CHAPTER TWO - EXISTING CONDITIONS

Fort Worth is one of the fastest growing cities in the United States 38.6 percent between 2000 and 2010. The Fort Worth Mobility and Air Quality Plan anticipated that our City will be serving the transportation needs of approximately 1.8 million residents and employees by 2030 if population trends continue. The2013 United States Census estimates Fort Worth has a population of 792,727.

Population and employment growth can improve quality of life. Compared to smaller communities, a large population can support specialized services and opportunities that can enrich residents' lives. However, growth issues such as traffic congestion, poor air quality, and lack of exercise can detract from that quality. A walkable community can help reduce the impact of growth issues while improving the quality of life of residents.

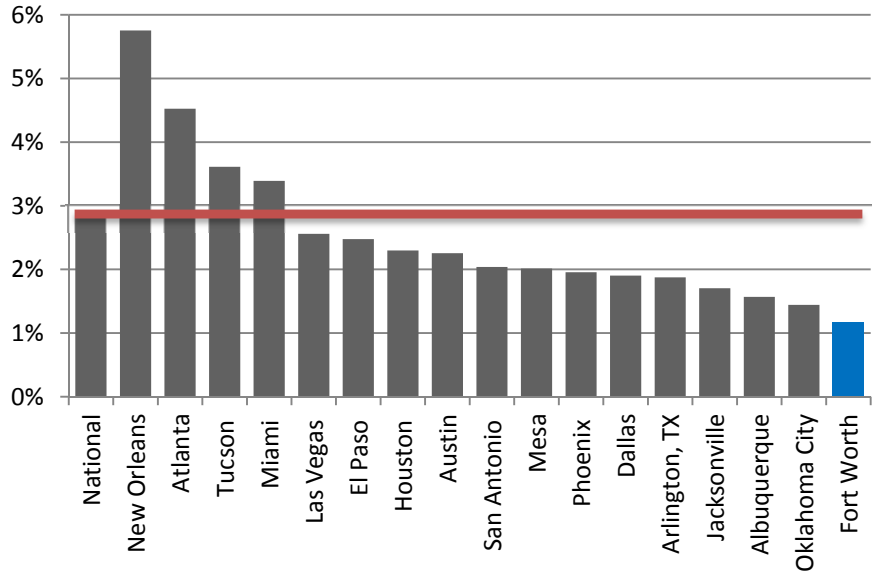
Throughout the City, pedestrian infrastructure conditions are varied due to the development patterns and city ordinances relating to the installation of sidewalks throughout the years. Many streets have no sidewalk infrastructure, curb ramps, or crosswalks. Additionally, many streets have gaps in the sidewalk network or lack curb ramps necessary for the elderly and persons with disabilities.

EXISTING DATA

The City of Fort Worth has many sources of data to use when benchmarking success of pedestrian improvements. The American Community Survey, a product of the U.S. Census Bureau, can be used to track pedestrian trips over time. Using Texas Department of Transportation crash data gives valuable insight to the type and frequency of pedestrian crashes. The Tarrant County Public Health Department measures health indicators across the county.

WALKING AS TRANSPORTATION IN FORT WORTH

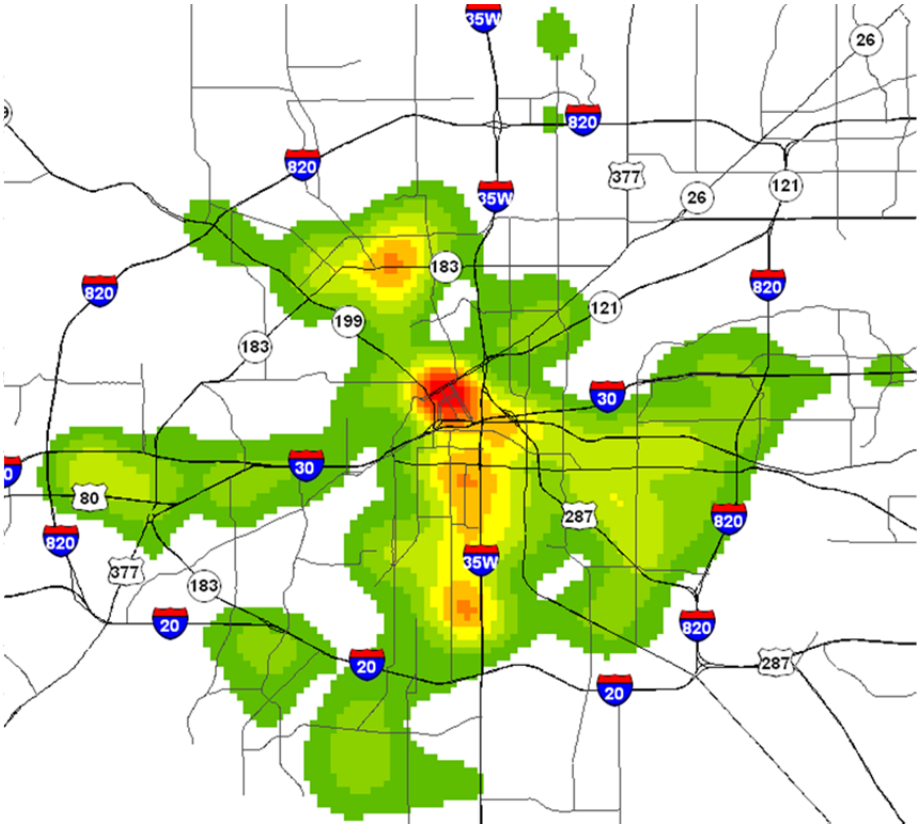
Since 2012, the Alliance for Walking and Bicycling has ranked Fort Worth last out of the 52 largest cities in walking trips in the biennial benchmarking report, even over other warm climate cities such as Phoenix, Miami, Dallas, and San Antonio. According to the 2012 American Community Survey (ACS), only 1.2 percent of trips were walking. If just two percent of residents chose to walk, use transit, or bicycle instead of driving, over 15,000 motor vehicles could be removed from the roadway network.



PERCENTAGE OF PEDESTRIAN TRIPS TO WORK IN SOUTHERN CLIMATES (ACS 2009)

FORT WORTH PEDESTRIAN SAFETY

The City of Fort Worth uses crash and fatality data from the Texas Department of Transportation. During the years 2005-2010, only 1.3 percent of roadway crashes involved a pedestrian, but represented close to 25 percent of the total roadway fatalities for that time. (TxDOT, 2012)



DENSITY OF PEDESTRIAN CRASHES IN FORT WORTH (MEDSTAR 2003-2011)

The Fort Worth Police Department reviewed pedestrian crashes for 2011 and reported the results using the Pedestrian Safety Guide and Countermeasure Selection System provided by the Federal Highway Administration. This program can assist in determine the type of crash and appropriate countermeasures to reduce the incidence of crashes. The most frequent identifiable crash type for this year was the dart/dash. This type of crash is defined as a pedestrian walking or running into the roadway at an intersection or midblock location and was then struck by a vehicle.

	Total Number	Percent of Total	Fatalities	Incapacitating Injuries
Dash / Dart	49	27.7%	1	16
Miscellaneous (no countermeasures provided)	38	21.5%	5	10
Turning Vehicle	32	18.1%	1	3
Backing Vehicle	14	7.9%	0	2
Through Vehicle at Unsignalized Intersection	12	6.8%	2	2
Crossing an Expressway	8	4.5%	6	1
Walking Along Roadway	7	4.0%	1	1
Through Vehicle at Signalized Intersection	6	3.4%	0	2
Working or Playing in Roadway	4	2.3%	0	1
Multiple Threat / Trapped	3	1.7%	0	1
Non-Roadway	3	1.7%	0	0
Bus-Related	1	0.6%	0	0
	177		16	39

FORT WORTH POLICE ANALYSIS OF 2011 PEDESTRIAN CRASH REPORTS

FORT WORTH HEALTH DATA

The Behavioral Risk Factor Surveillance System (BRFSS) is a nationally conducted random-digit-dialed telephone interview survey supported by the Centers for Disease Control and Prevention (CDC) along with the Tarrant County Public Health Department for the evaluation of health behaviors linked to chronic disease among non-institutionalized adults aged 18 years and older. The BRFSS examined physical activity levels among Tarrant County residents by analyzing the respondents' self-reported amount of time spent in either moderate or vigorous leisure-time physical activity. From October 2009 through February 2010, Tarrant County Public Health collected data for its third BRFSS; the first was completed in 1998 and the second in 2004. (Tarrant County Public Health Department)

The BRFSS found that almost half of Tarrant County residents aged 18 and older reported meeting the recommendations for physical activity, which is defined as 30 or more minutes of moderate physical activity per day for five or more days per week or 20 or more minutes of vigorous physical activity per day for three or more days per week. An estimated 19 percent of children 2-14 years old are obese; an estimated 28.2 percent of adults 18

and older are obese. The obesity-attributable health care spending for the state of Texas is estimated at over $5.7 billion annually.

Beginning in 2014, the City of Fort Worth will be participating in a Blue Zones Project, which will work with neighborhoods, schools, and business in a multi-year effort to improve the health and wellbeing of the citizens of Fort Worth. A key goal of the Blue Zones Project will be to improve the walkability of Fort Worth's neighborhoods, school zones, and commercial districts so the benefits of walking can be enjoyed by everyone.

FORT WORTH SIDEWALK INFRASTRUCTURE

The City of Fort Worth has nearly 3,500 linear miles of city streets, or about the same distance as flying from Brownsville Texas to Anchorage Alaska. Of that total, around 750 linear miles are arterial roadways. The main function of arterial roadways is to provide mobility for large numbers of motor vehicles and freight between communities. These roadways serve important functions to connect pedestrians within these communities as well. Safety and mobility for pedestrians is of paramount importance on these facilities because they are direct destination connections. See Appendix D for an inventory map of the high priority sidewalk corridors.

Of the miles analyzed for this study, only around 40 percent of arterials have sidewalks on both sides of the street. Overall, 60 percent of arterials and collectors were without sidewalks. Many of the areas without sidewalks are arterials built in the eastern and southern parts of Fort Worth without a sidewalk. However, many of the north and northwest arterials have yet to be built and are operated as two-lane county roads. These roads are being designed, built, or reconstructed with sidewalk infrastructure as funds become available. Additionally, some of these arterials are under the Texas Department of Transportation (TxDOT) operation and maintenance. East Lancaster, Jacksboro Highway, and Crowley Road are all roads that are maintained by TxDOT.

TxDOT also controls interstates, on-ramps and frontage roads, which total around 624 linear miles. And while walking on the interstates and on-ramps are not recommended, frontage roads are a main transportation link for pedestrians. A number of frontage roads have shoulders, as shown below. However, many pedestrians prefer to the safety of walking on the parkway away from the curb and fast moving vehicles. Additionally, on-street shoulders can suddenly disappear, potentially leaving a pedestrian in a dangerous position.

PEDESTRIAN WALKING ALONG IH-820 SERVICE ROAD NEAR RANDOL MILL

FORT WORTH TRAILS

Trails in Fort Worth can be in city parks, residential neighborhoods and along the river. Overall, the City has approximately 114 miles of walking trails, not counting sidewalks. These facilities are a great asset to the city, its residents, and visitors.

New residential developments are often constructed with amenities such as walking paths, benches, and playgrounds. These paths are great not only for exercise, but to bridge the gap where streets do not connect. Trails in residential neighborhoods can facilitate shorter pedestrian trips with more direct connections to other roadways, which can make walking a more efficient means of transportation.

FORT WORTH NEIGHBORHOOD WITH TRAILS CONNECTING A SCHOOL

FORT WORTH PEDESTRIAN SAFETY IMPROVEMENTS

In its commitment to improving the safety of pedestrians the City of Fort Worth has implemented several types of new pedestrian infrastructure and safety equipment.

Pedestrian countdown signals tell pedestrians how much time is left to cross the street before the crossing time runs out. It also reduces the number of pedestrians who initiate a crossing too late in the cycle. The City of Fort Worth has updated many traffic signals with countdown pedestrian signals. The city follows regulations in the Texas Manual for Uniform Traffic Control Devices (MUTCD) as stated in the city's Signal Design Guidelines, which requires use of this type of signal for all new and retrofitted traffic signals.

PEDESTRIAN COUNTDOWN SIGNAL

Due to the high number of pedestrian crossings in the Texas Christian University area, a *dedicated pedestrian traffic signal* was installed to facilitate student crossing of University Drive. Using a traffic signal, vehicular traffic is stopped on red to allow pedestrian crossings. A pedestrian-only traffic signal generally needs high numbers of pedestrians to warrant its installation.

DEDICATED PEDESTRIAN TRAFFIC SIGNAL ON UNIVERSITY DRIVE

Streetscape improvements along Fort Worth city streets have occurred mainly in designated Urban Villages where funding has been previously identified. These capital improvements are meant to upgrade the infrastructure and create an inviting public space to encourage economic development. The projects undertaken thus far have included improvements to the pedestrian realm including wider sidewalks, safer street crossings, shade trees, and street furniture.

STREETSCAPE IMPROVEMENTS ON WEST BERRY

In 2011, The City passed a *Safe Passing Ordinance*, which is a protection for vulnerable road users while being passed by motor vehicles. The ordinance requires that motor vehicles pass with at least three feet of passing space, or six feet for commercial vehicles.

Studies have shown that in-street *yield to pedestrian signs* increase driver awareness of a pedestrian crossing and increase pedestrian confidence levels in crossing the street. These have been successfully used in downtown Fort Worth in areas of high pedestrian crossings at unsignalized intersections.

IN-STREET PEDESTRIAN CROSSING SIGN AT CITY HALL

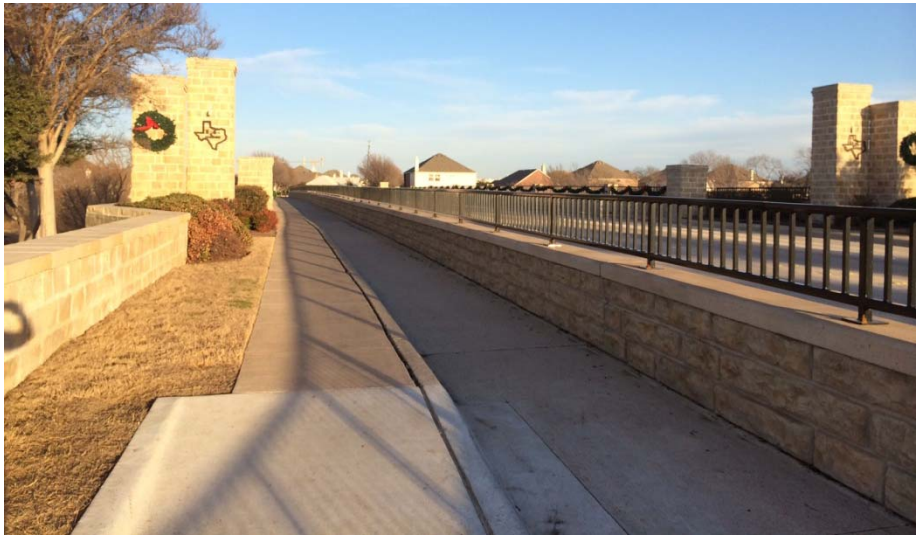
A *Rapid Rectangular Flash Beacon* (RRFB) is an amber-colored flashing light that is activated by a pedestrian before using a crosswalk to increase vehicle yielding at crosswalks. RFRBs are a visual cue that pedestrians may begin crossing the roadway at any time. They are accompanied by crosswalk markings and signs. Combined with signage and pavement markings, they have been shown to increase the percentage of motorists who stop for pedestrians from approximately 18 percent before the improvement to nearly 80 percent after. The City's first Rapid Flashing RRFB was installed on Seminary Drive at Rosemont Elementary to increase safety for children walking across the street. Other locations in Fort Worth are being considered for installation.

RAPID RECTANGULAR FLASHING BEACON INSTALLED
ON SEMINARY DRIVE AT ROSEMONT ELEMENTARY

Road diets are intended to reduce vehicle speeds and vehicle conflicts during lane changes, which can reduce the number and severity of vehicle-to-vehicle crashes. Pedestrians benefit because they have fewer lanes of traffic to cross, and because motor vehicles are likely to be moving more slowly. The City has installed over ten miles of road diets that have assisted in improving pedestrian and bicycle transportation safety.

ROAD DIET ON COMMERCE STREET DOWNTOWN REDUCED THE NUMBER OF LANES PEDESTRIANS NEEDED TO CROSS FROM FOUR TO TWO.

Several *new bridges* have been constructed or modified to enhance the pedestrian experience and encourage walking. The Clearfork Main Street Bridge opened in 2013 that features a separated pedestrian and bicycle bridge under the motor vehicle bridge connecting neighborhoods directly to the Trinity Trails. Other bridges including the West 7th Street Bridge over the Trinity River, Hulen Street over Chisholm Trail Parkway have provided enhanced pedestrian accommodations. The Phyllis Tilley Bridge over the Trinity River serves pedestrians and bicyclists and provides additional access to the Trinity Trails. Additionally, the Transportation and Public Works Department recently completed a retrofit to add a barrier protected walking/bike area across bridge over Harriet Creek for children to walk or bike safely to Clara Love Elementary School.



HARRIET CREEK DRIVE BRIDGE RETROFIT

These pedestrian safety improvements have been effective in facilitating safe pedestrian crossing of busy roadways and physical barriers. The City of Fort Worth should continue evaluating and implementing pedestrian safety improvements citywide.

SIDEWALK REPAIR AND MAINTENANCE

Under City Code the maintenance and repair of sidewalks is the responsibility of each individual property owner. Since sidewalks are typically within City right-of-way, the City reserves the right to inspect sidewalks and to notify property owners to make repairs when their sidewalks become unsafe. Where sidewalk repair or replacement is impractical due to physical conditions or lack of right-of-way, the city may elect to remove the sidewalk and return the property to grass. Common maintenance needs include removing weeds and repairing crumbling or sunken concrete. In the case of tree damage, the tree sometimes needs to be removed in order to repair the sidewalk.

TREE ROOTS CRUMBLING A SIDEWALK

COMMUNITY FACILITIES SIDEWALK POLICY

A community facilities agreement (CFA) is a contract between the City and a developer that is required whenever the construction of public infrastructure is funded entirely or in part by a private developer. It ensures that new development is adequately served by public infrastructure and that the infrastructure improvements are constructed according to City standards. In developing residential subdivisions, a sidewalk is constructed with the residential structure. However, subdivisions develop with open parcels lacking sidewalks, creating gaps in neighborhood sidewalk networks.

The relevant section of the policy states "In the case that a lot is not developed, the property owner will be responsible for the installation of sidewalk within five years of the date of street acceptance. Property owners of undeveloped lots will be notified on the five-year deadline that failure to construct sidewalks within 60 days of the date of the notice may result in the City constructing the sidewalks and filing a lien against the property for all costs and expense incurred by the City." Currently, this policy is not enforced; however, it is recommended the City begin enforcing this section of the Community Facilities Agreement Policy.

CHALLENGES TO INSTALLING AND REPAIRING SIDEWALK INFRASTRUCTURE

Installation and repair of sidewalks, while seemingly straightforward, can present challenges including funding and public opposition.

Funding. Sidewalk installation programs are generally limited by available funds. Depending on the topography, drainage needs, and necessity of purchasing right-of-way to construct the sidewalk from property owners, some sidewalk installation projects may be quite expensive. Currently, the City of Fort Worth has no annual funding dedicated to the construction and maintenance of sidewalks. However, $10 million was recently approved in the 2014 Bond Program. This plan proposes prioritization criteria (see Chapter 5) to help determine which projects are most needed. Additionally, issues such as utilities in the right-of-way, existing trees, topography, and number of driveways and intersections can increase the costs of sidewalk installations in certain areas.

Public demand. In some cases, established neighborhoods may not want sidewalks. This plan does not recommend that the City force sidewalks onto neighborhoods where most residents oppose their construction unless pedestrian safety or access is a concern. The City should develop a standard for determining whether sidewalks should be installed in a given neighborhood. If sidewalks are not desired by the neighborhood, the funding should be reallocated to areas where sidewalks are needed and wanted.

BARRIERS TO WALKING

The 2011 Pedestrian Survey conducted in Fort Worth asked respondents to rank from 1 (highest) to 10 (lowest), what personal and environmental factors limit you from walking in Fort Worth. The compiled ranking of answers of that question is below. Comments taken directly from the survey are included and appear in italics.

1. **No sidewalk or poor sidewalk condition.** Sidewalks provide a safe and level walkway, especially during wet weather and for people using wheelchairs, the elderly or people pushing a cart or stroller and provide separation between motor vehicles and pedestrians. Sidewalks significantly reduce pedestrian collisions with motor vehicles: For instance, one study found that in residential and mixed residential areas, pedestrian crashes were more than two times more likely to occur at locations without sidewalks.

   "There are many businesses near my residence that I would love to walk to, however I have children and I would not feel safe bringing them via walking to these places, mostly due to lack of sidewalks. We live less than one mile from my child's school, but I do not feel comfortable allowing him to walk, even when accompanied by an adult because of the lack of sidewalks, crossing guards and road quality in my area."

2. **Heavy or high-speed traffic.** Traffic speed can be critical to walkability and safety. While pedestrians may feel comfortable on streets that carry a lot of traffic at low speeds, higher speed traffic will discourage walking. Fast speeds increase the likelihood of pedestrians being hit and will make pedestrians feel uncomfortable. At higher speeds, motorists are less likely to see and react to a pedestrian, and even less likely to stop in time to avoid a crash. Higher speed crashes are much more lethal to pedestrians, with an 85 percent chance of a fatal injury to a pedestrian at 40 mph compared to a 5 percent chance of a fatality at 20 mph

   "Anywhere along Heritage Trace is extremely difficult to cross. This is especially true for families with children. Cars drive TOO fast and disregard the crosswalks."

3. **Places I need to go are beyond walking distance.** Land use practices that favor segregation of land uses and the concentration of commercial services along auto-dominated arterial corridors have increased the walking distance from residential land uses. Additionally, well-connected local streets help reduce walking or biking distances, provide more choices on travel, including the use of more local streets, at the same time dispersing vehicle traffic.

   "I would love to walk more in my neighborhood of West Meadowbrook but without destinations and business development, I drive out of my neighborhood. I'd love more business development in East Fort Worth to encourage more walking and bike riding."

4. **Dangerous or inattentive drivers.** Distracted or inattentive driving occurs when a driver engages in any activity that might distract them from the primary task of driving — and increases their risk of crashing. While many motorists may perceive driving as a routine activity, attentive driving is critical as the traffic environment changes constantly and drivers must be prepared to react. Pedestrians are especially at risk for being injured or killed in these situations.

   "The drivers that live there do not pay attention at all, and I had to stop counting how many times I've been nearly hit by a texter or someone going ten miles over the speed limit."

5. **Drivers not yielding or stopping for pedestrians crossing at driveways and intersections.** For pedestrians, every driveway and intersection is a potential conflict point. Vehicles pull in and out of commercial driveways continuously, and when driveways are designed like street intersections, turning speeds can be quite high.

   "I have had many close calls when I have had the right-of-way due to driver inattentiveness, left turn on red one way street to one way street, drivers not checking for pedestrian traffic, wrong way driver on one way street, etc."

6. **Weather (heat, rain, wind etc...).** In the heat of summer, weather can become a big obstacle for walking. Prolonged exposure can cause heat related illnesses, children and the elderly are especially at risk. Providing shade and water opportunities can reduce the exposure to heat related illnesses.

"Due to extreme hot weather, it would be good to have some resting areas, benches and water stations, available to cool off."

7. **Worries about personal safety.** Fears of crime, stray dogs, and bullying can contribute to the reduction of walking in neighborhoods and parks. Citywide, worries about personal safety did not appear to be a limiting factor in walking in the survey. However, many comments discussed issues with stray dogs, lack of lighting on the sidewalks, graffiti, and drugs as concerns.

   "Safety is the major concern with walking any distance. Most destinations have areas that are isolated or unsafe."

8. **Intersections are too wide and/or not enough time to cross intersections.** Typically, wide arterial streets have intersections that are even wider due to the addition of multiple turn lanes. They also often have large turning radii to allow larger vehicles, such as trucks and buses, to make turns easily and quickly. This requires pedestrians to cross extended distances and watch for more cars in more lanes, an often challenging and dangerous task. Skewed intersection designs and high vehicle right- and left-turn volumes at an intersection can also add complexity to the crossing task.

   "More time is needed on crosswalk signals at large intersections. An example is Bryant Irvin and Oakmont. When the light turns green for the traffic and pedestrians, almost immediately the caution starts signaling the pedestrian and a person must almost run to get across the street to beat oncoming traffic."

9. **Inadequate accommodations for people with mobility limitations (such as curb ramps).** Without curb ramps, sidewalk travel in urban areas can be dangerous, difficult, or even impossible for people who use wheelchairs, scooters, and other mobility devices. Curb ramps allow people with mobility disabilities to gain access to the sidewalks and to pass through center islands in streets. Otherwise, these individuals are forced to travel in streets and roadways and are put in danger or are prevented from reaching their destination; some people with disabilities may simply choose not to take this risk and will not venture out of their homes or communities.

   "We have many people in motorized wheelchairs in our area who are forced to use the side of the road to "drive on". It isn't safe."

10. **Physical ability.** Many elderly pedestrians and pedestrians with disabilities often travel by public transit to work, shop, or for recreational purposes to remain independent and active. All of these trips typically involve walking for at least some part of the trip. As frailty increases with age, citizens over the age of 65 continue to have the highest pedestrian fatality rates. If public transit is not reliable and streets are not easy or safe to cross and walk along, many seniors who do not drive must depend on transit, families, neighbors, or taxi services for rides—or they must remain homebound.

"I enjoy using the walking paths along the river. However, I do have arthritis in my hips and knees and need to take frequent rest breaks. There are not enough benches along the paths for me to take those breaks so I don't walk as often as I would like."