ARTICLE 40

Transportation: Streets, Parking, Public Transportation, and Airports

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Streets

THE DEVELOPMENT OF roads and streets has a long history in North Carolina.[1] Many years before the arrival of the first European settlers, Native Americans had developed a system of trails throughout much of the state. The settlers brought with them a well-developed appreciation of the importance of roads in the advancement of any society. Despite this appreciation and increasing attention to road building, some 300 years passed before North Carolina could lay claim to being the Good Roads State.

Historical Development: The "Fifteens" Phenomenon

By coincidence, significant moves have been made in the "fifteens" of the last three centuries. In the early part of the eighteenth century, action was spurred by Church of England missionaries as well as by landowners and commercial interests. In 1715 the colonial legislature adopted a comprehensive plan for laying out roads, constructing bridges, and establishing and maintaining ferries.[2] Responsibility for the development of the plan was placed with local governments—the counties and the cities—where it remained for more than 200 years.

A second push for road improvements came in 1815 under the leadership of State senator Archibald Murphy of Orange County. In the following years the state chartered private companies to build toll roads, ferries, and bridges along major routes, with state stock ownership in some of them. Most of the roads, however, remained with counties and cities. In the 1840s and the early 1850s the move to toll plank roads emerged.[3] More than 500 miles were constructed at a cost of about $1,500 a mile.

From the early colonial days until the middle of the nineteenth century, roads were often built and maintained by citizens. Typically, all males from age sixteen to sixty were required to contribute their labor, ranging from six to twenty-four days a year. Citizen labor in this fashion, under the direction of overseers, proved less than satisfactory. By the middle of the eighteenth century, some cities had started substituting tax-supported road maintenance for citizen labor. Counties started making the switch later. By the end of the nineteenth century, the requirement for citizen labor on the roads and the streets had ended.

The opening of the twentieth century brought the automobile and increased demand for better roads. (The first cross-country trip by automobile was made in the summer of 1903—in seventy days. North Carolina first imposed license fees for autos in 1909.) Inspired by the good macadam roads built by George Vanderbilt on his Biltmore estate, the Good Roads Association of Asheville and Buncombe County was organized. Later it expanded into a statewide organization. A key leader of the statewide organization, and its field representative, was Miss Hattie Berry, the secretary of the North Carolina Geological Survey and an Orange County native. The association's efforts were initially directed at improving roads by counties. The increased auto travel and the prospect of federal aid (which started in 1916) resulted in the creation of the State Highway Commission in 1915 with an appropriation of $10,000. It was charged with appointing a state highway engineer who would advise counties on their road-building responsibilities.

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1. The information in this section is drawn from Hugh Talmage Lefler and Albert Ray Newsome, *North Carolina, The History of a Southern State*, 3d ed. (Chapel Hill: The University of North Carolina Press, 1973); Capus Waynick, *North Carolina Roads and Their Builders*, vol. 1 (Raleigh, N.C.: Superior Stone Company, 1952); and Albert Coates's history of North Carolina roads and streets in "Report of the State-Municipal Road Commission," *Popular Government* 17 (December 1950/January 1951): 10–13.

2. 1715 Acts ch. 36.

3. The plank roads were usually 8–10 feet wide. After clearing and grading, *stringers* (heavy sills) were laid lengthwise along the road and sunk into the earth. Across the stringers were placed the planks, usually of pine, 9–16 inches wide and 3–4 inches thick. The planks were then covered with sand. This combination, with ditches alongside, provided an all-weather road—at least, one much superior to roads that were constructed by simply clearing away the trees.

Developments since 1915

The next major move came in 1921 when the state assumed responsibility from the counties for the roads connecting the 100 county seats and running through all other cities and towns with a population of 3,000 or more.[4] This first statewide system, which totaled 5,500 miles, was financed by a combination of license fees and a gasoline tax of one cent per gallon.

Between 1921 and 1927 the state issued $115 million in road bonds to build and improve the system. The Great Depression found counties heavily in debt for roads and schools. In 1931, under the leadership of Governor O. Max Gardner, the state took over the remaining county roads—some 45,000 miles.[5]

The 1931 action relieved counties of all road responsibilities except for retirement of their road debt, which was to take another twenty-five years for some counties. The move did nothing for the cities and the towns, however. They remained responsible for all the roads and the streets within their boundaries.

City officials started working for state aid for city streets. The General Assembly responded in 1935 with an appropriation of $500,000 to assist cities in maintaining city streets carrying state highways. Over the years the appropriations increased, reaching $2.5 million in 1949.

The 1949 General Assembly, the first of Governor Kerr Scott's administration, saw two other major actions to improve highways. First, the General Assembly authorized (and the voters approved) the issuance of $200 million in road bonds to improve rural ("farm to market") roads, as promoted by Governor Scott.[6] The proceeds financed the paving of 12,000 miles of rural roads and the stabilizing of another 15,000 miles. Second, the 1949 General Assembly created the State-Municipal Road Commission. Its recommendations led in 1951 to allocation of a part of the state's gasoline tax to municipalities for use on local streets that were to remain municipal responsibilities.[7] The same legislation transferred to the state full responsibility for the construction and the maintenance of some 2,300 miles of roads and streets *within* cities that were part of the state highway system but were being constructed and maintained by cities.

The most recent major highway action came in 1989 during Governor James Martin's administration with the establishment of the North Carolina Highway Trust Fund (G.S. 136, Article 14). This legislation increased motor fuel and other vehicle taxes and fees to finance a multi-billion-dollar highway improvement program from current receipts of the trust fund. The program projects improvements that would place over 90 percent of the state's population within ten miles of a four-lane highway, build urban loops, and add funds for rural secondary roads and municipal street aid.

The 1951 arrangement, with modifications for thoroughfare planning in 1959 and several increases in the amount of street aid for cities over the years, remains in place today. Its basic principles are twofold. First, public roads and streets that carry traffic outside, between, into, and through cities are constructed and maintained by the state. Other roads and streets within cities are the responsibility of the cities. Second, streets and highways, both inside and outside cities, are financed primarily from state and municipal shares of vehicle-related revenues. Each motorist, whether driving inside or outside cities in North Carolina, is contributing to the operation of the road or the street on which he or she drives through motor fuel and other taxes.

The Current Street and Highway System

Street and highway mileage has shown steady growth over the years—some 33 percent between 1950 and 2000 (see Table 40-1). However, the growth in mileage has been far exceeded by increases during the same period in population (98.2 percent) and vehicle registration (514.7 percent). The short story is one of more roads, much better roads, and greatly increased road use.

The current public street and highway system in North Carolina totals more than 100,000 miles as shown in Table 40-2. In round numbers, 77 percent of the mileage is operated by the state, 19 percent by cities, and 4 percent by federal and other state agencies. Of the total mileage some 27 percent is located inside cities.

4. 1921 Pub. Laws ch. 2.

5. 1931 Pub. Laws ch. 145.

6. 1949 N.C. Sess. Laws ch. 1250.

7. 1951 N.C. Sess. Laws ch. 260. This is the so-called Powell Bill money.

Table 40-1. *Changes in Population, Vehicle Registration, and Highway Mileage, 1950–2000*

	Year		Percent Change
	1950	2000	1950–2000
State population (in millions)	4.062	8.049	98.2
Municipal population (in millions)	1.500	4.073	171.5
Vehicle registration (in millions)	1.171	7.198	514.7
Highway mileage (state and mun.)	72,676	96,718	33.1

Sources: 1950 information found in Jenne, Kurt, Warren Jake Wicker, and David M. Lawrence, "Streets," chapter 23 in *Municipal Government in North Carolina* (Chapel Hill, N.C.: Institute of Government, The University of North Carolina at Chapel Hill, 1995), 667. The following 2000 information was gathered by Alex Hess, librarian for the School of Government, from *2000 Census of Population and Housing, North Carolina* (state population); N.C. State Data Center, State Demographics Unit (municipal population); and N.C. Division of Motor Vehicles, Vehicle Registration Section (vehicle registrations). Highway mileage from 2000 is from North Carolina Department of Transportation, Planning and Environment, Geographic Information Systems Unit, *2000 Highway and Road Mileage Report,* available on the Internet at http://www.ncdot.org/it/gis/DataDistribution/RoadMileageReports/Sld2001/GIS_RI_Main.html.

State and City Responsibility for Streets and Highways

To understand how cities manage their municipal street systems it is necessary to understand the role of the State of North Carolina in managing its own system. (As was noted earlier, counties have no responsibility for streets under North Carolina's transportation system.) The state system may be defined in terms of the roads that are maintained by the North Carolina Department of Transportation. The system thus includes five different types of routes: (1) Interstate routes; (2) Interstate business routes; (3) U.S. routes; (4) N.C. routes, and (5) state secondary routes. The order of this list also suggests in a rough way the significance of the various categories of routes in handling traffic. The federal government provides the most substantial portion of the funding for the construction and maintenance of highways in the first three categories, although in each case the state provides some. The first three categories, along with certain key state routes comprise the National Highway System. The construction and maintenance of the last two types of routes, "N.C. routes" (which generally are state primary routes) and "state secondary routes" are funded by the State of North Carolina. The first three categories of routes and many of the "N.C. routes" comprise the state's Primary Highway System, which includes both federal and state routes. Such a route may extend into and through a municipality as it connects certain municipalities with others, one area of the state with another, and one portion of the country with another. In contrast most of the state's secondary road system is located outside municipal limits. Virtually all municipalities include at least one road or highway that is a "N.C. route." Within the boundaries of larger North Carolina cities it is often possible to find Interstate routes, Interstate business routes, U.S. routes, and N.C. routes. If a road or highway is one of these four types of routes, then the State of North Carolina (or the federal government) takes primary responsibility for the maintenance, improvement, and construction of such a route, wherever it is located. Municipalities, in turn, share responsibility with the state for state-maintained roads inside city limits and take full responsibility for the remaining public streets within town limits.

State, Metropolitan, and Municipal Transportation Planning

The financial and operational responsibility for public highways and streets in North Carolina is shared among the federal government, the state, and the state's municipalities. However, regional transportation planning organizations play a significant role in local area transportation planning. Metropolitan transportation planning organizations (MPOs) in North Carolina have been established in response to federal highway legislation (23 U.S.C. § 134), which recognizes their role in urban areas. MPOs date to 1962 when Congress initiated a requirement that a continuing, cooperative, and comprehensive transportation planning process had to be established for all urban areas with a population of over 50,000 in order to qualify for federal transportation funds. Each MPO is created by a memorandum of understanding (MOU) among the affected local governments. There are seventeen MPOs in North Carolina ranging in size from the Goldsboro MPO to the Mecklenburg-Union MPO. An MPO typically includes not only territory within municipal limits but unincorporated urban areas as well. Although MPO boards are typically composed primarily of local elected officials (typically known as transportation advisory committees (TACs), it is not uncommon for the staff of such organizations to come from the largest central city represented in the MPO.

Table 40-2. *North Carolina Highway Mileage, January 1, 2005*

	Miles Statewide	
Interstate routes	1,043,99	Primary system
Interstate business routes	65.84	Primary system
U.S. routes	5531.19	Primary system
N.C. routes	8118.61	Primary system
State secondary routes	64084.54	Secondary system
Total:	78,844.17	State maintained roads
City maintained streets	19,824.10	
State park roads	724.81	
Federal roads	322.30	
Total:	23,793.21	Nonstate maintained roads
Total public road mileage	102,637.38	
Total vehicle miles traveled	95,627	(in millions)

Source: North Carolina Department of Transportation, Information Technology, Engineering-Transportation Systems Branch, Geographic Information Systems Unit, *2004 Highway and Road Mileage Report,* available on the Internet at http://www.ncdot.org/it/gis/DataDistribution/RoadMileageReports/Sld2004/2004index.html; and North Carolina Department of Transportation, Information Technology, Engineering-Transportation Systems Branch, Geographic Information Systems Unit, *GIS Road Statistics as of Dec. 31, 2004,* available on the Internet at http://www.ncdot.org/it/gis/DataDistribution/GISRoadStats/default.html.

Each MPO is expected to develop a comprehensive transportation plan that will serve present and anticipated travel demand in and around urban areas [G.S. 136-66.2(a)]. These comprehensive plans are multimodal in nature and include not only a highway or thoroughfare element but also transit and bicycle/pedestrian elements. Once completed, the plan must be adopted by the MPO and the North Carolina Department of Transportation (NCDOT) so that it can serve as the basis for future improvements within the MPO. The plan also serves as the basis for determining which roads and streets will be part of the state highway system and which streets will be part of municipal street systems. Once the MPO plan is adopted, any municipality within the MPO yields its transportation planning and programming interests to the MPO. In other words, the MPO represents the interests of its municipalities to the NCDOT.

In addition, each municipality that is not a part of an MPO is also directed by statute to develop a comprehensive transportation plan using similar procedures. In the past five to ten years a growing number of counties have participated in the transportation planning process, and more and more transportation plans include more than one local government.

Recently a significant link has been forged between the development of transportation plans and the adoption of land development plans. Since 2001, NCDOT has been authorized to contribute to the development and adoption or amendment of a transportation plan only if all of the local governments that will be party to the plan have adopted land development plans within the previous five years or are in the process of developing one. Similarly, NCDOT may not adopt or update a transportation plan until a local land development plan has been adopted.

Street and Highway Improvement Programming

In addition to developing transportation plans, MPOs also play in role in establishing funding priorities. MPOs typically submit regional project priority lists to NCDOT in advance of the state's development of its six-year State Transportation Improvement Program (STIP). Once adopted as part of the STIP, projects for each MPO area are then incorporated into its Metropolitan Transportation Improvement Program (MTIP). The MTIP reflects the priorities, scheduling, and source of funding for improvement projects on the state system roads in the metropolitan area. It may also reflect projects involving municipal streets.

The state takes primary responsibility for construction and maintenance of state thoroughfares located inside municipal limits. However, municipalities, particularly larger ones, sometimes contract with NCDOT to perform various maintenance tasks on these routes, including repair work and some reconstruction and widening projects. They may also contract to maintain highway signs, traffic control devices, and traffic signals on these state highways. NCDOT reimburses cities for this more routine work.

In other instances, however, a city may wish to improve a state thoroughfare running through it in a manner that suites the interests of the municipality but is unnecessary for the route to serve an interregional function. For example, a city may be interested in adding curb and gutter, constructing sidewalks, adding lanes for parking, or making intersection improvements to integrate the thoroughfare better into the urban area. For a municipality to undertake these improvements it must obtain the approval of NCDOT, but the cost must be borne entirely by the municipality. In addition, a city may agree with NCDOT to reimburse the costs for either improvement costs or the cost of additional right-of-way for a STIP project if those features would not normally be included in the project by NCDOT.

In 1989 state law was changed to limit the ability of cities to contribute or share in the cost of improvements to the state highway system, except to the limited extent described above. G.S. 136-66.3 reflected the view that large cities should not be able to influence the priority and funding of state projects shown on the STIP by offering to share the cost with the state. However, in 2000 North Carolina reversed course and began to allow cities fully to "participate" in the costs of a state project, but with the caveat that NCDOT may not allow such a practice to "cause any disadvantage" to a project elsewhere. In the case of a road in a new location a city may share in the project cost by acquiring the right-of-way for a particular project or by contributing to the cost of construction. Equally important, since many state highway projects affecting municipalities are, when built, outside city limits, state law [G.S. 136-66.3(c)] provides clear authority for a municipality to "participate" in the costs of projects located outside as well as those located inside current municipal limits.

Municipal Street System Components

Streets

An ideal street network accommodates growth, is part of a system of transportation choices, and serves to define the physical characteristics of a city in a fundamental way. Streets play an important role in establishing the image of the community and serving as the framework for future land development. In this regard streets demonstrate how the community expects and prefers to grow. Streets reflect choices about whether the community is trying to become more compact and focus growth. Streets reflect whether travelers enjoy a range of travel choices. Streets reflect the extent to which a city tries to encourage infill and revitalize older areas. Streets reflect how sensitive the community is to environmental protection values.

Many cities have systems for classifying streets and for establishing street design standards that aid in planning. A street classification system provides the framework allowing a city to determine street capacity and manage traffic on the existing street grid and to plan the streets that will serve the community in the future. The street design standards established for various types of streets govern the terms under which a city will accept the dedication of a new street offered by a developer and the standards that a city commits to meeting in those instances when a city contracts to build a street itself.

One design issue concerns the street cross-section. Street rights-of-way typically accommodate more than just the paved area for vehicular travel. Where and how will various utility lines located within the right-of-way (or behind the right-of-way) be accommodated? Will the street be designed with curb and gutter and a conventional storm sewer system or with a system of shoulders and swales? Will on-street parking be allowed? Is the traveled portion of street designed to accommodate bicycles and scooters? Will sidewalks and crosswalks be provided to make the street pedestrian friendly? Will the right-of-way be landscaped?

Another emerging issue is whether the street system promotes connectivity. Connectivity refers to the extent to which a system of streets provides multiple routes and connections between origins and destinations. Areas with high connectivity have multiple access points around the perimeters and a dense system of parallel routes and cross connectors within the area. A system of streets with high connectivity generally results in less traffic congestion, more convenient travel routes, greater safety, and often results in reduced travel time. High connectivity is associated with multiple connecting streets that carry moderate levels of traffic and serve adjacent land uses directly. Low connectivity systems are associated with a hierarchy of streets ranging from cul-de-sacs to freeways with each roadway serving a more specialized function. Such systems allow more privacy to owners of property served by more minor streets, as residents who live on a residential cul-de-sac know. Many small towns in North Carolina rely on a grid system of streets that still promotes high connectivity. However, the suburban form of development that has predominated in many urban areas since the 1970s has resulted in less connectivity and more circuitous travel. More recently the pendulum has swung back to simpler street systems that are designed with more connections.

A good street system integrates the transportation system with the pattern of existing and expected pattern of land uses. Local streets provide access to residential, industrial, or commercial districts and probably represent the majority of the land-miles of a city's street network. Speeds and motor vehicle traffic volumes on these streets are low, providing a safe environment for pedestrians and cyclist. Most new local streets are built by developers.

Collector streets (sometimes classified as avenues) are the most common nonlocal street type. They link neighborhoods to commercial areas, connect intercity destinations, and in some cases, traverse residential neighborhoods. In larger cities collector streets are often quite versatile. They may carry significant auto traffic while providing bike lanes, accommodating transit, and serving pedestrians. In metropolitan transportation plans collector streets are often classified as minor thoroughfares.

Arterials are intended to carry a considerable volume of through traffic and to allow minor access to smaller streets, land, and buildings. These thoroughfares are typically multilane, and access to them is often restricted in some way. Arterials with substantial landscaped medians are commonly referred to as boulevards. Four-lane urban thoroughfares require 90–120 feet of right-of-way and are built in a variety of divided or undivided forms.

Sidewalks and Bikeways

In the last half century transportation systems have focused on promoting the safety and convenience of the motor vehicle particularly the private automobile and the commercial truck. Designing and building roads has become more complex. Transportation engineers now have to consider accessibility, utilities, landscaping, historic and community preservation, wetland mitigation, and other matters when designing roads. The result has been less space and fewer resources with which to work at a time when traffic volumes have been growing steadily. Proposals for bicycle and pedestrian facilities have been rejected because of these space and funding limitations and the perceived lack of demand. More recently, however, federal transportation legislation (e.g., the 1998 Transportation Equity Act for the 21st Century) has begun to recognize multiple modes of travel and to encourage the fuller integration of bicycle facilities and pedestrian walkways into the construction of transportation projects of various types.

In North Carolina a primary source of municipal funding for bicycle facilities and pedestrian walkways has been Powell Bill funds. Municipalities have been authorized to use these funds for bikeways located within public street and highway rights-of-way since 1977, but for sidewalks only since 1994. More recently bicycle and pedestrian facilities have become part of transportation planning as well. In 2000, the North Carolina Board of Transportation adopted implementing policies that, among other things, encourage municipalities throughout the state to make bicycle and pedestrian improvements an integral part of local transportation planning. A year later, these policy changes were reflected in changes to G.S. 136-66.2. Prior to 2001, the statute required that a comprehensive thoroughfare plan be prepared and approved for each municipal and metropolitan area in North Carolina. Amendments adopted in 2001 require a comprehensive transportation plan be prepared and adopted, and now bicycle and pedestrian elements must also be included.

In the downtown area and in older residential parts of many cities, sidewalks have traditionally functioned as an integral part of the transportation system. Today the areas that are most likely to benefit from sidewalk improvements are higher-density residential and commercial areas, areas that are served by or are expected to be served by public transportation, mixed-use development, and school and recreational facilities. Sidewalks perform several functions. First, they provide safety by separating pedestrians from motor vehicle traffic. This is especially important where there are many pedestrians and vehicles, where vehicle speeds are high, and where lighting or visibility is poor. Second, sidewalks are a convenience to people who choose to walk wherever they want to go. Third, well-maintained sidewalks can improve the appearance of a community.

There are three major categories of bikeways: bike paths, bike lanes, and bike routes. A *bike path* is a paved way set aside for bicycles only and prohibited to motor vehicles. Bike paths are often inside the street right-of-way but are almost always clearly separated from the motor vehicle pavement by grade separations, plantings, or other barriers. They should also be separated from sidewalks. *Bike lanes* are usually part of the street pavement, but are separated from motor vehicle lanes by striping, small curbs, or other markings or barriers. *Bike routes* usually appear in areas of very light traffic and consist merely of signs to notify motorists that bicycles use the roadway.

Some of the most notable North Carolina projects that accommodate both the pedestrian and the cyclist are greenway projects. Many mid-sized and larger cities have developed greenways (i.e., liner parks along creeks or streams) that include shared-use paths that serve pedestrians, skaters, joggers, cyclists, and users of other nonmotorized vehicles. Most greenway projects, however, are located outside of public street and highway rights-of-way.

Table 40-3. *Distribution of Powell Bill Funds to Cities*

Year	Amount per Capita	Amount per Mile
1951	$ 1.51	$ 435.71
1961	1.92	453.12
1971	2.87	612.42
1982	12.69	845.67
1987	16.28	1,141.76
1990	19.09	1,368.88
1994	22.17	1,547.58
2005	23.20	1,709.23

Source: North Carolina Department of Transportation, Division of Highways, Program Development Branch, *2005 North Carolina State Street-Aid Allocations to Municipalities* (Raleigh, N.C.: NCDOT, 2005), p. 2.

Measures for Financing Street and Sidewalk Improvements

North Carolina's cities use a variety of sources of funds in the construction and maintenance of streets and improvements within the street right-of-way. State aid that is earmarked for municipal streets is the primary source of moneys for most municipal street programs. In addition, local property tax revenues and general revenues account for a modest portion of city expenditures. A third source, special assessments, are important in street paving and reconstruction projects. A fourth measure for financing the construction of streets is through the use of developer exactions and contributions that a municipality procures through the land development regulatory process. Streets of this sort are built by developers and accepted by cities when complete. These transactions typically do not appear in the city budget since the municipality typically spends no money on such projects until they become part of the city street system.

General Local Taxes

All cities may levy taxes to finance street and sidewalk improvements (G.S. Ch. 160A, Art. 9). The property tax is the chief local tax, although receipts from a city's auto licenses, privilege license taxes, and dog taxes may be used, as may revenues received from other governments, including community development grants and shared taxes, such as sales, franchise, and beer and wine taxes. All the local taxing measures are levied on the ability-to-pay principle. They are related to property ownership, an indicia that tends to represent financial capacity.

Powell Bill Funds

Ever since 1951 the state has shared part of its gasoline tax receipts with cities for use on city streets (G.S. 136-41.1). These moneys are called "Powell Bill funds" and are named after the sponsor of the bill in the General Assembly that established the revenue-sharing program. These funds and some funds from the Highway Trust Fund that are distributed the same way constitute the primary source of revenue for municipal street construction and maintenance. Powell Bill funds are calculated as follows: A portion of the state gasoline tax equal to 1.75 cents per gallon is earmarked for annual distribution to cities; and in addition, after certain adjustments are made, 6.5 percent of the funds in the Highway Trust Fund, launched in 1989, are also available for municipal use. In fiscal 2004–5, for example, adjusted available Powell Bill funds totaling about $92.2 million and Highway Trust Funds totaling about $44.6, or a grand total of about $136.8 million, were disbursed to cities on October 1, 2005. Of that grant total, 75 percent of the money was distributed to a city on the basis of its population relative to others and 25 percent on the basis of the municipality's qualifying street mileage. Thus in October 2005, about $102.6 million was distributed among 503 cities that collectively have a population of 4,425,528, resulting in a rate of $23.20 per city resident. An additional $34.2 million was distributed on the basis of the roughly 20,016 miles of qualifying city streets that are located in those 503 municipalities, resulting in a rate of about $1,709 per mile. Table 40-3 charts the growth of Powell Bill distributions over the history of the legislation.

Powell Bill funds are available for a wide range of purposes related to the construction, repair, and maintenance of municipal streets. However, the funds may also be used for a variety of improvements, including the construction and maintenance of landscaping, curb and gutter, stormwater facilities, sidewalks, and bicycle facilities, if they are located within municipal street rights-of-way. Similarly the funds may be used for traffic control devices, traffic signs and street markings, and speed bumps. Furthermore, the funds may be used for the costs of labor, engineering, equipment and supplies, and certain legal expenses associated with municipal street projects. There are certain limitations on the

use of funds, however, that are important. Powell Bill funds may not be used for municipal street lighting, parking meters, street name signs, the installation or removal of underground or overhead utility lines, the collection of garbage or refuse, or for the preparation of thoroughfare plans.

Some small cities can finance almost all their street expenditures from these Powell Bill distributions, particularly if their streets lack curbs and gutters and are built to the less-demanding standards that the state uses for its secondary road system. Large cities are far less likely to be able to finance all of their street expenditures from this source, particularly where streets are designed to accommodate paved parking areas along the curb and where traffic control and right-of-way improvements are substantial.

Special Assessments

Special assessments constitute an old tool that allows the assignment of at least some of the costs of public street improvements to the owners of property that stand to benefit from the work. An assessment can be a particularly useful tool for improvement projects on existing streets that are geographically confined. Because they can be procedurally a bit complex to administer, assessments are more popular among large cities than mid-sized and smaller ones. The increasing use of land development ordinance exaction requirements has also lessened the extent to which special assessments are used, because assignment of costs to a developer in advance of development can often be an effective substitute for assessing costs against benefiting properties after they are developed.

G.S. Chapter 160A-217 allows a municipality to assess the costs of street or sidewalk improvements if the city receives a petition signed by the owners of a majority of the lineal feet of frontage of the lands abutting the street. Unless the petition provides otherwise, no more than 50 percent of the costs may be assessed. However, a number of city charters (perhaps over fifty) include provisions that allow cities to use special assessment in the absence of a property owner petition and to assess more than 50 percent of the cost. Special assessments may be apportioned against benefited property in proportion to front footage, land area, or value added by the improvement, or on a per-lot basis, or on a combination of these bases. Assessments may be paid as soon as their amount is known or in installments over a period of up to ten years, as the city council determines.

Developer Exactions

In the last three decades it has become common for municipalities to expect developers of land to provide the public streets associated with a new development project. In the typical case a developer will be required to set aside land for new streets, to construct streets to city standards, and then offer the streets to the city for its acceptance. In other instances where a street is on the perimeter of a development a developer may be expected to dedicate additional street rights-of-way but make no improvements. Occasionally a developer will be required to construct an acceleration or deceleration lane on an existing street if the land being developed adjacent to the street is, for example, a shopping center or other major commercial development. In each case the extent to which a city may require a developer to provide right-of-way or traffic improvements as a condition of development approval must be related to the traffic generated by the development project itself, if the requirement is to avoid being an unconstitutional taking of land. A city may require the dedication of street right-of-way and various roadway improvements as a condition of land subdivision plat approval (G.S. 160A-372), as a condition of the grant of a zoning special-use or conditional-use permit, as a condition of a municipal driveway permit (G.S. 160A-307), or may accept these as a voluntary offer by the developer to induce the governing board to rezone land to a conditional zoning district. In many cities most of the mileage added to the city street system consists of streets built by developers and turned over to cities for maintenance.

In some instances it may make more practical sense for a city to accept funds from a developer rather than insisting upon in-kind contributions. G.S. 160A-372 allows a city to accept "fees-in-lieu" of street construction as a condition of subdivision plat approval. Fees such as these can be pooled for a later, more comprehensive road construction or right-of-way purchase. A city may use such funds for land acquisition, design, and construction of streets and roads that serve more than one subdivision or development.

Impact fees represent an even more comprehensive approach to collecting fees from property developers than accepting the right-of-way or improvements themselves. In such a system developers of land pay a charge that represents a portion of the prorated cost of the transportation facilities for the entire community made necessary by new growth. North Carolina cities lack express enabling authority to impose such fees, but a small number of cities (Raleigh and Durham among them) have obtained local authorizing legislation and have adopted impact fee systems to finance new streets and roads.

The Mix of Funding Options

Powell Bill funds and related forms of state-shared gasoline tax revenues make up the largest and most critical component of the revenues used to support street construction and maintenance. Larger and more rapidly growing cities are also likely to rely on developer exactions and contributions to help fund an expanding street system. Similarly, cities that

look to developers for funding help are also more likely to try to use special assessments to fund street improvements; both are based on the principle that the benefiting property owner should pay. But these cities are also much more likely to have capital improvement needs for the construction of major new arterial streets and thoroughfares and traffic control devices and relative improvements that developers cannot be expected to fund and are unsuitable for special assessment. If a road such as this will become part of the state's system upon completion, then state construction funds may be available. Nonetheless, some of the state's largest cities find it desirable to float bonds to finance the construction of major new streets. In contrast small and more slow-growing towns and cities are likely to rely more heavily on state aid and on general tax revenues to finance street system improvements. A greater portion of the expenditures will be for existing streets rather than streets on new alignment. Contributions from developers and property owners tend to be relatively less important in overall street funding.

Some Legal Topics Related to Streets

Definition of Street

Highway is the generic term for all ways of passage that are open to the public at large and maintained by public authorities, for both those who are on foot and those who are using vehicles. *Street* is normally used to refer to highways that are found within urban areas. A city's streets include not only *roadways*—the portions of a street used by vehicles—but also sidewalks, public alleys, bikeways, and downtown malls.[8] The city's basic authority to open and maintain streets, found in G.S. 160A-296, includes all these forms of streets.

Street can occasionally bear a narrower meaning, however, depending on the context. This possibility is best illustrated by the use of the word with respect to state street aid to cities.[9] Part of the state's aid is distributed to cities on the basis of the number of miles of streets maintained by the respective cities. G.S. 136-41.1, however, permits a city to count within its mileage only streets with an average width of at least 16 feet. Thus some city-maintained alleys may not qualify as streets for this purpose.

Street Property Transactions

Acquisition of Title to Streets

A city may acquire title to a street in one of four ways: purchase (or other voluntary conveyance), condemnation, dedication, or prescription. Purchase and condemnation are no different for a street than for a site for a city hall, an easement for a sewer line, or a watershed for the city's water supply, so there is nothing particular to note with regard to these two methods beyond the discussion of them in Article 21. The other two methods, however, deserve fuller comment.

Dedication. Dedication consists of an offer by an owner of property to devote (or dedicate) that property to a public use, and the acceptance of that offer by the public. Both elements, the offer and the acceptance, are necessary for a dedication to be complete.

By far the most common procedure for offering a dedication is through subdivision plat approval. Most local subdivision ordinances require the developer to offer to dedicate streets, utility easements, and other public spaces to the public; and the recorded plat for a regulated subdivision typically expressly states the required offer on its face. In areas of the state not subject to local subdivision regulation, the common law reaches a comparable result. Under the common law the preparation of a subdivision plat showing rights-of-way for streets (and other public uses) and the subsequent sale of at least one lot by reference to that plat constitutes an offer of dedication.

Inclusion of an express dedication on the face of a subdivision plat, or, in a common law context, the sale of a lot by reference to the plat, constitutes an offer of dedication, but neither constitutes acceptance of the dedication by the public. For that, the acceptance by proper authorities is necessary.[10] One method of public acceptance is formal action by a public body, such as a city council or the State Board of Transportation, or by its delegate, such as the city manager or public works director. This formal method is preferable to others because it indicates an official decision by the appropriate government to accept the dedication, and it provides a record, such as through the minutes of the public body, of the acceptance.

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8. Parsons v. Wright, 223 N.C. 520, 27 S.E.2d 524 (1943).

9. The uses to which state street aid may be put are listed in the discussion of the Powell Bill, above.

10. Owens v. Elliott, 258 N.C. 314, 128 S.E.2d 583 (1962).

A city may also, however, indicate acceptance of the dedication simply by beginning to maintain the street.[11] Because the city has no responsibility for maintenance until it accepts the offer of dedication, its undertaking to maintain the street has been held to imply the necessary acceptance.

A third method of acceptance is possible in some states: acceptance through use of the street by the public over a number of years. North Carolina case law, however, indicates that the method, called *public user*, is not possible in this state.[12]

An owner of property who has made an offer of dedication may withdraw the offer before the public has accepted it and sometimes even after. One way to do this, available when the offer has come through recordation of a subdivision plat, is by subsequently selling lots without reference to the plat.[13] G.S. 136-96 permits a second method. Under this statute, if the public does not open a dedicated street within fifteen years after the offer is made (even if the offer has been accepted), the dedicator may file a notice of withdrawal in the office of the register of deeds. Until that notice is filed, however, the public (city or state) retains the right to accept the offer and open the street, even if more than fifteen years have passed since the offer was made.

A city is the appropriate agency to accept a dedication for a street inside its borders or within its subdivision regulation jurisdiction. Acceptance of a street outside the city does not obligate the city to maintain it (G.S. 160A-374). In most cases such an acceptance will probably serve for a temporary period—until the street is accepted by the state for maintenance or becomes part of the city by annexation. The appropriate body to accept a dedication beyond these borders is the State Board of Transportation.

Prescription. Although not often used anymore, one final method of acquisition is by prescription. *Prescription* differs from dedication in that the owner of the property does not intend to offer it for public use. Rather, the public simply uses the property as a street over an extended period—at least twenty years—in a way that is adverse to the interests of the owner, but also known to him or her. The use must be of a specific, definite right-of-way, which must be maintained by the public. If all these elements are met, then acquisition by prescription is possible. In practice this method is rarely used except to confirm title to old streets for which the original title documents are lost.

Closing of Public Streets

Once a city has acquired the right-of-way to a street, it may eventually want to close that street. The street may never have been opened, and closing may be necessary to clear neighboring titles; or the city may wish to relocate the street. Whatever the reason, the city may close a street under the procedure set out in G.S. 160A-299. Similarly, counties enjoy authority to close streets under procedures set out in G.S. 153A-241. In practice, counties most often use this authority to close formerly state-maintained roads that have been abandoned by the state Department of Transportation. The two statutes create very similar procedures.

The statutes require the governing board first to hold a public hearing after it has published notice, mailed notice to owners of abutting property, and posted notice on the street itself. After the hearing, the board must find that the closing is not contrary to the public interest and would not deprive any person of "reasonable means of ingress and egress to his property." The North Carolina courts have held that although owners are entitled access to the street from their property, they have no right to have traffic pass directly by their property. Thus cutting off access to a street at one end, making that end in effect a cul de sac, does not deny reasonable means of ingress or egress to a property owner along the street.[14] When a street is closed in this fashion, the legal effect is that title to the land involved is divided along the middle of the street, among owners of the abutting land.

Other Uses of a Street Right-of-Way

G.S. 160A-273 permits a city to grant easements "over, through, under, or across . . . the right-of-way of any public street or alley that is not a part of the State highway system" as long as the easement will not "substantially impair or hinder the use of the street or alley as a way of passage." (Because counties do not own streets, this statute does not apply to them.) Thus a city is authorized to permit a utility company to lay pipes or to erect poles and string wires in the right-of-way of a street, or to permit the owners of property that abuts a street to join their properties by a bridge across the street. If the city's title to the street is itself but an easement for street purposes (rather than full title in fee

11. Foster v. Atwater, 226 N.C. 472, 42 S.E.2d 592 (1946).

12. *Owens*, 258 N.C. 314, 128 S.E.2d 583; Bumgarner v. Reneak, 105 N.C. App. 362, 413 S.E.2d 565 (1992).

13. Rowe v. Durham, 235 N.C. 158, 69 S.E.2d 171 (1952).

14. Wofford v. North Carolina State Highway Comm'n, 263 N.C. 677, 140 S.E.2d 376 (1965).

simple), however, the city's authority to permit other uses of the right-of-way, such as for laying pipes or erecting wires, is subject to the continuing property rights of the owner of the underlying title. The supreme court has held that utility pipes or poles constitute an additional burden on a street right-of-way, and the owner of the underlying title is entitled to additional compensation, however small that may be. Payment of that compensation, though, is the responsibility of whoever lays the pipes or erects the poles, not the city.[15]

City Liability for Streets

Once a city has assumed control of a street—whether by purchase, condemnation, acceptance of a dedication, or prescription—it becomes responsible for the maintenance and the repair of the right-of-way. This responsibility extends to all portions of the right-of-way, including the roadway, any sidewalk, and any other parts that contain conditions that might be a hazard to the normal use of the roadway or the sidewalk. The city's basic duty is to maintain the street in a "reasonably safe condition" so that it may be used for the purpose for which it is intended.[16] If the city fails to meet this responsibility, by failing to correct or warn against a street condition that renders the street unsafe, it may be held liable to any person injured by the condition. For example, if a street is under excavation, a city generally must set up barriers and lights sufficient to keep a careful traveler from falling into the excavation. Furthermore, the city must keep its streets and sidewalks free from obstructions—whether permanent, such as a private fire hydrant extending from a building, or temporary, such as a pile of bricks being used by a contractor—that present a hazard to vehicles or pedestrians. Although a very large body of case law details the sorts of conditions that might lead to city liability, much of it is old, with recent cases relatively infrequent. This fact suggests that cities are, by and large, meeting their standard of care in maintaining and repairing streets.

Street Names and Numbers

Inherent in the city's "general authority and control" over city streets is the authority to name streets and to establish a system for numbering the houses and the other buildings along streets. Counties, by contrast, enjoy authority to name and number streets in unincorporated areas under a specific statute, G.S. 153A-239.1. Most current naming of streets goes on in new subdivisions, and the typical subdivision ordinance gives attention to street names within the subdivision. This ordinance often requires that any new street that is a clear continuation of an existing street bear the same name as that street, and it prohibits new names that duplicate or sound very much like the names of existing streets. If these conditions are met, the names of the new streets are left to the subdivider. The power to name streets is legislative in nature, however, and therefore the city or county may change the name of a street at any time.

As noted, cities and counties also have statutory authority to establish a system of house numbers for city or rural streets. In a city, such a system usually begins with *reference streets* that divide the city into quarters—north, south, east, and west. The house numbers then proceed from the reference streets to the city's outer boundaries. Any ordinance that sets up a numbering system must establish frontage intervals so that a new number is given each succeeding interval. Intervals are commonly in the range of 20 to 30 feet, although shorter intervals may be necessary in downtown areas. In addition, the ordinance should also maintain even numbers on one side of the street and odd numbers on the other, in a manner that is consistent throughout the city. (The preferred practice is for the even numbers to be on the right side—low to high—and the odd numbers on the left side, going away from the reference streets.) It is also very desirable to establish the numbers so that the building numbers on parallel streets are comparable. Counties number lots or tracts under similar principles, although the lower population densities usual in unincorporated areas often lead to larger numbering intervals than is true of cities.

When cities exercise their power to name or number streets, there is no statutory procedure they must follow. A county's power to do so, however, is conditioned upon the board of commissioners first holding a public hearing after both publishing and posting notice of the hearing.

Franchises

Cities are authorized by G.S. 160A-319 to grant franchises for up to sixty years for the operation of electric, telephone, gas, water, and sewer utilities, and bus lines and other mass transit facilities. The same section permits cities to franchise cable television systems for up to twenty years. In addition, G.S. 160A-304 permits comparable city regulation

15. Van Leuven v. Akers Motor Lines, 261 N.C. 539, 135 S.E.2d 640 (1964).

16. Fitzgerald v. Concord, 140 N.C. 110, 52 S.E. 309 (1905).

of taxicab services. (Cities are also authorized to franchise private garbage collectors, parking lot operators, and airports, but in practice these powers are not used.) Counties are authorized to franchise four kinds of businesses: airport limousine services (G.S. 63-53), ambulance services (G.S. 153A-250), cable television companies (G.S. 153A-137), and solid waste collection or disposal services (G.S. 153A-136). Because the historical basis and much of the current justification of the power to franchise lie in local control of streets, the franchising power needs some discussion.

A *franchise* is a special privilege, such as the right to erect poles and string wires in a street right-of-way or to operate a bus line, that is granted by a city or county and that may not be exercised in the absence of a franchise.[17] Once granted, the franchise is a contract between its holder and the city or county and may not be revoked by the government except according to the terms of the franchise.[18] As a contract, it is a property right of great potential value, and for that reason G.S. 160A-76 and 153A-46 each requires that ordinances granting franchises be adopted twice, at two separate regular meetings of the governing board.

Historically the first extensive governmental regulation of public utilities was by cities, through their franchising power. City regulation at this time was comparable to the current state regulation of utilities, including levels and territory of service and rate regulation. In the last half-century, however, state regulation through agencies like the North Carolina Utilities Commission has displaced much of the municipal power to regulate. If there is a conflict between a state-approved tariff and the rates established or approved through a city franchise, the state-approved rates prevail.[19] Indeed, the North Carolina Court of Appeals has held that a city may not require a franchise holder to cease serving customers within the city once the franchise has expired if it is also serving those customers pursuant to a certificate of convenience and necessity from the North Carolina Utilities Commission.[20] A main continuing justification for city franchising of utilities is the regulation of the franchise holder's activities within the rights-of-way of city streets. For example, the franchise may make clear that any excavation or tree cutting is subject to city regulation and inspection; may require the franchise holder to repair fully any street or sidewalk pavement that is removed during an excavation; and may make clear the city's right to require removal or relocation of utility structures in the right-of-way, at no cost to the city. However, because of the dominant role of the utilities commission in regulating most activities subject to franchise (cable television is not subject to utilities commission regulation but is subject to considerable federal regulation), a city's bargaining power is not nearly as strong as it once was. With those businesses not subject to state or federal legislation, however, such as ambulance services or landfills, the franchising power, especially of counties, remains more robust.

Parking

An integral component of a local transportation system is vehicular parking. Parking opportunities are important in accommodating residents where they live (particularly in multifamily residential areas), in promoting the accessibility of commercial land uses for customers, and allowing employees ready access to their places of work. As the amount of automobile travel has increased so too has the need for parking spaces at various locations. The same travel origin-destination surveys that allow the estimation of trips and routes taken provides critical information about the demand for parking for autos and to a much lesser extent, trucks, bicycles, scooters, and other means of travel. Just as travel volumes exhibit peaks and valleys so too does the demand for parking. In larger cities significant public transportation use can diminish slightly the need for parking. Occasionally a community will limit the amount of parking with an eye to encouraging automobile drivers to carpool or to use another mode of transportation. However, in the mind of most citizens the easier it is to park a car near one's destination, the better.

On-Street Parking

On-street parking refers to parking spaces made available along the curb or shoulder of a street or road that are designed to accommodate vehicles. If a city provides on-street parking, particularly in commercial areas, it makes a conscious choice to provide better access to adjacent land uses at the expense of more efficiently moving traffic. The use of

17. Shaw v. City of Asheville, 269 N.C. 90, 152 S.E.2d 139 (1967).

18. Boyce v. City of Gastonia, 227 N.C. 139, 41 S.E.2d 355 (1947).

19. Corporation Comm'n v. Henderson Water Co., 190 N.C. 70, 128 S.E. 465 (1925).

20. Duke Power Co. v. City of High Point, 22 N.C. App. 91, 205 S.E.2d 774 (1974).

streets for parking affects their use for traffic movement in three ways. First, curbside parking significantly reduces a street's capacity. At an intersection with a signal, parking on both sides of both streets usually cuts the intersection's—and therefore the street's—capacity roughly in half. Second, curbside parking reduces safety. Vehicles leaving the curb, doors opening into traffic, and pedestrians walking between parked cars are all dangerous concomitants of parking on the street. Third, curbside parking increases service conflict. Curbside space must accommodate not only private cars but also delivery vehicles that need convenient loading zones, buses that need safe and convenient stops, and emergency vehicles that need quick access to buildings and fire hydrants. Furthermore, the alleys that give access to the interior of the block and the crosswalks that permit safe pedestrian crossing of the street all take their slice of curbside space. Virtually all on-street parking involves parallel parking; that is, the car is parked parallel to the curb. Most on-street parking areas outside of single-family residential neighborhoods are restricted or metered or both.

Off-Street Parking

Most demand for parking, however, is met with off-street parking. Off-street parking spaces may be found in spaces next to buildings, large surface lots, parking decks, or garages that serve larger areas, and even underground garages that serve single buildings or entire areas. The number, location, and design of off-street parking areas reflect the interests of both the owners of properties that will benefit from the parking and the interests of the city.

Most zoning ordinances include off-street parking requirements for the various categories of land use allowed. These requirements are usually based on some combination of nationally developed standards or rules of thumb on the number of customer and employee spaces that are likely to be needed for each kind of use and the community's assessment of its own circumstances. More recently emphasis has shifted from the sheer number of spaces to requirements to ensure that lots are appropriately landscaped, that stormwater is managed effectively, and that the circulation of vehicles within the lot and entrance and exit points are arranged to minimize the impact of drivers entering and leaving parking areas on street traffic.

Off-street parking is closely related to managing how accessible properties are from the adjacent street. North Carolina cities are authorized to undertake access management by adopting an ordinance regulating the design and location of driveways that tie into adjacent streets (G.S. 160A-307). Mid-sized and larger cities may require driveway permits, particularly if the adjacent use of land is nonresidential. Driveway regulations often set spacing standards between driveways to ensure that autos and trucks entering or exiting from a street will not cause traffic congestion or cause unsafe driving conditions. However, driveway standards can best be enforced if the adjacent street is curbed so that access points are available only at designated locations.

Privately Owned Public Parking

Public parking may be privately owned. This type of parking consists of lots, decks, and garages developed by private parties to provide off-street parking for a fee to customers or workers in an area. Off-street parking is also commonly provided in association with many shopping centers and other commercial enterprises, without charge. A developer or a private lessee may operate these facilities, or a city may operate them under lease. Parking fees, when imposed, are charged to cover operating costs and profit to the investor.

Publicly Owned Public Parking

These facilities are similar to private off-street facilities, but are either developed, or purchased after development, by a public body—the city or a special authority. Parking fees are charged to cover operating costs and retirement of any public debt used to develop the facilities. These facilities may also take the form of lots, decks, or garages. However, municipalities today are less likely to undertake the construction of large-scale parking facilities, particularly parking garages, than they were in the past, because of the financial risk inherent in building and operating facilities requiring large investments over an extended period of time.

Public Financing of Parking

A variety of means are used to finance public parking that is developed or operated by a public body. On-street parking usually involves no significant improvement expense, unless curb and guttering is added. It normally uses existing public rights-of-way and existing street pavement. Beyond the small cost of marking spaces, the only costs that a community is likely to incur for curbside parking are for enforcement by city personnel, for parking meters, or for both. Parking meters are the most common means of enforcing time limits for curbside spaces. They also provide a source of revenue to help meet the costs of maintenance and enforcement associated with on-street parking.

Off-street parking is usually a much more costly venture for a city. The city might have to acquire land and construct a lot or a deck. Once the facility is in operation, the city has to control parking and maintain the facility separately from routine street maintenance. Usually the large initial outlays for off-street facilities are covered by bonds, either revenue or general obligation, or by installment financing agreements, depending on a variety of factors. Regardless of the type of debt financing used, before the project is undertaken, a city should try to ensure that demand—and therefore use—will provide enough revenue to cover the total cost of developing and operating the facility. Meters may be used on off-street facilities, but attended lots (monitored by persons or machines) are more common as a measure to control turnover and to ensure enough revenue to meet obligations.

Public Transportation Systems

NCDOT reports that there are more than 120 public transportation systems operating in North Carolina, which can be grouped into four different types of systems: urban transit, human service transportation, community transportation, and regional transit.[21]

Urban Transit

Urban transit in North Carolina began over a century ago with privately owned horse-drawn coaches. These gave way to electric trolleys, which in turn were replaced by motor buses. The electric trolleys were often operated by power companies; and in several cities the power companies, as a part of their franchises, continued to provide transit services after the switch to buses. This era ended in 1991, when Durham and Greensboro assumed ownership of the bus systems in their cities from Duke Power Company. Today seventeen North Carolina cities own urban transit systems, of which Charlotte's is by far the largest.[22] These systems offer both fixed-route and dial-a-ride services.

Three organizational approaches are found among the city-owned systems: direct city operation, city contract with a private firm, and a combination of the two. North Carolina law does not, of course, allow cities to bargain with labor unions; but when a city uses a private management company, that operator can negotiate with a union that represents drivers and other workers.

Each system supports its operations from a combination of revenues: farebox receipts, appropriations from the city that owns the system, and federal and state grants. In no case are farebox receipts adequate to meet the operating costs of an urban transit system. The NCDOT reports that statewide, local revenues—farebox receipts and general fund appropriations—account for about 55 percent of capital and operating costs, with the rest being supplied from federal and state grants.

Human Service Transportation

Human service systems work with local human services agencies to transport agency clients for purposes such as congregate meals, adult and child day care, medical and recreation services, education and training, and senior and volunteer activities. These systems do not serve the general public directly, however; rather, riders must be referred by a human services agency. Administrative arrangements for these systems vary widely. In some counties administrative responsibility may be centered in a single agency, such as aging or social services. In others administrative responsibility may be contracted to a private nonprofit agency. NCDOT reports that there are fifty-five human service transportation systems operating in North Carolina.

Community Transit

Community transit systems are combination systems; they provide services to human services clients, as do human service transportation systems, but they also offer services to the general public. (These systems are required to offer public services as a condition of receiving federal support for their operations.) Some are single-county systems,

21. Much of the information in this section is drawn from materials prepared by the Public Transportation Division of the North Carolina Department of Transportation and found on the Internet at www.ncdot.org/transit/transitnet/.

22. The other cities with systems are Asheville, Boone, Chapel Hill, Durham, Fayetteville, Gastonia, Greensboro, Greenville, Hickory, High Point, Raleigh, Rocky Mount, Salisbury, Wilmington, Wilson, and Winston-Salem.

while others operate on a multicounty basis. Rather than the fixed-route systems offered by urban transit operators, community transit systems usually operate on a subscription basis, with rides prearranged by individuals, agencies, or groups, or on a dial-a-ride basis.

Regional Transit

There are two metropolitan regional transportation authorities currently operating in North Carolina, one in the Triangle region and the other in the Triad region. The Triangle Transit Authority (TTA) operates a series of fixed-route bus services between the major cities of the Triangle region as well as into the Research Triangle itself, while the Piedmont Authority for Regional Transportation (PART) operates express bus services between the major cities of the Piedmont Triad region. Each of these entities is organized as a regional authority, the TTA under the Regional Public Transportation Authority Act (G.S. Chapter 160A, Article 26) and the PART under the Regional Transportation Authority Act (G.S. Chapter 160A, Article 27). Both sorts of authorities are permitted, pursuant to G.S. Chapter 105, Article 51, to levy a registration tax of $5 on all vehicles located within the authority's jurisdiction. Before this tax may be levied, the county commissioners of each affected county must approve it.

Airports

In 1929, just over twenty-five years after the Wright Brothers made their first flights in Kitty Hawk, North Carolina's cities and counties were authorized to own and operate airports (G.S. Chapter 63). Their initial powers were broad and have since been enlarged. Counties and cities may levy taxes for airports, issue bonds to finance facilities, condemn land for airport facilities, and join with other cities or counties in supporting and operating airports. They may also create subordinate boards or commissions to manage airport operations, or lease the airports to be operated privately. A few other arrangements have been authorized. For example, the Raleigh-Durham airport is operated by an authority created by special act, with authority members appointed by the four participating governments—Raleigh, Durham, Wake County, and Durham County. The Charlotte airport, by contrast, is operated as a regular city department but with strong policy guidance from an advisory commission.

Although the exact number of airports in North Carolina is not known, the North Carolina Department of Transportation has estimated that there are over 400 airports and airstrips, the majority of which are privately owned personal-use air strips in rural areas. There are some 115 publicly owned airports in North Carolina. Of these, 74 are open to general public use while the remainder are not. The latter group includes such facilities as military airports, local hospital heliports, and state airports used for fighting forest fires.

The North Carolina airports open to general public use are administered in a variety of ways. A significant minority are operated by an airport authority or commission, most of these are the creations of two or more local governments. Most of the remainder are operated directly by a city or, more often, a county; most of these, however, have some sort of advisory board or committee.

Only the airports served by major airlines are fully self-supporting for both operations and capital improvements. In fact, most of the airports operated by local governments do not generate enough revenues to meet even their operating expenses. Rather, they rely on local appropriations and state and federal aid to meet their remaining capital needs and operating expenses. The smaller airports, though, have only modest needs. Their annual operating costs are usually restricted to utilities, grass cutting, and limited pavement and building maintenance. They usually contract for actual operation by one or more private companies, usually known as fixed-base operators.

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