in terms of elaborate multimodal boulevards that get a lot of attention, and it can allay their fears that every street will need such a treatment. With Complete Streets, every time something on the street is touched, it is made better for all users. This means that small and routine tasks such as restriping and updating signal timing—not just the larger construction and reconstruction projects—provide opportunities to implement Complete Streets. Many small, low-cost improvements can, when thoughtfully implemented over time, create a much friendlier and safer environment for everyone. (Slide 2:4)

Helping others understand:

- Show photographs of ordinary streets with modest improvements.
- Emphasize that Complete Streets implementation does not mean an immediate retrofit of all streets, but rather incremental changes to the built environment resulting from a shift in everyday planning and engineering practices.

- Discuss the benefits of simple changes, which may include
  - restriping to narrow travel lanes and provide more room for bicycles and/or pedestrians;
  - changing signal timing;
  - installing refuge islands, medians, and curb extensions;
  - restriping crosswalks to be more visible;
  - installing temporary curbside plazas;
  - adding pedestrian countdown signals;
  - using on-street head-out angled parking, instead of parallel parking, to narrow wide, dangerous roadways.

- Use examples of recent low-cost, modest projects to show this will not be a big change for your jurisdiction—just a more consistent practice.

- Help community leaders understand the low-cost nature of this approach by simply bringing a can of paint to the meeting.
Examples:

• WASHINGTON, DC. Even the most basic changes can have an impact on the street atmosphere and how the public views the city’s expenditures. To illustrate, an intersection in a Washington, DC, neighborhood that traditionally had not been given a lot of attention from planners had some basic components of pedestrian safety and convenience: a crosswalk over the major street, countdown pedestrian signals, and accessible curb ramps. However, by simply painting a few lines for a new crosswalk and making the existing ones more visible, the street now signals to everyone that pedestrians are expected here and care should be taken to share this space with them; the city cares about this neighborhood. The city may change other aspects of the street to make it even better in the future, but this simple solution cost very little and already has had a big visual and psychological impact. (Slide 2:5)

• NEW YORK CITY. The Big Apple was able to improve safety with many low-cost solutions that reduced fatalities and pedestrian crashes in almost all improved areas from 9 percent to as much as 60 percent. Traffic fatalities have fallen to an all-time low. Targeted spending to install low-cost features to make walking safer included the creation of 35 pedestrian refuge islands, 55 new left turn lanes to better manage traffic, 12 curb extensions to shorten crossing distances, eight median tip extensions to provide safer crossings, and four pedestrian fences to encourage pedestrians to use crosswalks. Six hundred intersections now allow more time to cross the street. (Slide 2:6-7)

• NEW YORK CITY. During just one winter, the New York City Department of Transportation spent $2 million filling potholes, of an annual budget of $800 million. That amount is more than the city spent of its own funds on improvements to its entire bikeway network between 2008 and 2011 – or about eight one-thousandth of the total investment in the city’s transportation over those three years. (Slide 2:8)

• SAN DIEGO, CALIFORNIA. The San Diego region has been integrating small improvements for pedestrians, bicyclists, and transit users into its street network since the continuation of a transportation sales tax with a Complete Streets provision in 2004, and the city has followed suit. For example, the addition of a midblock crossing cost only $20,000 but it provided residents in a lower-income neighborhood safe access to their only park. Andy Hamilton, president of Walk San Diego, said the project “made a huge difference calming traffic for two blocks, giving a whole neighborhood better access to its park.” Another low-cost solution was also funded through that sales tax money. Coming in at just $4,500, a project at the 50th and University Avenue intersection enhanced safety and calmed traffic through the application of paint and the installation of a few bollards. (Slide 2:9-10)
• REDDING, CALIFORNIA. On a recent reconstruction project, the city invested in low-cost treatments to improve pedestrian safety and comfort: six curb extensions and two refuge islands. The total cost of these elements, $40,000, represented just 13 percent of the overall project budget. (Slide 2:11)

Quotes:

• “When we talk about ‘Complete Streets,’ we aren’t necessarily talking about expensive widening projects or major redesigns of our roadways. These concepts can often be applied to existing streets by simply rethinking how we approach traffic flow and how we accommodate all modes of transportation.”—Phil Broyles, director of public works, Springfield, Missouri (Slide 2:12)

(b) A Complete Streets approach means thinking ahead and thinking smart—and that can lead to decisions that save money and avoid costly mistakes.

Integrating the needs of all road users early in the planning process and in all departmental activities provides opportunities to avoid potentially costly delays and make small changes in routine operations that will result in significant improvements at minimal or no cost. The examples here are many and diverse; what they have in common is the understanding that Complete Streets implementation is gradual. (Slide 2:13)

Helping others understand:

• Clarify that Complete Streets is not an additive approach. It is not about simply tacking a bicycle lane or sidewalk onto an existing roadway, but about looking for opportunities, no matter how small, to make improvements for various road users. When all users are considered, different tradeoffs will be made in planning projects: some may cost more but others, such as narrower automobile lanes or signals replaced with roundabouts, may cost less. Careful consideration often saves money.

• Discuss some strategies to integrate Complete Streets within existing projects, including road conversions (also known as road diets), combination of projects to lower costs, incremental installation, and simply thinking through small improvements.

• Mention that implementing Complete Streets policy means that maintenance activities such as resurfacing can help to achieve Complete Streets goals at a low cost—it is not only large capital projects.

• Note that low-cost multimodal improvements can eliminate or postpone the need for expensive road and intersection widening projects.

• Remind your audience that thinking ahead means avoiding costly retrofits later.

• Discuss how projects developed with a Complete Streets process are planned and designed with all users in mind from the start. Because project planners and designers address and balance the needs of all users up front and usually with good public input, projects often have fewer construction delays, which can be costly.
Examples:

- **COLORADO SPRINGS, COLORADO.** The city has created much of its bicycle network within its existing budget for maintenance and repaving. The city repaves about 3 percent of its network every year. Through that work, it has created many miles of bikeways by converting undivided four-lane roads to three-lane roads that include bicycle lanes. Evaluations done before and after implementation of such changes to roadway configuration have found that the new configurations reduce speeding and improve community satisfaction with the roads. (Slide 2:14)

- **LEE COUNTY, FLORIDA.** As part of its Complete Streets implementation process, county staff reexamined its list of road projects approved in the Metropolitan Planning Organization’s 2035 Long Range Transportation Plan (LRTP). As a result of this Complete Streets analysis, staff determined that five road projects slated for widening from two to four lanes should be reduced to a two-lane divided roadway with a median and turn lanes. The county asked for amendments to the 2035 LRTP to reflect these changes in roadway plans. The changes were estimated to reduce the cost of these five projects by $58.5 million, a significant savings for the county and its taxpayers that will also create better streets for all users. (Slide 2:15)

- **RICHFIELD, MINNESOTA.** Initial plans called for 76th Street in Richfield to be torn up to accommodate necessary expansion and reconstruction of sewer lines. According to consulting engineer Jack Broz of H.R. Green, the original estimate for the sewer work and reconstruction of the roadway was approximately $6 million. A collaborative approach to reallocate the existing roadway space resulted in a better balance point in serving Complete Streets goals and the needs of all users, as well as meeting the needs for wastewater and water management and a regional trail linkage. The road diet resulted in reconstruction cost savings of approximately $2 million, or one-third of the original cost estimated for reconstruction. This approach still satisfies the mobility and safety needs of motorists, freight haulers, and transit riders while greatly improving mobility and safety for pedestrians and bicyclists and augmenting the quality of life for the adjoining community. (Slide 2:16)

- **CHARLOTTE, NORTH CAROLINA.** Simple road conversions—converting a four-lane undivided roadway into two travel lanes, a center turn lane, and two bicycle lanes—costs the city about $250,000–$300,000 when done in conjunction with resurfacing. Approximately 15 percent of that cost, or $40,000–$50,000, can be attributed to conversion elements. The Charlotte Department of Transportation has found that routinely narrowing travel lanes when appropriate from 12 feet to 11 feet can save about 2 percent of project costs. (Slide 2:17)

- **WASHINGTON.** The State Department of Transportation determined that a Complete Streets process would save an average of $8 million per project, or about 30 percent, when rehabilitating highways that serve as small-town main streets. The pilot project sought community input at the beginning of the process and incorporated sidewalks, safe crossings, on-street parking, and other features important to small towns; the savings are realized through reduced schedule, scope, and budget changes. (Slide 2:18-19)

- **BROWN COUNTY, WISCONSIN.** In a reconstruction project, the county highway department built a three-lane street with two bicycle lanes on
Saving Money: Brown County, Wisconsin

- Re-evaluated needs on four-lane road
- Instead created three-lane street with bike lanes
- Replaced traffic signals with roundabouts
- Savings: $347,515 (16.5% below the original project estimate)

Quotes:

- “Implementation of Complete Streets goals can actually keep costs at acceptable levels and save money, while adding more public benefits and return on investment.” — Scott Bradley, director of context sensitive solutions, Minnesota Department of Transportation (Slide 2:21)

- “The [Complete Streets] processes that we are going through now in project development should lead to fewer changes in construction by addressing the issues upfront. If you are properly going through the project development process, you should have lower costs, fewer change orders, and fewer delays because people are not coming out during the construction phase to demand changes.” — Thomas DiPaolo, assistant chief engineer, Massachusetts Department of Transportation (Slide 2:22)

- “This [Complete Streets policy] puts the framework in place that allows the city to start with a project in the design phase and include these multimodal recommendations. It will be at a much lower cost than tearing up something that’s already in place.” — Michael Leaf, transportation commissioner, Highland Park, Illinois (Slide 2:23)

(c) The incremental cost of features such as bicycle lanes and sidewalks are dwarfed by much bigger cost concerns, such as variable labor and materials costs.

This point is one best made by planners and engineers to their peers, but it helps explain why so many communities that have implemented Complete Streets policies do not see cost as a significant issue.

CAUTION: This section includes some figures and percentages estimating the portion of a project that covers elements such as bicycle lanes and sidewalks. Because the tendency is to look for such a bottom-line figure, use these figures sparingly and only in the context in which they are given. Taken out of context, your audience may erroneously view them as universal cost estimates. Why answering these questions effectively is so difficult” on page 3.

Helping others understand:

- Remind your audience that there are so many other expensive factors in play: the variable cost of asphalt (which is linked to the cost of oil); utility placement; the terrain and number of crossings over a stream, river, or other natural barrier; the costs of going from open to closed drainage; and variable labor costs.
Examples:

- **NORTH CAROLINA.** Research conducted using North Carolina Department of Transportation data has shown that the year-to-year variation in cost of construction materials, labor, and other factors is greater than the incremental cost of adding sidewalks, bicycle lanes, and other features. (Slide 2:30-1)

- **CHARLOTTE, NORTH CAROLINA.** In implementing Complete Streets, Charlotte has found that project costs vary greatly by adjoining land use, terrain, and the need to purchase right-of-way. For example, the city runs a program to improve rural, farm-to-market roads to serve new development, which can include installation of curbs and gutters, stormwater drainage, roundabouts, turn lanes, medians, bicycle lanes, sidewalks, and other necessary infrastructure. Such projects can cost as little as $6 million per mile or double that. New arterials can cost the city $5 million per mile or up to twice that amount. The costs that can be attributed to Complete Streets features on these projects are relatively small, 4–8 percent of total project costs, but add high value and are simply part of the highly variable mix of project costs. (Slide 2:32)

Quotes:

- “[Protected bike lanes] are dirt cheap to build compared to road projects.”
  – Gabe Klein, commissioner, Chicago Department of Transportation (Slide 2:33)

- “The advantage of inserting a dialogue about all users at the earliest stages of project development is that it provides the designers and engineers the best opportunity to create solutions at the best price.”—James Simpson, commissioner, New Jersey Department of Transportation (Slide 2:34)
**Point 3: Complete Streets can lead to new transportation funding opportunities**

Please refer to Part 3 of the companion PowerPoint slides.

This point can help broaden the horizons of transportation professionals and decision makers so they understand that a multimodal approach can be an opportunity rather than a constraint. You can provide information and examples that support two subpoints:

- Complete Streets projects can make transportation projects more popular and garner more support for transportation funding.

- Complete Streets can inspire a search for additional funds from new sources to achieve the Complete Streets vision. (Slide 3:2)

**Use it with:** concerned and supportive administrators and transportation professionals (Slide 3:3)

(a) **Complete Streets projects can make transportation projects more popular and garner more support for transportation funding.**

National, state, and local polls all show strong, consistent support for ensuring that transportation projects include all modes. Popular support can translate into financial support when funding measures come up either for a popular general vote or for consideration in the legislature or city council. Beyond funding specific measures and specific infrastructure, the popularity of Complete Streets can lead to increased funding for core transportation programs. (Slide 3:4)

**Helping others understand:**

- Share surveys that show residents want multimodal transportation investments. If has not been done in your community, consider creating a survey using one of the angles used in the examples below.

- Talk about any transportation funding measures that require community support (such as bonds).

- Note whether any current funding sources at the federal, state, regional, or local level award points for or otherwise make multimodal projects more competitive.

**Examples:**

- Many national surveys show strong support for Complete Streets concepts. In a 2010 national survey conducted for Transportation for America, most respondents said that providing more transportation options was more likely to reduce congestion than building or expanding roads. (Slide 3:5)

- A national telephone poll conducted for America Bikes in May 2012 found that 83 percent of those polled would like to see federal funding for bicycling and walking maintained or increased—and this high percentage was consistent across demographics and political affiliation.
• SEATTLE, WASHINGTON. In 2006, Seattle voters approved a 9-year, $365-million levy in part because of its promise to improve the transit, bicycle, pedestrian, and motorist networks. In the measure’s first 5 years, the city improved safety for children walking to 25 schools, re-marked 3,620 crosswalks, built nearly 80 blocks of new sidewalks, planted more than 4,000 street trees, marked nearly 130 miles of new bicycle facilities, installed more than 1,100 pedestrian countdown signals, and paved 150 road lane-miles. (Slide 3:6-7)

• NASHVILLE, TENNESSEE. Community approval of a Complete Streets approach can unlock resources. In his 2010–2011 budget, Mayor Karl Dean set aside $12.5 million for sidewalks, $3 million for bikeways, and more than $10 million for public transportation. Overall, Nashville spent nearly 60 percent of its local transportation dollars on walking, bicycling, and transit infrastructure. (Slide 3:8)

• DALLAS, TEXAS. A 2011 poll of Dallas residents found that 85 percent of respondents were willing to give up at least a small portion of street space now devoted to cars to make room for other options. Sixty-eight percent said that the local economy would benefit from creating more walkable and bikeable streets. (Slide 3:9-10)

• NEW YORK CITY. A December 2011 poll found that 78 percent of residents wanted safe spaces for people on foot and on bicycles, including separate bike lanes and pedestrian islands on city streets. Nine out of 10 respondents considered safe, walkable streets important to their lives. A majority (60 percent) also reported supporting the installation of bicycle lanes. (Slide 3:11)

• CHARLOTTE, NORTH CAROLINA. Frequent surveys of residents reliably show support for the city’s Complete Streets approach. In 2010, an overwhelming 80 percent of respondents agreed that the city should create streets that accommodate all users, including motorists, pedestrians, bicyclists, and transit users. (Slide 3:12)

• MINNESOTA. When given a dollar to divide according to the portion that should go to different modes of transportation, poll respondents allocated 20 percent to bicycling and walking facilities, 25 percent to public transportation, and 55 percent to roads for cars. That 2008 poll helped inform the adoption of a state-level Complete Streets law. As it is being implemented, the State Department of Transportation is discovering that improving the streets for all users is a win-win situation. (Slide 3:13)
MISSOURI. The Missouri Department of Transportation’s public opinion poll asked residents whether they agreed with a proposal to spend up to 25 percent of a transportation project’s budget on facilities for walking, bicycling, and riding public transportation—with that cost reducing the total number of projects that could be built. In 2008 and 2009, 47 percent of Missourians supported that statement; in 2010, 53 percent agreed. (Slide 3:14)

Quotes:

“In a period when every tax dollar must be carefully spent, state policymakers would be wise to require planning that considers more than vehicles in designing roads.”—Fort Wayne Journal Gazette editorial board, December 10, 2010 (Slide 3:15)

(b) Complete Streets can inspire a search for additional funds from new sources to achieve the Complete Streets vision.

Inclusion of all users in transportation projects can make such projects more competitive for funding from some federal, state, and regional sources. The strength of the Complete Streets vision and community belief in the value of Complete Streets can also empower transportation planners to find and use a wider variety of existing resources to achieve multimodal objectives.

Helping others understand:

• Mention funding programs that can be used in multimodal projects at the federal, state, or local level.

• Note whether any current funding sources award points for or otherwise make multimodal projects more competitive.

Examples:

• PIPESTONE, MINNESOTA. The process of developing a Complete Streets policy in the small community of Pipestone inspired a successful application for Safe Routes to School funding—a source the community had not previously thought to seek. (Slide 3:16)

• DUBUQUE, IOWA. Dubuque’s work in the Historic Millwork District exemplifies its Complete Streets approach, and city officials have kicked off a major reinvestment push. Street improvements were funded in large part through a $5.6 million federal grant from U.S. Department of Transportation’s TIGER (Transportation Investment Generating Economic Recovery) program and a $150,000 Iowa Great Places grant. The large-scale project, featured on PBS’s NewsHour, broke ground just over a week before the city became the fourth in Iowa to formally commit to a Complete Streets approach. (Slide 3:17)

• BIRMINGHAM, ALABAMA. With a Complete Streets policy in place since early 2011, the City of Birmingham won $10 million from the very competitive TIGER program, administered by the U.S. Department of Transportation. The money will be used to create safer streets for all users in the downtown Civil Rights District, rebuild streets in a tornado-ravaged neighborhood to better serve all travelers, and better connect the local off-road trail system. (Slide 3:18)
NEW HAVEN, CONNECTICUT. The city is home to a strong Complete Streets policy and process and received a $16 million TIGER grant from the U.S. Department of Transportation to turn a grade-separated highway into a signature multimodal boulevard. (Slide 3:19)

SANTA MONICA, CALIFORNIA. To improve safe pedestrian and bicycle access to forthcoming light rail stations, the City of Santa Monica was funded $650,000 from the U.S. Department of Housing and Urban Development through its competitive Sustainable Communities Challenge grants program. (Slide 3:20)

DENVER, COLORADO. To improve transit options by extending a light rail line, business owners and residents of the Lower Downtown (LoDo) neighborhood donated $250,000, adding to over $2.5 million in cash contributions from private organizations. This private investment allowed the local transit agency to proceed without needing to wait for additional federal funds, a move that saved time and provided service much quicker. Landowners in the area were willing to raise the money themselves because they expected the additional transit access to add to land value. (Slide 3:21)

Metropolitan planning organizations provide resources for their member jurisdictions, engage them in creating regional transportation plans, and distribute some types of federal transportation monies. Some of these agencies specifically offer resources and funding for Complete Streets work. In the Kansas City region, for example, the Mid-America Regional Council has changed the funding criteria to provide incentives for projects that consider all users.

Communities are tapping all available funding streams to implement Complete Streets policies, including, federal Surface Transportation Program- and Congestion Mitigation and Air Quality funds; grants from the Federal Transit Administration for improved pedestrian and bicycle facilities near stations and stops; Community Development Block Grants; Main Streets programs; city bond measures; self-imposed taxes in business districts (BIDs, SSAs, and the like); local corridor tax increment financing programs; and corporate sponsorships.

NEW JERSEY. The State Department of Transportation provides a Complete Streets incentive to municipalities applying to its Local Aid program. One of 25 possible points awarded in the application review process goes to communities with an adopted Complete Streets policy, giving those communities a significant advantage in securing funds from this highly competitive program.
Point 4: Complete Streets add lasting value

Please refer to Part 4 of the companion PowerPoint slides.

Many communities have concluded that a Complete Streets approach offers the best return on investment: the lasting value to the community and to the transportation network is worth the initial cost. Local officials may find the high return on investment particularly appealing as well as the value added to public health and economic vitality. We provide information that supports four of the many subpoints that can be made:

- Complete Streets supports healthy communities.
- Complete Streets means safer streets for everyone.
- Complete Streets can be a powerful aid to economic vitality.
- Complete Streets is a cost-effective part of a long-term strategy for congestion mitigation.

Examples and information about additional benefits, such as for sustainability, can be found on our website. Be especially careful in choosing benefits that meet the interests of your audience. Also, realize that while some of these points are especially compelling to you, they may not resonate with planners, engineers, and officials worried about constrained transportation budgets. (Slide 4:2)

Use when talking to: general public, officials, and receptive transportation professionals. (Slide 4:3)

Helping others understand:

- Choose benefits to fit the interests of your audience.
- Emphasize that these benefits allow transportation dollars to do more than just improve transportation.
- Find as many local, hard numbers as you can, including data on public health, air quality, and traffic safety

(a) Complete Streets supports healthy communities.

- NATIONAL STUDY. A comprehensive study of walkability has found that people in walkable neighborhoods did about 35–45 more minutes of moderate intensity physical activity per week and were substantially less likely to be overweight or obese than similar people living in low-walkability neighborhoods. (Slide 4:4)

- NATIONAL STUDY. Only one-quarter of women aged 40–60 years meet national guidance for recommended physical activity. Research published in the November 2011 issue of *American Journal of Preventive Medicine* found that where women live affects how likely they are to meet that target. Those who live in neighborhoods with sidewalks, low crime, and near destinations such as shops are more likely to walk, run, and bicycle—and meet those recommendations for physical activity. (Slide 4:5)
• NATIONAL STUDY. Easy access to transit can increase the rates of healthy physical activity. Over one-third of transit users meet the Surgeon General’s recommendations for minimum daily exercise through their daily travels.10 (Slide 4:6)

• NEW ORLEANS, LOUISIANA. A 2012 study from the Prevention Research Center at Tulane University investigated how changes to community, including a walking path and a new school playground, would affect the rates of physical activity in a low-income African-American neighborhood in New Orleans. Researchers concluded that “built environment changes, such as easily accessible paths that lead to destinations, can provide more opportunities for physical activity in primarily African American neighborhoods and others where infrastructure has been allowed to fall into disrepair or was not initially installed.”11 (Slide 4:7)

• Include health data for your own community and region. You may choose to start with County Health Rankings, an online portal with specific health statistics about your county, including data on adult obesity, physical inactivity, motor vehicle crash death rate, and more. You can use this information to make the case of needed built environment changes and to compare your county to nearly every other county in the nation. (Slide 4:8)

(b) Complete Streets means safer streets for everyone.

• SEATTLE, WASHINGTON. One project to create Complete Streets along a major arterial, Aurora Avenue, included the installation of new crossings, bus plazas, and redesign of the street. Total crashes dropped by 21 percent. In another, the city redesigned Stone Way North to better accommodate both freight vehicles and bicycles. After the redesign, speeding dropped by 75 percent; bicycle traffic increased by 35 percent, the collision rate for bicyclists declined, and collisions involving pedestrians dropped 80 percent. Peak traffic volumes remained consistent with city-wide levels, and no traffic diversion to parallel streets occurred. (Slide 4:9)

• ORLANDO, FLORIDA. A road diet on Edgewater Drive, which features two travel lanes, a center turn lane, parallel parking, and bicycle lanes, reduced the frequency of crashes involving injuries from every 9 days to once every 30 days. (Slide 4:10)

• VANCOUVER, WASHINGTON. Fourth Plain Boulevard was converted from four lanes with poor provisions for people walking, bicycling, or in wheelchairs into a street with two through lanes, a center turn lane, two bicycle lanes, curb ramps, and improved sidewalks. After this inexpensive treatment, vehicle collisions dropped 52 percent, and the number of crashes involving pedestrians dropped from two per year to zero. (Slide 4: 11)

• Include data for your own community and region that highlights coming demographic changes. This should include information about the growing number of older adults and persons with disabilities.
(c) Complete Streets can be a powerful aid to economic vitality.

- Bicycling and walking add to states’ bottom lines. In Vermont, those activities mean 1,400 jobs, $41 million in wages, and $81 million in revenue. In Wisconsin, named one of the country’s most bicycle-friendly states by the League of American Bicyclists, the bicycle industry flourishes, adding more than $556 million to the economy. Shifting more Wisconsinites’ short trips from cars to bicycles could result in $409 million in health benefits. Iowans who commute to work by bicycle are estimated to generate nearly $52 million in direct and indirect benefits.

- Making infrastructure improvements for walking and bicycling, and investing transportation dollars into public transportation, produce more jobs per dollar than building auto-focused projects.

- LANCASTER, CALIFORNIA. The town removed six traffic signals along Lancaster Boulevard and created a central rambla patterned after the design of a street in Barcelona, Spain, which provides parking spaces, pedestrian facilities, and a place for community events. The $10 million investment in new lighting, landscaping, and trees spurred $125 million in investment in the downtown area, with 40 new businesses opening and 800 new jobs created. Sales tax revenue grew by 26 percent.

- SAN DIEGO, CALIFORNIA. After the city installed new roundabouts and other features to improve safety along La Jolla Boulevard in the business district of Bird Rock, a survey of tax receipts among 95 businesses along the corridor showed a 20 percent boost in sales. Numerous new businesses opened during construction, including a CVS with a 40-year lease, indicating optimism for Bird Rock’s long-term economic viability.

- In many communities, developers are responsible for the construction of new roads. Requiring narrower streets, sidewalks, shorter blocks, and integration into the existing transportation network is a great way to ensure that streets are built to be safe and complete from the start. Developers may push back, citing higher cost or stating that their segment of sidewalk will not connect to anything else. Remind them that this approach is incremental: the next development will connect to that sidewalk. Building narrower roadways can offset most of the cost of adding sidewalks. The minimal remaining difference can be passed on to prospective homebuyers. Homeowners will appreciate the extra value provided by living in a walkable neighborhood.

- NATIONAL STUDY. A 2009 study from CEOs for Cities found that in 13 of the 15 markets studied, higher levels of walkability, as measured by Walk Score, were directly linked to higher home values. On average, homebuyers attach greater value to walkable homes relative to other housing units in the same metropolitan area, controlling for other observable characteristics.

- WASHINGTON, DC. A 2012 Brookings Institution study quantified the value that walkability adds to commercial and residential real estate in a sample of neighborhoods in the Washington, DC, region. Neighborhoods are divided according to a five-step walkability ladder, with each step up adding value to office, retail, and apartment rents, as well as to home value.
• “Communities that invest in bike ways and good sidewalks also attract a creative class of professionals who bring additional vitality and economic growth to communities.” — Jeffrey Tumlin, principal, Nelson\Nygaard (Slide 4:17)

(d) Complete Streets is a cost-effective part of a long-term strategy for congestion mitigation.

• PORTLAND, OREGON. The city has kept the growth of automobile traffic in check in part through growth of its bicycle network. The city was able to avoid an expensive bridge-widening project by providing more room for bicyclists and pedestrians. Looked at over the long term, the city’s entire bicycle network cost less than constructing a mile of urban freeway. (The bicycle network, in 2008 dollars, was conservatively estimated to have cost $60 million. A four-lane urban freeway can cost between $20 million and $80 million; in areas with severe restrictions, a four-lane freeway can cost from $67.2 million to nearly $300 million for a four-lane mile.) (Slide 4:18-19)

• BOULDER, COLORADO. The city focuses on mobility rather than cars. By making bicycling, walking, and bus riding attractive and available options, Boulder has avoided the expenditures and impact of widening roads to accommodate more traffic. Instead, the city has invested in making its major arterials into Complete Streets that accommodate all transportation modes. While Boulder has grown over the past 10 years, the level of congestion on its streets has stayed steady while bicycling, walking, and transit use has increased. Over 20 years, the city has seen a 7 percent drop in trips taken by single-occupancy vehicles; a bicycle commuting rate that is about 20 times the national average; transit use at twice the national average; and the number of trips made on foot at three times the national average. (Slide 4:20)

• VANCOUVER, BRITISH COLUMBIA. One travel lane on Burrard Bridge that had been for automobile use only was reallocated as a bicycle-only travel lane. This simple change resulted in 200,000 additional bicycle rides over this bridge from 2009 to 2010. Since the installation of more bicycle lanes, 300,000 more bicycle trips have occurred without significant negative impact for autos and other transit. (Slide 4:21)
A final point: the “user fee” misconception

When the cost question comes up, you might also hear that mainstream transportation funding is reserved for building facilities to serve automobiles because it comes from the gas tax paid by drivers. Some states do have statutes on the books reserving gas tax dollars for this purpose; even in many of these states, however, such funds are used for sidewalks and bicycle lanes. In all cases, gas taxes are not the exclusive source of transportation funding.

- Work with your community’s transportation agency to get to know the funding mix in your community. Create a pie chart showing the percentage of the budget that comes from different sources, including federal, state, and local funding streams.

- A December 2010 report from the U.S. Public Interest Research Group shows that contrary to popular belief, roads do not pay for themselves: only half the cost of road construction and maintenance is covered by funds from gasoline taxes today. Since World War II, road construction costs have outpaced funds raised through the gas tax and other fees by $600 billion dollars—money that came out of general government funds. (Slide 4:22)

- Seattle’s 2009 transportation budget primarily drew from sources other than user-generated fees. In fact, the gas tax provided just 4 percent of its overall budget that year. (Slide 4:23)

- Boulder’s multimodal transportation program is funded primarily from the city sales tax (64 percent), with an additional 15 percent from federal funds. Just 11 percent of the city’s budget is from the State highway user’s tax. (Slide 4:24)

- Investment in Complete Streets means some people will choose not to drive as often, making the roads safer and more convenient for those who choose to continue driving. (Slide 4:25)
Glossary of Selected Terms

This glossary only addresses terms used in this guide. For additional commonly used transportation terms, please refer to:

- CDC Transportation Glossary
- U.S. Department of Transportation Planning Glossary
- Federal Highway Administration, “A Resident’s Guide for Creating Safe and Walkable Communities”

Arterial Roads

Arterial roads are designed as high-capacity urban roads that connect smaller local roads with larger ones. They are often a community’s transportation backbone, connecting many destinations and neighborhoods. Automobile traffic generally travels at high speeds and facilities for travelers by foot, bicycle, or public transit are afterthoughts. Most pedestrian injuries and fatalities occur on these roads.

Photo courtesy Michael Ronkin.

Bollards

Bollards are vertical posts often arranged in a line to separate automobile traffic from people on foot or riding bicycles. They may also be used to prevent parking on sidewalks, to demarcate special bus-only lanes, and to manage and calm traffic flow. Sometimes other objects, such as planters, are used as bollards. They may be fixed—permanent—or flexible—movable or able to bend and return to their original position.

Photo courtesy Elvert Barnes, PBIC. www.pedbikeimages.org.

Countdown Pedestrian Signals

Countdown pedestrian signals are a combination of traditional pedestrian signals that direct people on foot as to when they may and may not cross a street and an added display that shows the number of seconds remaining to safely cross. They are easily understood by all age groups and increase the feeling of safety while also being simple and inexpensive to install.

Photo courtesy James Wagner, PBIC, www.pedbikeimages.org
Curb Extensions

Curb extensions (also known as bulb-outs) are a relatively simple way to transform overly wide streets into ones where people feel more comfortable walking and driving. They can bring down the speed of cars making right turns, add visual emphasis to important pedestrian crossings, and make it easier for people in cars and people on foot to see each other. Curb extensions are commonly used at intersections, but are also helpful at mid-block crossings and other locations. Sometimes the added area is landscaped and used to filter storm water.

Photo courtesy Dan Burden, PBIC. www.pedbikeimages.org

Goat Trails

Goat trails are worn paths through grass along a road without sidewalks. They signal a demand for better pedestrian facilities.

Photo courtesy Greg Griffin, PBIC. www.pedbikeimages.org

Head-Out Angled Parking

Head-out angled parking is a type of on-street parking where cars are backed into diagonal spaces. This maximizes use of the roadway, accommodates more vehicles than traditional parallel parking, and is a simpler maneuver for drivers as well. Head-out angled parking is useful in narrowing the overall width of a roadway to promote compliance with speed limits. On-street parking in general also provides a buffer between people who are walking and automobile traffic, creating a more pleasant pedestrian environment.

Photo courtesy Eric Fredericks

Medians

Medians are raised areas within a roadway that separate opposing lanes of traffic. They may feature decorative landscaping, trees, or other barriers. Pedestrians may use medians as a safe place to stop when crossing streets. In some designs, medians can help to decrease vehicle speeds to the desired level.

Photo courtesy of Dan Burden, PBIC, www.pedbikeimages.org
Median Tip Extensions
Median tip extensions are painted or raised areas at the ends of medians to provide additional space for pedestrians to pause while crossing the street, shorten overall crossing distances, and improve alignment of travel lanes.

Photo courtesy Los Angeles Bike Coalition.

Open and Closed Drainage
Open drainage often consists of uncovered channels or ditches that collect and direct stormwater runoff from nearby paved roadways. They are often employed in rural areas with little residential density. As these areas develop, such systems are often converted to closed drainage systems, where water is directed by man-made systems such as curbs, gutters, and drains. This conversion process is a good cost-saving opportunity to also include sidewalk construction.

Photo courtesy U.S. Environmental Protection Agency.

Pedestrian Refuge Islands
Pedestrian refuge islands are small areas of sidewalk or pavement where people on foot can safely stop as they cross a road. They are typically used on overly wide streets where pedestrians need additional time to cross the street. They may also be used where no traffic light exists so that people crossing on foot may navigate one direction of traffic at a time.

Photo courtesy Charlotte Department of Transportation.

Road Diets
Road diets (also known as conversions or rechannelizations) are often employed on overly wide roads that have too many travel lanes for the level of automobile traffic and are often unsafe for people traveling by bicycle or on foot. Travel lanes are removed or narrowed to create on-road space for bicycle lanes, center turn lanes, or on-street parking. They may be removed or narrowed to free right-of-way for wider sidewalks and medians. Most commonly, road diets transform a four-lane, bidirectional roadway into a three-lane road with one travel lane in each direction, a center turn lane or median, and dual bicycle lanes.

Photo courtesy Dan Burden. Santa Cruz, California.
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References

1 More information on building the bridge between public health and transportation can be found within the American Public Health Association’s Transportation and Health Toolkit, available online at: http://www.apha.org/advocacy/priorities/issues/transportation/Toolkit.htm
2 http://www.planning.org/policy/guides/adopted/surfacetransportation.htm
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