

TOWN OF NASHVILLE, NORTH CAROLINA

COMPREHENSIVE PEDESTRIAN PLAN



Developed in conjunction with the North
Carolina Department of Transportation



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STAKEHOLDER COMMITTEE MEMBERS

Louise Hinton
Preston Michell
Eugene Foxworth
Chief Bill Creech
Jim Glover
Bob League
Mary Meletiou

PLAN DEVELOPMENT TEAM

Staff Project Manager:	Eugene Foxworth, Planning Director, Town of Nashville
Consultant Project Team:	Chris Lukasina, AICP, GISP, Upper Coastal Plain Council of Governments Jessica Cain, Upper Coastal Plain Council of Governments

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TOWN OF NASHVILLE COMPREHENSIVE PEDESTRIAN PLAN EXECUTIVE SUMMARY

INTRODUCTION & PURPOSE

Walking is a part of just about every journey and trip made each day. The Nashville Comprehensive Pedestrian Plan is the first of this kind in Nashville. The Plan's purpose is to improve and encourage pedestrian transportation throughout the community. The process began in February of 2006 with field surveys of pedestrian facilities. Throughout the planning process an advisory committee made up of Town staff members, representatives from the community, and state and regional officials provided guidance and input that served the needs of the entire community.

The Plan focuses on creating an interconnected walking environment for all ages and abilities that is safe, efficient, and provides an alternative means of transportation to motor vehicle use as well as recreational opportunities. The Plan is composed of several sections that detail an inventory of existing facilities and programs, identify existing gaps and future needs, provide a set of goals and tangible objectives to meet those goals, and make recommendations for safety improvements as well as education and encouragement programs and policies. By encouraging walking as an alternative mode of transportation Nashville hopes to provide for a better quality of life in the community through reduced congestion and better air quality as well as to continue ongoing beautification effort and improved opportunities ofr healthy lifestyles.

PURPOSE

The Nashville Comprehensive Pedestrian Plan will help increase pedestrian activity over time by providing a convenient, interconnected, safe and inviting environment for walkers. Though the plan is not intended to solve every problem at the moment, the plan will serve as a framework for implementing new Town policies that include the importance of the pedestrian in planning. Goals of the plan include: Funding, Education, Connectivity, Policy, Maintenance, and Priority Projects. In support of these goals, the Plan creates a community-wide pedestrian network; recommends pedestrian friendly policies and identifies pedestrian projects.

DEVELOPING POLICIES, PROGRAMS & PROJECTS

An advisory team was formed to guide the development of the pedestrian plan. This team consisted of Town staff from Administration, Planning, Parks and Recreation, the Police Department, staff from the Rocky Mount Metropolitan Planning Organization, the North Carolina Department of Transportation Division of Bicycle & Pedestrian Transportation, and the Nashville Town Council. Throughout the process, pedestrian and other related experts were consulted, including representatives from the Federal Highway Administration and the United States Access Board.

The advisory team began the planning process by reviewing existing Town plans to identify previously documented pedestrian issues and recommendations. Through a community wide inventory of existing pedestrian facilities and areas of pedestrian related crashes, gaps and needs were identified in the pedestrian system. A community survey gathered information from the public concerning pedestrian issues. Once this information was gathered, a public workshop was held to collect additional input from the public and to identify the most critical pedestrian issues in the community (See Appendix B). Priority pedestrian corridors and future focus pedestrian corridors were identified that provide safe, convenient connectivity to major destinations (see Appendix A). These corridors provide the backbone for the pedestrian network and allow for connections and expansion to meet future development. Section 5 contains the full pedestrian network plan.

FUNDING

This plan identifies and proposes to study the use of several funding mechanisms to fund pedestrian projects and programs. Currently there is no annual construction and maintenance program to handle ongoing pedestrian projects. Establishing an annual maintenance program for community pedestrian facilities would provide a source of funds to maintain existing facilities and complete improvements to the pedestrian network that are identified in the plan. Grants from the state and the federal governments, incorporation of pedestrian facilities in TIP and widening or resurfacing projects can also assist in construction and maintenance costs. New policies such as requirements for pedestrian accommodation in new developments will also assist the Town in meeting improvement needs identified in the pedestrian network as well. Other options such as fee in lieu, community wide sidewalk fees or property owner requirements can also assist in funding improvements and maintenance of the pedestrian transportation network.

IMPLEMENTATION

Successful implementation of the Pedestrian Plan is dependent on the steps identified below:

- Establish partnerships with federal, state, municipal, and community groups that can assist the Town in development and maintenance of pedestrian facilities and programs.
- Allocate Town resources to develop and ensure the consistent application of standards that are pedestrian friendly.
- Support the creation and development of a citizen led pedestrian advocacy group.
- Actively pursue alternative funding mechanisms to help finance sidewalk and pedestrian infrastructure.



CONCLUSION

Nashville is a wonderful community that has the potential to be one of the great walkable communities in North Carolina. However, after many years of planning for the automobile, improvements are necessary to reclaim sidewalks and re-validate walking as a viable mode of transportation.

The Nashville Comprehensive Pedestrian Plan is an important document because it enables Town staff to make consistent decisions that will affect the pedestrian mode of transportation in positive ways. By setting the stage for pedestrian policy discussions it promotes efficient use of resources that provide a well connected pedestrian network that increases safety and encourages the community to live a healthy and active lifestyle while meeting the needs of all members of the community. This plan is the beginning of the process and through continued updates the Town will be able to monitor improvements to pedestrian opportunities in the community. Nashville should be committed to the periodic review and update of the Nashville Comprehensive Pedestrian Plan to review the policies, assess the accomplishments and identify new improvement projects. The continued implementation of the recommendations made in this and subsequent updates will require partnerships, funding, and a shared vision that walking is an easy, safe, necessary, enjoyable and viable transportation choice.



SECTION 1: INTRODUCTION & GOALS

INTRODUCTION AND GOALS

1.1 Introduction

The Town of Nashville Comprehensive Pedestrian Plan is the first of this kind in Nashville. The Plan's purpose is to improve and encourage pedestrian transportation throughout the community. The process began in January of 2006 with field surveys of pedestrian facilities. Throughout the planning process an advisory committee made up of Town staff members, North Carolina Department of Transportation officials, and community representatives provided guidance and input that served the needs of the entire community.

The Plan focuses on creating a safe, interconnected walking environment for all ages and abilities that provides an alternative means of transportation as well as recreational opportunities. The Plan is composed of several sections that detail an inventory of existing facilities and programs; identify of gaps and future needs; provide a set of goals and tangible objectives to meet those goals; and make recommendations for safety improvements as well as education and encouragement programs and policies. By encouraging walking as an alternative mode of transportation Nashville hopes to provide for a better quality of life in the community through reduced congestion, improved air quality, ongoing beautification efforts and improved opportunities for healthy lifestyles.

1.2 Goals and Objectives

Goals should be optimistic in nature yet anchored in a practical assessment of future resources and expectations. The Advisory Committee created several goals and objectives to assist in focusing the Plan on the needs of the community.

GOAL 1: FUNDING

Identification of adequate funding for existing and future pedestrian improvements, programs and projects.

Objective 1A: Establish a continual process for identifying grants and other outside funding sources and applying for those sources for new facilities and programs.

Objective 1B: Create a yearly budget to maintain existing facilities and improve the pedestrian network in existing development areas

GOAL 2: EDUCATION

Educate pedestrians, motorists and bicyclists about pedestrian safety and the benefits of walking through a variety of communication formats and other activities sponsored by the Town as well as civic groups.

Objective 2A: Create public education program that includes creation and distribution of educational brochures, posters, public service announcements, a website and other communication tools that focus on pedestrian safety issues and the healthful benefits of walking.

Objective 2B: Establish a Safe Routes to School program within the next 2 years.

Objective 2C: Establish pedestrian safety programs in Rocky Mount-Nash Schools, the Nashville Parks & Recreation Department and the Nashville Police Department within 5 years

GOAL 3: CONNECTIVITY

Create an interconnected network of pedestrian facilities that is accessible by all members of the community that links pedestrians with destinations throughout the Town and to other modes of transportation.

Objective 3A: Connect pedestrian attractors, such as schools, shopping centers, health care facilities, parks and public places to pedestrian generators.

Objective 3B: Link different types of pedestrian facilities (e.g. sidewalks, greenways, multi-use paths) together and with other modes of transportation, in particular transit.

Objective 3C: Define the primary pedestrian uses and needs on existing & proposed pedestrian facilities.

GOAL 4: POLICY

Establish development and construction policies to ensure pedestrian facilities are included in all new public and private projects in Nashville.

Objective 4A: Design development policies for all new public and private construction to accommodate pedestrian safety and accessibility.

Objective 4B: Broaden the use of existing and future utility easements to include appropriate pedestrian facilities.

Objective 4C: Request NCDOT provide pedestrian facilities on all new state maintained roadways.

GOAL 5: MAINTENANCE

Keep a well-maintained pedestrian network through sound program and project development

Objective 5A: Establish a regular maintenance program of existing public facilities within 5 years.

Objective 5B: Establish public/private partnerships such as an "Adopt a Trail" or "Adopt a sidewalk" program within 5 years.

SECTION 2: CURRENT CONDITIONS

2.1 CONTEXT FOR PEDESTRIAN PLANNING IN NASHVILLE

Section 2 identifies Nashville's current pedestrian needs and establishes a context for the Nashville Pedestrian Plan. This section describes the Town and its residents. An analysis of the community's demographics, socio-economic traits, travel behaviors and other characteristics that indicate the likelihood that an individual will choose to walk as a means of transportation is also included. Current conditions in Nashville have been evaluated and existing and proposed pedestrian facilities have been analyzed as well as land use, transit routes, schools and recreation facilities. Pedestrian involved crash statistics have been analyzed to better understand pedestrian safety needs in Nashville.

2.2 DEMOGRAPHICS

The Town of Nashville had a population of 4,309 in 2000 (2000 US Census) and a 2005 estimated population of 4,709 (ESRI Estimates). Between 2000 and 2004 it is estimated that the Town of Nashville experienced a growth rate of 5.4 percent, making it the fastest growing city in Nash County and one of the fastest growing small municipalities in North Carolina (NC State Data Center). Nashville is the second largest city in Nash County as well as the county seat and is a regional hub of commerce and community activities. Below is a summary of some of the demographic trends that are relevant to addressing pedestrian needs in Nashville.

Demographic Highlights:

- The Median Resident Age is 39.8 which is slightly higher than the median for North Carolina and the overall median age in the United States.
- A higher percentage of the population consists of minorities (40.3 percent) when compared to North Carolina (29.1 percent) and the United States (26.7 percent).
- 58 percent of households in Nashville have an average commute time of less than 20 minutes.

Population

Data compiled from the US Census Bureau for the 1990 and 2000 Census as well as estimates based on the 2000 Census indicate that 3,833 people lived in the Town of Nashville in 1990. By 2000 the population had grown by almost 12 percent to 4,309. In 2005 Nashville is estimated to have a population of 4,709. This growth trend is expected to continue resulting in an estimated population of 5,058 by 2010 as illustrated in Table 2-1. However, this demographic information does not take into account expected growth as a result of expansion and spillover from the Research Triangle region as it continues to grow to the east.

Table 2-1 Population			
	Nashville	NC	US
2000	4,309	8,049,313	281,421,906
2005	4,709	8,732,955	298,727,898
2010	5,058	9,408,689	317,430,845

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Age of the Population

With a median age of 39.8 the population of Nashville is slightly older than the median age of North Carolina (36.6) and the country (36.3). The portion of the population under the age of 15 is also marginally lower in Nashville (19.2 percent) than the state (20 percent) under 15 population or the national under 15 population (20.7 percent). This age group is typically the age group of children who walk or ride bicycles to school and recreational activities. Nashville's working age groups, those between the ages of 15 and 64 years is slightly lower than the state and national averages as shown in Table 2-2.

Table 2-2 2005 Population by Age			
	Nashville	NC	US
Under 15	876	1,746,601	61,879,546
15-19	302	580,239	21,232,647
20-24	278	606,200	21,478,165
25-34	573	1,225,054	39,333,411
35-44	742	1,358,821	44,836,907
45-54	652	1,237,447	42,478,515
55-64	515	912,410	29,967,155
65-74	330	569,623	18,836,951
Over 75	441	496,560	18,684,601

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Population by Race

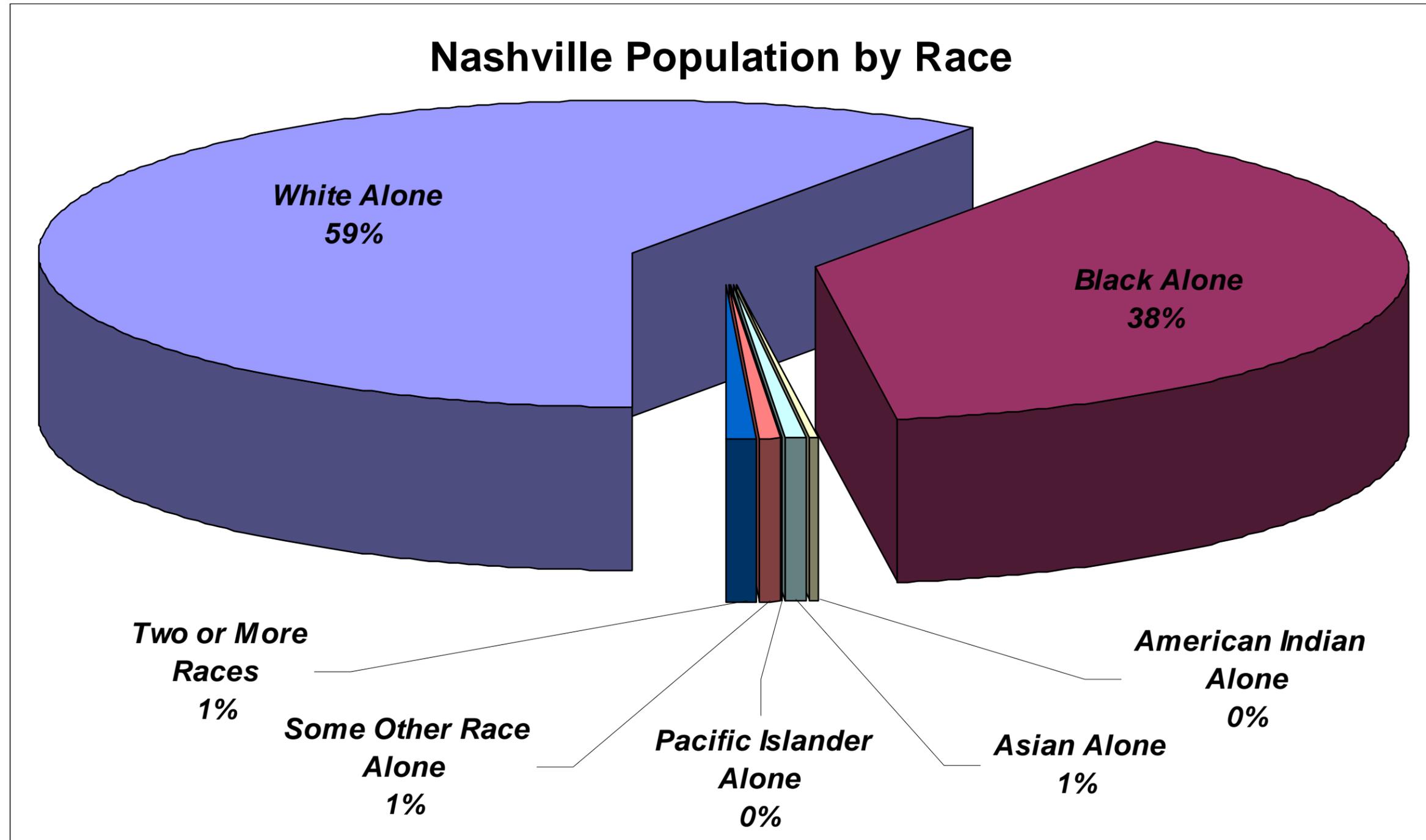
Minorities constitute 40.3 percent of the overall population in Nashville, making it home to a diverse community, especially when compared to minority population at the state and national levels. Black residents make up the largest minority group in Nashville with 37.9 percent of the population. Less than one percent of the population in Nashville identifies itself as a race other than Black, American Indian, Asian, or Pacific Islander alone. Approximately 1.3 percent of the population identify themselves ethnically as Hispanic which is significantly lower than the state and national averages (see Table 2-3).

Table 2-3 2005 Race and Ethnicity						
	Nashville	%	NC	%	US	%
White Alone	2,814	59.7%	6,191,665	70.9%	218,967,549	73.3%
Black Alone	1,785	37.9%	1,877,585	21.5%	37,340,987	12.5%
American Indian Alone	16	0.3%	104,795	1.2%	2,688,551	0.9%
Asian Alone	26	0.6%	157,193	1.8%	12,546,572	4.2%
Pacific Islander Alone	0	0.0%	8,733	0.1%	298,728	0.1%
Some Other Race Alone	34	0.7%	261,989	3.0%	18,819,858	6.3%
Two or More Races	35	0.7%	130,994	1.5%	8,065,653	2.7%
Hispanic Origin (Any Race)*	60	1.3%	506,511	5.8%	43,315,545	14.5%
Total	4,710	100%	8,732,955	100%	298,727,898	100%

*It should be noted that Hispanic is an ethnicity with a separate analysis.

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

FIGURE 2-1 Population by Race



(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Educational Attainment

Nashville has a higher percentage of high school graduates (36.3 percent) than the state or national averages and more than 20 percent of the population over the age of 25 has an associates degree or higher and an additional 18.5 percent of the population has some college education. Table 2-4 below compares the educational attainment of Nashville's over 25 population with North Carolina and the United States.

Table 2-4 2000 Population 25+ by Educational Attainment			
	Nashville	North Carolina	United States
Total Population 25 years and older	2,981	5,282,994	182,211,639
Less than 9th Grade	10.5%	7.8%	7.6%
9th - 12th Grade, No Diploma	14.0%	14.0%	12.1%
High School Graduate	36.3%	28.5%	28.6%
Some College, No Degree	18.5%	20.5%	21.1%
Associate Degree	5.5%	6.8%	6.3%
Bachelor's Degree	9.4%	15.3%	15.5%
Master's/Prof/Doctorate Degree	5.8%	7.2%	8.7%

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Housing

There are nearly 2,000 housing units in Nashville with approximately 63 percent occupied by owners and approximately 29 percent occupied on a rental basis. Just over seven percent of the housing stock is vacant (see Table 2-5).

Table 2-5 2005 Housing Units		
Total Units	1,983	100%
Owner	1,258	63.4%
Rental	578	29.1%
Vacant	147	7.4%

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

The 2005 median housing value in Nashville is estimated to be \$113,212. When compared statewide and nationally, housing in Nashville is more affordable than many other areas as shown in Table 2-6.

Table 2-6 2005 Median Home Value		
Nashville	NC	US
\$113,212	\$119,818	\$163,247

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Income

The 2005 estimated median household income in Nashville was \$42,003. This is a measure of the middle household income of all households in Nashville. Nashville's median household income increased by an estimated increase of \$6,189 from 2000. It is estimated that by 2010 this figure will increase by \$6,657 to \$48,660. For 2005 the estimated median household income in Nashville was lower than North Carolina and the nation (see Table 2-7).

Table 2-7 Median Household Income			
	Nashville	NC	US
2000	\$35,814	\$39,190	\$42,164
2005	\$42,003	\$44,845	\$49,747
2010	\$48,660	\$51,350	\$58,384

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Nashville's poverty levels are also lower than North Carolina's rate and the national rate. Nashville reported an overall poverty level of 10.5 percent as of 1999 while the state reported 12.3 percent and the country reported 12.4 percent in that year (see Table 2-8 & Table 2-9 below).

Table 2-8 Poverty Rate (1999)			
	Nashville	NC	US
	10.5%	12.3%	12.4%

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Table 2-9 Nashville Poverty Rates (1999)						
	Nashville	%	NC	%	US	%
Total Individuals living in Poverty	417	10.5	958,667	12.3	33,899,812	12.4
18 years and over	328	10.7	647,614	11	22,152,954	10.9
65 years and over	89	15.6	122,248	13.2	3,287,774	9.9
Related children under 18 years	89	10	301,899	15.7	11,386,031	16.1
Related children 5 to 17 years	66	9.4	207,269	14.9	7,974,006	15.4
Unrelated individuals 15 years and over	95	36	320,479	24.2	10,721,935	22.7

(Source: US Census Bureau, 2000 Census of Population & Housing SF3 & ESRI Forecasts for 2005 & 2010)

Major Employers

The Town of Nashville is the county seat of Nash County and has a business community that continues to grow with the Town. Retail and Manufacturing are the largest employers in Nash County as well as Nashville. Table 2-10 below contains a list of the major employers and their respective products.

Table 2-10 Major Employers	
Name	Product
Atlantic Cheese	Cheese Converting & Redistribution
Braswell Foods	Egg Production & Mill Feeding
Carolina Steel	Fabricated Highway Girders
Cavalier Home Builders	Manufactured Homes
Fawn Electronics	Electronic & Electromechanical Assemblies
Nash-Rocky Mount Schools	Education
Perdue Feed Company	Chicken Feed
Sweet Concepts Inc.	Candy
Tortillas San Antonio Inc.	Food Production

(Source: Carolinas Gateway Partnership)

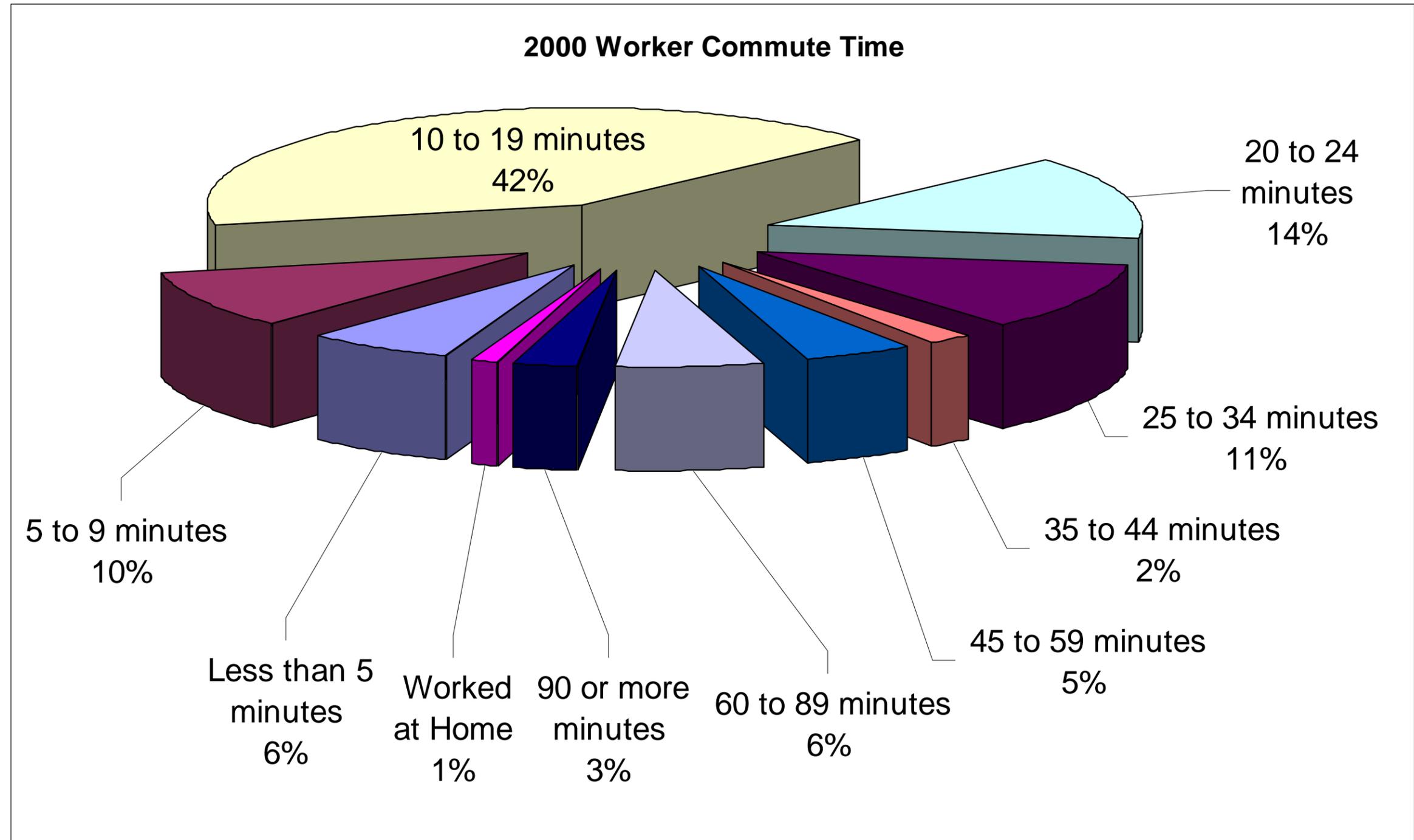
Work Commute

The daily work commute in Nashville for the majority of those 16 years or older is less than 20 minutes across all modes of transportation. This includes 41.7 percent with a daily commute of between 10 and 19 minutes and 16.2 percent with a daily commute of less than 10 minutes. However 41 percent of daily work commutes in Nashville are trips with a duration of 20 minutes or more. The average commute time in Nashville is 23.6 minutes. This information indicates that many of Nashville's work commuters could take advantage of the pedestrian network in Nashville. However, it is more likely that the 113 people in the "Less than 5 minutes" would walk rather than the "5 to 9 minutes" category. Table 2-11 below compares Nashville commute times with North Carolina and the rest of the United States. This is further illustrated in Figure 2-2 below.

Table 2-11 2000 Workers 16+ by Travel Time to Work						
	Nashville	%	NC	%	US	%
Total	1,767		3,837,773		128,279,228	
Did Not Work at Home	1,749	99.0%	3,734,153	97.3%	124,046,013	96.7%
Less than 5 minutes	113	6.4%	111,295	2.9%	4,233,215	3.3%
5 to 9 minutes	173	9.8%	391,453	10.2%	13,725,877	10.7%
10 to 19 minutes	737	41.7%	1,274,141	33.2%	38,227,210	29.8%
20 to 24 minutes	244	13.8%	594,855	15.5%	17,959,092	14.0%
25 to 34 minutes	203	11.5%	721,501	18.8%	23,603,378	18.4%
35 to 44 minutes	35	2.0%	191,889	5.0%	7,311,916	5.7%
45 to 59 minutes	81	4.6%	234,104	6.1%	9,236,104	7.2%
60 to 89 minutes	115	6.5%	130,484	3.4%	6,413,961	5.0%
90 or more minutes	49	2.8%	84,431	2.2%	3,463,539	2.7%
Worked at Home	18	1.0%	103,620	2.7%	4,233,215	3.3%
Average Travel Time to Work (in min)		23.6		24		25.5

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

FIGURE 2-2 Worker Commute Time



(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

Vehicle Availability

Nearly 150 households in Nashville or 9.2 percent of all Nashville households do not have a vehicle readily available when needed. This rate is nearly two percent higher than the state overall (7.5 percent) as indicated in Table 2-12.

Table 2-12 2000 Households Vehicles Availability						
	Nashville	%	NC	%	US	%
Total	1,617	100.0%	3,132,013	100%	105,480,101	100%
None	149	9.2%	234,901	7.5%	10,864,450	10.3%
1	559	34.6%	1,011,640	32.3%	36,074,195	34.2%
2	605	37.4%	1,249,673	39.9%	40,504,359	38.4%
3	218	13.5%	466,670	14.9%	13,185,013	12.5%
4	48	3.0%	125,281	4.0%	3,586,323	3.4%
5+	38	2.4%	43,848	1.4%	1,371,241	1.3%
Average Number of Vehicles Available	1.8	-	1.8	-	1.7	-

(Source: US Census Bureau, 2000 Census of Population & Housing & ESRI Forecasts for 2005 & 2010)

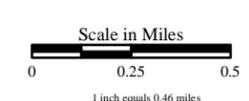
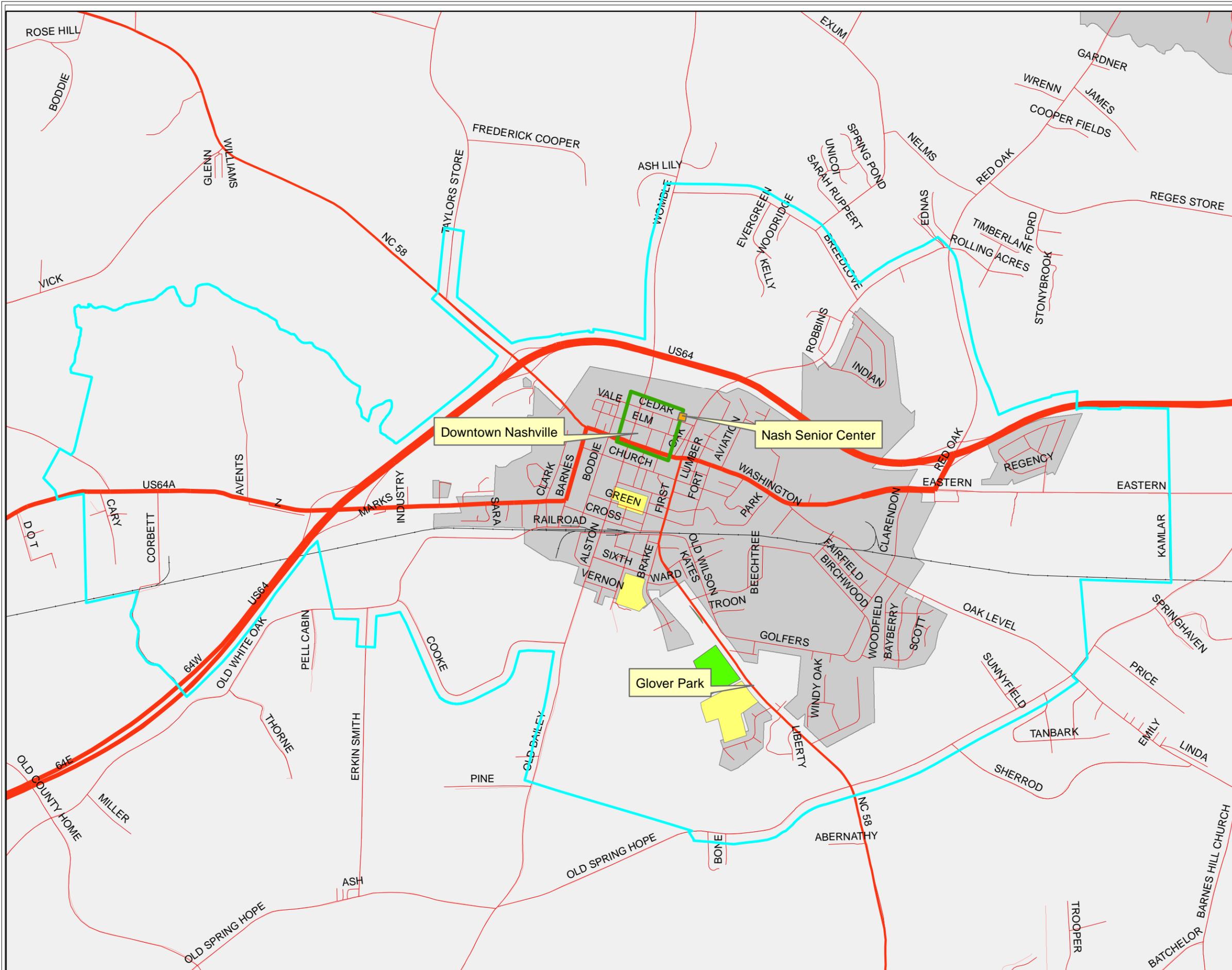
2.3 EXISTING CONDITIONS

Road Network

Nashville is an interconnected city with access from Rocky Mount and points to the east via U.S. Highway 64. Nashville is connected to Raleigh and points to the west from U.S. Highway 64 as well. N.C. Highway 58 provides access from points to the north or south while the Interstate 95 corridor is a short drive to the east of Town. Within the Town of Nashville N.C. Highway 58 serves as the major north-south corridor. U.S. Highway 64 and U.S. Highway 64 Business/Washington Street are the major east-west routes through the Town. Other key roads include U.S. Highway 64 Alternate, Oak Level Road, Church and Old Bailey Streets. (see Figure 2-3).

U.S. Highway 64 and Interstate 95 are full access control facilities designed for higher levels of vehicle mobility with no pedestrian accommodation. Both N.C. Highway 58 and U.S. Highway 64 Business/Washington Street have intermittent pedestrian facilities with more pedestrian accommodation along those road sections closer in to the downtown Nashville area. Further information about pedestrian facility location is discussed later in this section and illustrated in Figure 2-4.

Existing Road Network (FIGURE 2-3)



Legend

- NCDOT Primary Roads**
 - Interstate
 - US Route
 - NC Route
- NCDOT Secondary Roads
- Streets
- Railroad
- County Boundaries
- ETJ
- Municipalities
- Major Surface Hydrography
- Nashville Schools
- Parks

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 Rocky Mount, North Carolina 27807-2748
 (252) 446-0411 • www.ucpcog.org

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Existing Transit Network

While there is currently no fixed route transit network in Nashville, the Town is still served by van pool and on demand transit services. All transit riders are pedestrians at various points during their journey. Good pedestrian access to the future transit network can encourage ridership while reducing traffic congestion and increasing intermodal connectivity.

Existing & Planned Pedestrian Network

Nashville's existing pedestrian facilities are most concentrated within and in close proximity to the downtown area. The majority of the existing pedestrian network consists of sidewalks of varying widths, age and condition. This network provides access to downtown businesses and access to many town and county services. As distance from the downtown area increases the pedestrian network coverage begins to decrease, thus outlying areas of Nashville are provided notably less access to pedestrian facilities. Residential areas are of particular note as these areas tend to have the highest rate of pedestrian and motor vehicle interaction. Older residential areas such as those in historic districts or close to downtown have pedestrian facilities. Overall the pedestrian network in these areas is well established, with some portions in need of maintenance or upgrade. In contrast many contemporary residential areas have little access to safe pedestrian facilities (see Figure 2-4).

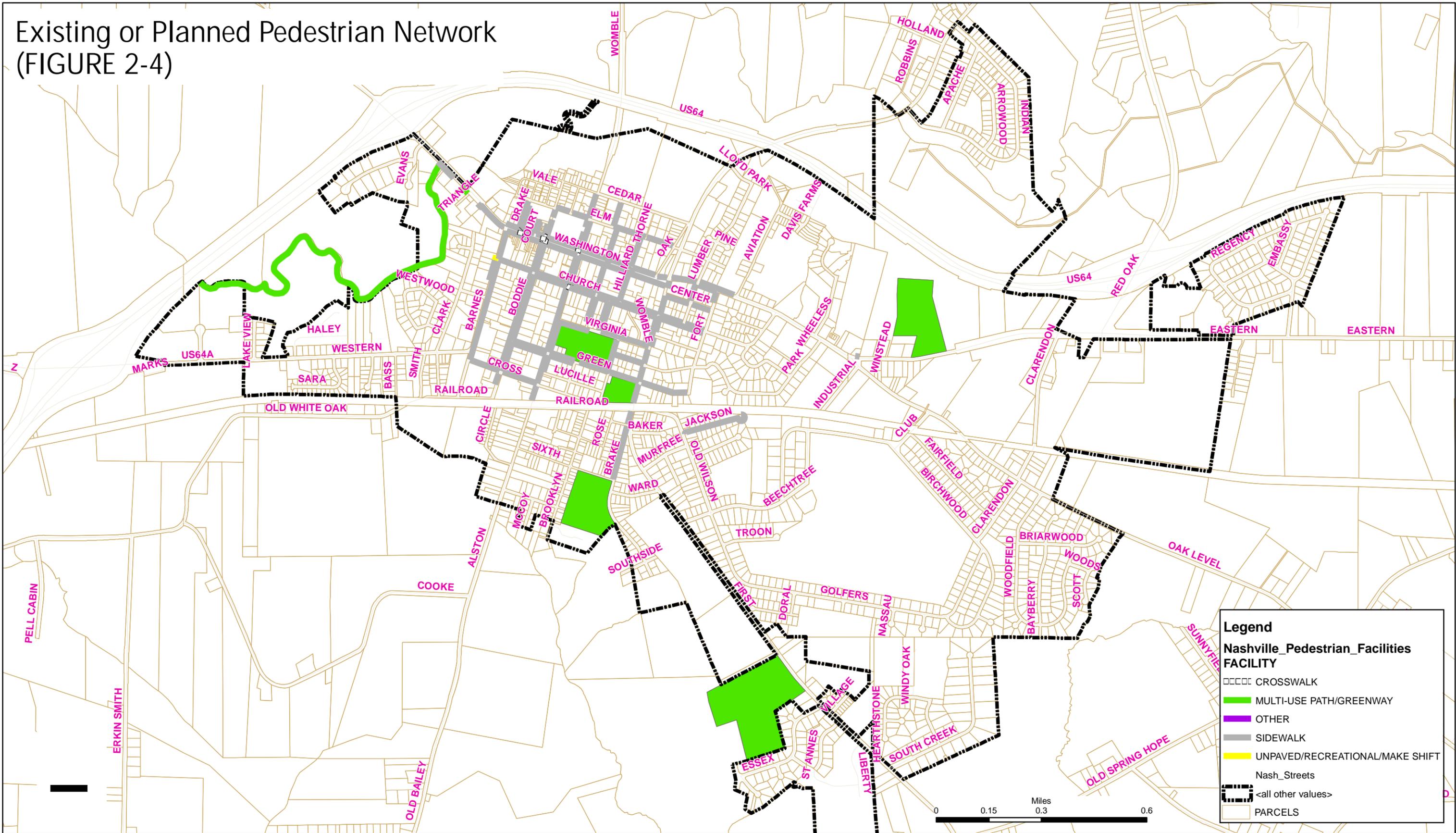
Nashville is developing a greenway on the south side of U.S. Highway 64 that runs roughly parallel to highway from near the intersection of U.S. Highway 64 and U.S. Highway 64 Business. The Town is also actively seeking greenway connections to several subdivisions north of U.S. Highway 64. Another greenway is under development that will connect Glover Park with Brake Street residential areas west of N.C. Highway 58 on the south side of Nashville as well as the central portion of Nashville. The Town is also utilizing Enhancement Grant monies and local funding to repair existing pedestrian facilities at several locations throughout Nashville as well as installing new facilities to fill in gaps along U.S. Highway 64 Business/Washington Street on the east side of downtown Nashville.

Nashville Elementary School is connected to one of the older portions of the pedestrian network. As such the sidewalks immediately adjacent to the elementary school are in need of repair and upgrades as described in Appendix A. Pedestrian accommodation around the Nash Central Middle school is improving as planning work on the greenway connection to Glover Park and ultimately the residential neighborhoods along Brake Street are completed.

Major Destinations (post office, City Hall, Mall, Library, Hospital...)

From the businesses and municipal attractions downtown to the many shopping and activity centers throughout the rest of the community Nashville offers many major destinations and attractions to citizens and visitors. Destinations located in the downtown area are well served by the pedestrian network. Other attractions such as shopping centers, medical facilities, historic sites and major employers should eventually be tied into the pedestrian network. Doing so will not only increase their accessibility, especially to those members of the community with little or no access to personal vehicles, but may contribute to a reduction in traffic congestion and improvements in air quality and overall public health (see Figure 2-5 below).

Existing or Planned Pedestrian Network
(FIGURE 2-4)

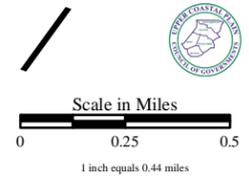
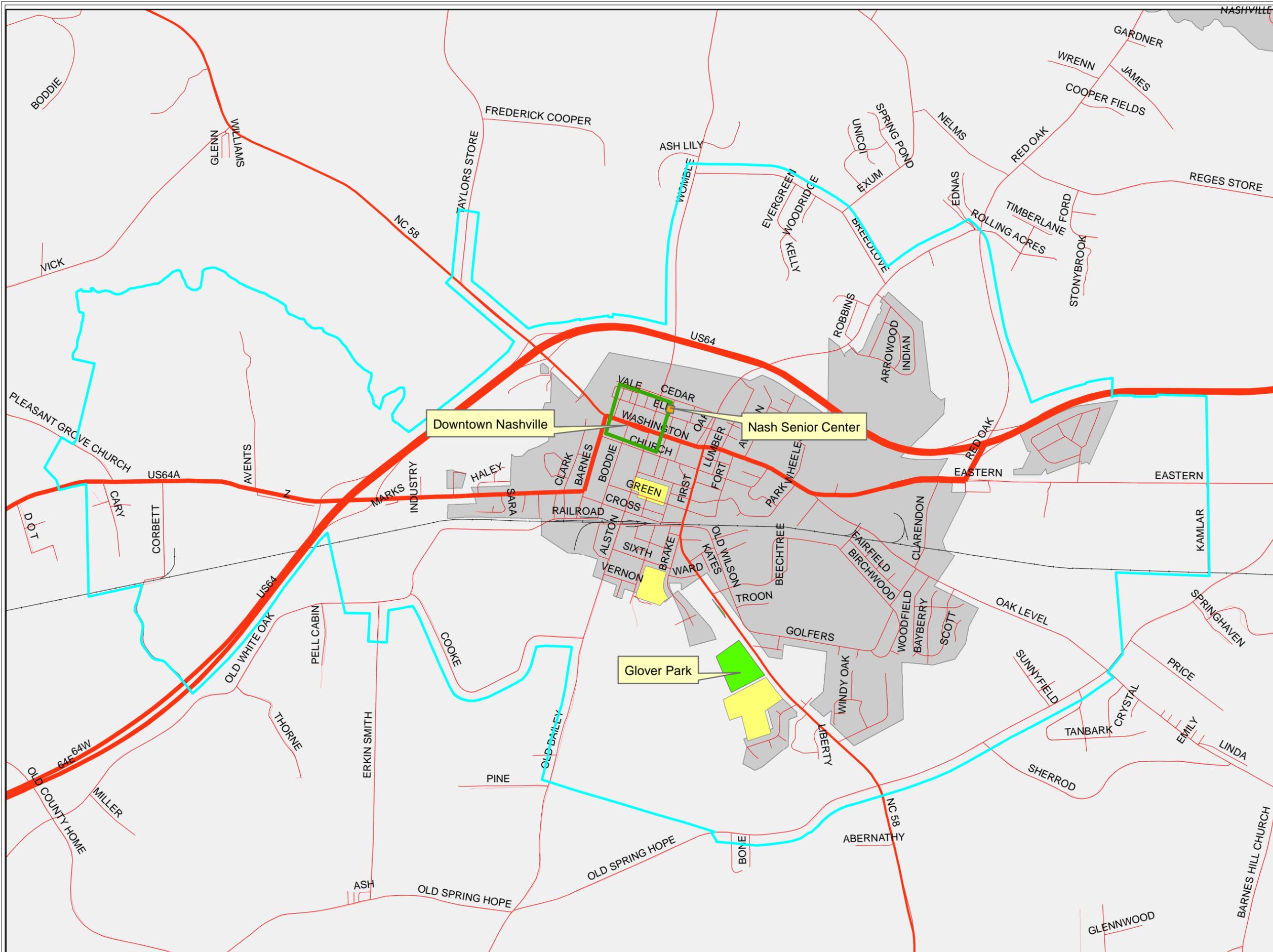


Legend

Nashville Pedestrian Facilities FACILITY

- CROSSWALK
- MULTI-USE PATH/GREENWAY
- OTHER
- SIDEWALK
- UNPAVED/RECREATIONAL/MAKE SHIFT
- Nash_Streets
- <all other values>
- PARCELS

Nashville's Major Destinations (FIGURE 2-5)



Legend

- NCDOT Primary Roads**
 - Interstate
 - US Route
 - NC Route
 - NCDOT Secondary Roads
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Schools

The Nash-Rocky Mount School System consists of 18,290 students and 2,340 teachers and staff. Within the Town of Nashville there are three public schools with 132 teachers that serve 1,630 students including one elementary school with 762 students and 55 staff members; one middle school with 802 students and 63 staff members, and one alternative education school with 66 students and 14 staff members (see Table 2-13 below). Currently pedestrian network access to education facilities is intermittent or incomplete resulting in students walking on dirt paths along arterials, on city streets with vehicular traffic, or across private property. Providing readily accessible pedestrian network opportunities will reduce pedestrian related crashes in these areas (see Figure 2-6 below). Pedestrian improvements in these areas could provide other benefits such as reduced congestion around school sites, improved air quality and a reduction in erosion in areas where pedestrian facilities were previously not located or in disrepair. New programs such as the Safe Routes to School program may be able to provide assistance to Nashville that could result in a safer walking or cycling trip to school for children as well as teachers and staff.

Table 2-13 Town of Nashville Schools			
Type	School	Enrollment	Teachers/Staff
Traditional	Nash Central Middle	802	63
Traditional	Nashville Elementary	762	55
Alternative Ed.	W L Greene Alternative	66	14

(Source: NC Department of Public Instruction, Nash-Rocky Mount Public Schools)

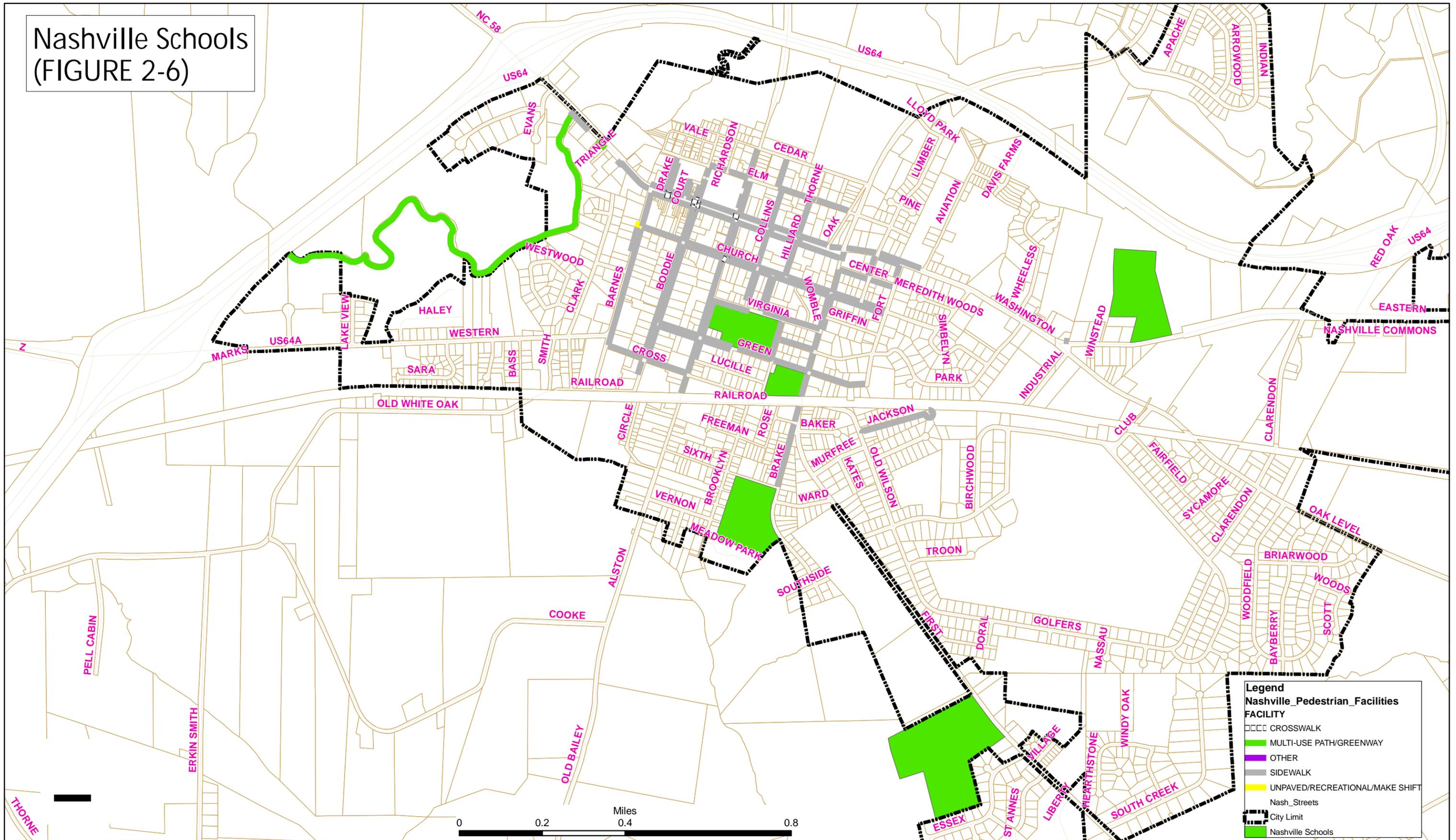
Recreation Facilities

The Nashville Parks and Recreation Department operates two recreational facilities throughout the community as shown in Figure 2-7 below. These locations have pedestrian facilities associated with them including sidewalks located within and adjacent to each recreation facility. The planned greenway link between Glover Park and Brake Street will serve as an excellent alternative for driving trips to the park as well as the adjacent Nash Central Middle School. By comprehensively tying these facilities into the pedestrian network and promoting pedestrian friendly education and encouragement programs the community can reduce traffic congestion, improve transportation safety and promote community health and wellness.

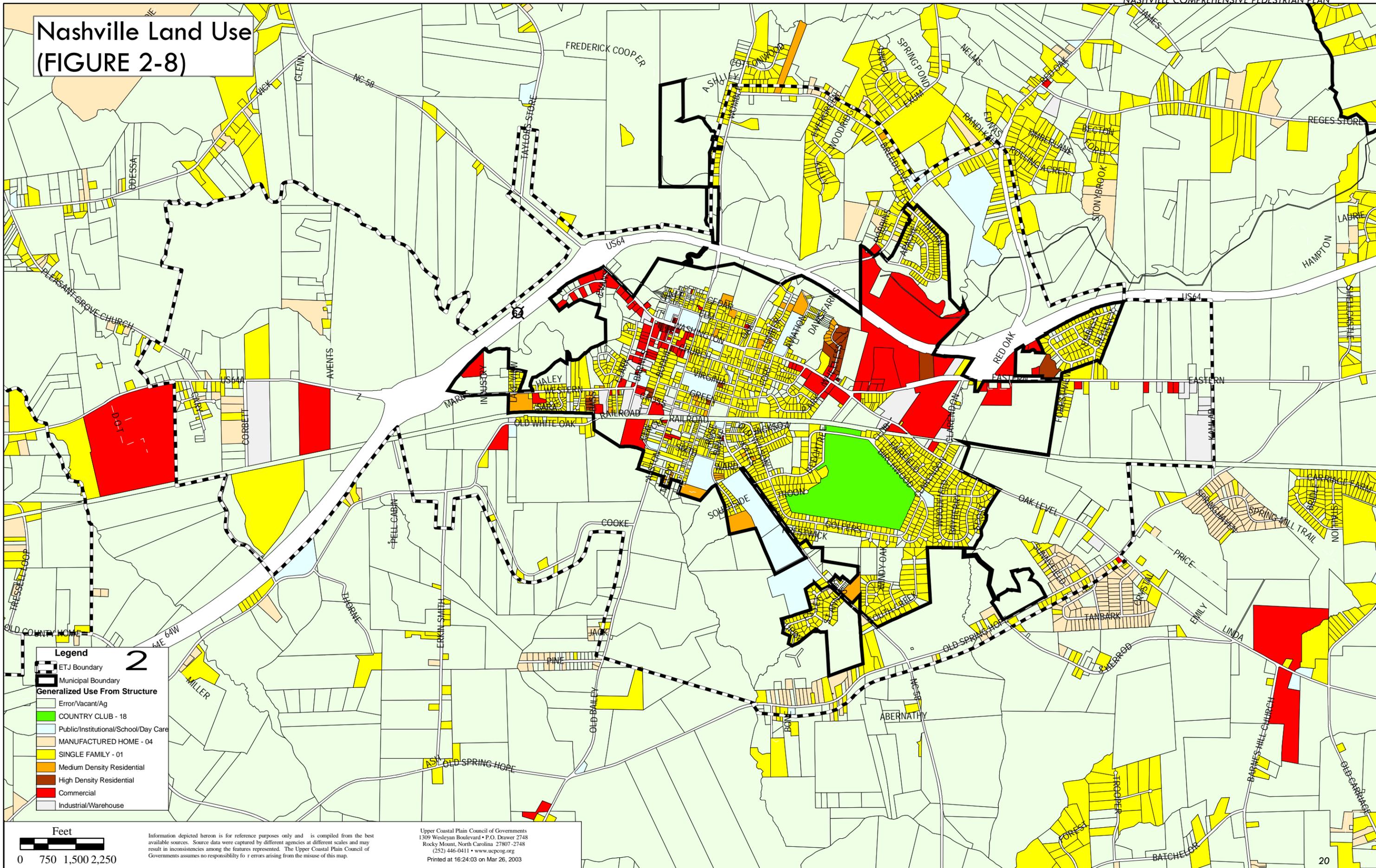
Existing Land Use

A variety of land uses can be found throughout the Town of Nashville. These range from commercial developments and industrial locations to single family residential subdivisions and community facilities. Commercial concentrations are located in the downtown area as well as at the intersection of US 64 and NC 58 to the west of downtown Nashville and at the Red Oak Road interchange of US 64 near the right side of the map. Like other modes of transportation, an integrated pedestrian network with good connectivity between these commercial areas and the many residential neighborhoods is key to promoting walking as a viable transportation mode in the community. General land use is show in Figure 2-8 below.

Nashville Schools
(FIGURE 2-6)



Nashville Land Use (FIGURE 2-8)



Legend

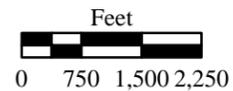
ETJ Boundary

Municipal Boundary

Generalized Use From Structure

- Error/Vacant/Ag
- COUNTRY CLUB - 18
- Public/Institutional/School/Day Care
- MANUFACTURED HOME - 04
- SINGLE FAMILY - 01
- Medium Density Residential
- High Density Residential
- Commercial
- Industrial/Warehouse

2



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2.4 CRASH DATA ANALYSIS

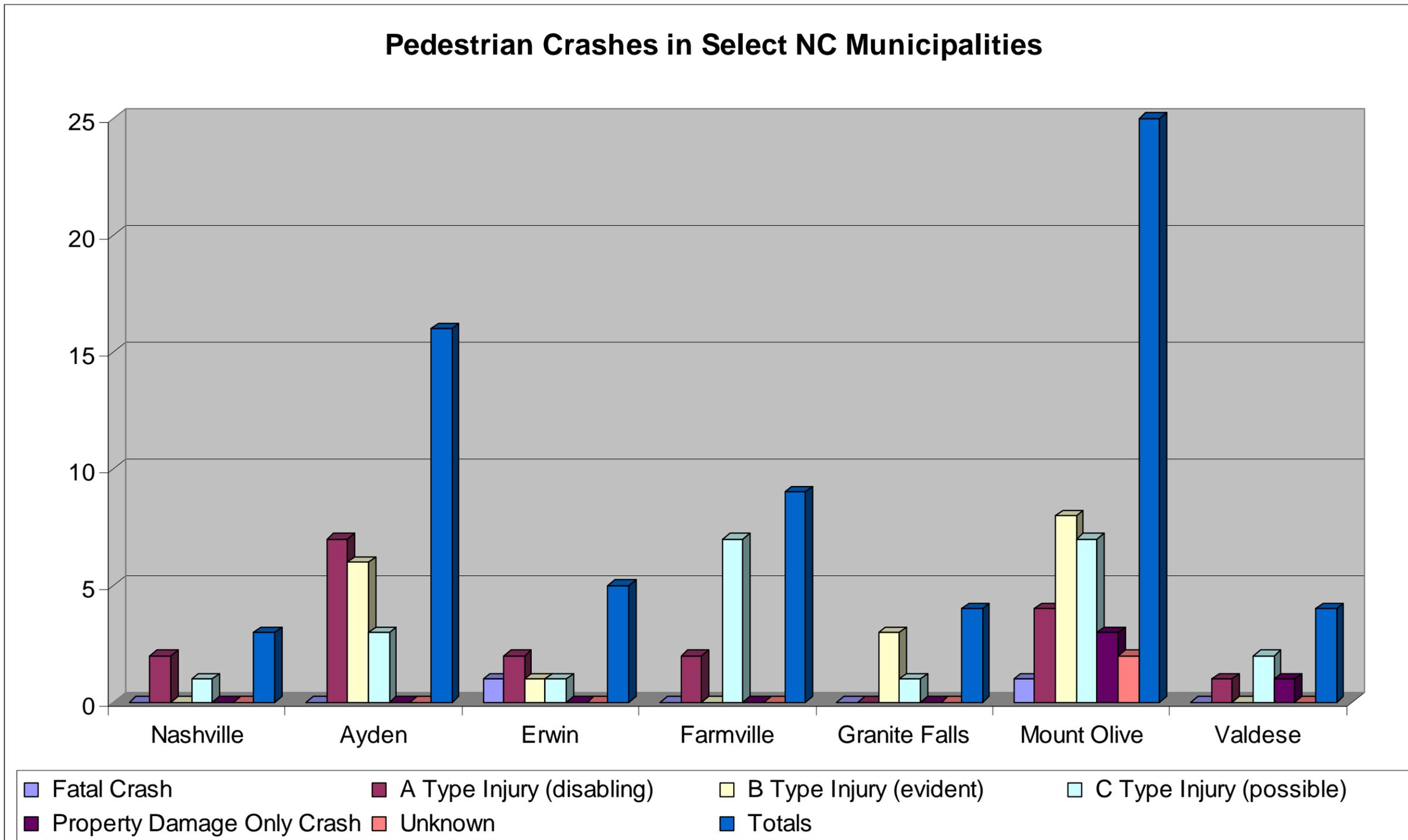
The Town of Nashville experienced 3 pedestrian-vehicle related crashes between 1997 and 2004. One crash was Type C (possible injury). Two crashes were Type A (injury disabling) as indicated below in Table 2-14. Figure 2-9 compares pedestrian related crashes in Nashville to other North Carolina communities that are similar in size. These results indicate Nashville has a lower reported pedestrian related crash rate than communities of similar size in North Carolina. Nashville also experienced less disabling (type A) and possible injury (type C) crashes than other similar municipalities.

Table 2-14 Nashville Pedestrian Crash Data - Crash Severity Table									
Crash Severity	1997	1998	1999	2000	2001	2002	2003	2004	Totals
Fatal Crash	0	0	0	0	0	0	0	0	0
A Type Injury (disabling)	1	0	0	0	0	1	0	0	2
B Type Injury (evident)	0	0	0	0	0	0	0	0	0
C Type Injury (possible)	0	0	0	0	0	0	1	0	1
Property Damage Only Crash	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0
Totals	1	0	0	0	0	1	1	0	3

(Source: <http://www.pedbikeinfo.org/pbcat/index.htm>)

Figure 2-9 Pedestrian Crashes throughout North Carolina

Pedestrian Crashes in Select NC Municipalities



(Source: <http://www.pedbikeinfo.org/pbcat/index.htm>)

Crash Location

While it is possible for pedestrian involved crashes to occur anywhere pedestrians travel, pedestrian involved crashes occurring in Nashville took place either in a residential area on a local street or in a parking lot at a commercial establishment (see Table 2-15). This suggests that many pedestrians are walking on the street in residential subdivisions. This could also suggest a lack of adequate pedestrian facilities, existing pedestrian facilities that are in need of maintenance or an increased need for awareness, education and encouragement programs.

Table 2-15 Nashville Pedestrian Crashes by Location							
(1997-2004)							
Road Type (Classification)	FARMS - WOODS - PASTURES	RESIDENTIAL	COMMERCIAL	INSTITUTIONAL	INDUSTRIAL	UNKNOWN	TOTAL
	0	0	0	0	0	0	0
Interstate Route	0	0	0	0	0	0	0
United States Route	0	0	0	0	0	0	0
North Carolina Route	0	0	0	0	0	0	0
State Secondary Route	0	0	0	0	0	0	0
Local City Street	0	1	0	0	0	0	1
Public Vehicular Area (ex. Parking lot)	0	0	2	0	0	0	2
Private Property	0	0	0	0	0	0	0
Total	0	1	2	0	0	0	3

(Source: <http://www.pedbikeinfo.org/pbcat/index.htm>)

SECTION 3: EXISTING POLICIES, PLANS AND PROGRAMS

3.1 EXISTING PLANS, POLICIES, AND PROGRAMS

A review of information contained in other planning documents, plans, policies, ordinances, laws and manuals is needed to identify existing applicable programs, policies and project development as well as form recommendations for new initiatives. This section contains information about those documents and briefly examines their compatibility with pedestrian friendliness. A number of items were reviewed at the local level, including the following:

- *Town of Nashville Land Development Plan, 2000*
- *Town of Nashville Code of Ordinances & Subdivision Regulations*
- *Resolution for Pedestrian Plan, adopted November, 2005*
- *Town of Nashville Thoroughfare Plan, 1983*

3.2 LOCAL PLANS & POLICIES

Nashville Land Development Plan (NLDP)

The NLDP does an excellent job of setting policy for guiding growth that is consistent with the concept of organizing land use in the Town in a series of tiered development zones of increasing intensity and varied character. The NLDP communicates pedestrian access policy more strongly in terms of overall transportation accessibility than in terms of basic pedestrian purposes.

Recommendations

- A detailed definition of pedestrian-oriented development should be included in the plan.
- A Safe-Routes-To-School program should be developed, particularly in light of federal funding available through SAFETEA-LU, the federal transportation reauthorization that was passed by Congress and has recently been incorporated at the state level with NCDOT establishing a statewide coordinator to oversee the program in North Carolina.
- The relationship should be established between the redevelopment of existing areas, including residential neighborhoods, and how pedestrian facilities should be provided.
- The NLDP should specifically address the issue of walking on road shoulders in suburban and rural settings and/or where no sidewalks are available.
- The policy for crosswalks and other in-road pedestrian safety features should be explicitly discussed including policy details of design elements and best practices of these treatments.
- Pedestrian amenities and safety treatments such as benches, lighting, hand railings, drinking fountains, and way finding signage should be discussed. These amenities are important where sidewalks are provided in suburban settings for respite on long stretches, or for pedestrian safety in areas with more extreme slopes or other conditions exist.
- The NLDP should include a map of the existing pedestrian network and a map of desired future improvements including sidewalks, trails, and recommended roadway walking routes.

Town of Nashville Zoning Ordinance

The Town of Nashville Zoning Ordinance does not specifically address pedestrian access as a distinct element of any site development plan or requirement of any provision in the zoning ordinance. Recommendations to clarify and strengthen the Zoning Ordinance for pedestrian access include:

Recommendations

- *Definitions:* The Definitions section of the regulations should include pedestrian-related terminology.
- *Organization:* Consideration could be given to putting all pedestrian facility requirements in one comprehensive section with cross references in other, related sections.

- *Applications and Permits:* Consideration should be given to including the overall connectivity and convenience of pedestrian network as an application review factor.
- *Schedule of District Regulations:* Pedestrian facilities should be more comprehensively addressed within residential and commercial developments. This will acknowledge the need for safe pedestrian travel and safe roadway crossings as well as reduce short vehicle trips. The section should emphasize a continuous internal pedestrian network. These requirements could also be strengthened by placing strong emphasis on connectivity outside a development boundary.
- *Design standards:* Additional pedestrian network standards (in addition to those for open space design and how trails may be included in required open space calculations should be provided or direction on where to locate such standards) are recommended.
- *Infrastructure and public improvements:* Focus on sidewalk design might be strengthened by detailed requirements for other pedestrian circulation elements such as safe crosswalks, shade for sidewalks, and lighting. In addition, consideration should be given to linking sidewalk location and design requirements to the functional classification of streets which they border. This would allow sidewalk design to be tailored to the intensity of vehicle activity on the adjacent roadways and the level of pedestrian/vehicle interaction.
- *Off-street parking requirements:* Additional detail on how pedestrian access must be incorporated into parking lot design would be of great benefit.

Town of Nashville Subdivision Regulations

The Town of Nashville Subdivision Regulations were recently updated to include pedestrian facilities in design requirements. The regulations also discuss adequate transportation system improvements.

Recommendations

- *Design Recommendations:* Currently requirements for sidewalks call for installation on at least one side of any street. Consideration should be given to sidewalks on both sides of any street where appropriate.
- *Exemptions:* The regulations could ask for an easement across new lots where a connection to any existing or future sidewalks or trails is desirable. Consideration should also be given to establishing some mechanism for tracking small subdivisions over time and planning for the Town to provide connecting sidewalk or trail segments as needed within them.
- *Site Plan Checklist:* Nashville should develop a subdivision site plan checklist that includes pedestrian facilities to facilitate this process.
- *Preliminary and final plats:* Requirements for existing as well as proposed conditions information to be shown on plans should be expanded to include any sidewalk/greenway/trail elements contiguous with or near to the proposed development.
- *Cluster Development:* This section should be expanded to include requirements for convenient and safe pedestrian connectivity between new set-asides of open space and residences as well as other existing open space.
- *Construction Standards:* A single source of design standards should be referenced.
- *Design Review Board:* Consideration should be given to including a representative of the Pedestrian Advisory Committee and the Parks & Recreation Department to this group.
- *Fee in Lieu:* Establish a process by which a developer can pay a fee in lieu of construction of sidewalks in a development. The description of the circumstances under which this is permissible should be clear and concise.

Nashville Code of Ordinances

The Nashville Code of Ordinances codifies all of the regulations for the Town of Nashville and can serve as a comprehensive listing of pedestrian related laws and ordinances.

Recommendations

- *Streets and Sidewalks:* Update and consolidate text to include the newly adopted pedestrian facility requirements.
- *Parks and Recreation:* This section should be expanded to include greenway, multi-use path, and trail information
- *Trees:* Consideration should be given to include requirements for street trees that are conducive to the pedestrian environment in appropriate locations.
- *Bicycles on Sidewalks:* Consideration should be given to include prohibiting bicycle usage on sidewalks. This will reduce the potential for bicycle and pedestrian conflict.

Town of Nashville Thoroughfare Plan, 1983

The State of North Carolina has been producing Thoroughfare Plans as a part of its mission since the late 1950's. Nashville's first Thoroughfare Plan was adopted on June 24, 1965 and focused on recommending improvements to the highway and street network in the Town. In 1983 the North Carolina Department of Transportation worked with the community to develop an updated plan. The Nashville Thoroughfare Plan of 1983 provided for a hierarchical, functional road network and promoted the proper arrangement of land patterns by managing state and local roadways. In 2001 the North Carolina General Assembly (NCGS §136-66.2) established that the "coordinated transportation system" plan require that municipalities have an adopted transportation plan prior to receiving state transportation funds. As a result of this new legislation, specific provisions were in put in place to address pedestrian needs in Comprehensive Transportation Plans, the descendants of Thoroughfare Plans.

Recommendations

Develop an up to date multi-modal Comprehensive Transportation Plan that specifically incorporates the recommendations contained in the Pedestrian Plan including addressing the pedestrian network in terms of existing conditions, future needs, current and future access, and interconnectivity with other transportation modes. This will fulfill the NCGS requirement that "consideration shall be given to all transportation modes including, but not limited to, the street system, transit alternatives, bicycle, pedestrian, and operating strategies." Within a metropolitan planning organization (MPO), the MPO long-range transportation plan may provide guidance and coordination with the County and Rocky Mount. This will help to ensure the status of pedestrian planning recommendations in future transportation projects and applying to the state, federal and other funding sources for funds or other resources needed to construct or maintain such facilities.

3.3 FEDERAL GUIDANCE

The Federal Highway Administration (FHWA) of the United State Department of Transportation (USDOT) has released policy-level guidance concerning pedestrian and bicycle facilities (<http://www.fhwa.dot.gov/environment/bikeped/design.htm>), which was last updated in 2003. While this is a general document, it does include the statement that safe and convenient pedestrian facility considerations in future roadway improvements should be the norm, not the exception. Of particular value is the reference section, containing several valuable design references for pedestrian facilities as well as bicycle facilities.

Recommendations

- The Town of Nashville should work with federal agency staff and elected officials to better define what a "convenience" to a pedestrian is. While the guidance needs to respect the individuality of all state departments of transportation, it should also recognize the authority of metropolitan and rural planning organizations in the identification and prioritization of local policies pertaining to pedestrian facility programming and development.
- FHWA as well as American Association of State Highway Officials (AASHTO) and the Institute of Transportation Engineers have developed meaningful national pedestrian guidance documents. These are valuable resources on pedestrian practices and research and are used by the planning, design and engineering communities.
- *Federal Highway Administration, United States Department of Transportation* (<http://www.fhwa.dot.gov/Environment/bikeped/>). This website offers links to valuable Internet-based resources as well as specific federal guidance on programming and designing pedestrian projects. This includes the 1999 FHWA Memorandum, *Transmittal of Guidance on Bicycle and Pedestrian Provisions of the Federal-aid Program*.

- *Federal Highway Administration Manual on Uniform Transportation Control Devices (MUTCD)*, (<http://mutcd.fhwa.dot.gov/>). This website defines the standards used by road managers nationwide to install and maintain traffic control devices on all streets and highways. The MUTCD is published by the Federal Highway Administration (FHWA) under 23 Code of Federal Regulations (CFR), Part 655, Subpart F.
- *Institute of Transportation Engineers, Transportation Planning Handbook*
- *American Association of State Highway and Transportation Officials, Guide for the Development of Pedestrian Facilities.*

3.4 STATE GUIDANCE

NCDOT Pedestrian Policy

The State of North Carolina (NCDOT) adopted a policy on the provision of pedestrian facilities in 1993, and has provided guidance on the department's website (http://www.ncdot.org/transit/bicycle/laws/laws_pedpolicy.html). This guidance discusses incidental projects that are included as part of a roadway project. Notable features of the NCDOT policy include:

- NCDOT will pay 100% of the cost to replace existing sidewalk that is removed to facilitate the widening of a road.
- A sliding funding scale for sidewalk construction (Nashville, being under 10,000 in population is required to match 20% of the construction costs).
- Requirement to have right-of-way in fee simple ownership or in easement if not already within the berm width of the roadway.
- Bridges of less than 200' in length scheduled to be built or replaced will have sidewalk on both sides funded by NCDOT; bridges over 200' will have sidewalk on at least one side of the structure. This is true only if curb-and-gutter is present on both approaches leading to the bridge.
- There is no funding cap on the project cost, although "betterment" costs (e.g., decorative pavers) will be borne by the municipality.

NCDOT Greenway Administrative Process.

Adopted in 1994, the principal purpose of this policy is to ensure that, "where possible, within the policies of the Department," greenway access occurs during highway development and design, if the greenway is part of a locally-adopted plan. Justifications of highway crossings shall be made in priority order in the local planning document. It is important to note the transportation use of the facility as opposed to simply a recreational use to help justify future crossings of roadways that are widened or placed on new location across the greenway alignment. The complete Greenway Administrative Process is located at: http://www.ncdot.org/transit/bicycle/laws/laws_greenway_admin.html.

Recommendations

- The unwritten policy of maintaining the continuity of an adopted greenway through the provision of grade separated crossings at intersections with major roadway facilities should be spelled out in the policy.
- There is room to improve pedestrian policy to include rural, unincorporated areas. North Carolina General Statute does not allow counties to hold street or highway right-of-way. As such counties typically do not participate in any transportation construction or maintenance activities, including sidewalk maintenance. Cooperation such as a collective agreement by municipal, county, and state officials to arrive at a satisfactory conclusion on issues such as construction specifications outside of municipal extra-territorial jurisdiction (ETJ); and construction and maintenance of facilities in rural areas could ensure integrated pedestrian networks and the most effective use of available resources.
- The justifications for sidewalk construction on bridges should be clearly indicated, and some flexibility on the need for curb-and-guttering on bridge approaches should also be added and defined in the State's policy.
- Consideration to the consolidation of project selection criteria and TIP funding process documentation into a single source document would help people locate this information quickly and easily.

3.5 INSTALLING SIDEWALKS IN EXISTING NEIGHBORHOODS

Currently the Town of Nashville works to replace and install sidewalks in areas of existing development as safety requirements, budgetary constraints and other resources allow. Nashville has been successful in obtaining NCDOT Enhancement Grant funds to replace sidewalks needing maintenance as well as installing new facilities. A standardized policy with clear fiscal connections to the annual budget and a designated program coordinator are recommended. Nashville should devote a percentage of Powell Bill funds to the construction of new sidewalks and maintenance of existing sidewalks throughout the community. Many municipalities across North Carolina and throughout the United States have established similar programs. Some examples are below:

Cary, North Carolina

Each year the Town Council establishes a priority list of locations for annual sidewalk projects that have been requested by the Police Department and the community. The annual sidewalk priority list considers a number of factors including safety, use, need, and constructability. At least 70 percent of homeowners within the "area of influence" must sign a petition for requests to be considered.

Fayetteville, North Carolina

Property owners are assessed \$5/linear foot of sidewalk but in the six years of the program no one has taken advantage of this program. This may be due in part to the requirement that 51% of adjoining property owners sign a petition in support of the project. Developers may install sidewalks during development of a property or pay a fee-in-lieu of \$22/linear foot. Many developers feel the payment-in-lieu fees of \$22/linear foot are more expensive than the cost of installing sidewalks at the time of development.

Winston-Salem, NC

The City has been able to construct sidewalks at no cost to the residents as result of recent bond programs. There is currently no requirement for private developers to construct sidewalks as part of new development. However, the City is working on making ordinance revisions to change this. Winston-Salem has also raised the vehicle tax rate by \$10, half of which is to be used to fund new pedestrian projects (est. \$600,000 - \$1,000,000 annually).

Charlotte, North Carolina

To facilitate sidewalk projects, Charlotte has a new sidewalk policy in effect with four categories of ranking. A two-step process with a nomination and a petition are necessary for areas with traffic volume under 3,000 vehicles per day (vpd). If the location is near a school or a park in this category, then neither is required to initiate the process; 25% of the lots fronting the street on either side need to petition, in order to process the ranking, which the City does. When the project reaches the top of the ranking list, then meetings are held in the community for the top 10 projects. A second petition of 60% of the lots is required to get on the funding list (this is the same percentage that the City uses with their traffic calming program). If the residents choose to fund the project themselves, then the petition requires 51% of the property owners abutting the street to sign. A public hearing is also required for approval. If approved, then ALL property owners are assessed on both sides of the streets. Curb-and-gutter is not required for retrofitted sidewalk construction, but instead is determined on a case-by-case basis. Assessments for retrofitting sidewalk typically fall into the \$100-\$200 per linear foot range, with the assessment determined on a case-by-case basis.

3.6 EDUCATION, ENCOURAGEMENT & ENFORCEMENT PROGRAMS

Pedestrian education, encouragement, and enforcement programs can be sponsored by a wide range of organizations in a community. Parks and recreation departments, police departments, schools, health care providers and civic groups are all common sponsors of these programs. The following existing pedestrian-related programs were identified in Nashville.

Town Administration

The Parks & Recreation Department provides walking trails at Glover Park and encourages the community to walk as a form of physical activity and recreational pastime. The Town is currently working on several potential greenways to develop in the near future. These greenways would serve as recreation facilities as well as transportation facilities that connect the suburban fringe with the existing pedestrian network and downtown.

Rocky Mount-Nash School District

Pedestrian programs, which seek to educate, enforce, or encourage walking generally found in North Carolina's more rural communities where resources for programs are small and dispersed. Programs that do exist tend to focus on school children and use the school system for outreach. More recently walking has been encouraged as a form of physical activity. However, currently programs such as "walking school busses" and more formal walker safety programs do not exist. Nashville Elementary has been identified as an area of concern for pedestrian traffic, particularly during pick-up and drop-off times during the school year.

Healthcare Providers

The Nashville Senior Center has established an urban "walking trail" through the neighborhoods that are adjacent to downtown Nashville. The Center distributes brochures showing the trail, cross streets and the location of benches and designated rest areas. The walking trail is used for exercise and recovery/rehabilitation programs. Programs that encourage healthy diets and physical activity are on-going. The Nash County aging program and the Area Agency on Aging are developing Senior Friendly Community programs that include walkability surveys of the transportation network as well as access to public facilities and private businesses. Organizations can be recognized as being "senior-friendly" after meeting certain criteria including accessibility and walkability standards. Several programs also exist to encourage walking groups.

Nashville Police Department

The Nashville Police Department is responsible for enforcement of all laws in the community including those pedestrian related laws as established by the Town Council, the North Carolina General Assembly, and the federal government. The Nashville Police Department has also continually promoted safe pedestrian behavior such as proper street crossing techniques and personal safety tips to citizens. Nashville Police have issued warnings and tickets to people who do not follow existing pedestrian laws and works with Rocky Mount-Nash Schools to improve safety around Nashville Elementary School. The Nashville Police Department provides traffic control around Nashville Elementary School before and after school.

Civic Groups

Several non-governmental organizations provide programs that encourage and promote pedestrian activity and a health lifestyle. While not an exhaustive list, below are some of the groups that are active in the Nashville community.

- American Cancer Society- ACS sponsors events such as the Breast Cancer 3 Day, a 60 mile walk that raises awareness and funding support for the fight against breast cancer.
- American Heart Association- This organization promotes active lifestyles that increase and maintain cardio-vascular health. A major event sponsored by this group to raise awareness and funding is the annual Heart Walk.

SECTION 4: PUBLIC INVOLVEMENT

4.1 PUBLIC INVOLEMENT

Throughout the planning process a number of methods were used to identify community preference and interest in pedestrian facilities and programs including the formation of an advisory committee for the plan, a community survey, a public workshop and advertising and outreach communication efforts through material postings in public places and word of mouth. A summary of the results from the Nashville Pedestrian Survey are detailed in Section 4.3. This survey was conducted during May 2006 and June 2006 and gives more insight into the facility and program needs of the Nashville community that will help address current and future pedestrian needs of Nashville.

4.2 ADVISORY COMMITTEE

The Nashville Pedestrian Plan Advisory Committee was established to serve as a sounding board and to provide input throughout the planning process. The Advisory Committee included a cross-section of the community with representatives from government, the development community and private citizens. Advisory Committee membership included:

Table 4-1 Pedestrian Plan Advisory Committee Members	
Citizens and Representatives	
Louise Hinton,	Town Council
Jamie Wilson,	Nash Senior Center
Preston Mitchel,	Town Manager
Eugene Foxworth,	Planning Director
Chief Bill Creech,	Nashville Police Department
Jim Glover,	Nashville Parks & Recreation Director
Bob League,	Rocky Mount MPO
Mary Meletiou,	NCDOT Div. of Bicycle & Pedestrian Transportation

4.3 SURVEY

The following is a summary of the results of the Community Pedestrian Survey conducted during the planning process. The survey respondents do not represent a statistically-correct random sampling of the Nashville population. However, the results of the survey are still useful for identifying the general needs of the Nashville community. A copy of the survey and the full survey results can be seen in the Appendix B. The survey was distributed during May and June 2006, via the Town of Nashville staff, at Town facilities, and at local businesses. Overall a total of 50 responses were received.

Some of the notable results include:

- *When and Why people walk:* Nineteen respondents listed walking as their preferred choice of transportation. Fifteen indicated bicycling as their ideal mode of transportation. All respondents indicated at least one walking/running trip per week. The top location where respondents indicated they currently walk or run is in their neighborhood. This was followed by walking or running for exercise and walking or running in the downtown area.

- *Barriers to Walking:* The number one barrier respondents reported to walking or running in Nashville was lack of sidewalks. The second and third highest responses were lack of safe sidewalks and lack of signalized crosswalks.
- *Pedestrians would walk more if:* A majority of respondents indicated they would walk more if improvements were made to the pedestrian facility network. Many of the respondents noted the need for more pedestrian facilities in residential subdivisions in addition to major pedestrian connectors.

Major conclusions resulting from the survey are as follows:

- *The Plan should focus on constructing more pedestrian facilities.* New pedestrian facilities will allow for safe access to more locations, which may result in more pedestrian trips. These new pedestrian facilities should focus not only on major destinations such as schools, libraries, and parks but also on residential subdivisions and neighborhoods to provide safe opportunities for walking or running.
- *The Plan should include the creation of programs to promote pedestrian safety and awareness.* A pedestrian safety program would foster greater awareness for citizens of all ages and encourage safer motorist/pedestrian interactions.
- *The Plan should contain provisions for maintenance and upkeep programs.* Increased efforts to maintain existing facilities through town staff and partnerships with other organizations may also encourage pedestrian travel throughout the community.

This survey was not a true random sampling of Nashville residents. As such, some of the results may be skewed. In particular, it should be noted that although many respondents walk or run for recreation, there still may be a large portion of pedestrian community who walk for primary transportation or utilitarian reasons that may be unrepresented in the survey.

As a result, it is important to keep in mind the types of needs of those people who walk for utilitarian purposes as well as recreation purposes. In addition, the majority of the respondents for this survey are within the 18 – 49 years old age range. This indicates that the survey results may not represent adequately the needs of school aged pedestrians and the senior members of the community who walk. Respondents' feelings of safety and regularity of pedestrian trips may be skewed towards an adult perspective – someone who may feel safer, and may walk less because they can drive a car. The needs of younger pedestrians such as safety zones near schools, better access to schools, libraries, and other youth centers as well as the needs of seniors or those who cannot afford personal vehicles or public transit should still be considered strongly in the Plan.

4.4 WORKSHOPS/OPEN HOUSES

A workshop was held in November, 2006 to solicit input from the public on pedestrian issues in Nashville. This workshop was held on November 14 at Glover Park from 5:30 p.m. to 8 p.m. During this workshop the public was encouraged to comment on the pedestrian improvements proposed in this Plan. Workshop participants completed surveys and identified areas of interest on maps of the Town. This information was then compiled and incorporated with data collected from the community survey, comments from the advisory committee, the inventory and other researched data.

Overall participation from the public in the workshop was good. Comments from the public on the proposed top priority and future focus pedestrian corridors were supportive and indicated some additional areas to be considered for inclusion in these two categories.

4.5 ADVERTISING/OUTREACH EFFORTS

Advertising and other outreach efforts were made to inform the community about the development of the pedestrian plan, the deployment of the public survey and scheduling of public input opportunities. The following were several of the ways in which outreach was accomplished:

- *Postings in public places*- Public notices were posted and copies of the public survey were available at various public places throughout the community during the development of this plan including town hall, various park & recreation facilities, and the library.
- *Television*- Notices were placed on the Town's cable access information board to inform the public of meetings and activities during the planning process.
- *Word of Mouth*- Town employees and advisory committee members were encouraged to "pass the word" about the pedestrian plan development and solicit opinions from the community. While anecdotal in many cases, this one-on-one form of contact can provide information not attainable through other public solicitation methods.

SECTION 5: PEDESTRIAN NETWORK PLAN

5.2 Project Development

Pedestrian projects of all types were developed based on input from the public, the advisory committee, Town of Nashville staff and the consultant analysis. The criteria that were used to identify potential network improvement include the following:

Demand: Level of demand was measured through the level of public comment, Town staff input and advisory committee recommendations.

Need: A particular need may not receive the highest level of public notice or comment. However, the need may still exist. Destinations accessed and connectivity as well as safety considerations also increase the need for a particular project. Pedestrian facilities may be needed in a location to provide increased connectivity within the pedestrian network as well as to other modes of transportation. Improvements may also be needed to connect major destinations into the pedestrian network, especially those destinations that are or have the potential to be a major pedestrian attractor such as schools, parks & recreation facilities, libraries, historic landmarks and districts, shopping centers and downtown.

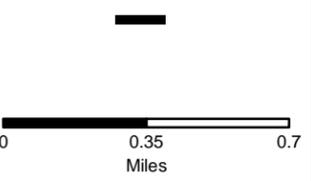
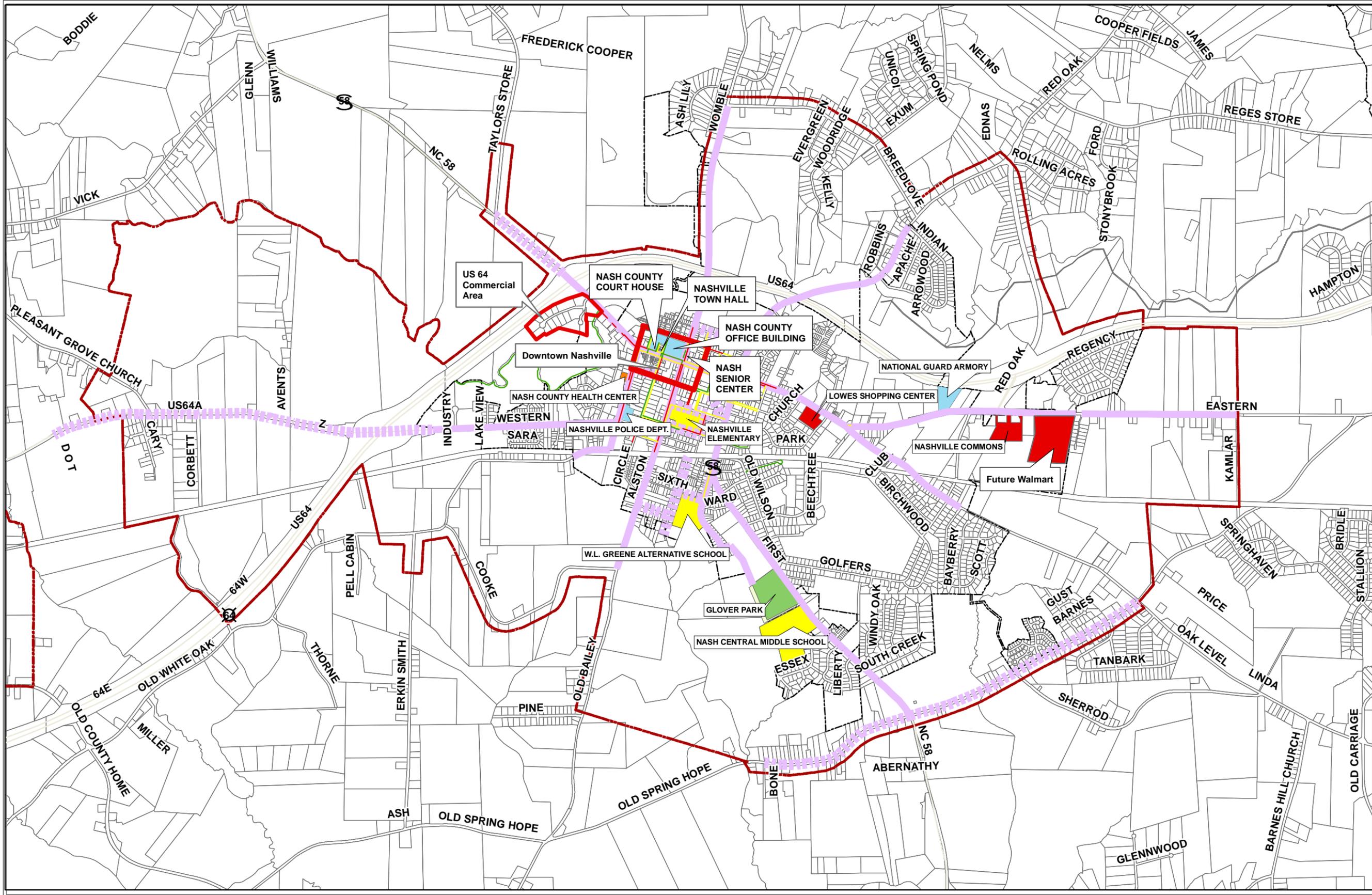
5.3 Project Prioritization

Prioritization of the top priority and future focus pedestrian corridors was further analyzed and discussed through the public involvement process. At public workshops citizens were able to provide input on these corridors and make suggestions for improvements. Ultimately a project's priority was based on the input from the public, crash and safety data, proximity to schools and major destinations, inter-modal connectivity, future growth patterns, and the location and condition of the existing network. Pedestrian projects identified as a priority were designated *Future Focus Corridors*. Projects designated as *Top Priority Corridors* were identified as being of a higher priority and include the *Nashville Walkable Commercial Corridors*. Figure 5.2 illustrates these projects. These priorities include on-road and off-road pedestrian corridors. A complete listing of the *Top Priority* and *Future Focus Corridors* along with estimated costs can be found in Appendix A.

Nashville's Walking Opportunities

Present and Future Pedestrian Corridors

(FIGURE 5-2)



Legend

Nashville Pedestrian Facilities

CONDITION

- EXCELLENT (Green line)
- FAIR (Yellow line)
- NEEDS MAINTENANCE (Red line)

Nashville Pedestrian Corridors

PRIORITY

- TOP PRIORITY (Purple dashed line)
- FUTURE FOCUS (Pink dashed line)

Points of Interest

POI TYPE

- CIVIC (Orange square)
- COMMERCIAL (Red square)
- GOVERNMENT (Blue square)
- RECREATION (Green square)
- SCHOOL (Yellow square)
- ETJS (Red dashed line)
- city/mt (Black dashed line)
- Property Line (Thin grey line)

Developed in cooperation with:

Prepared by:



Information depicted herein is for reference purposes only and is compiled from the best available sources. Source data were captured by different agencies at different scales and may result in inaccuracies among the features represented. The Upper Cumberland Plain Council of Governments assumes no responsibility for errors arising from the use of this map.

SECTION 6: PROGRAM & POLICY RECOMMENDATIONS

PROGRAM & POLICY RECOMMENDATIONS

A walkable community is more than just sidewalks on every street and greenway trails that are intertwined throughout the community. A walkable community must also be a community that recognizes the importance of walking for transportation purposes, recreation purposes and healthy living in general. A walkable community is one that emphasizes walking considerations across the transportation spectrum. Thus, programs and policies are an important component to implement a walkable community both in physical infrastructure and in spirit. Several policy and program recommendations were identified. All of these can fall within the “4 E’s” of pedestrian friendliness, engineering, education, encouragement and enforcement.

6.1 POLICY RECOMMENDATIONS

ENGINEERING

The following recommendations address the Town of Nashville’s internal project development, construction and maintenance policies related to these items.

Pedestrian Facility Considerations In All Road Construction And Road Maintenance Projects- Commitment to encouraging pedestrian use must extend to construction and infrastructure projects. Nashville should always consider the construction of new pedestrian facilities on new roads and in any maintenance or other roadway project. Nashville should also require other construction entities, such as the Rocky Mount MPO (RMMPO) or developers, to consider pedestrian facilities on new roads. This will expedite the construction process for new pedestrian facilities and guarantee the preservation of existing pedestrian facilities.

Responsible Parties: Town of Nashville Planning Department, Town of Nashville Public Works Department, Nashville development community, RMMPO, the Upper Coastal Plain RPO (UCPRPO), and NCDOT units including the Transportation Planning Branch, the Division 4 office, and the Division of Bicycle & Pedestrian Transportation for projects funded through the Transportation Improvement Program (TIP).

Pedestrian Accommodation Consultation During The Development Process- The Town should consult with the development community throughout the development process to encourage inclusion of pedestrian facilities. These facilities may include, but are not limited to, sidewalks on new roads and greenways or multi-use paths. Such items will stress to the private sector Nashville’s desire to create a livable community that is walkable and encourages more pedestrian considerations. *Responsible Parties: Nashville Town Council, Nashville Planning Department, Nashville Public Works Department, Nashville development community.*

Funding Opportunity Pursuit- The Town of Nashville should commit to identifying and pursuing funding opportunities for pedestrian facilities at every opportunity. There are many funding sources that Nashville can consider. These are discussed in the Implementation Section of this plan.

Responsible Parties: Nashville Town Council, Nashville Planning Department, Nashville Public Works Department, Nashville Parks and Recreation, Civic Groups.

Consistent Pedestrian Facilities Maintenance- Once pedestrian facilities are in place, proper maintenance is required to ensure continued safe use. Nashville should establish pedestrian facilities maintenance programs that include:

- On-road facilities such as sidewalks to be regularly kept clear and repaved as necessary.
Responsible Parties: Nashville Public Works and Parks and Recreation Departments, RMMPO, UCPRPO, Community Groups, Property Owners.
- Off-road facilities such as greenways and trails: regular sweeping, resurfacing as needed
Responsible Parties: Nashville Public Works and Parks and Recreation Departments, Community Groups.

ENCOURAGEMENT

Policies that encourage walking through active and passive support. Recommendations include:

Create Standing Pedestrian Advisory Committee- A pedestrian committee can serve as a guiding group for new pedestrian facilities, coordinating facility maintenance, and advocating for pedestrian issues – locally, regionally, state-wide or nationally. This committee could ensure that the Town continues to receive community input on new projects and community support for any programs or activities.

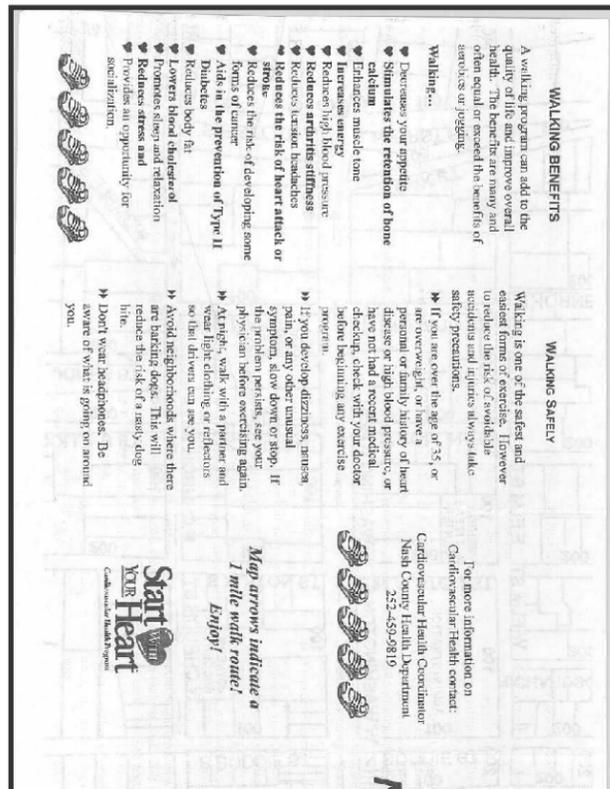
Responsible Party: Nashville Planning Department.



Example of poor connectivity between a neighborhood, park, and school near NC 58 south of downtown Nashville



Example of good pedestrian facility maintenance along Washington St in Nashville



The Nash Senior Center’s Walk Nashville Brochure is an excellent example of community encouragement & outreach efforts

Designate A Pedestrian Transportation Coordinator- A Town of Nashville staff member should be designated as the point of contact for pedestrian related programs and activities within the Town. This position can provide staff support to the pedestrian advisory committee and represent the community in pedestrian related issues. The pedestrian transportation coordinator can coordinate maintenance and construction projects as well as funding opportunities and provide pedestrian related grant administration.

Responsible Party: Nashville Planning Department

Promote Walking For Municipal Employees- Nashville should encourage walking by municipal and other government employees. To accomplish this, Nashville should establish employee policies that allow for flexible commuting times and habits that may be necessary for walking commuters. These policies should be promoted within the municipal staff and included in new employee information packets. Town facilities should have safe, secure, convenient and adequate facilities such as showers for pedestrian commuters. An emergency ride home program for pedestrian commuters would also be appropriate.

Responsible Party: Town of Nashville Administration

Coordinate With Other Community Pedestrian Activities- Nashville should consider coordinating with nearby communities in Nash County as well as surrounding counties, neighboring towns, the state, and local recreation and pedestrian advocacy groups to establish new pedestrian facilities, create promotional opportunities, and facilitate community and regional pedestrian events. Organizations that have expressed interest in pedestrian activities include various Nash County agencies (listed below), the City of Rocky Mount, the Towns of Momery, Spring Hope and Red Oak, NCDOT, RMMPO, UCRPO, and the Upper Coastal Plain Area Agency on Aging (UCPAAA). A further discussion of potential partners is listed in the Implementation Section.

Responsible Parties: Town of Nashville departments of Planning, Police, and Parks & Recreation, Nashville Chamber of Commerce, RMMPO, UCRPO, NCDOT Transportation Planning Branch, NCDOT Division 4, Nash County Planning & Development Department, Nash County Parks & Recreation Department, Nash County Health Department, Nash County Sheriff’s Office, Nash County Cooperative Extension Service, Nash-Rocky Mount Public Schools, Rocky Mount Family YMCA, Nashville Senior Center.

6.2 PROGRAM RECOMMENDATIONS

Just as policies can be used, so too can programs to promote pedestrian use address the “four E’s”, engineering, education, encouragement and enforcement. There are a variety of local, state, national, and international programs that focus on increasing pedestrian awareness and promoting pedestrian activity. Below are listed pedestrian related programs that have been identified by Nashville to implement through the planning process.

ENCOURAGEMENT

Safe Routes to School Program- The Safe Routes to School Program is a federally funded program that allocates funds to state departments of transportation which in turn select candidate projects and programs for funding. Eligible funding activities include infrastructure projects such as sidewalk or greenway construction as well as non-infrastructure projects such as safety or educational programs. The goal of Safe Routes to School initiative is to encourage students to have more active lifestyles by establishing safe and accessible facilities that ensure students can safely enjoy walking as a transportation option to get between school and home. Nashville should consider establishing a Safe Routes to School program with Nash-Rocky Mount Public Schools and the various private schools in the community which will emphasize safe and efficient walking and bicycling practices. These programs may include Walk-to-School days or Walking School Busses which encourage students and their parents to walk together along designated corridors to and from school. These routes are identified and established to make sure students arrive at school safely. The Safe Routes to School program could also include educational classes that will teach students about safe walking practices, the benefits of walking, such as better health, reduced air pollution, and less traffic congestion.

Responsible Parties: Nashville Planning Department, Nashville Public Works Department, Nash-Rocky Mount Schools and private schools.

Walking Brochures For Residents And Visitors- Nashville should create a walking brochure that educates visitors and residents about the benefits of walking and walking opportunities in Nashville. This brochure could include maps of Nashville’s pedestrian network and specific walking routes and tours which would include major attractions such as Nashville’s downtown, recreation centers, historic sites, schools, and library. In addition to promoting walking these brochures would be useful for promoting the community and assisting in attracting new residents and visitors alike. Brochures could be made available at:

- Town Hall
- Libraries
- Schools
- Health Department
- The Nashville Chamber of Commerce
- Medical facilities
- Town of Nashville events such as the Blooming Festival
- Town of Nashville website

Responsible Parties: Town of Nashville Administration, Nashville Planning Department, Nashville Chamber of Commerce, Carolina Gateway Partnership

Annual Walking Events- Walking events promote walking for health and better quality of life, educate citizens about pedestrian and motorist safety, and attract visitors who may be interested in pedestrian events. The events could be held independently or in conjunction with other events such as the Blooming Festival. Major contributors could include the Town Administration and Parks and Recreation Departments, Police Department, schools, and public health groups.

Responsible Parties: Town of Nashville Administration, Nashville Planning Department, Parks & Recreation Department, Nashville Chamber of Commerce, the Rocky Mount Family YMCA, UCPAAA, Nashville Senior Center.

EDUCATION

Pedestrian Education and Safety Classes- Educational classes could be considered as part of driver’s licensing requirements for student drivers and included as part of existing drivers education classes or through physical education or after school programs. Pedestrian education can also be incorporated into the other areas of existing school curriculum including art, geography, language arts, math, and science. The National Center for Safe Routes to Schools (NCSRTS) suggests several examples that can also meet existing education requirements. Lesson plans suggested by the NCSRTS include mapping routes taken by students to and from school, calculating walking distances and speeds of students, designing art projects that encourage walking and pedestrian safety, and learning how pedestrian activity can impact pollution and climate change (http://www.saferoutesinfo.org/guide/education/strategies_for_educating_children.cfm).

Responsible Parties: Nash-Rocky Mount Public Schools, private schools, daycare facilities, Nashville Police Department, Nashville Planning Department, NC Wesleyan College, Nash Community College, community businesses.

Public Education & Encouragement Programs- A media campaign including broadcast public service announcements, website content and brochures that would focus pedestrian safety tips for the Nashville community should be developed. These communication tools could be developed in a way to easily reach a broad spectrum of the community. This media content would go on local cable access television, local radio, newspapers, into schools, libraries, health care facilities, senior centers, and other public places.

Responsible Parties: Town of Nashville Planning Department, Nashville Police Department, NCDOT Division 4, NCDOT Division of Bicycle & Pedestrian Transportation, community groups.

ENFORCEMENT

Pedestrian Sting Operations- Nashville Police, in cooperation with other law enforcement agencies, should develop pedestrian sting operations which use plainclothes officers and unmarked police units to identify motorists in violation of crosswalk right-of-way laws. Penalties for violations can range from verbal warnings to citations and fines. These types of operations are becoming more popular around the United States and are also good opportunities to provide education and encouragement materials. Law enforcement should also work to identify pedestrians who are in violation of the law as well as those that conduct themselves in an unsafe manner. Unsafe pedestrian



The intersections around Nashville Elementary School lack crosswalks and sidewalks are narrow and in need of maintenance. This school zone could benefit from improvements to facilities and programs under the Safe Routes to School Program.



The Safe Routes to Schools Program is just beginning in North Carolina and offers an excellent opportunity for Nashville to expand education and encouragement programs in addition to new facility construction

activities include running out into oncoming traffic and disrupting orderly traffic flow. These types of operations have been identified by the Pedestrian and Bicycle Information Center (PBIC) as ways of targeting both drivers and pedestrians (<http://www.walkinginfo.org/ee/enforcement.cfm>).

Responsible Parties: Town of Nashville Police Department, Nash County Sheriff's Office, North Carolina State Patrol.

Child Activity Zone Enforcement- Nashville Police should develop a program to increase enforcement of traffic laws and pedestrian laws in areas where concentrations of children exist. These areas include schools, parks, neighborhoods, and community facilities such as the library. A goal of this program should be to not only increase safety for the pedestrian but also to increase awareness of pedestrian safety issues and increased efforts of law enforcement. Many times public perception of increased enforcement can yield better results than major increases or changes in police patrols. This program can include active patrols as well as passive efforts such as police vehicle staging. Communities throughout North Carolina stage inactive police vehicles at various locations through the community where police visibility can deter unlawful activity from occurring. Examples of police vehicle stage locations include:

- **Schools**
- **Parks**
- **Shopping Centers**
- **Along heavily traveled corridors where pedestrian activity occurs**

SECTION 7: PEDESTRIAN FACILITY STANDARDS & GUIDELINES

PEDESTRIAN FACILITY STANDARDS GUIDELINES

This Section of the Nashville Pedestrian Plan will serve as a guidance document for the consideration, design, and construction of pedestrian facilities in the Town of Nashville, North Carolina. These guidelines can be considered as examples of how proven practices may be applied in the Town of Nashville. Only through sound engineering practices that recognize the physical constraints of various landscapes and account for site-specific conditions can effective designs be determined. The North Carolina Department of Transportation (NCDOT) published guidance in 1997 on the design of pedestrian facilities. The American Association of State Highway and Transportation Officials (AASHTO) provided similar guidance in 2004 and the Federal Highway Administration (FHWA) of United States Department of Transportation (USDOT) also provided pedestrian design guidance in 2002. Further guidance was obtained from the Charlotte Department of Transportation, the Oregon Department of Transportation, the California Department of Transportation and the National Transportation Institute. The recommendations provided in this section borrow heavily from these and other sources. Reference to these documents is encouraged for further information (1, 2, 3, 4).

7.1 FUNDAMENTAL GUIDANCE

- New or reconstructed sidewalks shall adhere to all current local, state, and federal standards, including the provisions of the Americans with Disabilities Act including compliant curb ramps.
- The standard sidewalk width outside of a commercial district or other higher volume pedestrian zone is a five foot minimum concrete structure unless otherwise approved by the Town of Nashville (See Figure 7-1). Sidewalks and pedestrian facilities within a commercial district or other higher volume pedestrian zone will comply with the standards shown herein or to those of the existing, adjacent facilities, whichever is greater.
- All new developments and expanded developments shall have sidewalk on at least one face of the abutting edge of the property to intersect with the nearest existing sidewalk or be directly across the street from the nearest existing sidewalk.
- During temporary closures of sidewalk, construction detours will be identified by signs placed at a location closest to the nearest intersecting sidewalk or pedestrian facility in both directions of travel according to the Town of Nashville’s policies, procedures, and ordinances as well as the latest edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*. Refer to <http://mutcd.fhwa.dot.gov/> for access to the MUTCD.

7.2 ON-ROAD PEDESTRIAN FACILITIES

7.2.1 Sidewalk Width

Sidewalks are part of the street not an element to be added later. AASHTO’s *Transportation Planning Handbook* states that “sidewalks are integral parts of city streets”. Characteristics of good sidewalk design include: proper width, smooth and level surfaces, separation from vehicle traffic, and clear of obstacles. A sidewalk should be as wide as needed to serve anticipated pedestrian use. Sidewalk widths should accommodate two persons walking together or past one another or a minimum width of five feet with a minimum two foot wide “planting strip” (See Figure 7-2 below). A planting strip is an area of grass or landscaping that is located between the edge of the street pavement and the edge of the sidewalk pavement. Planting strips serve to off set sidewalks from street and provide a safety buffer as well as to accommodate shy distance between pedestrians and automobiles. Planting strips in commercial areas or in areas with applied streetscapes may consist of landscaping or other materials such as brick or concrete pavers that accentuate the area while still providing the benefits of separation and safety. In areas of high pedestrian activity or where design aesthetics require a more varied use of the sidewalk, additional width as well as different paving and streetscape options should be considered if not required (see Table 7-1). Increased right-of-way widths and/or easement requirements should also be considered to accommodate utilities, pedestrian facilities and automobile needs.

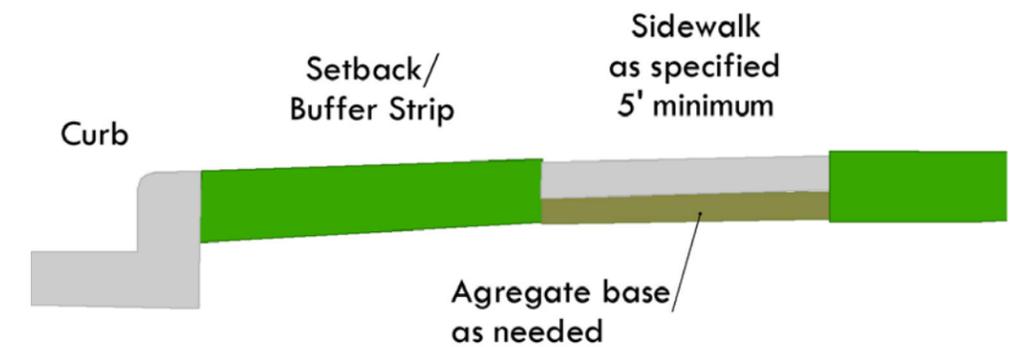


FIGURE 7-1: Example of typical sidewalk cross-section (Source: Oregon DOT)

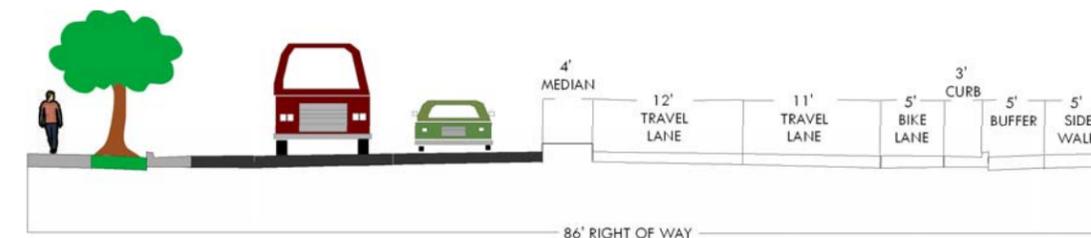


FIGURE 7-2: Example of typical street cross section with sidewalks and buffer

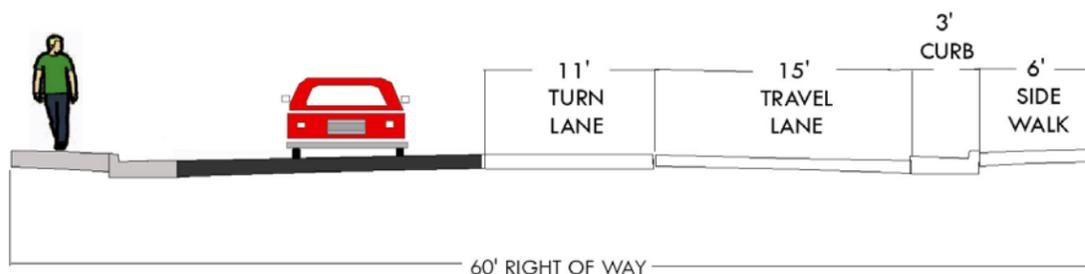


FIGURE 7-3: Example of typical 60 foot street cross section with sidewalks but no buffer

Table 7-1 Sidewalk Widths Land Use – Street Type	Minimum (ft)	Planting Strip
Central Business District or Pedestrian Activity Center	8	variable
Commercial/Industrial	5	2
Residential – Arterials and Collector Streets	5	3
Residential – Local Streets	5	2

Additional sidewalk widths may be required to provide adequate pedestrian access and buffer between pedestrians and traffic. These include areas where planting strips cannot be installed such as at locations with seating areas or shelters or areas with angled parking where the overhang from parked vehicles renders portions of the sidewalk impassible. Additional sidewalk width should also be considered in areas if a planting strip cannot be installed (See Figure 7-3). In these areas pedestrian will tend to avoid walking next to the vehicle travel lanes. Identification and consideration of “shy-distance”, or the distance from objects or obstacles that a pedestrian will avoid walking near areas with walls along sidewalks, street furniture, amenities, vegetation or other common obstacles to pedestrian movement may require increased sidewalk widths to accommodate accessibility. Other on-street pedestrian facility considerations include mitigation of low and high contact points from signage, trees and other vegetation, business advertising, lighting implements, parking meters and storm drains. Bridge sidewalks should be a minimum of 5.5 feet (NCDOT).

7.2.2 Non Curb & Gutter Locations

Streets in less developed or less dense areas may not be constructed with curbs or gutters. These streets typically have open drainage swales and grass or other vegetated zone between the edge of street pavement and the open swale. Sidewalks in non curb & gutter locations should be constructed behind the drainage swale to provide maximum safety distance from motorized traffic on the street and be a minimum of five feet in width to accommodate two persons walking together or in passing. However, many areas, particularly areas with existing development may not permit construction of sidewalks behind the drainage swale. This may be due to cost restrictions or yard sizes in these areas. Where sidewalks cannot be constructed behind the drainage swale they should be located between the edge of street pavement and the drainage swale with a minimum three foot planting strip consisting of grass or landscaping that will not obstruct sight distance for drivers or pedestrians. In non curb & gutter locations where pedestrian traffic is higher signage should be required to inform drivers of the presence of pedestrians.

7.2.3 Surface Treatments

Pedestrian facilities can be constructed using a wide variety of materials and designs. Sidewalks are commonly constructed with concrete. This is a long lasting, impervious surface material that is widely available and has a low maintenance requirement. While there are “permeable” concrete products that are being used in an increasing number of communities, they require periodic cleaning and are thus more expensive to maintain. Asphalt is a material that is commonly used in the construction of greenways. Although a more flexible surface material, asphalt requires more maintenance than concrete.

In several communities the use of brick pavers, rubberized sidewalks, and “stamped” concrete or asphalt has become popular. These more specialized surface treatments are commonly used to provide a visual and tactile cue for drivers and pedestrians as well as for aesthetic purposes, particularly in areas where streetscapes have been incorporated into development. These treatments are used to delineate crosswalks, intersections, and other focal points in the roadway environment. Figure 7-4 depicts a stamped asphalt crosswalk on Greene Street in Greensboro, North Carolina and is part of a larger streetscape project. These surface treatments typically have higher costs associated with installation and maintenance that should be considered in relation to the benefits listed above prior to use.



FIGURE 7-4: Stamped asphalt surface treatment in Greensboro, NC (Source: Integrated Paving Concepts)

7.3 OFF-ROAD PEDESTRIAN FACILITIES

The Town of Nashville took part in the Upper Coastal Plain Open Space Strategy (2004), a planning document that identified several potential off-road pedestrian projects throughout the Nashville area. While the Town of Nashville does not currently have a comprehensive trails and greenways plan, the design standards and recommendations that follow are in agreement with guidance provided by NCDOT, USDOT, AASHTO, MUTCD, the National Recreation and Park Association (NRPA) and the American Academy for Park and Recreation Administration.

7.3.1 Types of Off-Road Pedestrian Facilities

- **Multi-use Path** – A multi-use pathway is physically separated from motor vehicle traffic, and can be either within the highway right-of-way or within an independent right-of-way. Multi-use pathways include bicycle paths, rail-trails or other facilities built for bicycle and pedestrian traffic. An alignment with the fewest intersections with roadways should be chosen. Multi-use pathways need continuity with other facilities. A multi-use pathway should not just end, leaving pedestrians stranded with no nearby pedestrian connectivity. Multi-use pathways are generally expensive to build because they are entirely separate facilities from the roadway so it is important to have a well-defined origin and destination to support the development of a proposed multi-use pathway project. Multi-use pathways that are intended for transportation should be as direct as possible or many pedestrians will not choose to use the facility. Multi-use pathways located adjacent to a street or a highway may result in pedestrian/motor vehicle conflicts at driveways and with turning traffic at intersections with roadways. Where significant pedestrian usage is anticipated, additional width should be provided.

- **Greenway Trail (paved)** - A paved path that is a minimum of 10 feet wide and can consist of multi-use paths, trails, and/or recreational trails that is not classified as a highway, road or street and permits more than one type of user, such as a trail designated for use by both pedestrian and bicyclist.

- **Greenway Trail (unpaved)** – An unpaved pathway that can be used for walking, hiking, equestrian use, mountain biking, and other transportation and recreational uses. Recreational trails may have limited accessibility for mobility impaired users and may have more primitive amenities available. Cross slopes should not exceed 10 percent to prevent poor drainage and erosion problems.

7.3.2 Steps to Construct a Greenway or Multi-Use Trail

The North Carolina Department of Transportation has developed a checklist for the development of off-road pedestrian and multi-use facilities. This checklist includes information that is meant to assist facility developers from the initial stages through final completion of a project. While every project has its unique variables, this checklist provides guidance that can be incorporated or used as a starting point for most off-road pedestrian facility projects.

The first step in the NCDOT checklist is to perform a feasibility study or preliminary engineering assessment of the proposed project. This is done to develop an accurate scope of work and identify potential impacts from construction. This should be done as early in the process as possible.

NCDOT also recommends that a survey of topographic features, streams and existing structures be conducted in order to produce accurate horizontal and vertical alignments. The survey should also include property ownership boundaries, existing rights of way as well as all utilities.

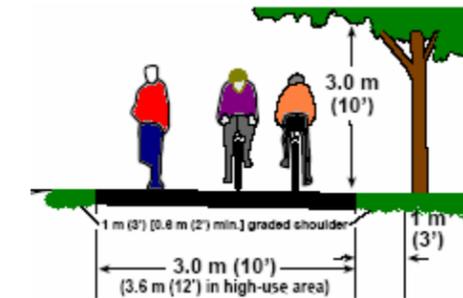


FIGURE 7-4: Examples of typical multi-use paths.
(Source: Oregon DOT)

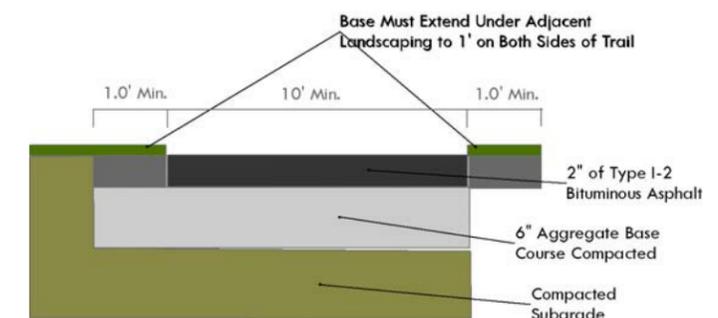


FIGURE 7-5: Example of typical multi-use path/trail cross section
(Source: NCDOT)

- ✓ Feasibility study
- ✓ Initial meeting and site visit
- ✓ Gather data
 - Survey of proposed center line alignment should include a set of cross-sections taken at 50-foot and 100-foot increments (50-foot in critical areas).
 - Average Daily Traffic Counts (ADTs), for on-road sections of bikeway
 - Environmental information, if applicable, regarding coastal areas (Coastal Area Management Act), endangered species, archeological sites and historic properties, Federal Emergency Management Agency (FEMA), fish and wildlife, wetlands, soils investigation, flood plain delineation, etc.
 - Right-of-way (ROW) or easement documentation must be done according to federal aid requirements.
 - Preliminary plans
 - Pavement design
 - Preliminary estimate
- ✓ Prepare project report, documentation of environmental information, and reimbursement agreement. This is the next major step in the process and should take 8-12 weeks to complete once the necessary information has been collected.
- ✓ Approval of final plans & estimate
- ✓ Funding account set-up
- ✓ Notice to proceed
- ✓ Erosion control approval (local)
- ✓ Bid process
- ✓ Construction
- ✓ Inspection of completed project
- ✓ Reimbursement (if using cost sharing, grants, or funding sources other than local funds)

More information on this recommended checklist can be found at on the NCDOT Bicycle and Pedestrian Planning Division website: (http://www.ncdot.org/transit/bicycle/projects/resources/project_construct.html).

7.3.3 Off-Road Facility Accessibility & Amenities

Universal off-Road Pedestrian Facilities should be just as accessible as on-road facilities. Many amenities associated with on-road pedestrian facilities are just as necessary for off-road facilities. Rest areas with seating are important especially in areas with an ascent or decent. However, care should be taken to ensure these amenities are not located directly in the path of though travel but rather off to the side on level terrain. Signage and other amenities such as vegetation, water fountains, or other improvements should also be placed to avoid interference with unloading areas and though traffic.

7.4 Special Features

This section provides design guidance on several pedestrian treatments including:

- Americans with Disabilities Act (ADA) compliance and accessibility
- Intersections
- Underpasses & Overpasses/bridges for pedestrian facilities
- Traffic Calming designed for pedestrian mobility
- Mid-Block Crossings
- Pedestrian friendly parking areas
- Temporary pedestrian access

7.4.1 Universal Accessibility Design

The Town of Nashville continues to make every effort to provide a pedestrian system that is fully accessible to all members of the community and to meet the provisions of the Americans with Disabilities Act of 1990, as amended. When it comes to appropriate design and treatment issues it all comes down to the details. By recognizing appropriate designs and treatments a universally accessible pedestrian network can continue to be developed. While not a comprehensive guide the following discussion is meant to provide guidance on a number of design details that are crucial to providing universal and equal access to the pedestrian network and is borrows heavily from AASHTO, NCDOT, USDOT, and the United States Access Board.

Driveways and Pedestrian Facilities

Figure 7-6 below shows the preferred (left), the conditionally acceptable (middle), and the inaccessible (right) design practices for driveway/pedestrian facility interfaces. Extreme cross-slopes on sidewalks or paths at driveways as shown in the inaccessible example (below right) make it difficult for a person using a wheelchair, cane or other personal assistance device to traverse. By moving the sidewalk back from the driveway apron with a planting strip or furniture zone, safe passage is much easier (below left).

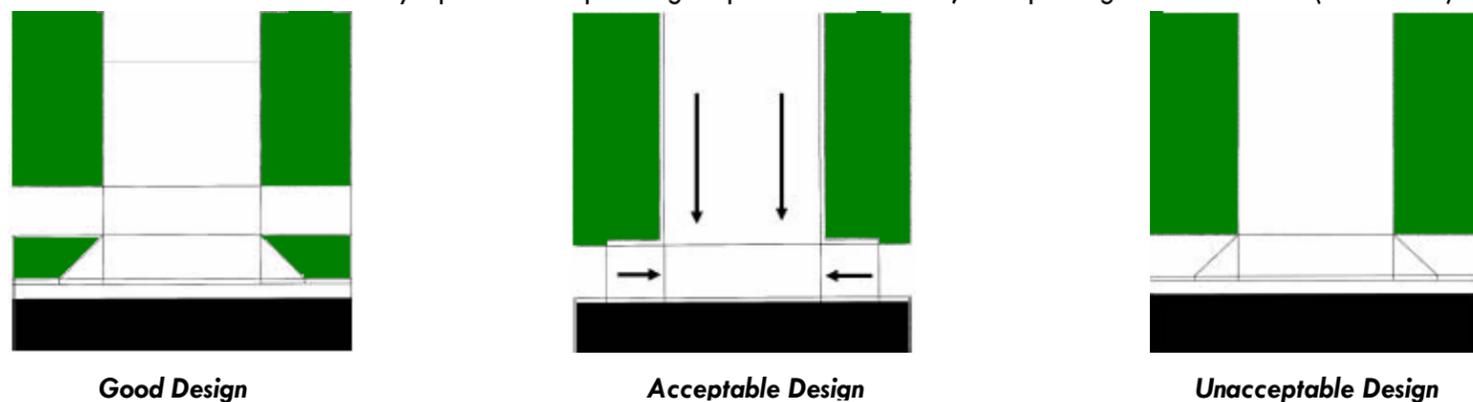


FIGURE 7-6: Pedestrian friendly driveway design (Source: US Access Board)

Curb-cuts and Ramp Design

Curb-cuts, especially at intersections or mid-block crossings that feature ramps are required for a pedestrian facility to be considered accessible (See Figure 7-7). Ramps should have a slope that is no greater than 1:12. Ramps should include a perceptible warning to the visually impaired such as raised truncated domes with a high color contrast to the background material. As concrete is typically the material used in sidewalk construction and concrete or asphalt is typically used in multi-use path construction, many communities use yellow colored truncated dome pads to meet this need. The ADA Accessibility Guidelines for Buildings and Facilities (<http://www.access-board.gov/adaag/html/adaag.htm#A4.29.2>) includes tools for identifying curb ramp design as well as information on transportation facility requirements (<http://www.access-board.gov/adaag/html/adaag.htm#tranfac>).

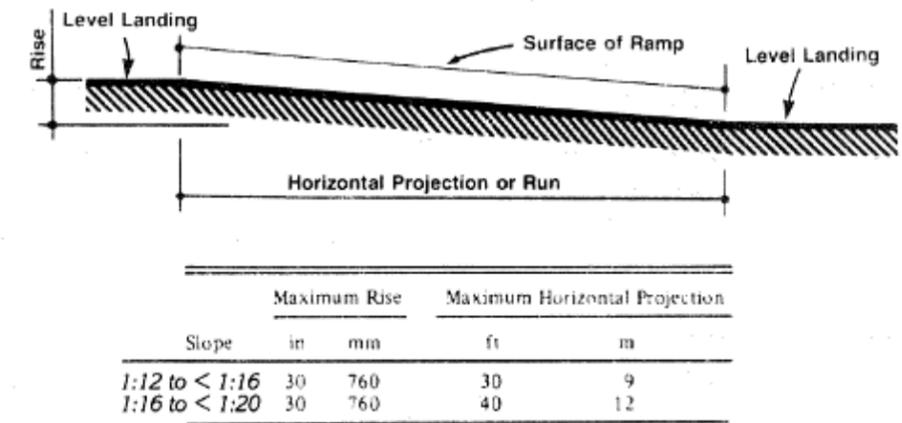
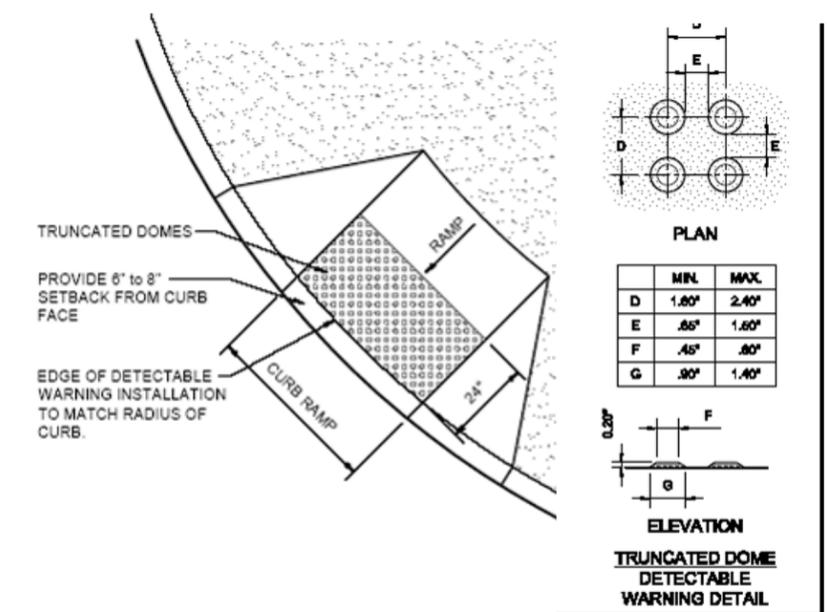


FIGURE 7-7: Cross section of an ADA ramp (Source: US Access Board)





The signalized intersection at Washington & Boddie in downtown Nashville. Note the signalized intersection without pedestrian signalization.

7.4.2 Pedestrian Crossings

To ensure that a pedestrian can safely navigate intersections and other street crossings there are several elements that can be put in place to ensure a safer and faster crossing for pedestrians. At intersections the curb ramp space should be placed at an angle perpendicular to the direction of travel. Curb ramps are to be placed entirely within the area of the marked crosswalk. If a shared or diagonal curb ramp is constructed (Figure 7-8), then the width and radius should accommodate the user so that entry onto the ramp is parallel to the direction of travel. The figures below provide examples of the acceptable relationship between crosswalk and curb ramps.

Figure 7-8 also shows elements of a signalized crossing, including crosswalks and pedestrian countdown signals. Additional elements may include audible pedestrian signals and High Intensity Activated Crosswalk, or HAWK, signals display a color signal when activated by a pedestrian. It is recommended that Nashville should have pedestrian signals for all signalized intersections with adjoining pedestrian facilities.

Wide well defined street lawn provides positive separation of pedestrians and drivers

Wide Stop Bas placed well behind the crosswalk provide an additional visual cue to drivers of where to stop for pedestrians in the crosswalk



Pedestrian Countdown Timers provide visual notification to drivers and pedestrians by indicating when it is safe to use the crosswalk and how long pedestrians have to make the crossing.

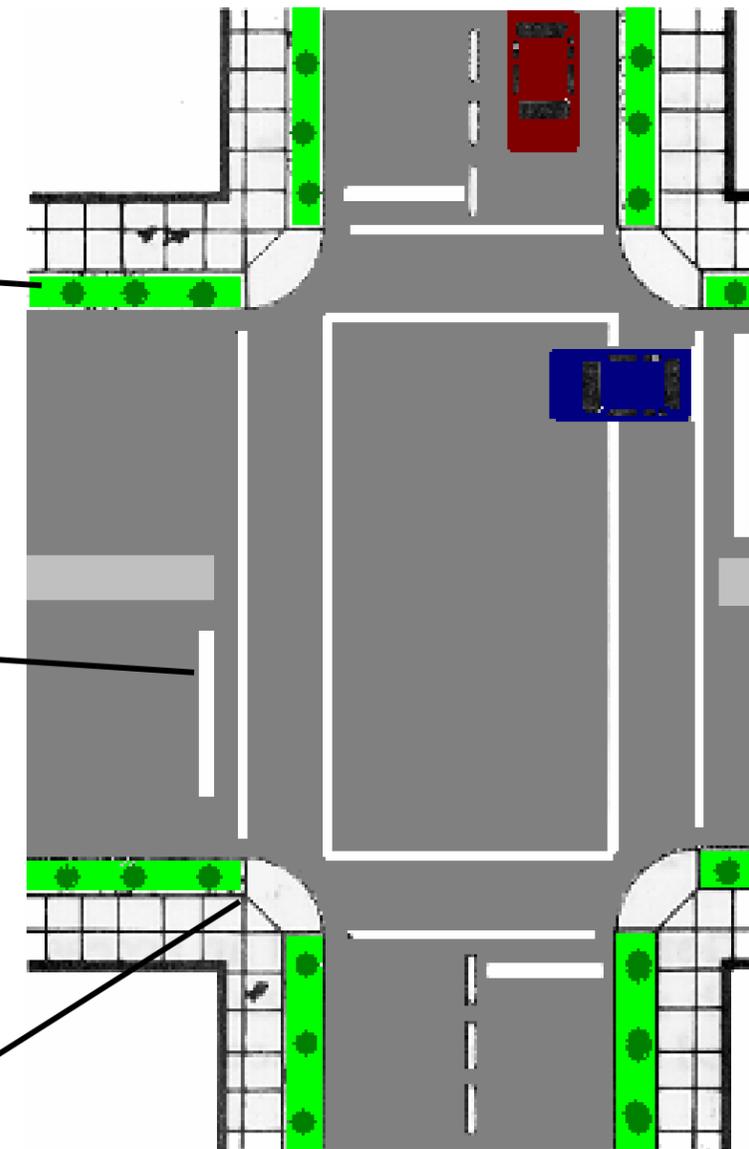


FIGURE 7-8: Signalized Pedestrian Crossing

Pedestrian Underpasses

In many situations a grade separated pedestrian crossing of a roadway, stream or other impediment is desirable or necessary. Such crossings that provide an uninviting or threatening environment will often discourage use particularly crossings that are exceptionally long, poorly lit or allowed to fall into a state of disrepair. These facilities also provide design opportunities to enhance the natural or built environment. Facilities in more urban locations are excellent opportunities to incorporate public art displays. Those facilities in more natural settings can be designed with “green-design” principles and incorporate or be tied into natural features of the local environment.

In the case of an underpass, care should be given to proximity to floodways and the opening should be flared along with ample lighting to provide clear sight lines through to the other side. Minimum widths are 10 feet for distances of less than 60 feet. Wider widths are recommended for longer underpasses or those located where high usage is anticipated. A minimum of 8 feet is required for vertical clearance but 10 feet is recommended to accommodate all path users. While not required, lighting in underpasses increases safety during low light conditions by allowing users to visually scan into and through an underpass. AASHTO’s Roadway Lighting Design Guide can provide more detailed guidance for underpass lighting (9).



Multi-Use Underpass over Stream
(Source: Bikepedimages.org)



Multi-Use Underpass below a busy street
(Source: Bikepedimages.org)

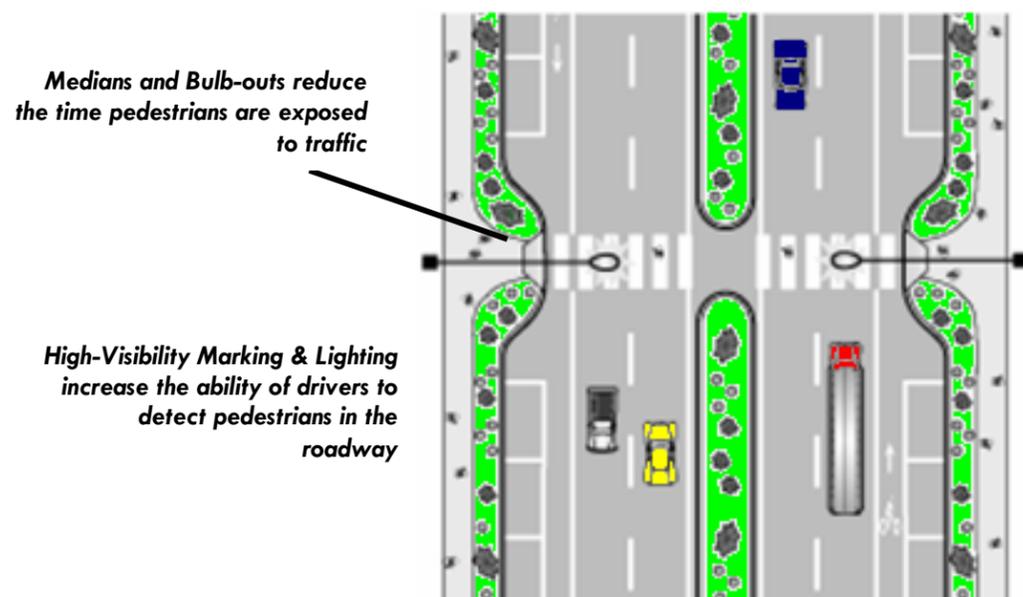


FIGURE 7-9: Example of Mid-block Crossing with Bulb-Outs and median Refuge Zone
(Source: Oregon DOT)

Mid-Block Crossings

Many pedestrians choose to cross streets at the most convenient location for them to do so without regard to the safest location for crossing. Many of these crossings happen at places other than street corners. These mid-block crossings pose a special challenge for state and local transportation departments requiring alternative crossing opportunities and treatments in many instances. Departments of transportation in the State of Oregon, the City of Portland, Oregon and Charlotte, North Carolina have conducted research and created guidance in this area. This research and guidance builds upon work conducted by the University of North Carolina Highway Safety Research Center and FHWA. This research has overwhelmingly noted that a basic marked crosswalk is often insufficient to provide good communication to motorists and thus protection for pedestrians. This is especially applicable on roads that exceed 12,000 vehicles per day (vpd), in poor lighting conditions, during adverse weather, multi-lane crossings, during higher commute times and situations with shorter sight distances. Table 7-2 lists several treatments that can increase protection for pedestrians including raised crosswalks, curb extensions, medians, colored/textured markings, and pedestrian actuated signals. On roadway crossings with exceptionally long distances to cross a pedestrian refuge area is recommended and bulb-outs, or extensions of the curb in to the roadway, are recommended to reduce the amount of time pedestrians are in the roadway and at their most vulnerable to a collision with a vehicle. Figure 7-9 illustrates a mid-block crossing with bulb-outs and a median refuge island as well as high-visibility markings and lighting. All mid-block crossing treatments will require analysis of the specific conditions by the Town of Nashville.

The Charlotte DOT has developed recommended treatments (Table 7-2) including estimated costs and operating factors.

Table 7-2 Pedestrian Mid-block Crossing			
Treatment	AADT	Operating Speed	Approx. Cost
Signs	5,000 – 35,000	Less than 45 mph	\$250 - 350
High-Visibility Markings	5,000 – 12,000	Less than 35 mph	\$500 – 1,500
Colored and Textured Markings	5,000 – 12,000	Less than 35 mph	\$5,000+
Curb Extensions (Bulb-Outs)	5,000 – 12,000	Less than 35 mph	\$5,000 – 25,000
Raised Crosswalks	5,000 – 15,000	Less than 30 mph	\$2,000 – 15,000
Refuge Island	12,000 – 30,000	Less than 40 mph	\$10,000 – 40,000
Median	15,000 – 35,000	35 - 45 mph	Varies greatly
In-Pavement Illumination	5,000 – 15,000	Less than 35 mph	\$40,000

**Note: MUTCD recommends pedestrian volumes of at least 400 for a four-hour period.*

(Source: Charlotte DOT, 2005)

7.4.3 Traffic Calming for Increased Pedestrian Mobility

The Institute of Transportation Engineers defines traffic calming as a mixture of physical elements to improve conditions for non-motorized road users by altering driver behavior (10). When properly implemented traffic calming slows down cars and increases the visibility for pedestrians. Fewer and slower moving vehicles as well as increased pedestrian awareness are direct benefits of good traffic calming design. There are many different traffic calming strategies and devices. Table 7-3 (11) lists several of the many different traffic calming strategies and devices that can be implemented to meet the needs of a community.

Table 7-3 Traffic Calming Strategies & Devices	
Type	Description
Curb extensions “pinch points” (Bulb-outs)	Curb extensions, planters, or centerline traffic islands that narrow traffic lanes to control traffic and reduce pedestrian crossing distances. Also called “chokers.”
Speed tables, raised crosswalks	Curved 7-10 cm high, 3-4 m long hump.
Speed humps	Small traffic circles at intersections.
Median island	Raised island in the road center (median) narrows lanes and provides pedestrian with a safe place to stop.
Channelization islands	A raised island that forces traffic in a particular direction, such as right-turn-only.
Tighter corner radii	The radius of street corners affects traffic turning speeds. A tighter radius forces drivers to reduce speed. It is particularly helpful for intersections with numerous pedestrians.
Mini-circles	Ramped surface above roadway, 7-10 cm high, 3-6 m long.
Rumble Strips	Low bumps across road make noise when driven over.
Chicanes	Curb bulges or planters (usually 3) on alternating sides of the road, forcing motorists to slow down.
Roundabouts	Medium to large circles at intersections (Kittelson, 2000).
Pavement treatments	Special pavement textures (cobble, bricks, etc.) and markings to designate special areas.
Bike lanes	Marking bike lanes narrows traffic lanes.
“Road diets”	Reducing the number and width of traffic lanes, particularly on arterials.
Horizontal shifts	Lane centerline that curves or shifts.
2-lanes narrow to 1-lane	Curb bulge or center island narrows 2-lane road down to 1-lane, forcing traffic for each direction to take turns.
Semi-diverters, partial closures	Restrict entry/exit to/from neighborhood. Limit traffic flow at intersections.
Street closures	Closing off streets to through vehicle traffic at intersections or mid-block
“Neotraditional” street design	Streets with narrower lanes, shorter blocks, T-intersections, and other design features to control traffic speed and volumes.
Perceptual Design Features	Patterns painted into road surfaces and other perceptual design features that encourage drivers to reduce their speeds.
Street Trees	Planting trees along a street to create a sense of enclosure and improve the pedestrian environment.

(Source: Victoria Transport Policy Institute, 2007)

Table 7-3 includes several traffic calming measures and should be viewed as a starting point of pedestrian friendly traffic calming examples. Of the measures listed in Table 7-3, speed humps and roundabouts were of particular interest to members of the Steering Committee and are discussed in more detail in this section. Further discussions of how specific traffic calming measures can be implemented on their websites of the Victoria Transport Policy Institute (<http://www.vtppi.org/tdm/tdm4.htm>) as well as the Federal Highway Administration (<http://www.fhwa.dot.gov/environment>).



Example of an existing Speed Hump in Nashville. These types of devices can slow vehicle traffic significantly. When used in areas such as neighborhoods and school zones lower speeds brought on by speed humps can increase pedestrian safety and when combined with proper signage and marking increase pedestrian awareness.

Speed Humps

Speed humps, also called road humps or undulations are rounded raised areas of pavement typically 12 to 14 feet in length. Speed hump height is typically 3 to 4 inches, although construction tolerances of as much as 1/8 inch may be appropriate. Speed hump effectiveness as a traffic calming device increases when spaced 300 to 600 feet apart in a series. Speed humps can slow traffic by as much as 20 mph although 8-10 mph is more typical. Speed humps can increase pedestrian safety by decreasing the speed of traffic and in combination with signage increase the awareness of drivers to pedestrian activity areas.

Use of speed humps is appropriate on residential streets with a midblock placement. Street grades of less than 8 percent are ideal. Speed hump installation should be avoided on major roads, emergency response routes, transit routes and evacuation routes. Consideration should also be given to bicycle lanes and routes. Bicycle accommodation can include tapering speed humps to avoid a bicycle lane or to allow ample room for bicycle passage between the speed hump and the curb or unpaved shoulder.

After installation of a speed hump, pavement markings such as the chevron, zigzag, shark's tooth, or zebra should be added along with signage to provide advanced warning of an individual speed hump or series of speed humps.

Modern Roundabouts

Modern roundabouts, sometimes referred to as traffic circles, are a type of circular intersection that has been successfully implemented in Europe and Australia over the past few decades and throughout the United States in recent years. A modern roundabout should not be confused with the traffic circles of the past which had severe safety and operational problems. The modern roundabout follows the "yield-at-entry" rule in which approaching vehicles must wait for a gap in the circulating flow before entering the circle. Modern roundabouts involve low speeds for entering and circulating traffic, as governed by small diameters and deflected (curved) entrances. Adequate deflection of the vehicle entering a roundabout is the most important factor influencing their safe operation. Roundabouts should be designed so that the speed of all vehicles is restricted to 15-20 mph or less within the roundabout. This is done via adjustment of entrance alignment geometry, installation of a center island and splitter islands, and exit alignment adjustments to ensure that "through" vehicle paths are significantly deflected. In giving priority to entering vehicles, a traffic circle tends to lock up at higher volumes.

Roundabouts offer several advantages to pedestrians including; the reduced need for travel lanes allows use of the right-of-way for other purposes, including pedestrian facilities; traffic flows at a more even pace, making it easier for pedestrians to judge crossing movements; pedestrians have to cross only one or two lanes of travel at a time, in clearly marked crosswalks; and mid-block crossing opportunities at other points along the roadway may be improved if the number of travel lanes can be reduced. However, pedestrians are still responsible for judging crossing opportunities as typically no signal protection is afforded to the pedestrian. Pedestrian safety in roundabouts can be enhanced though the installation of highly visible, setback crosswalks with detectable warnings and tactile indicators to identify the crossing for pedestrians with vision impairments. Additionally, roundabouts with accessible medians and splitter islands that double as pedestrian refuge islands help to reduce the crossing distance and exposure to traffic. Slip resistant rumble strips or other similar noise-generating devices that increase the sound of approaching vehicles, making them more detectable and many times causing a reduction in vehicle speed as they enter or exit the roundabout.

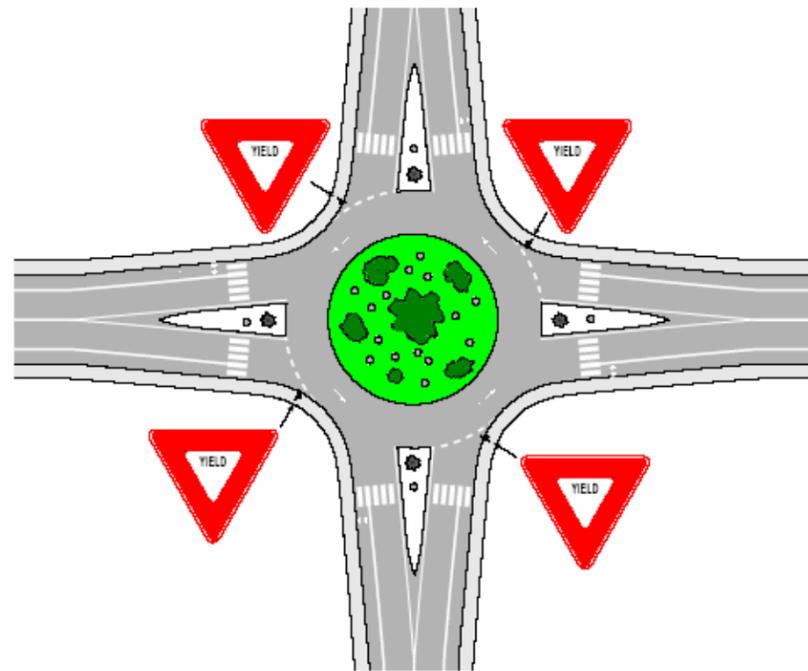


FIGURE 7-10: Modern Roundabout with pedestrian crossing points and deflection/pedestrian refuge islands

7.4.4 Pedestrian Friendly Parking Areas

Everyone is a pedestrian at some point during their journey. Parking lots are common areas overlooked for pedestrian friendliness. The main entrance of a parking lot is where the primary throughway for vehicles in a parking lot often coincides with where most pedestrians are moving. This is the most common pedestrian unfriendly design issue in parking lot design. Poor pedestrian markings such as no crosswalks, inadequate transition areas, and bad sight lines are also design issues that need to be addressed from the pedestrian point of view. Designated walking areas such as sidewalks around the parking area and crosswalks that connect to the adjacent pedestrian network as well as refuge medians will delineate a clear and safe path for pedestrians. These treatments along with proper signage will also serve as a visual cue to drivers that pedestrians may be present.

7.4.5 School Zones

Because school zones have a combination of children and high levels of automobile traffic during peak drop-off and pick-up hours they merit special attention and pedestrian consideration. Traffic during these peak hours can vary greatly. Large vehicles such as school buses and large sports utility vehicles as well small personal automobiles, bicyclists, and pedestrians are moving in a small area and generally under the time constraints of school or work start times as well as before and after school activities. Specific design features should be required in school zones to improve safety for the area. Requiring sidewalks on both sides of streets and placing crosswalks and pedestrian signals or trained crossing guards at all intersections in a school zone as well as large intersections adjacent to the school zone will provide safe facilities for the pedestrian to utilize. Safe automobile operation in a school zone can be improved by reducing speed limits along streets in and adjacent to each school zone. Additionally, signage should be provided to caution drivers of the presence of a school zone and the higher potential for pedestrians in or along the streets in the area.

7.4.6 Temporary Pedestrian Access & Work Zone Safety

The process of improving the transportation system to meet the needs of the community is an evolutionary process. Many times in order to accommodate future improvements, current facilities must be temporarily closed. When this happens the organization that is responsible for the construction is also accountable for providing adequate temporary access around or through the construction site. This includes signage that informs the traveling public of the temporary closure and gives advance warning. Unless a man-made or natural emergency has created an extreme situation, NCDOT (as noted in the Planning and Designing Local Pedestrian Facilities draft document), the Americans with Disabilities Act, and the Manual on Uniform Traffic Control Devices (MUTCD) require the following considerations for pedestrian safety in work zones:

- Safe and convenient travel path through or around the work zone that duplicates the most desirable characteristics of the existing pedestrian facilities.
- Pedestrian separation from conflicts with the work site, construction equipment and work zone operations
- Pedestrian separation from conflicts with vehicle traffic

In fixed work site areas that will require longer construction periods additional safety precautions may be needed including protective barriers or covered walkways that include adequate signage, lighting, and railing especially in situations where excessive slopes are present. Figure 7-12 provides guidance on standard treatments in a typical work zone where pedestrian facilities are affected. Proper signage indicating the work zone should be displayed in a location outside of the work zone where a pedestrian can still choose an alternate route. Signage should also clearly direct pedestrian traffic along any detours and back to the original travel corridor once beyond the work zone.



FIGURE 7-11: Example of a parking area that separates pedestrians and vehicles while still providing good and convenient access for both modes of transportation (Source: Oregon DOT)

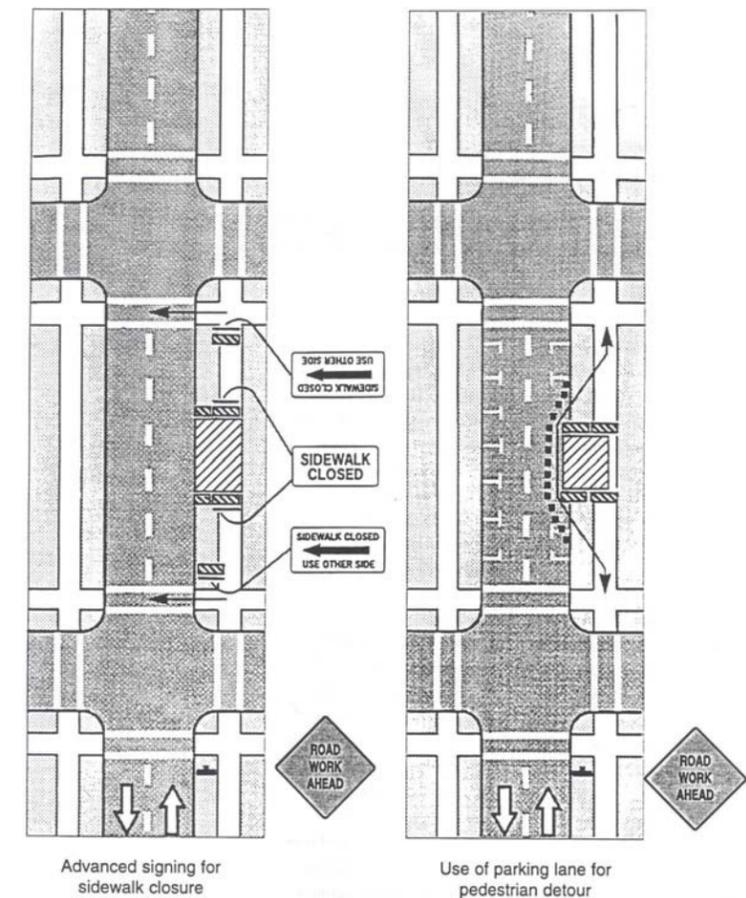


FIGURE 7-12: Example pedestrian accommodation in a work zone (Source: NCDOT)

References

- 1 NCDOT, "Planning and Designing Local Pedestrian Facilities." North Carolina Department of Transportation Office of Bicycle and Pedestrian Transportation, February, 1997.
- 2 AASHTO, "Guide for the Planning, Design, and Operation of Pedestrian Facilities." American Association of State Highway and Transportation Officials, July, 2004.
- 3 Oregon Department of Transportation Engineering Services (http://www.oregon.gov/ODOT/HWY/ENGSERVICES/standard_details.shtml), accessed May 9, 2006; Oregon Department of Transportation Bicycle & Pedestrian Program (<http://www.oregon.gov/ODOT/HWY/BIKEPED/index.shtml>), accessed April 18, 2006.
- 4 FHWA, "Pedestrian Facilities Users Guide-Providing Safety and Mobility." Federal Highway Administration, USDOT, Publication No. FHWA-RD-01-102, March, 2002.
- 6 Charles Zegeer, et al, "Safety Effects of Marked vs. Unmarked Crosswalks at Uncontrolled Locations: Executive Summary and Recommended Guidelines." (FHWA-RD-01-075) Federal Highway Administration, February, 2002.
- 8 United States Access Board, ADA Accessibility Guidelines Homepage, accessed June 8, 2006. (<http://www.access-board.gov/adaag/html/adaag.htm#A4.29.2>)
- 9 AASHTO, "Roadway Lighting Design Guide." American Association of State Highway Officials, 2005.
- 10 FHWA, "Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide", Federal Highway Administration, USDOT Homepage, accessed Nov. 10, 2006. <http://www.fhwa.dot.gov/environment/sidewalk2/sidewalks209.htm>
- 11 Victoria Transportation Policy Institute, "TDM Encyclopedia" Figure 1 Traffic Calming Strategies and Devices. <http://www.vtppi.org/tdm/tdm4.htm>
- 12 Walkable Communities, Inc. (<http://www.walkable.org/index.htm>). Note: This is the source of various photographic examples depicting applications of design examples, traffic calming treatments, and ITS.
- 13 ITE/FHWA, Traffic Calming: State of the Practice, August, 1999. Page 67. (www.ite.org/traffic/tcstate.htm#tcsop)
- 14 *Manual on Uniform Traffic Control Devices for Streets and Highways*, 2003 Edition. Federal Highway Administration, 2003. Sections 6B-1, 6D, and Figures 6H-28 and 6H-29.
- 15 *Planning and Designing Local Pedestrian Facilities*, North Carolina Department of Transportation Office of Bicycle and Pedestrian Transportation. February, 1997, Chapter 10.
- 16 Americans with Disabilities Act, US Code 28 CFR Part 36: ADA Standards for Accessible Design. Page 496 (www.usdoj.gov/crt/ada/adastd94.pdf).
- 17 New York State Department of Transportation Roundabout Guide (<http://www.dot.state.ny.us/roundabouts/guide.html>), accessed June 20, 2006.

SECTION 8: IMPLEMENTATION

IMPLEMENTATION

This section discusses the financing and partnerships that are available to the Town of Nashville to plan, design, schedule, acquire right-of-way for, and construct the various pedestrian projects and programs contained in this Plan. While many of these funding sources and partnerships are still evolving, identifying a reasonable schedule for assessing progress made in implementing the Nashville Pedestrian Plan in future years is necessary. It is this periodic, annual assessment that is the most important part of developing an effective plan and planning process.

8.1 FUNDING

Major roadway enhancement projects in Nashville are dependant on the State of North Carolina Department of Transportation for funding. No one source of funding will be able to meet the pedestrian needs of the community. Thus it will become increasingly importation to pool resources and coordinate activities with community partners to create a pedestrian friendly Nashville in the future that continues to provide enhanced active living opportunities. Table 8-1 details some of the funding sources Nashville should consider for pedestrian facilities and programs.

Table 8-1 Potential Funding Opportunities	
Funding Source	Funding Uses
Nashville Sidewalk Program	The Town of Nashville could create a dedicated funding stream for sidewalk construction and maintenance or dedicate a percentage of Powell Bill funding each year for sidewalk construction and maintenance.
Development Fees	Although already discussed, Nashville can establish fees that are charged during the development process that can be used to implement pedestrian projects.
State Transportation Improvement Program (TIP)	Bicycle and pedestrian projects are broadly eligible for funding from most of the major federal-aid transportation sources. One of the most cost-effective ways of providing bicycle and pedestrian facilities is to incorporate them as part of larger reconstruction, new construction and some repaving projects. Generally, the same source of funding can be used for the bicycle and pedestrian accommodation as is used for the larger highway improvement if the bicycle and pedestrian facility is “incidental” in scope and cost to the overall project. In addition, a cost-sharing approach with local municipalities will be used to fund pedestrian facilities. Overall, most bicycle and pedestrian accommodations within the state are made as incidental improvements. The other type of specific bicycle project is termed “independent” because it is not connected to a specific roadway improvement funded by NCDOT, which sets aside funding annually through the Division of Bicycle & Pedestrian Transportation for the construction of bicycle and pedestrian improvements across the State. Eighty percent of these funds are from STP-Enhancement funds, while state funds provide the remaining 20 percent. For more information on the TIP process, see: http://www.ncdot.org/transit/bicycle/funding/funding_TIP.html . For NCDOT's Pedestrian Policy Guidelines, please see: http://www.ncodt.org/transit/bicycle/laws/laws_pedpolicy.html . The NCDOT's Greenway Policy can be found at the following website: http://ncdot.org/transit/bicycle/laws/laws_greenways_admin.html .
Transportation Enhancement Program	Transportation enhancements are transportation-related activities that are designed to strengthen the aesthetic, cultural, and environmental aspects of the intermodal transportation system by increasing transportation choices and access, enhancing the natural or built environment, and creating a sense of place. The transportation enhancements program provides for the implementation of non-roadway capacity improvement projects, including bike and pedestrian facilities; landscaping; and similar aesthetic improvements. Various forms of pedestrian facilities such as sidewalks, greenways, pedestrian safety improvements, pedestrian tunnels and bridges, and crossing improvements are eligible for funding.

Spot Improvement Program	The NCDOT Bicycle and Pedestrian Transportation Division has established a yearly budget for “spot” safety improvements throughout the State. The Spot Improvement Program is used only for bicycle and pedestrian projects. Spot Improvement funds are typically used for small-scale or special projects that are not large enough to merit TIP TIP funding. Proposals for Spot Improvement funding should be submitted directly to the Division of Bicycle & Pedestrian Transportation.
Small Urban Funds	Each year \$2 million of small urban funds are allocated to the 14 NCDOT Highway Divisions. While this funding is not commonly used for pedestrian projects, local requests for pedestrian projects can be directed to the NCDOT Highway Division 4 office for funding through this source. A written request should be submitted to the Division Engineer providing technical information such as location, improvements being requested, timing, budget, etc. for review and consideration.
Statewide Discretionary Funding	The Secretary of the Department of Transportation is responsible for administering the Statewide Discretionary Fund. This fund consists of \$10 million that can be used on any project at any location within the State. Primary, urban, secondary, industrial access, and spot safety projects are eligible for this funding. Nashville must submit a written request to the NCDOT Highway Division 4 office with a clear description of project and project justification for consideration.
Hazard Elimination Program	Another program that is not commonly used pedestrian projects is the Hazard Elimination Program. This program is administered through the NCDOT Division of Highways. This program focuses on projects intended for locations that with a documented history of previous crashes. Similar to the Small Urban Funds, it is a significantly limited funding source and can be a highly competitive program in any particular year.
Governor’s Highway Safety Program (GHSP)	GHSP funding is used as “seed money” to get programs started and the grantee is expected to provide a portion of the project cost as well as funds to continue the program after GHSP funding ends. This funding source is limited in funds and time line. Projects are approved for one full or partial fiscal year at a time. However, projects have been funded for up to three additional years. Substantial progress in reducing crashes, injuries and fatalities is required as a condition of receiving funding through the annual GHSP program. Funding varies from year to year, according to the specific amounts requested.
Safe Routes to School Program	The North Carolina Safe Routes to School program has been established by NCDOT and the Federal Highway Administration. This statewide program is designed to promote safe walking and bicycling to elementary and middle schools in North Carolina as well as reduce pollution and congestion caused by school traffic. The North Carolina Safe Routes to School program provide opportunities for schools to apply for funding for both programs and capital improvements projects to encourage walking and cycling to school. For more information about the Safe Routes to School Program, please see the N.C. Safe Routes to School’s webpage at: http://www.ncdot.org/programs/saferoutes .
Congestion Management and Air Quality (CMAQ) Funds	Nashville’s unique situation as a member of the Rocky Mount MPO as well as having portions of the jurisdiction in the Upper Coastal Plain RPO allow the Town to take advantage of two separate “pots” of CMAQ money. The CMAQ program funds projects which may help to reduce traffic congestion and improve air pollution. Many pedestrian improvements are eligible for CMAQ funding.

8.2 PARTNERSHIPS

By working with other municipal governments and government agencies, non-profit organizations, chambers of commerce and economic development agencies, the school district, and private developers, the Town of Nashville can accomplish a greater level of plan implementation both in new pedestrian oriented infrastructure as well as education, enforcement, and encouragement programs.

Table 8-2 Potential Partners	
Partnering Agency	Role
Various Nash County Agencies	Coordination with the county will be crucial to developing the most effective use of resources and ensuring a well connected pedestrian transportation network. The Sheriff's Office and the Nashville Police Department can develop cooperative enforcement programs. The Health Department can assist the Town's Administration in education and encouragement programs. Nash County Planning as well as Nash County Parks & Recreation are excellent resources for coordinating regional pedestrian programs and projects.
North Carolina Dept. of Transportation	Although already discussed extensively, NCDOT will be an integral partner in facility and program development/operations as well as funding (TIP, Enhancement Grants, Highway Safety Grants, CMAQ funding, SRTS, etc.)
Nashville Arts Council	This organization may be a good source for furthering program opportunities in particular partnership opportunities for public art displays that can be incorporated into facility design
Carolina Gateways Partnership	Good source of potential new partners from the private sector. The Partnership could not only use pedestrian programs and amenities as a marketing tool for the region but also act as a conduit for engaging the private sector to actively participate in pedestrian related activities such as event sponsorships, adopt a sidewalk/trail programs, and information dissemination activities.
Nash Community College	Colleges are an excellent source of volunteer resources, and the Community College's health-based education programs could be tied into supporting walking-related health events.
North Carolina Wesleyan College	Another excellent source of volunteer resources and a good education and encouragement partner. The College could also be an excellent partner for future localized research of pedestrian issues including walkability audits and safety surveys. Students and staff could also be trained for use as volunteer crossing guards in school zones.
Nash Regional Hospital	Nash Regional Hospital has a direct interest in helping people become more active and maintain healthy lifestyles. The hospital would be a good sponsor for pedestrian related events such as health walks. The hospital is also a good distribution point for education and encouragement pamphlets, and informational brochures and flyers. Good source of volunteer effort and coordination.
Nashville Chamber of Commerce	Nashville has a very active Chamber of Commerce with a membership roster that includes a readily accessible supply of potential donation, in-kind, and volunteer resources.
Nash County Aging Department	Another active group in the Town and county with access to a good outreach network and volunteers as well as other potential funding streams. The Aging Department will also play a role in coordinating activities of the Senior Friendly Community Initiative.
Nashville Area Developers	The development community is an excellent resource for all aspects of implementation.
Rocky Mount MPO	Another avenue to solicit state and federal transportation funding and program access. Also a good venue to coordinate multi-jurisdictional pedestrian projects. As a member of the MPO, Nashville can work to secure pedestrian related projects on the Long Range Transportation Plan, the Comprehensive Transportation Plan, and the MPO's priority listing of unmet transportation needs.
Nash-Rocky Mount School District	The school system provides a great network for education and encouragement programs and is a key partner to accessing special funding programs such as Safe Routes to Schools.
Civic Clubs	Both the Rotary and Kiwanis Clubs are active in Nashville, and may be helpful in securing volunteers for programs and maintenance of greenways/multi-use trails.

Below is a listing of other organizations that can provide not only funding but also technical advice and partnering opportunities for operation and maintenance of facilities and programs:

- North Carolina State Government, including Parks and Recreation (Parks & Recreation Trust Fund, Trails Programs); Wildlife Resources Commission; Division of Water Resources; Division of Community Assistance (facilitation)
- National Park Service (Land and Water Conservation Fund Grants)
- Conservation trusts, such as the Tar River Land Conservancy, N.C. Conservation Trust Fund
- Fitness and health-based initiatives, including the Senior Friendly Community program,
- Fit Together program and Fit Community grants.

8.3 PRIORITY PROJECTS

Priority projects identified in this Plan will only come to fruition through the cooperation of partner organizations. Prioritization was based on several factors including location and condition of the existing pedestrian network, interconnectivity with the rest of the transportation network, proximity to schools and major destinations, crash and safety data, and input provided through the public involvement process. Pedestrian projects identified as a priority were designated as *Future Focus Corridors*. Those projects identified as being of a higher priority were designated as *Top Priority Corridors*. At public workshops citizens were able to provide input on these corridors and make suggestions for improvements. A complete listing of the *Top Priority* and *Future Focus Corridors* is contained in Appendix B.

Working locally with the existing partners in the community to develop a program may produce faster results than pursuing traditional grant sources alone. Once a project has been started the group, agency or individual who will spearhead the process and coordinate with all partners involved such as a pedestrian program coordinator must be identified to ensure successful completion and operation.

Making *the Nashville Pedestrian Plan* a reality will require more than just the work of the Town or any one particular group. The community must work together to accomplish the goal of a more pedestrian friendly Town. Cooperation with partner organizations and community outreach are the only ways to ensure implementation of the Plan.

APPENDIX A: FUTURE PEDESTRIAN PROJECTS

TOP PRIORITY & FUTURE FOCUS PEDESTRIAN CORRIDOR LIST

This technical appendix contains the Top Priority & Future Focus pedestrian corridors as discussed in Section 5 of this Plan. Summary sheets precede the detailed listing of Top Priority and Future Focus priority corridors and include:

- Top Priority Pedestrian Corridor Summary
- Future Focus Pedestrian Corridor Summary

The detailed listing of priority corridors are sorted by type, street and address range. This information will assist City planning and engineering staff in future project level planning and construction. Estimated costs have also been determined based the 2006 cost estimates of \$30 per square yard and the average thickness of a concrete sidewalk segment of four inches. These cost estimates were provided by the North Carolina Department of Transportation, Division of Highways and are intended to be a guide for the capital planning of pedestrian facilities. Individual corridor segments were then grouped by street corridor and the data were summarized. While these cost estimates have remained relatively stable in relation to material costs and inflation, it should be noted that these cost estimates are for new construction segments of Nashville's future pedestrian network, are based on 2006 dollars, and may subject to change in the future. It is recommended that updated cost estimates be obtained prior to any project letting or project level budgeting process begins.

The columns to the left of the estimated cost column indicated the address range for each construction segment. The columns labeled as "FROMLEFT" and "TOLEFT" identify the addressing on the left side of each street segment. The columns labeled as "FROMRIGHT" and "TORIGHT" identify the addressing on the right side of each street segment. The "OBJECTID" column indicates the geographic information system, or computer mapping database, identification number for each street segment.

Appendix A: Top Priority Corridor Prioritization List Summary

STREET	ESTIMATED LENGTH (FT)	ESTIMATED COST (2006 \$'s)	SEGMENT DESCRIPTION
BARNES ST Total	4352.10	\$72,535	Between Washington St. and W. Railroad St.
BRAKE ST Total	2227.69	\$37,128	Between Galatia St. and Southside Dr.
E CEDAR ST Total	37.90	\$632	Between Oak St. and N. First St.
E WASHINGTON ST Total	7981.63	\$133,027	Between S. Alston St. and Woodfield Dr.
EASTERN AVE Total	9536.28	\$158,938	Between Eastern Ave. towards Regency Dr. and extending to the ETJ
FIRST ST EXT Total	5919.22	\$98,654	Between US 264 E. to Indian Trl.
N ALSTON ST Total	2263.04	\$37,717	Between Elm St. and Cedar St.
N FIRST ST Total	3527.98	\$58,800	Between E. Washington St. and US 64 W.
N NC 58 Total	779.83	\$12,997	Between US 64 E and US 64 W
S ALSTON ST Total	5401.40	\$90,023	Between W. Washington St. and Cooke Rd.
S FIRST ST Total	10837.27	\$180,621	Between Center St. and E. Old Spring Hope Rd.
SOUTHSIDE DR Total	194.39	\$3,240	From Brake St. and extending NE towards S. First St.
US64A Total	2466.90	\$41,115	Between Marks Rd. and Industry Ct.
W RAILROAD ST Total	944.11	\$15,735	Between Barnes St. And the Town Limits to the SW
W WASHINGTON ST Total	3067.58	\$51,126	Between N. Alston St. and US 64 E
WESTERN AVE Total	3815.91	\$63,598	Between Barnes and Industry Ct.
WOMBLE RD Total	4310.97	\$71,849	Between US 64 E and Breedlove Rd.
FUTURE GREENWAY Total	1157.96	\$150,000	Future Greenway
Grand Total	68822.16	\$1,277,737	

Cost Estimates are based on the latest available data for average sidewalk construction costs from the North Carolina Department of Transportation, Division of Highways.

Appendix A: Top Priority Corridor and Future Focus Corridor Prioritization List

CORRIDOR TYPE	STREET	ESTIMATED LENGTH (FT)	ESTIMATED AREA (SQ YDS)	ESTIMATED COST (SQ YDS) (2006 \$'s)	FROMLEFT	TOLEFT	FROMRIGHT	TORIGHT	OBJECTID	SEGMENT DESCRIPTION
TOP PRIORITY	BARNES ST	532.93	296.07	\$8,882	101	129	100	128	4031	Between Washington St. and W. Church St.
TOP PRIORITY	BARNES ST	586.41	325.78	\$9,773	201	239	200	238	4124	Between W. Church St. and Curtis St.
TOP PRIORITY	BARNES ST	838.66	465.92	\$13,978	301	319	300	318	9158	From Curtis St. 230' SW
TOP PRIORITY	BARNES ST	838.66	465.92	\$13,978	401	415	400	414	9160	Beginning 230' from Curtis St. and extending 235' SW
TOP PRIORITY	BARNES ST	838.66	465.92	\$13,978	501	519	500	518	9161	Beginning 465' from Curtis St. and extending to Western Ave.
TOP PRIORITY	BARNES ST	144.58	80.32	\$2,410	601	609	600	608	4182	Between Western Ave. and Cross St.
TOP PRIORITY	BARNES ST	572.22	317.90	\$9,537	701	739	700	738	4214	Between Cross St. and W. Railroad St.
TOP PRIORITY	BRAKE ST	818.91	454.95	\$13,649	801	825	800	824	4257	Between Galatia St. and Sixth St.
TOP PRIORITY	BRAKE ST	173.21	96.23	\$2,887	827	831	826	830	4263	Between Sixth St. and Ward St.
TOP PRIORITY	BRAKE ST	1235.57	686.43	\$20,593	901	925	900	926	4289	Between Ward St. and Southside Dr.
TOP PRIORITY	E CEDAR ST	37.90	21.06	\$632	326	398	327	399	4463	Between Oak St. and N. First St.
TOP PRIORITY	E WASHINGTON ST	453.06	251.70	\$7,551	100	118	101	119	4034	Between S. Alston St. and N. Collins St.
TOP PRIORITY	E WASHINGTON ST	377.81	209.90	\$6,297	200	218	201	219	4104	Between N. Collins St. and N. Hilliard St.
TOP PRIORITY	E WASHINGTON ST	380.25	211.25	\$6,337	300	308	301	309	4107	Between N. Hilliard St. and Oak St.
TOP PRIORITY	E WASHINGTON ST	210.00	116.67	\$3,500	310	318	311	319	4109	Between Oak St. and N. First St.
TOP PRIORITY	E WASHINGTON ST	431.60	239.78	\$7,193	400	418	401	419	4113	Between N. First St. and N. Lumber St.
TOP PRIORITY	E WASHINGTON ST	343.94	191.08	\$5,732	500	518	501	519	4118	Between N. Lumber St. and Fort St.
TOP PRIORITY	E WASHINGTON ST	275.38	152.99	\$4,590	600	606	601	607	4123	Between Fort St. and Aviation Ave.
TOP PRIORITY	E WASHINGTON ST	648.97	360.54	\$10,816	608	638	609	639	4136	Between Aviation Ave. and E. Church St.
TOP PRIORITY	E WASHINGTON ST	668.68	371.49	\$11,145	700	728	701	729	4151	Between E. Church St. and N. Wheelless Dr.
TOP PRIORITY	E WASHINGTON ST	117.23	65.13	\$1,954	730	748	731	749	8613	Between N. Wheelless Dr. and Park Ave.
TOP PRIORITY	E WASHINGTON ST	516.83	287.13	\$8,614	800	848	801	849	8614	Between Park Ave. and Eastern Ave.
TOP PRIORITY	E WASHINGTON ST	178.82	99.35	\$2,980	850	898	851	899	9052	Between Eastern Ave. and Industrial Dr.
TOP PRIORITY	E WASHINGTON ST	1276.72	709.29	\$21,279	900	998	901	999	9053	Between Industrial Dr. and Club Dr.
TOP PRIORITY	E WASHINGTON ST	739.18	410.66	\$12,320	1000	1012	1001	1013	4237	Between Club Dr. and the southern R.O.W. of the railroad
TOP PRIORITY	E WASHINGTON ST	923.62	513.12	\$15,394	1014	1098	1015	1099	2408	Between the southern R.O.W. of the railroad and N. Clarendon Dr.
TOP PRIORITY	E WASHINGTON ST	76.71	42.61	\$1,278	1100	1102	1101	1103	2409	Between N. Clarendon Dr. and S. Clarendon Dr.
TOP PRIORITY	E WASHINGTON ST	362.85	201.58	\$6,048	1104	1198	1105	1199	4264	Between S. Clarendon Dr. and Woodfield Dr.
TOP PRIORITY	EASTERN AVE	535.74	297.63	\$8,929	900	920	901	921	4177	Between Eastern Ave. and Winstead Ave.
TOP PRIORITY	EASTERN AVE	2623.27	1457.37	\$43,721	922	1098	923	1099	4179	Between Winstead Ave. and N. Clarendon Dr.
TOP PRIORITY	EASTERN AVE	342.15	190.08	\$5,703	1100	1102	1101	1103	4152	From N. Clarendon Dr. 326' towards Red Oak Rd.
TOP PRIORITY	EASTERN AVE	238.58	132.54	\$3,976	1104	1118	1105	1119	9061	Beginning 326' from N. Clarendon Dr. and extending to Red Oak Rd.
TOP PRIORITY	EASTERN AVE	565.03	313.91	\$9,417	1120	1138	1121	1139	4154	From Red Oak Rd. 570' E towards Forest View Dr.
TOP PRIORITY	EASTERN AVE	539.09	299.49	\$8,985	1140	1198	1141	1199	4155	Beginning 570' from Red Oak Rd. and extend 610 E
TOP PRIORITY	EASTERN AVE	800.82	444.90	\$13,347	1200	1298	1201	1299	4156	Beginning 1180' from Red Oak Rd. and extend 800' E
TOP PRIORITY	EASTERN AVE	668.90	371.61	\$11,148	1400	2098	1401	2099	4159	Between Forest View Dr. and Regency Dr.
TOP PRIORITY	EASTERN AVE	1389.69	772.05	\$23,161	2100	2364	2101	2363	2912	From Regency Dr. 1389' E. towards E. Old Spring Hope Rd
TOP PRIORITY	EASTERN AVE	1833.02	1018.34	\$30,550	2366	2710	2365	2709	2913	Beginning 1389' from Regency Dr. and extending 1833' to the ETJ
TOP PRIORITY	FIRST ST EXT	1470.92	817.18	\$24,515	656	934	655	933	2312	From US 264 E. 1473' NE towards Indian Trl.
TOP PRIORITY	FIRST ST EXT	352.05	195.59	\$5,868	936	1036	935	1035	2516	Beginning 1473' from US 264 E. and extending NE to Indian Trl.
TOP PRIORITY	FIRST ST EXT	1322.68	734.82	\$22,045	1038	1058	1037	1057	2514	Between Indian Trl. and Robbins Ln.
TOP PRIORITY	FIRST ST EXT	1322.68	734.82	\$22,045	1060	1248	1059	1247	3546	Between Robbins Ln. and Holland Ln.
TOP PRIORITY	FIRST ST EXT	1322.68	734.82	\$22,045	1250	1286	1249	1285	3620	From Holland Ln. 210' NE towards Indian Trl.
TOP PRIORITY	FIRST ST EXT	128.19	71.22	\$2,137	1288	1310	1287	1309	9320	Beginning 210' from Holland Ln. and extending to Indian Trl.
TOP PRIORITY	N ALSTON ST	514.51	285.84	\$8,575	100	118	101	119	4027	Between Elm St. and E. Washington St.
TOP PRIORITY	N ALSTON ST	415.88	231.04	\$6,931	200	218	201	219	4004	Between Cedar St. and Elm St.
TOP PRIORITY	N ALSTON ST	807.15	448.42	\$13,452	300	398	301	399	3994	Beginning 629' from US 264 W. 805' SW to Cedar St.
TOP PRIORITY	N ALSTON ST	525.51	291.95	\$8,758	400	498	401	499	9149	From US 264 W. 629' SW Towards Cedar St.
TOP PRIORITY	N FIRST ST	478.15	265.64	\$7,969	100	118	101	119	4108	Between E. Washington St. and E. Elm St.
TOP PRIORITY	N FIRST ST	403.67	224.26	\$6,728	200	214	201	215	4021	Between E. Elm St. and E. Cedar St.
TOP PRIORITY	N FIRST ST	1028.53	571.41	\$17,142	216	222	217	223	9172	From E. Cedar St. 270' NE towards Lloyd Park Dr.
TOP PRIORITY	N FIRST ST	1028.53	571.41	\$17,142	300	398	301	399	9173	Beginning 270' from E. Cedar St. and extending to Lloyd Park Dr.
TOP PRIORITY	N FIRST ST	589.11	327.28	\$9,818	418	654	417	653	9175	Between Lloyd Park Dr. and US-64 W.
TOP PRIORITY	N NC 58	779.83	433.24	\$12,997	200	348	199	347	887	Between US 64 E and US 64 W
TOP PRIORITY	S ALSTON ST	520.12	288.96	\$8,669	101	199	100	198	1715	Between W. Washington St. and Church St.
TOP PRIORITY	S ALSTON ST	539.60	299.78	\$8,993	201	299	200	298	1716	Between Church St. and Virginia Ave.
TOP PRIORITY	S ALSTON ST	532.20	295.67	\$8,870	301	499	300	498	1261	Between Virginia Ave. and W. Green St.
TOP PRIORITY	S ALSTON ST	293.12	162.84	\$4,885	501	599	500	598	1262	Between W. Green St. and Lucille St.
TOP PRIORITY	S ALSTON ST	204.25	113.47	\$3,404	601	699	600	698	1755	Between Lucille St. and W. Cross St.
TOP PRIORITY	S ALSTON ST	352.26	195.70	\$5,871	701	799	700	798	1756	Between W. Cross St. and E. Railroad St.
TOP PRIORITY	S ALSTON ST	636.44	353.58	\$10,607	801	899	800	898	1757	Between E. Railroad St. and Sixth St.
TOP PRIORITY	S ALSTON ST	270.89	150.49	\$4,515	901	905	900	904	1758	Between Sixth St. and Circle Dr.
TOP PRIORITY	S ALSTON ST	387.93	215.52	\$6,465	907	999	906	998	1759	Between Circle Dr. and Vernon St.
TOP PRIORITY	S ALSTON ST	217.35	120.75	\$3,623	1001	1003	1000	1002	1760	From Vernon St. 217' SW
TOP PRIORITY	S ALSTON ST	1447.24	804.02	\$24,121	1005	1099	1004	1098	1761	Beginning 217' from Vernon St. and ending at Cooke Rd.
TOP PRIORITY	S FIRST ST	226.81	126.01	\$3,780	101	107	100	106	4120	Between E. Washington St. and Center St.
TOP PRIORITY	S FIRST ST	364.09	202.27	\$6,068	109	199	108	198	4137	Between Center St. and E. Church St.
TOP PRIORITY	S FIRST ST	294.51	163.61	\$4,908	201	299	200	298	4461	Between E. Church St. and Griffin St.
TOP PRIORITY	S FIRST ST	193.08	107.27	\$3,218	301	305	300	304	4460	Between Griffin St. and Virginia Ave.
TOP PRIORITY	S FIRST ST	268.76	149.31	\$4,479	307	319	306	318	4184	Between Virginia Ave. and Park Ave.
TOP PRIORITY	S FIRST ST	275.26	152.92	\$4,588	401	499	400	498	4197	Between Park Ave. and E. Green St.

Cost Estimates are based on the latest available data for average sidewalk construction costs from the North Carolina Department of Transportation, Division of Highways.

Appendix A: Top Priority Corridor and Future Focus Corridor Prioritization List

CORRIDOR TYPE	STREET	ESTIMATED LENGTH (FT)	ESTIMATED AREA (SQ YDS)	ESTIMATED COST (SQ YDS) (2006 \$'s)	FROMLEFT	TOLEFT	FROMRIGHT	TORIGHT	OBJECTID	SEGMENT DESCRIPTION
TOP PRIORITY	S FIRST ST	332.60	184.78	\$5,543	501	599	500	598	4222	Between E. Green St. and E. Cross St.
TOP PRIORITY	S FIRST ST	88.52	49.18	\$1,475	601	601	600	600	4466	Between E. Cross St. and E. Railroad St.
TOP PRIORITY	S FIRST ST	230.60	128.11	\$3,843	701	707	700	706	4230	Between E. Railroad St. and Galatia St.
TOP PRIORITY	S FIRST ST	50.79	28.22	\$846	709	713	708	712	4462	Between Galatia St. and Baker St.
TOP PRIORITY	S FIRST ST	612.68	340.38	\$10,211	801	899	800	898	4255	Between Baker St. and Murfree St.
TOP PRIORITY	S FIRST ST	372.04	206.69	\$6,201	901	999	900	998	4262	Between Murfree St. and Ward St.
TOP PRIORITY	S FIRST ST	81.80	45.45	\$1,363	1001	1117	1000	1116	1887	Between Ward St. and Birchwood Dr.
TOP PRIORITY	S FIRST ST	2057.26	1142.92	\$34,288	1119	1507	1118	1506	9127	From Birchwood to 2/3 the length of Glover Park
TOP PRIORITY	S FIRST ST	1280.27	711.26	\$21,338	1509	1767	1508	1766	2130	From 2/3 the length of Glover Park to Essex Rd.
TOP PRIORITY	S FIRST ST	500.37	277.98	\$8,339	1773	1805	1772	1804	2699	Between Essex Rd. and Village Ln.
TOP PRIORITY	S FIRST ST	500.37	277.98	\$8,339	1807	1837	1806	1836	2715	Between Village Ln. and St. Annes Rd.
TOP PRIORITY	S FIRST ST	500.37	277.98	\$8,339	1839	1869	1838	1868	2716	From St. Annes Rd. and extending 500' SE
TOP PRIORITY	S FIRST ST	203.07	112.82	\$3,385	1871	1909	1870	1908	1891	Beginning 500' from St. Annes Rd. and continuing 203' SE
TOP PRIORITY	S FIRST ST	324.57	180.32	\$5,409	1911	1925	1910	1924	9136	Beginning 703' from St. Annes Rd. to Liberty Dr.
TOP PRIORITY	S FIRST ST	324.57	180.32	\$5,409	1927	1969	1926	1968	9137	From Liberty Dr. and extending 324' SE
TOP PRIORITY	S FIRST ST	368.22	204.57	\$6,137	1971	2039	1970	2038	1885	Beginning 324' from Liberty Dr. and extending 368' SE
TOP PRIORITY	S FIRST ST	240.76	133.75	\$4,013	2041	2085	2040	2084	1886	Beginning 692' from Liberty Dr. and extending 240 SE
TOP PRIORITY	S FIRST ST	1145.91	636.62	\$19,098	2087	2315	2086	2314	2092	Beginning 932' from Liberty Dr. to E. Old Spring Hope Rd.
TOP PRIORITY	SOUTHSIDE DR	194.39	107.99	\$3,240	400	402	401	403	4288	From Brake St. and extending 184' NE towards S. First St.
TOP PRIORITY	US64A	1233.45	685.25	\$20,558	901	1023	900	1022	9038	From Industry Ct. 654' E towards Lakeview Dr.
TOP PRIORITY	US64A	1233.45	685.25	\$20,558	1025	1135	1024	1134	9039	Between Marks Rd. and Industry Ct.
TOP PRIORITY	W RAILROAD ST	282.85	157.14	\$4,714	301	399	300	398	4215	Between Barnes St. and Clark St.
TOP PRIORITY	W RAILROAD ST	282.92	157.18	\$4,715	401	499	400	498	4218	Between Clark St. and Smith St.
TOP PRIORITY	W RAILROAD ST	378.35	210.19	\$6,306	501	599	500	598	4225	Between Smith St. and the City Limits to the SW
TOP PRIORITY	W WASHINGTON ST	545.50	303.06	\$9,092	101	139	100	138	4028	Between N. Alston St. and N. Boddie St.
TOP PRIORITY	W WASHINGTON ST	164.81	91.56	\$2,747	201	211	200	210	4018	Between N. Boddie St. and Court St.
TOP PRIORITY	W WASHINGTON ST	234.49	130.27	\$3,908	213	239	212	238	4014	Between Court St. and Drake St.
TOP PRIORITY	W WASHINGTON ST	211.03	117.24	\$3,517	241	299	240	298	4012	Between Drake St. and Barnes St.
TOP PRIORITY	W WASHINGTON ST	743.50	413.05	\$12,392	301	339	300	338	9033	Between Barnes St. and Triangle Ct.
TOP PRIORITY	W WASHINGTON ST	969.75	538.75	\$16,163	341	499	340	498	3993	Between Triangle Ct. and Evans Dr.
TOP PRIORITY	W WASHINGTON ST	198.49	110.27	\$3,308	501	599	500	598	3984	Between Evans Dr. and US 64 E
TOP PRIORITY	WESTERN AVE	502.69	279.27	\$8,378	301	399	300	398	4168	Between Barnes St. and Clark St.
TOP PRIORITY	WESTERN AVE	173.17	96.20	\$2,886	401	499	400	498	4170	Between Clark St. and Smith St.
TOP PRIORITY	WESTERN AVE	451.97	251.10	\$7,533	501	599	500	598	4173	Between Smith St. and Bass Dr.
TOP PRIORITY	WESTERN AVE	929.67	516.48	\$15,495	601	607	600	606	9074	Between Bass Dr. and Westview Ct.
TOP PRIORITY	WESTERN AVE	929.67	516.48	\$15,495	609	621	608	620	9075	Between Westview Ct. and Sara Dr.
TOP PRIORITY	WESTERN AVE	556.46	309.14	\$9,274	623	631	622	630	4175	Between Sara Dr. and Haley Dr.
TOP PRIORITY	WESTERN AVE	119.03	66.13	\$1,984	633	685	632	684	4178	Between Haley Dr. and Lakeview Dr.
TOP PRIORITY	WESTERN AVE	153.25	85.14	\$2,554	687	699	686	698	9154	From Lakeview Dr. 147' W. towards Industry Ct.
TOP PRIORITY	WOMBLE RD	217.06	120.59	\$3,618	500	542	499	541	1810	Between US 64 E and the northern R.O.W. of US 64 W
TOP PRIORITY	WOMBLE RD	4093.91	2274.39	\$68,232	544	1316	543	1315	9124	Between the northern R.O.W. of US 64 W and Breedlove Rd.
TOP PRIORITY	FUTURE GREENWAY	1157.96	643.31	\$150,000	0	0	0	0	0	-
ESTIMATED TOTAL		68822.16	38234.54	\$1,277,737						

Cost Estimates are based on the latest available data for average sidewalk construction costs from the North Carolina Department of Transportation, Division of Highways.

Appendix A: Future Focus Corridor Prioritization List Summary

STREET	ESTIMATED LENGTH (FT)	ESTIMATED COST (2006 \$'s)	SEGMENT DESCRIPTION
BROOKLYN BLVD Total	2051.71	\$34,195	Between E. Railroad St. and Vernon St.
E CEDAR ST Total	1436.53	\$23,942	Between N. Alston St. and Oak St.
E GREEN ST Total	955.60	\$15,927	Between S. Alston St. and Joyner St.
E OLD SPRING HOPE RD Total	25948.89	\$432,482	Between Pleasant Hollow Ln. and Oak Level Rd.
JOYNER ST Total	535.75	\$8,929	Between Virginia Ave. and E. Green St.
N NC 58 Total	2145.65	\$35,761	Between US 64 W and Taylors Store Rd.
SIXTH ST Total	692.21	\$11,537	Between Brooklyn Blvd. and Brake St.
US64A Total	11462.96	\$191,049	Between Z Rd. and Cary St.
VERNON ST Total	845.74	\$14,096	Between S. Alston St. and Brooklyn Blvd.
VIRGINIA AVE Total	947.21	\$15,787	Between S. Alston St. and Joyner St.
W CHURCH ST Total	586.53	\$9,775	Between Barnes St. and S. Boddie St.
WOMBLE ST Total	610.28	\$10,171	Between Virginia Ave. and E. Church St.
Grand Total	48219.06	\$803,651	

Cost Estimates are based on 2006 data for average sidewalk construction costs from the North Carolina Department of Transportation, Division of Highways

Appendix A: Top Priority Corridor and Future Focus Corridor Prioritization List

CORRIDOR TYPE	STREET	ESTIMATED LENGTH (FT)	ESTIMATED AREA (SQ YDS)	ESTIMATED COST (SQ YDS) (2006 \$'s)	FROMLEFT	TOLEFT	FROMRIGHT	TORIGHT	OBJECTID	SEGMENT DESCRIPTION
FUTURE FOCUS	BROOKLYN BLVD	445.64	247.58	\$7,427	801	821	800	820	4235	Between E. Railroad St. and Battle Dr.
FUTURE FOCUS	BROOKLYN BLVD	230.70	128.17	\$3,845	823	837	822	836	4243	Between Battle Dr. and Seventh St.
FUTURE FOCUS	BROOKLYN BLVD	231.14	128.41	\$3,852	839	859	838	858	4252	Between Seventh St. and Sixth St.
FUTURE FOCUS	BROOKLYN BLVD	652.08	362.27	\$10,868	901	929	900	928	4271	Between Sixth St. and Vernon St.
FUTURE FOCUS	BROOKLYN BLVD	195.93	108.85	\$3,266	1001	1005	1000	1004	9143	Between Vernon St. 207' SW towards Meadow Park Dr.
FUTURE FOCUS	BROOKLYN BLVD	296.21	164.56	\$4,937	1007	1099	1006	1098	4280	Beginning 207' from Vernon St. and extending 287' SW.
FUTURE FOCUS	E CEDAR ST	361.58	200.88	\$6,026	100	118	101	119	3997	Between N. Alston St. and N. Collins St.
FUTURE FOCUS	E CEDAR ST	534.24	296.80	\$8,904	200	228	201	229	4001	Between N. Collins St. and Thorne St.
FUTURE FOCUS	E CEDAR ST	540.72	300.40	\$9,012	300	324	301	325	4006	Between Thorne St. and Oak St.
FUTURE FOCUS	E GREEN ST	424.80	236.00	\$7,080	100	118	101	119	4183	Between S. Alston St. and S. Collins St.
FUTURE FOCUS	E GREEN ST	530.80	294.89	\$8,847	200	228	201	229	4192	Between S. Collins St. and Joyner St.
FUTURE FOCUS	E OLD SPRING HOPE RD	9765.36	5425.20	\$162,756	1194	1276	1193	1275	3825	Between Pleasant Hollow Ln. and Bone Ln.
FUTURE FOCUS	E OLD SPRING HOPE RD	9765.36	5425.20	\$162,756	1278	1950	1277	1949	3822	Between Bone Ln. and NC 58, S.
FUTURE FOCUS	E OLD SPRING HOPE RD	2027.73	1126.52	\$33,796	1952	2334	1951	2333	3302	From NC 58, S. extending 2027' NE towards Sherrod Rd.
FUTURE FOCUS	E OLD SPRING HOPE RD	814.58	452.55	\$13,576	2336	2488	2335	2487	3301	Beginning 2027' from NC 58, S. and extending to Sherrod Rd.
FUTURE FOCUS	E OLD SPRING HOPE RD	1884.83	1047.13	\$31,414	2490	2846	2489	2845	3300	Between Sherrod Rd. and Sunnyfield Rd.
FUTURE FOCUS	E OLD SPRING HOPE RD	834.19	463.44	\$13,903	2848	3004	2847	3003	3299	Between Sunnyfield Rd. and Tanbark Dr.
FUTURE FOCUS	E OLD SPRING HOPE RD	856.84	476.02	\$14,281	3006	3166	3005	3165	3298	Between Tanbark Dr. and Oak Level Rd.
FUTURE FOCUS	JOYNER ST	262.08	145.60	\$4,368	301	399	300	398	4174	Between Virginia Ave. and Park Ave.
FUTURE FOCUS	JOYNER ST	273.67	152.04	\$4,561	401	499	400	498	4191	Between Park Ave. and E. Green St.
FUTURE FOCUS	N NC 58	2145.65	1192.03	\$35,761	350	754	349	753	886	Between US 64 W and Taylors Store Rd.
FUTURE FOCUS	SIXTH ST	692.21	384.56	\$11,537	300	338	301	339	4258	Between Brooklyn Blvd. and Brake St.
FUTURE FOCUS	US64A	2000.87	1111.60	\$33,348	1137	1515	1136	1514	9156	Beginning 1496' from Z Rd. and extending to Mfarks Rd.
FUTURE FOCUS	US64A	1515.74	842.08	\$25,262	1517	1801	1516	1800	1532	From Z Rd. extending 1496' SE towards US 64 W
FUTURE FOCUS	US64A	2381.37	1322.98	\$39,689	1813	2253	1812	2252	1191	Between Corbett Rd. and Avents Ln.
FUTURE FOCUS	US64A	1196.52	664.74	\$19,942	2255	2479	2254	2478	1529	Between Pleasant Grove Church Rd. and Corbett Rd.
FUTURE FOCUS	US64A	291.14	161.74	\$4,852	2481	2533	2480	2532	843	Between Cary St. and Pleasant Grove Church Rd.
FUTURE FOCUS	US64A	4077.32	2265.18	\$67,955	2535	2955	2534	2954	1534	Between D O T Dr. and Cary St.
FUTURE FOCUS	VERNON ST	467.34	259.63	\$7,789	100	128	101	129	4266	Between S. Alston St. and McCoy Dr.
FUTURE FOCUS	VERNON ST	378.40	210.22	\$6,307	200	228	201	229	4272	Between McCoy Dr. and Brooklyn Blvd.
FUTURE FOCUS	VIRGINIA AVE	426.57	236.99	\$7,110	100	128	101	129	4144	Between S. Alston St. and S. Collins St.
FUTURE FOCUS	VIRGINIA AVE	219.74	122.08	\$3,662	200	206	201	207	4150	Between S. Collins St. and Jones St.
FUTURE FOCUS	VIRGINIA AVE	300.90	167.17	\$5,015	208	228	209	229	4160	Between Jones St. and Joyner St.
FUTURE FOCUS	W CHURCH ST	586.53	325.85	\$9,775	201	239	200	238	4455	Between Barnes St. and S. Boddie St.
FUTURE FOCUS	WOMBLE ST	610.28	339.04	\$10,171	201	299	200	298	4162	Between Virginia Ave. and E. Church St.
ESTIMATED TOTAL		48219.06	26788.37	\$803,651						

Cost Estimates are based on 2006 data for average sidewalk construction costs from the North Carolina Department of Transportation, Division of Highways

APPENDIX B: COMMUNITY SURVEY RESULTS

COMMUNITY SURVEY RESULTS

Appendix B contains the results of the community survey conducted during May and June 2006, via the Town of Nashville staff, at Town facilities, and at local businesses. A copy of the survey is shown on pages 73 and 74. Overall a total of 50 responses were received. The survey results do not represent a true random sampling of Nashville residents. As such, some of the results may be skewed. In particular, it should be noted that although many respondents walk or run for recreation, there still may be a large portion of the pedestrian community who walk for primary transportation or utilitarian reasons that may be unrepresented in the survey.

Survey responses were analyzed and it was noted that respondents generally feel safe walking in residential areas, but are uncomfortable walking along busy streets with higher speeds and volumes of traffic. Many respondents also would like to see maintenance on the existing system increase, citing uneven surfaces or missing portions of the system as a barrier to use of the system. Overall, fitness level had little impact on respondents' reasons for walking or not.

Respondents were in favor of continued improvements to the Town's pedestrian system. Some of the areas for improvement based on survey responses include:

- Lack of pedestrian system connectivity. A top reason respondents did not walk to a location such as parks, shopping centers, the library, or other neighborhoods was because the pedestrian system did not have continuous sidewalk or a greenway to that location.
- Establish better crossings. Many of the comments from the survey responses indicated a need for better pedestrian crossings at mid-block locations and at intersections of major roads with smaller roads for access to schools, parks, greenways, shopping, neighborhoods, and work.

Perception of Nashville's Pedestrian System

The highest number of respondents (54.5 percent) indicated that they are comfortable walking in their neighborhood. However, 54.5 percent of respondents feel very uncomfortable walking in the commercial areas such as around McDonald's and Bojangles or near Lowe's Food. A majority

of respondents (54.5 percent) felt that more greenways were needed. Over 45 percent of respondents felt that the overall system needed improvement and expansion to increase connectivity. Just over 18 percent felt greenway improvements should be a high priority.

Constraints on Walking

The greatest number of respondents (36.4 percent) indicated that they choose not to walk somewhere because no pedestrian facilities exist to connect to their destination. Other reasons why respondents very frequently choose *not* to walk somewhere are as follows:

- Traffic makes it unsafe (27.2 percent);
- Sidewalks in disrepair (18.1 percent); and
- Lack of a safe street crossing point (9.1 percent).

Reasons for not walking such as traffic from new residential development, a lack of business in the downtown area, and lack of connectivity to commercial areas were reported by survey respondents. These may indicate the need for traffic calming policies and pedestrian friendly design in new development as well as the development of pedestrian oriented activity centers in the downtown and outlying commercial areas.

Walking Destinations and Purposes

Survey responses indicated that there were several areas of Nashville in need of new pedestrian facilities. Survey respondents indicated that sidewalks were needed to connect the new library with other areas of Town. Washington Street, particularly from the Nashville Baptist Church east to Lowe's Food was also listed by respondents as an area in need of new sidewalks. Respondents indicated a need for greenways near the senior center as well as a connection to the court house area and to Glover Park.

Almost half of respondents (45.5 percent) indicated the purpose of their walk is most frequently for exercise or recreation.

Sidewalk/Greenway Comments Summarized

Most survey comments requested new sidewalk on locations where none existed or conducting maintenance on existing sidewalk in need of repair. The most common areas cited by survey respondents include:

- Davis Farms
- Alston St.
- Aviation Ave.
- Washington St. (east of downtown)
- Symbdyn Dr.
- Fort St.
- Glover Park
- East Church St.
- Griffin St.
- Cedar St.
- Lucille St.
- Woodfield St.

Head of Household: Please complete and check all that apply. Remember, this information is confidential.

Personal Information

Name (optional): _____

Are you a Nashville resident (circle one): Yes No

Where do you live? (Street/Neighborhood) _____

Do you work in Nashville? (circle one): Yes No

How old are you? _____ Are you (circle one): Male Female

Household Income _____

How would you describe your household?

Individual _____ Single Parent _____ Couple _____

Couple with children _____ Unrelated adults _____

Number of people in your household: _____

Number of school aged children in your household: _____

Do they walk to school? (circle one): Yes No

Pedestrian Information

My primary mode of transportation is:

___ personal vehicle

___ walking/running

___ bicycle

___ van pool

___ other (Please specify) _____

I currently walk or run:

___ in my local neighborhood

___ in the downtown area

___ to go to/from work or school

___ for exercise/recreational activity

___ to shop

___ I do not walk or run around town or in my neighborhood

How many walking or running trips do you take during the average week:

___ 1-5

___ 6-10

___ 11-15

___ 16-20

___ 21 or more

Community Conditions

What are biggest reasons or barriers to walking or running in Nashville on a scale of 1 to 5, with 5 being the biggest and 1 being the smallest?

- ___ Lack of sidewalks/greenways
- ___ Unsafe sidewalks or sidewalks in disrepair
- ___ Lack of safe crosswalks
- ___ Other (Please specify) _____

Do you currently walk or run where no pedestrian walkways exists? If so where?

Where do you not currently walk or run because you feel unsafe to do so? Why?

Where would you establish new pedestrian corridors?

Sidewalks: _____

Greenways/Trails: _____

In your opinion how can Nashville be made more "walkable"?

Other concerns or comments related to Pedestrian issues in Nashville:

Thank you for your ideas and comments.

