

Chapter 1

INTRODUCTION

1.1 Scope and Purpose

The purpose of the Pedestrian Plan is to make an accessible, safe, convenient, interconnected and functional pedestrian transportation system, ultimately contributing to a higher quality living environment. Walking is more than a means of getting from one place to another; walking facilitates healthful living habits, conserves energy while improving air quality, and builds strong communities by increasing social interaction.

The Town of Wake Forest contracted with Greenways Incorporated to prepare a pedestrian plan to guide the Town in creating a safe and convenient pedestrian network. The project was started and funded through the bicycle and pedestrian planning grant initiative of the North Carolina Department of Transportation (NCDOT). Wake Forest is located in one of the ten fastest growing counties in North Carolina and now is the time to plan for the future needs of pedestrians. The area is already experiencing tremendous growth. While there are areas where retrofit solutions will be necessary, it isn't too late to plan for a functional pedestrian system. Developing an effective plan now will reduce community costs overall as facilities can be put in place in the most effective manner, utilizing public investments in key areas and private investment as development occurs. The Wake Forest Pedestrian Plan will help Wake Forest keep its commitment to provide its citizens with a high quality living environment.

Greenways Incorporated collaborated with the Town of Wake Forest and conducted a series of meetings with the Pedestrian Plan Steering Committee, a public meeting with local citizens, and a walkability survey. Through the public involvement process, the needs of the citizens became clear. Utilizing information from fieldwork, and existing town and regional plans, Greenways Incorporated was able to assess current and



Figure 1(a):
North Main Street



INTRODUCTION

future transportation needs of the community and identify potential safety concerns.

The personal, environmental, and societal benefits of a pedestrian transportation system will only come to fruition when interconnected quality facilities are available. The Town of Wake Forest aims to achieve the goals above by improving existing facilities and identifying pedestrian corridors for future connections. The plan is organized into the following six elements:



Figure 1(b):
North Main Street

1. **Pedestrian Corridors:** Identify important pedestrian connections within the town.
2. **Improvement Projects:** Prioritize levels of improvements to the existing facilities based on community developed criteria: safety, connectivity, accessibility, proximity to key destinations, access to natural areas, and regional connections.
3. **Design Guidelines:** Provide design guidelines for future development and for retrofitting existing facilities and provide costs associated with both.
4. **Policy Recommendations:** Recommend changes in policy for future development.
5. **Funding Recommendations:** Quantify cost associated with desired facilities, alternative funding sources, and provide recommendations.
6. **Marketing:** Provide marketing strategies to promote the use of the pedestrian system.

1.2 Elements of the Plan

The first element of the plan is the identification of important pedestrian connections within the town. Town residents and Steering Committee members have expressed important destinations, such as the downtown, parks, and adjacent



neighborhoods to join via pedestrian corridors. Some existing facilities are adequate for current uses but need provisions for future growth. Most facilities have significant gaps, while others may have no connectivity at all to other areas of Wake Forest. There is a range of provisions from 'immediate fixes' to solutions ultimately achieving 'long-term connectivity' to areas within and surrounding the Town of Wake Forest.

The second element involves prioritizing implementation steps to improve existing pedestrian conditions. Priority is given to facilities lacking safe conditions or ADA accessibility and to improvements with a high amount of benefit in relation to their cost. Pedestrian facility improvements range from quick-fix projects such as maintenance or short additions to fill in gaps to large scale projects requiring coordinated public and private investment. Priorities established by the community are based on the following: safety, connectivity, accessibility, proximity to key destinations, access to natural areas and regional connections.

The third element of the plan is design guidelines for future pedestrian facilities and for retrofitting existing facilities to meet accessibility and safety standards that are consistent within the regulatory framework of AASHTO, ADA and the NCDOT. Adherence to these guidelines is a minimum. Efforts should be made to adhere to 'universal design' principles, where all products, buildings and exterior spaces are usable by all people.

The fourth element is the policy framework. To improve the aesthetics, function, and constructability of future sidewalks and trails, the plan will recommend changes to the policies regulating the location, design and construction of pedestrian facilities.

The fifth element is funding needed for desired facilities, alternative funding sources and feasible recommendations.

The sixth element is marketing strategies to promote the use of the pedestrian system. Residents and visitors will need



INTRODUCTION

to be educated about the location, safety considerations, and benefits of new and improved existing pedestrian facilities.

Throughout the production of the various elements of this plan, past planning efforts will be consulted as they provide valuable insight and background to the planning process. Various transportation plans, greenway plans, and local plans all represent important efforts and are summarized in Chapter Three: Existing Plans, Programs and Policies.

1.3 Benefits of Walking

1.3.1 Personal Health

It is well documented that an active community is a healthy community. There are numerous studies affirming that sedentary lives and prolonged periods of inactivity are major deterrents to health, sometimes doubling the risk of morbidity and mortality from coronary heart disease and stroke¹. One recent study showed that blood pressure is 25% lower in people who are physically active. With regular physical activity, people can lower their mortality rates, lower the risk for heart disease and stroke, decrease the risk for hypertension, diabetes, osteoporosis, and some cancers, reduce the symptoms of anxiety and depression, and much more².

Studies also stress the benefits of physical activity to children's health, particularly in the areas of childhood obesity and diabetes. Obesity has risen dramatically in recent years with the majority of U.S. states having obesity prevalence rates of 20% or greater³. Improving the connections between schools and neighborhoods in Wake Forest can positively influence children's health by providing opportunities to further incorporate exercise into their daily lives.

Asthma is another major concern in children's health that can be addressed through a successful pedestrian network. According to the EPA there is strong evidence that reducing air pollution from automobile use can protect children's health⁴.



*Figure 1(c):
South Avenue*



This suggests that while pedestrians are improving their own health through physical activity, they are also improving the health of those around them by not contributing to air pollution with their automobile trips.

Trends indicate a growing automobile dependency that reduces regular physical activity during daily routines. In a 2004 study, scientists at the RAND Corporation scored 38 metropolitan areas on the “sprawl index” – which was basically a measure of their dependence on cars. When researchers tallied disease rates for the same areas, people in densely populated places with sidewalks and shops had lower rates of diabetes, hypertension, heart disease and stroke, all with other risk factors aside⁵. Furthermore, the rates rose steadily as communities became more spread-out and less walkable. Opportunities exist for positive transportation reform that supports more active lifestyles. The Wake Forest Pedestrian Plan aims to guide this positive reformation.

1.3.2 Environmental Benefits

Replacing some car trips with alternative forms of transportation, such as walking, will reduce vehicle miles and associated pollutants. According to the Pedestrian and Bicycle Information Center of Chapel Hill, NC, “60% of the pollution created by automobile emissions happens in the first few minutes of operation, before pollution control devices can work effectively”. This makes short car trips as polluting as many long car trips. About 40% of all car trips are shorter than 2 miles, which equates to a 10-minute bike ride or a 30-minute walk⁶. A viable alternative transportation system can replace these short car trips, effectively reducing pollution.

1.3.3 Community Benefits

Pedestrian facility networks that link people from their neighborhoods to their daily destination points contribute to the overall livability of the region and help to create strong communities. Walking is a way for residents to regularly interact socially with other residents in the community. Whether someone is walking to work or walking the dog,



INTRODUCTION

pedestrians are more likely to interact with one another than with someone passing by in a car. In short, walking builds social capital.

Pedestrian facilities can also link people to parks, streams, and other open spaces. Having convenient pedestrian access to such green spaces is also a major benefit to the community.

1.3.4 Transportation Alternatives

Walking can also be a viable transportation option. Creating safe pedestrian systems enables those who do not drive to be active in society. People may not drive for many reasons, including but not limited to economic reasons, physical ability, or personal preference. According to the 2001 National Household Travel Survey conducted by the US Department of Transportation, 7% of U.S. households do not own an automobile. In light of this, designing the facilities to create the option of walking is important. A recent study indicated that “75% of adult respondents believe that their communities and the State (North Carolina) should spend more money to improve conditions for bicycling and walking”⁷. (*Statewide Survey on Bicycling and Walking, 2000*).

1.4 The Planning Process

The Town of Wake Forest obtained the services of Greenways Incorporated to assist the community in developing a Pedestrian Plan that will encourage the aforementioned benefits of a walkable community. The planning process for the Plan consists of the following tasks: 1) Project Kick-Off and Steering Committee Meetings, 2) Data Collection and Evaluation of Current Conditions, Existing Plans, Programs, and Policies, 3) Public Involvement, 4) Preparation of the Draft Plan Report and Map, 5) Client Review, and 6) Completion of the Final Plan Report and Maps. The last step of the planning process includes a presentation of the final plan to the Wake Forest Planning Board and the Town Council for adoption.



1.5 Goals and Objectives

The following goals and objectives for this Plan are a combination of ideas from the Steering Committee and general public.

- Provide more walking opportunities to promote healthy lifestyles
- Provide safer walking environments
- Build a sense of community
- Improve connectivity and fill gaps of sidewalk and greenway system to allow for viable alternative transportation options
- Improve pedestrian system for economic development and overall desirability of the Town
- Build a sense of community
- Improve accessibility for children, elderly, and the handicapped



INTRODUCTION

Additional Resources:

www.walkinginfo.org

The Pedestrian and Bicycle Information Center website.

http://www.ncdot.org/transit/bicycle/laws/laws_pedlaws.html

North Carolina Department of Transportation website with pedestrian laws.

<http://www.cdc.gov/diabetes/>

Centers for Disease Control and Prevention, Department of Health and Human Services.

<http://www.cdc.gov/nccdphp/dnpa/obesity/trend/maps/index.htm>

Centers for Disease Control and Prevention, Department of Health and Human Services.

Footnotes

¹ Active Living by Design. (2005) *A Primer on Active Living by Design*. Robert Wood Johnson Foundation.

² Ibid.

³ Centers for Disease Control and Prevention, Department of Health and Human Services.

⁴ U.S. Environmental Protection Agency (EPA). (2003). *Travel and Environmental Implications of School Siting*. Regarding air pollution and children's health: During the 1996 Atlanta Olympic Games, when driving was reduced and ambient ozone levels fell by 27.9 percent, emergency room visits for asthma dropped by 41.6 percent.

⁵ Sturm, Roland and Deborah Cohen. (2004). *Suburban Sprawl and Physical and Mental Health*. The RAND Corporation.

⁶ National Personal Transportation Survey (1995).

⁷ North Carolina Statewide Survey on Bicycling and Walking (2000).

