

Growing Smart about Transportation

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Sprawl is emerging as the hot topic for political debate. Relentless development eating up acres of open space, hour-long commutes in bumper-to-bumper traffic, permanent water restrictions, and air that is brown with pollution—all these aspects of sprawl are vivid and easy for politicians and policy makers to communicate to the public. Voters see the problem; now they want solutions. This article explores solutions from the perspective of transportation planning.

There are no easy solutions, of course. From 1995 to 2007, North Carolina's vehicle miles traveled (VMT) is projected to grow about 43 percent. This is about two and a half times faster than the growth in population (see Figure 1, page 54). That trend is enough to make any transportation planner lose sleep because it translates into a huge demand for more transportation investments.

There are many explanations for this trend: a booming economy that permits ownership of more cars, few high-quality alternatives to driving a car, women joining the workforce in record numbers, and sprawling automobile-oriented pat-

terns of land development. But for transportation planners, the reasons are not the issue; the solutions are.

Transportation planners are charged with the responsibility of finding ways to deal with this incredible growth in VMT. More road capacity is part of the solution, but for several reasons it cannot be the only solution. First, roads are a huge public investment. On the average, widening a two-lane road to four lanes on the North Carolina intrastate system costs \$5.4 million per mile, and building an outer loop around one of North Carolina's major metropolitan areas costs \$20.9 million per mile.

Second, planning and building roads takes much longer than planning and building new residential or commercial developments. In North Carolina, planning, environmental review, and design of "new alignment roads" (new roads built where no road exists) can take as long as twelve years. In the private sector, planning and building new developments takes only a fraction of that time. As a result, development quickly outpaces the transportation improvements needed to support it.

Third, adding road capacity does not seem to eliminate congestion. This is the classic transportation planning debate: Does the road cause the development, or does the development cause the road?

When an area has a viable economy, roads and development are closely intertwined, and more of either results in more of both. Because adding roads cannot keep pace with new development, the result is traffic congestion.

Fourth, like any new infrastructure, roads have a negative impact on the environment. Although every proposed road goes through an environmental review process that is designed to balance the need for the road against impacts on the environment and the community, in the end the natural and built landscapes are forever altered by the road.

In summary, just building more roads cannot meet the increasing demand for travel represented by the growth in VMT.

Smart Growth as a Potential Solution

Many transportation planners recognize that smart growth has the potential to help them meet their mission in a new way—by affecting the demand side of travel, rather than the supply side. Smart growth provides a vision for a community's future that must be accomplished by integrating transportation and land-use planning. Over time, a smart growth vision can fundamentally alter the travel patterns in ways that will reduce VMT.

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BELOW: CHRIS DOANE / THE CHARLOTTE OBSERVER; LEFT: N.C. DEPARTMENT OF TRANSPORTATION; DIVISION OF BICYCLE AND PEDESTRIAN TRANSPORTATION

Opposite, left to right: a crowded train station in Greensboro, N.C.; a traffic circle in Okemos, Mich.; a bus transporting a passenger's bike. Above: bikers on the open road.

A smart growth vision can be found in the conceptual definition of smart growth—to *direct* development in ways that preserve and enhance an area's or a city's *livability* and *natural resources* while providing for *economic prosperity*. The critical words in this definition are emphasized. Smart growth is proactive rather than reactive. It is a thoughtful choice about where and when development will occur, and what type of development it will be. Smart growth is balanced, including quality of life, economic growth, community-defined livability, and protection of the natural environment.

Local Efforts

This deceptively simple vision can be implemented only through a complex process of thoughtful, continuous, comprehensive, and integrated decision making that is based on the commitment and the values of the residents of a community. The decisions to be made address nearly every aspect of community planning and

implementation, including planning for future transportation. Smart growth is not a quick solution, and it cannot be simply a political agenda. The cumulative decisions will not have a visible impact on the community for years. Therefore the vision must come from the residents of the community through a broad-based process of public involvement. Once the vision is in place, it must be implemented by elected officials through myriad day-to-day decisions about development.

When a community accepts smart growth as its vision for the future, it needs a set of working principles to govern its plans, policies, and practices. An example appears in *A Smart Growth Audit for Charlotte–Mecklenburg County*, recently published by the Charlotte–Mecklenburg Planning Commission and based in part on smart growth principles from the American Planning Association and the National Association of Home Builders. The principles identified by the commission (see page 55) recognize the importance of comprehensive and integrated planning to smart growth. Infrastructure is one of the key categories, and a balanced, multimodal transportation system (that is, a system balanced among several



modes of transportation) is specifically highlighted. These principles point to the need to integrate land-use, transportation, and infrastructure decisions.

The Charlotte–Mecklenburg County audit also details some characteristics that reinforce integrated decision making and demonstrate its importance to smart growth:

- Consistency between infrastructure and land-use plans
- Implementation of compact and infill development strategies
- Street-design standards that promote and support the use of transit, walking, and biking
- Reduction of parking availability
- Coordinated implementation of land-use and transportation decisions

Decisions reflecting these characteristics can either reduce the need to travel or support the implementation of viable alternatives to the car, both of which can reduce VMT. For Charlotte–Mecklenburg County, these principles and the detailed characteristics and indicators provide a decision-making framework within which each decision can be evaluated for its consistency with the community's smart growth vision.

Although the Charlotte–Mecklenburg County audit provides an array of strategies and tools, the same set might not be appropriate or acceptable in a different setting. When a community chooses smart growth as its vision, there are many tools that it can use to develop a supportive transportation system. A guide recently published by the North Carolina Department of Transportation (NCDOT) highlights a broad range of tools and techniques that can create less automobile-dependent communities.¹ The guide is divided into four categories of tools:

- Policy tools to promote integrated, comprehensive planning
- Land-use tools to increase densities and mix of use
- Site- and building-design tools to provide convenient, continuous, and direct connections for travel by other means than car
- Transit-facility design tools to address the placement of facilities and the amenities for transit access

The guide includes nearly fifty specific actions to help implement a transportation system that supports a smart growth vision.

State Efforts

The Charlotte–Mecklenburg County model and the tools outlined in the NCDOT guide described earlier are examples of smart growth implementation that is locally driven. However, a local commitment to smart growth is not enough. In every state, the state government makes or heavily influences major infrastructure investments that shape the community. This is particularly true of transportation, an area in which vast amounts of federal aid to build roads is spent by, or funneled through, state departments of transportation. This substantial infrastructure investment is driving many governors and state legislators to push smart growth from the state level through legislation that mandates or strongly encourages communities to implement land-use patterns more consistent with smart growth principles.

As of April 1999, twelve states had growth management legislation in place.

Several others had legislation in place that requires components of growth management, such as encouraging development of local land-use plans. North Carolina has recognized that VMT must be addressed. Although the state has not passed growth management legislation, it has established a goal for reduction in growth of VMT that helps establish a rationale, or case for change, for future legislation. The goal reads as follows: “It shall be the goal of the state to reduce the growth of vehicle miles traveled in the State by at least twenty-five percent (25%) of that growth that would otherwise occur by 1 July 2009.”²

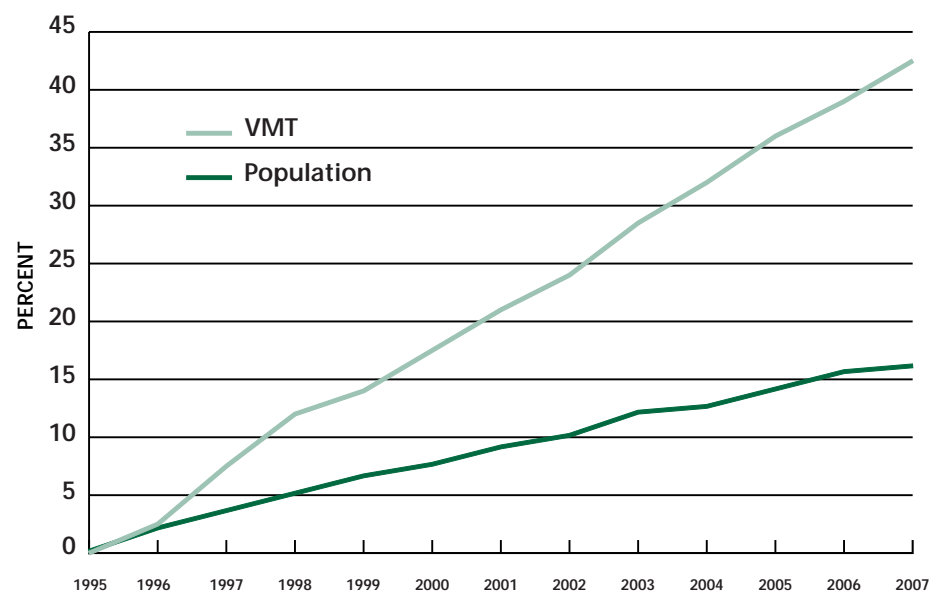
Transportation is a component of most states’ growth management legislation. (For a discussion of statewide planning efforts, see the article on page 12). Georgia’s legislation is by far the strongest in terms of transportation planning because it gives the state, through the newly formed Georgia Regional Transportation Authority (GRTA), control over regional transportation and land-use decisions. Although the legislation is statewide in scope, it applies only to the Atlanta region now and for the foreseeable future. In Georgia, growth management legislation was prompted by the complete shutdown of the Atlanta

region’s \$1 billion road construction program because of air quality problems. A recent article described the sweeping authority of the GRTA as follows:

GRTA can tell the state transportation department not to build a highway. It can tell a county not to allow a new shopping mall inside its borders. If it wants to, GRTA can build and operate a mass transit system in any of the jurisdictions surrounding Atlanta. It can then force those jurisdictions to pay for it by threatening to take their state funds away.³

The entire board of GRTA is appointed by, and serves at the pleasure of, the governor. The direct authority this gives the state over both land-use and transportation decisions provides the strongest and most direct connection between land-use and transportation implementation. Money from federal transportation programs is again available to Atlanta, although the projects and the programs that the GRTA is implementing are substantially different from those that were in place before the air quality crisis. GRTA, the U.S. Department of Transportation, and the U.S. Environmental Protection Agency are counting

Figure 1. Actual and Projected Growth in Vehicle Miles Traveled (VMT) and Population, North Carolina, 1995–2007



Source: North Carolina Dep’t of Env’t and Natural Resources, Div. of Air Quality, Presentation to the N.C. Env’tl. Management Comm’n (Feb. 9, 2000).

on this integration of land use and transportation to reduce VMT in Atlanta.

Coalition Building

Smart growth sounds so much like apple pie and motherhood that few, if any, would oppose it. Who can possibly be for dumb growth? However, many of the underlying principles and tools, such as urban growth boundaries and adequate public facilities ordinances (discussed in more detail in the article on page 29), can be highly controversial and difficult for elected officials to champion. Critical to the success of implementing a smart growth vision is coalition building.

Interestingly, some members of the business community have become strong advocates of both local and state smart

growth strategies. Business leaders are an important voice in any community, one to which virtually all elected officials listen. On the basis of recent events in Atlanta and Charlotte, it appears that the business community plays at least two critical roles in implementation of smart growth. First, it is an important and usually powerful constituency that can help communicate the smart growth vision and provide elected officials with critical support to implement difficult or controversial policies and legislation. Second, political boundaries are frequently irrelevant to the business community. It can push elected officials to cooperate for more effective implementation of a smart growth vision.

Charlotte–Mecklenburg County’s vision and the business community’s role in providing political support came together when the region’s Chamber of

Commerce actively participated in and strongly endorsed the adoption of a comprehensive land-use plan and a companion transportation plan. Based on the smart growth vision, these integrated plans reflect the principle of densely developed transit corridors (that is, channeling of development along transit corridors).

With strong support from the Chamber of Commerce, this vision was put to the political test with a sales tax referendum in November 1998. By a large majority, the voters approved a half-cent sales tax in the city and the county to implement the public transportation portions of the transportation plan. This tax currently raises more than \$50 million a year for public transportation in Charlotte–Mecklenburg County, and the area has begun to implement the land-use changes needed to make mixed-use, more densely developed transit corridors a reality.

The most valuable contribution of the business community may lie in its recognition that the quality of life in an urban area is tied to regional success, not individual city or county success. In most urban areas, regional partnerships across local community boundaries are a critical element in smart growth’s having an impact on the growing need for transportation. Neighboring communities frequently have traditional relationships based on competition rather than cooperation. This competition and need for local control generally will lead to a dysfunctional transportation system in which major regional roads will have “bottlenecks” (locations along a road corridor where the traffic regularly slows or stops because of adjacent land use or some characteristic of the road such as a reduction in the number of lanes) and local communities will push for more road widening. Likewise in public transportation, transit services are haphazardly implemented or have inconsistent service levels based on individual communities’ commitment to transportation alternatives. A single community can implement all the principles of smart growth within its boundaries and see little impact on traffic congestion if all the surrounding jurisdictions follow a conventional automobile-dominated transportation strategy.

CHARLOTTE’S SMART GROWTH AUDIT PRINCIPLES

Charlotte commissioned an audit of its growth management programs in light of smart growth principles. The audit team developed the following principles by combining elements from statements on smart growth by the American Planning Association (APA) and the National Association of Home Builders (NAHB), and adding two principles of its own.¹ The team’s report acknowledges the differences in the APA and NAHB perspectives. The planners seek compact urban patterns, revitalization, infill, and less dependence on automobiles. The homebuilders want to avoid a shortage of developable land, unfair development costs, and limits to providing the type of housing that homebuyers desire. Nevertheless, sufficient overlap exists to make possible a merged set of principles.²

Planning Capacity and Quality

- Anticipation of and provision for development and growth
- A long-term comprehensive plan, with adequate land supply

Urban Form

- Compact development (that is, development that occupies a small volume by reason of efficient use of space—as opposed to sprawl)
- Protection of natural resources
- Substantial public open space
- Infill development
- Variety of housing
- Mixed-use, walkable neighborhoods

Infrastructure

- Balanced, multimodal transportation (that is, transportation balanced

- among several modes, instead of a single focus on highways and autos)
- Maximization of existing infrastructure
- Timely provision and fair funding of new infrastructure

Supportive Decision-Making Process for Development

- Reasonable, predictable, and efficient plan review
- Supportive fiscal policies
- Integration of land-use, transportation, and infrastructure decisions

Notes

1. Uri Avin & David Holden, *Does Your Growth Smart?* PLANNING, Jan. 2000, at 26.

2. The principles are adapted from LDR INTERNATIONAL, INC., FOR CHARLOTTE-MECKLENBURG PLANNING COMM’N, A SMART GROWTH AUDIT FOR CHARLOTTE-MECKLENBURG COUNTY 7 (Charlotte, N.C.: the Commission, 1999).



CHRIS STEWARD / THE NEWS AND OBSERVER

At a busy intersection in Raleigh, construction and rush hour traffic collide.

In both Atlanta and Charlotte, the business communities have been among the first to recognize that successful implementation of smart growth requires a regional perspective. In Atlanta the business community, not the local communities that make up the Atlanta region, became the key political constituency for the regional perspective needed to implement GRTA. The Metro Atlanta Chamber of Commerce helped lobby for the legislation when it was introduced. The president of the Chamber of Commerce, Sam Williams, stated, “We’ve been over there lobbying like hell. . . . We’ve called in every favor there was to call in. It’s the most critical issue for the survival of metropolitan Atlanta. We can slip off to sprawl and mall and L.A., or we can move up to a higher level.”⁴

One of the major reasons for Atlanta’s air quality crisis was a lack of consensus on a multimodal regional transportation system. Attempts to develop a consensus failed as critical counties and communities refused to implement any type of transit strategy. Without a consensus, Atlanta and the Georgia Department of Transportation were trying to build roads to handle the exploding growth. Eventually the air quality problems associated with this single solution led to the shutdown of the road-building program.

With its integrated land-use and transportation plan and the associated transit tax to support implementation, Charlotte–Mecklenburg County is trying to avoid a shutdown like Atlanta’s. Inside its own borders, Charlotte can implement transportation and land-use decisions that reflect smart growth principles, but the communities surrounding Charlotte all are experiencing explosive growth, with much of the traffic focused on Charlotte’s major employment areas. Transportation decisions in the region must be made on the basis of regional traffic patterns and needs if the area is to avoid the experience of Atlanta.

In Greater Charlotte, political leaders are keenly aware of the Atlanta experience but still are struggling with regional planning and implementation. There are currently three “regional” transportation planning agencies in the area. Local elected officials make up their policy boards. All three, to varying degrees, opposed recently proposed legislation that would have required their consolidation into a single regional transportation planning organization. In part their opposition was based on fear that their communities would lose local control over transportation decisions. Acknowledging that they need to coordinate their plans, they have formed an organization to discuss regional transportation issues, but it does not have the authority to issue binding decisions.

On the other hand, the Chambers of Commerce for ten counties in the region, including two in South Carolina, have developed a strong business-based coalition. The coalition recognizes that bright prospects for the area lie in planning and implementing its future as a single region. These business leaders supported the consolidation legislation and lobbied strongly for substitute legislation that passed in June 2000. This legislation, which applies across North Carolina, mandates the development of regional transportation strategies, although it does not require actual consolidation of the current metropolitan planning organizations.⁵

Conclusion

Smart growth is a long-term strategy to help communities balance their desire for economic growth with their desire to maintain quality of life. Smart growth can help with the exploding growth in VMT. Simply building more roads will not eliminate, or even reduce, traffic congestion. Rather, transportation planning today is a complex set of interactions and partnerships having as one of its principal aims the integration of land-use and transportation decisions. This complex planning process depends on local vision, regional coordination, and state responsibility, and it can be managed over the long term only if there is consensus and public support, including support and leadership from the business community. All this sounds tough, but managing it is transportation planners’ best hope for peaceful sleep.

Notes

1. HOLIDAY COLLINS & LAURENCE LEWIS, *THE LAND USE AND TRANSIT CONNECTION: BUILDING LIVABLE AND SUSTAINABLE COMMUNITIES IN NORTH CAROLINA*, REPORT 2—TOOLS AND EXPERIENCES FROM OTHER COMMUNITIES (Raleigh: N.C. Dep’t of Transp., 1999).
2. The Ambient Air Quality Improvement Act of 1999, S.L. 1999-328.
3. Alan Ehrenhalt, *The Czar of Gridlock*, *GOVERNING*, May 1999, at 20.
4. Ehrenhalt, *Czar of Gridlock*, at 24.
5. House Bill 1288 (S.L. 2000-80), passed by the 1999 General Assembly in its 2000 regular session.