What Are the Benefits of Complete Streets?
Complete streets address the need for a comprehensive, integrated, connected transportation network that balances access, mobility, health, and safety needs of all roadway users. By planning, funding, designing, constructing, managing, and maintaining a complete and multimodal network, complete streets can ensure a fully integrated transportation system, achieve and sustain mobility, and safely accommodate non-motorized transportation. While difficult to quantify, there are numerous benefits of complete streets.

**3-1. Safety**

Complete streets can create infrastructure and a physical roadway environment that improves safety for pedestrians and bicyclists. Complete-streets principles provide for the safe accommodation of pedestrians and bicycles for a wide range of street types—from local residential streets, to neighborhood collectors, to major arterial roadways—within a variety of land-use contexts.

A review of pedestrian-safety research by the FHWA revealed that, when combined, roadway engineering, facility design, and educational programs can provide effective countermeasures to pedestrian crashes. Specific pedestrian facilities cited as effective features include (FHWA, 2004):

- Marked and illuminated crosswalks
- Alternative crossing treatments—including raised medians and pedestrian refuse islands
- Traffic-control devices, signalization, and signage
- Treatments to assist pedestrians with disabilities
- Careful bus-stop placement
- Measures to enhance safe routes to school
- Traffic-calming measures
- Provision of continuous sidewalks and walkways

Specifically designing, engineering, operating, and maintaining pedestrian facilities are tactics that are proven to produce pedestrian-friendly environments. Sidewalks provided along both sides of a roadway reduce pedestrian accidents, prevent mid-block crossing crashes, and greatly improve pedestrian mobility. Reducing road width is one traffic-calming measure that also improves roadway safety. A study in Longmont, Colo., showed that there was a 35- to 50-percent increase in injury accidents for every two-foot increase in street width (Swift, 2006). This same study revealed “the most significant casual relationships to injury and accident were found to be street width and street curvature” (Swift, 2006). Traffic-calming measures can effectively improve roadway safety by reducing vehicle speed, pedestrian crashes, and neighborhood cut-through traffic.
In addition to improving pedestrian safety, complete streets also encourage the safe design and engineering of bicycle-friendly and multimodal facilities. A recent study indicates that “on-road marked bike lanes were found to have a positive safety effect in five studies—consistently reducing injury rate, collision frequency or crash rates by about 50 percent compared to unmodified roadways” (Daniels, Brijs, Nuyts & Wets, 2009). Depending upon the land use and roadway context, the design of safe on-road bicyclist facilities may include shared lanes, marked shared lanes, paved shoulders, and/or designated bicycle lanes (AASHTO, 2010).

3-2. Health

Healthy lifestyles are becoming more important in the face of increasing obesity rates and related illnesses. Research indicates that there is a clear connection between the built environment and the health or livability of a community. A recent study published by Medicine & Science in Sports & Exercise concludes that “[i]f everyone in the United States began walking 30 to 60 minutes each day, the benefits would be extensive” (Powell and Blair, 1994, 851).

In order to increase physical activity and improve the health of communities, a multi-faceted approach is required. Building pedestrian- and bicycle-friendly environments alone will not stem the rising tide of obesity. Along with improvements to the built environment, public policy changes, health-promotion activities, and community support is needed to improve health outcomes (Robert Wood Johnson Foundation, 2007). In addition, eliminating built-environment barriers to walking or biking can be effective in influencing both behavior and transportation choice. According to San Diego State University, “An 11-year study, which followed residents in Seattle as they moved, found that people shifted some trips to transit, bicycling, and walking as a result of moving into more walkable neighborhoods.”

Just as people can improve their diet with access to healthy, nutritious food, greater transportation choices can lead to a more healthy and active lifestyle. Complete streets provide improved access and opportunities for walking, biking, and physical activity. Built-environment features—including land use, recreational resources, availability of sidewalks, and community environment—are essential to opportunities for physical activity and positive health impacts.
3-3. Environment

The EPA recognizes the important relationship between an increase in greenhouse gases and the degradation of air quality. EPA released their “endangerment finding” in December 2009, which states that “…the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor-vehicle engines contribute to the greenhouse gas pollution, which threatens public health and welfare” (EPA, 2009).

The transportation sector accounts for more than 30 percent of all greenhouse-gas emissions in the United States, with over 88 percent of all trips being made by car (EPA, 2011). When road design is auto-centric, more unnecessary automobile trips are made. While most short-distance trips could easily be made on foot or by bike, about 65 percent of trips of less than one mile are made by the automobile in the United States (Collia, Sharp & Giesbrecht, 2003). Switching to carbon-neutral transportation modes such as biking or walking can provide significant environmental benefits. If each person switched from automobile travel to walking or bicycling, an individual’s carbon dioxide emissions could be reduced by 4,800 pounds per year (National Complete Streets Coalition, 2010). Converting short car trips to travel by walking, biking, or public transit can decrease the carbon footprint of daily vehicle travel, minimize the generation of greenhouse gases, and improve air quality.

3-4. Smart Mobility

Complete streets support smart mobility and growth-development patterns. Communities that embrace smart-growth principles encourage compact building design, mixed-use development, walkable/bikable neighborhoods, an array of transportation choices, and a distinct sense of place.

There are economic, societal, and environmental benefits of smart growth (Litman, 2011). Compact, mixed-use development, infill redevelopment, and downtown revitalization are examples of public investment based on smart-growth principles. Substantial savings of taxpayer dollars can be realized by strategic public investment in existing downtowns and communities. Because infrastructure already exists in the core of a community, reinvestment in new infrastructure or public services is not required.

In addition, there are higher levels of social capital associated with more walkable communities. Successful public spaces are designed for people, not cars. Great places are easy to access, convenient to public transit, perceived to be safe and clean, encourage active use, and foster sociability (Project for Public Spaces, Inc., 2005).

Finally, the redevelopment of and reinvestment in compact, walkable communities protects the environment and natural resources. Focusing or redirecting development to places where infrastructure already exists conserves farmland, scenic vistas, historic resources, and natural assets.
3-5. Inclusive Physical Environments

3-5-1. Older Adults

In the United States, less than seven percent of Americans over the age of 65 make their trips on foot or bicycle (Pucher & Dijkstra, 2003). This figure is in stark contrast to many other places in the world. In Germany, 50-55 percent of people over the age of 65 make trips via foot or bicycle. This “walking gap” is likely due to auto-centric development and incomplete streets. AARP, which is part of the National Complete Streets Coalition, reports that “heavy reliance on automobile travel has contributed to making it difficult to get to places on foot in many parts of the United States and, in far too many cases, unsafe” (Haase et al., 2009). In the AARP Public Policy Institute publication, Planning Complete Streets for an Aging America, transportation planners and engineers are urged to consider the multimodal travel needs of older adults in roadway design. Changing the design and physical layout of transportation systems may help older adults, as both drivers and pedestrians, better navigate roadways and encourage this demographic to use other forms of transportation. The report recommends refinements to the FHWA’s Design Handbook for Older Drivers and Pedestrians to increase the safety of older adults. It also recommends that state and local governments adopt national Complete Streets policies that specifically address the needs of mature citizens (Haase et al., 2009).

3-5-2. Persons with Disabilities

ADA regulations require that new facilities be accessible and usable by people with disabilities. Title II of ADA also prohibits state and local governments from discriminating against persons with disabilities with respect to public accommodations and transportation (U.S. Department of Justice, 2005). In 2005 a draft of Public Rights-of-Way Accessibility Guidelines (PROWAG) was issued to provide guidance on scoping and technical requirements to ensure that access for persons with disabilities is provided wherever a pedestrian way is built or altered (United States Access Board, 2005). Equitable transportation policies, compliance with ADA, and access to transportation facilities by persons with disabilities will be furthered as complete-streets principles become more widely supported and adopted. Complete-streets practices reinforce the need for safe access and transportation equity for all—including persons with disabilities.

3-5-3. Children

According to Nemours Health and Prevention Services, approximately 40 percent of
Delaware’s children and youth are either overweight or obese and at risk for long-term chronic health problems (Nemours, 2010). While there are a number of factors associated with rising obesity rates, lack of physical exercise is one factor that can be addressed with improvements to the built environment.

Nemours Health and Prevention Services is a strong public policy advocate for complete streets. Nemours points to research indicating that children are more physically active and dependent when complete streets are present, including built environment changes that improve pedestrian safety, provide safe routes to school, and remove barriers to walking and biking. In a policy brief titled “Counties and Municipalities in Delaware Can Develop Complete Streets to Combat Childhood Obesity,” Nemours urges the support of Delaware’s Complete Streets Policy by local governments (Nemours, 2009). It notes that local governments can update comprehensive plans, create bicycle and pedestrian master plans, and adopt zoning ordinances and public policies that support pedestrian- and bicycle-friendly built environments.

The National Complete Streets Coalition also concurs that complete streets can promote the physical activity of children. The Coalition’s fact sheet “Complete Streets Helps Keep Kids Safe!” cites several benefits of designing and operating streets for all users, including children. It notes that Complete Streets can help to foster increased independence, mobility, physical activity, and safety of children. Children who live in bikeable and walkable communities have greater opportunities to be active in a safe environment (National Complete Streets Coalition, n.d.).

3-6. Walkability and Economic Vitality

There is growing evidence that walkable environments can provide positive economic benefits. Walkability can help revitalize a downtown, increase private investment, bolster property values, promote tourism, and support the development of a good business climate. A 2009 report, Walking the Walk, documents a positive correlation between the walkability of cities and home values.

According to the report, homes in neighborhoods that are within walking distance to destinations related to daily living can command a higher price than homes in similar neighborhoods that are automobile-dependent. A home in a more walkable community saw an increased property value premium of $4,000 to $34,000 dollars over homes in communities that were not very walkable (Cortright, 2009). Housing values are positively and significantly correlated with walkability in almost all metropolitan markets. Walkability was also correlated with high housing values in metropolitan areas of different sizes and in different regions of the country. Walkability was correlated with housing prices both in older,
denser markets (i.e., Chicago, Ill.) and in faster-growing Sunbelt markets (e.g., Phoenix, Ariz., and Jacksonville, Fla.) (Cortright, 2009). In addition, the report found that homes that scored higher on a “Walk Score” algorithm, which assigns a higher point value to homes that are closer to typical consumer destinations, generally had increased home values in most markets (Cortwright, 2009).

In recent decades, there has been a renewed interest in the benefits of urban living and revitalizing downtown shopping districts and “Main Streets.” A study supported the Federal Transit Administration (FTA) and National Trust for Historic Preservation (NTHP) reveals that transit reinvestment and historic preservation, when combined, can be major forces in community revitalization. Successful revitalization strategies have focused on investing in resources that promote transit-oriented and transit-supportive development, adaptive reuse of historic structures, expansion of travel choices, intermodal hubs or centers, and the renewal of historic downtowns (Costello, 2003). Communities that reinvest in and revitalize critical public transportation links in their downtowns and surrounding neighborhoods are more likely to experience overall success in CBD-revitalization efforts (Costello, 2003). Successful initiatives capitalize on a town’s historic character, transportation enhancements, and attractive streetscapes that support a pedestrian-, transit-, and business-friendly climate.

For example, North Carolina’s Outer Banks invested approximately $6.7 million in public funds for bicycle improvements, and over 10 years saw an economic benefit of $60 million in bicycle-related tourism (North Carolina Department of Transportation, 2010, 33). The initial investment has paled in comparison to the total economic benefit gained.

### 3-7. Responds to Housing Market Preferences

In the past decade, there has been a dramatic shift in housing market preferences. More Americans are seeking to reside in walkable, mixed-use neighborhoods than in sprawling suburbia. A number of factors have contributed to the change in housing market trends, including the decreasing size of American households, higher commuting expenses, and spiraling single-family home-energy costs. These factors, combined with the economic recession, recent mortgage crisis, and collapse in the housing market have increased the demand for living in places with convenient access to public transportation, places of employment, schools, retail shops and restaurants, and residential communities (Renaissance DOWNTOWNS, LLC, 2011).

According to a 2011 Consumer Preference Survey commissioned by the National Association of Realtors, Americans have a strong preference for walkable, mixed-use, and transit-accessible neighborhoods. Among those polled, 56 percent of respondents favored smart-growth communities over neighborhoods that require automobiles to drive to work, home, schools, and recreation. The survey revealed that when considering a new home purchase, 77 percent of respondents would prefer neighborhoods with sidewalks and pedestrian-friendly amenities. Investment in public-transportation improvements is favored over building new roads by 50 percent of survey respondents. The survey also showed that most Americans would sacrifice the size or square footage of a new home for the quality of a neighborhood...
and a shorter commute to work (Belden, Russonello & Stewart LLC, 2011).

The National Association of Realtors also notes that demographic trends and changes in consumer behavior will have a profound influence on the housing market. Demographic research shows evidence that the future generation of home buyers prefers to live in neighborhoods in city centers or inner suburbs that are close to jobs, entertainment, retail establishments, and public transportation. Recent surveys by RCLCO, a leading real estate–advisory firm, indicate that the future generation of home owners is in tune with smart growth—including communities that offer a compact, walkable lifestyle with a range of transportation alternatives (National Association of Realtors, 2010).

Aging baby boomers also have indicated a strong preference to “age in place” in communities that are livable, safe, and transit-friendly. A 2009 AARP Survey on Community Services in Delaware revealed that while most respondents are now dependent upon automobiles, nearly half of the residents surveyed agree they would use public transportation more often if it was more convenient (AARP, 2009).