

# Transportation in North Carolina

## Case Studies and Commentary from NCAPA Contributors

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With an introduction by Fleming A. El-Amin II

*Editors' Note: Carolina Planning regularly publishes a feature highlighting projects from members of the North Carolina Chapter of the American Planning Association (NCAPA). This year's submissions focus on initiatives and trends that encapsulate larger national movements within the transportation field. From case studies highlighting complete streets in Charlotte and partnerships with the public health community in Wilmington, to broader discussions like context sensitive solutions and the renewed concern about the environmental justice implications of highway infrastructure, these writers provide valuable insight in their areas of expertise.*

Before the mass production of private automobiles in the early 1900s, many cities throughout the southeastern United States maintained bustling urban centers with electric streetcars running along major corridors. North Carolina was no exception, with more than a dozen cities and towns across the state acquiring streetcars between 1886 and 1948. In the late 1890s alone, the state's five largest cities at the time – Asheville (pop. 10,235), Winston and Salem (pop. 10,729 combined), Charlotte (pop. 11,557), Raleigh (pop. 12,678), and Wilmington (pop. 20,056) – were the first to implement streetcars. Thriving central business districts emerged as the primary locations for working, shopping, and entertainment during the early 1900s, with streetcars serving as an intricate part of the urban transportation fabric.

The flight from urban centers to the urban fringe and suburbs that began during the years following World War II promoted auto-dominated neighborhood designs throughout many cities. This ultimately had a significant impact on our transportation infrastructure, urban form and development patterns as cities and towns expanded outward. Eventually, streetcars and much of the intercity passenger rail services were discontinued, and in some

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instances rail tracks were paved over to better accommodate various types of rubber tire motor vehicles.

Since the adoption of the Federal Aid Highway Act in 1956, a majority of federal and state transportation funds have been devoted to highway planning and construction. This act facilitated the construction of the Eisenhower Interstate System, which today consists of nearly 47,000 miles of limited access freeways across the country. During the 1960s and 1970s, transportation planning was synonymous with highway planning, but today mobility enhancements are typically planned with multimodal transportation considerations in mind.

### ***Transportation Funding and Legislation***

The North Carolina Department of Transportation (NCDOT) was created in 1915 as the State Highway Commission, and today has evolved into a multi-modal agency providing a wide range of services to meet the transportation needs of the state. In recent years, however, the state's revenue for transportation infrastructure improvements have not kept pace with funding demand. To help address this issue, Governor Beverly Perdue worked with the N.C. General Assembly to create a mobility fund as a way to generate more revenue for transportation projects of statewide and regional significance that help relieve congestion and enhance mobility across all modes of transportation. The Mobility Fund is anticipated to generate \$173 million from fiscal year 2011 to fiscal year 2014 and will appropriate \$58 million each fiscal year thereafter.

### ***Re-Emergence of Intercity and Regional Passenger Rail in North Carolina***

In 1998, Mecklenburg County passed a bond referendum for a one-half cent sales tax to significantly expand bus transit service and construct a light rail system that would provide rapid transit service within several congested corridors throughout the city. The Charlotte LYNX light rail system opened in 2007 and has been a great success with higher-than-anticipated daily ridership. In 2009, the General Assembly passed House Bill 148 Congestion Relief Intermodal Transport Fund, which provided the authority for urban counties in the Charlotte metropolitan area, Triangle, and Triad to levy a sales or use tax (with voter approval) for the purpose expanding transit services. The bill also granted authority to other local governments across the state with options to secure funding to improve and expand transit service. Comprehensive regional rail studies are currently underway in the Triangle and Triad.

At the state level, NCDOT is working in collaboration with FHWA, Virginia DOT, and the Federal Railroad Administration to design and construct the Southeast High Speed Rail between Raleigh and Richmond. In 2010, North Carolina was granted \$545 million in federal stimulus funds for rail enhancements, with the majority of that obligated for improvements in the Raleigh-to-Charlotte corridor. Additional federal funds have been requested, but the current status of heated budget and deficit discussions

in Washington, D.C. will likely delay, if not preclude, these funding sources from consideration.

### ***Contributions from NCAPA Authors***

Over the last one hundred years, the nation has come full circle from implementing streetcars and intercity rail systems, to focusing almost exclusively on planning and constructing highways, and now today returning to a much greater focus on accessibility and multimodal transportation planning. The NCAPA-contributed articles in this feature discuss these critical components of multimodal transportation planning and implementation, both in case studies and larger contexts.

#### ***Complete Streets — The Charlotte Experience***

According to the National Complete Streets Coalition, “complete streets” are streets that are designed and operated to enable safe and convenient access and travel for all users. Complete streets promote multimodal transport within a given right-of-way whereby motorists, pedestrians, cyclists, transit users, and mobility-challenged persons are all safely accommodated. When implemented properly, complete streets can help spawn economic development, enhance access and connectivity between different modes of travel, and increase safety and mobility for all users.

In North Carolina, the City of Charlotte was the first major city to adopt a comprehensive complete streets policy. In their contribution to this feature, Benjamin Miller, Tracy Newsome, and Dan Gallagher discuss how the Charlotte City Council adopted the Urban Street Design Guidelines (USDG), as well as the implementation tool for planning and designing Charlotte's complete streets. Their article provides case examples of implementing complete street policies in the actual design and construction of several streets. The authors provide information on the early road diet projects, details of the framework established with the USDG, challenges and successes of implementation throughout the city, and lessons learned.

#### ***Bicycle and Pedestrian Investments and Innovative Partnerships — The Wilmington Experience***

With the passage of the comprehensive Bicycle and Bikeway Act of 1974, North Carolina established the first state bicycle program in the nation, quickly becoming a national model. The legislation granted authority for the N.C. Bicycle Program (now the Division of Bicycle and Pedestrian Transportation – DBPT) to undertake comprehensive bicycle planning and programming. Using planning grants offered through the DBPT, over 100 communities in North Carolina have developed and adopted bicycle and/or pedestrian plans.

Adrienne Walters (City of Wilmington) presents a case study on the extensive bicycle and pedestrian plans in Wilmington and elaborates upon her city's methods of leveraging funds to expand bicycle and pedestrian infrastructure through innovative partnerships with the

public health community. Walters provides an overview of Wilmington's process for goal setting, stakeholder involvement, cultivating partnerships, and securing alternative funding sources to complete the River to the Sea Bikeway system.

#### *Context Sensitive Solutions*

Ann Hartell (N.C. State University) discusses the importance of "context sensitive solutions" (CSS) in helping ensure that improvements to highways, roadways, and various transportation facilities are designed in keeping with the surrounding character of the affected environment. CSS helps stakeholders involved with designing and implementing transportation improvements to understand the landscape, community, valued resources, and role of all appropriate modes of transportation in each unique context before developing engineering solutions. Hartell details the core CSS principles and how federal and state DOTs utilize CSS to implement projects within existing constraints.

#### *Environmental Justice*

Brian Byfield raises important questions on the status of environmental justice (EJ) federal- and state-level monitoring efforts in transportation projects. EJ is the fair treatment and meaningful involvement of all people in decision-making processes, regardless of race, color, national origin, or income. The ultimate goal of EJ is to establish the same level of protection across resident populations from environmental and health hazards, as well as to provide equal access to the decision-making processes for development, implementation, and enforcement of environmental laws, regulations, and policies. Byfield provides a historical perspective on this subject matter and offers his perspective on environmental justice issues in North Carolina as they pertain to transportation infrastructure investments.