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Coordination of Transportation Planning and Land Use Controls: A Challenge for Virginia in the 21st Century

Author(s)

Robert D. Vander Lugt and Salil Virkar

Performing Organization Name and Address:

Virginia Transportation Research Council
Box 3817, University Station
Charlottesville, Virginia 22903-0817

Sponsoring Agencies' Names and Addresses

Virginia Department of Transportation
1401 E. Broad Street
Richmond, Virginia 23219

University of Virginia
Charlottesville
Virginia 22903

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Abstract

The public power to control the use of land is primarily exercised by city and county officials in Virginia. Control over the location and characteristics of transportation facilities, including roads and mass transit, is exercised primarily by the Commonwealth through the Virginia Department of Transportation. Unlike most other states, Virginia retains control over and responsibility for almost all roads not within an incorporated city.

Though it complicates coordination, this separation of the responsibility for land use control and transportation planning is not unworkable. This structure seems to have served the Commonwealth well for some 50 years; however, new pressures have begun to place great stress on it.

This report explores the legal, institutional, and procedural environments within which the land use and transportation planning processes operate in Virginia. In particular, the study focuses on the problems that have emerged from the explosive population growth and development that Northern Virginia experienced in the 1980s. The report encompasses six general areas of inquiry: (1) intergovernmental relations; (2) the transportation planning process; (3) land use control; (4) tools for coordination; (5) impediments to effective coordination; and (6) the laws and practices of other selected regions.

FINAL REPORT

COORDINATION OF TRANSPORTATION PLANNING AND LAND USE CONTROL: A CHALLENGE FOR VIRGINIA IN THE 21ST CENTURY

Robert D. Vander Lugt
Graduate Legal Assistant

and

Salil Virkar
Graduate Legal Assistant

(The opinions, findings, and conclusions expressed in this report are those of the authors and not necessarily those of the sponsoring agencies.)

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PROJECT ADVISORY COMMITTEE

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Prince William County

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EXECUTIVE SUMMARY

The public power to control the use of land is primarily exercised by city and county officials in Virginia. This is accomplished by means of comprehensive plans, official maps, subdivision ordinances, zoning statutes, site plan reviews, capital improvement plans, and other regulatory and proprietary actions of local governments.

Control over the location and characteristics of transportation facilities, including roads and mass transit, is exercised primarily by the Commonwealth Transportation Board through the Virginia Department of Transportation (VDOT). Unlike most other states, Virginia retains control over and responsibility for almost all roads not within an incorporated city.

Though it does complicate coordination, this separation of land use control and transportation planning responsibility is not inherently unworkable. This structure seems to have served the Commonwealth well for some 50 years. However, new pressures have begun to place great stress on it.

Efforts have been made to better coordinate land use controls and transportation planning decisions. A number of innovative tools have been employed by localities and by the state. Several regional organizations designed to foster cooperation have been created, and a subregional transportation planning process has been undertaken to focus coordination efforts in Northern Virginia.

The institutions and structures in place, even with recent efforts at coordination, have not alleviated the growing pressures on the system. There are two major kinds of tension. First, there is the struggle to coordinate land use with transportation within a given jurisdiction. The traditional process of planning seeks to address this problem. It has proven to be an intractable problem, however. Localities facing rapid urbanization have been caught in a battle between growth advocates and slow-growth proponents. They have been criticized for the decline in mobility as more cars clog the roads, and at the same time, they have been criticized for encouraging new development by expanding transportation facilities to alleviate congestion. For many, the answer seems to have been to encourage or allow only business and commercial development, which enriches public coffers, while discouraging or banning residential development, which inevitably requires costly services. This "solution" for each locality, which might be called the beggar-thy-neighbor approach, has only exacerbated the regional problem since workers and shoppers have been forced into longer trips over more congested roads to reach their destinations.

This, then, is the second major kind of tension—the difficulty of coordinating across jurisdictional boundaries and levels of government. State government, like the cities and counties, has not been immune to destructive incentives. As the question of where and when to build new transportation facilities becomes more and more politically charged, VDOT has faced a situation in which its traditional emphasis on engineering solutions to transportation problems is no longer reaping results. Roads that are engineered to fit projected needs nonetheless become the object of heated protests from local citizens' groups.

Because these new tensions arise out of more fundamental tensions between mobility and growth, and between freedom of movement and preservation of a sense of community, they can never be completely eradicated. They can, however, be managed and channelled into creative outlets. Effective management can best be accomplished at the regional level. However, regional coordination is difficult in Northern Virginia at present. The legal and institutional structure tends to polarize the process by focusing authority at the local and state levels.

This study identifies four institutional impediments to an improved coordination of land use and transportation policies. First, the historical basis for granting greater independent authority to city governments as compared to county governments has eroded with the growth of concentrated population centers in unincorporated areas. The differential in authority and treatment by the Commonwealth should be removed. Second, the Commonwealth's close supervision of local government activities, which results from a strict adherence to Dillon's rule, should be examined, and greater local authority should be granted in response to changing needs. Third, the regional voice in Northern Virginia should be strengthened by merging several organizations that perform similar or complementary functions in the process of coordination. And fourth, the geographical organization of VDOT and its role should be altered in order to create a strong regional voice within the Department that could assist in vertical (state/local) as well as horizontal (local/local) coordination. In rapidly urbanizing areas of the state, VDOT should develop and strengthen its staff expertise in planning, in order to facilitate coordination with local planners.

These structural changes must be coupled with effective policy. Such a policy can be neither entirely demand-responsive nor entirely regulatory. It must combine a commitment to providing adequate infrastructure with a commitment to manage and contain demand. Effective management requires that the various actors in the process adapt to an environment in which, increasingly, there are no policies that will be accepted across the board. All measures will be compromises. All actors, public and private, must participate in an ongoing effort to balance mobility and growth with the quality of life. Institutions that will facilitate this kind of ongoing process can be adapted from those now in existence. Such institutions should be designed to encourage state and local problem-solving on the regional level.

In order to achieve political consensus, which has often been lacking on these issues, policy initiatives should combine demand management measures with financing for additional highway and transit needs, a dispute resolution mechanism, and a structure for continuous citizen input and intergovernmental accommodation. These elements could form the basis for a sort of regional compact that would replace destructive incentives, such as those of the beggar-thy-neighbor scenario described above, with incentives for regional cooperation in the coordination of land use controls and transportation plans.

PREFACE

In an effort to reverse Northern Virginia's drift toward transportation gridlock, Governor Gerald L. Baliles directed the Secretary of Transportation and Public Safety, Vivian E. Watts, to develop a transportation plan for the region. Secretary Watts formed a Policy Planning Committee composed of senior municipal and county officials, members of the General Assembly, and other key state officials. This committee arrived at a plan for meeting the region's projected transportation needs through the year 2010 and is now in the process of refining and updating the plan. As part of that process, the committee called for a "study of better methods for coordinating land use and transportation planning functions." The Virginia Transportation Research Council was asked to assist with that task. The report that follows provides a survey of the legal, institutional, and procedural environments within which these planning processes operate in Virginia and compares the situation in Virginia to that in other states.

ACKNOWLEDGMENTS

The authors express their deepest appreciation to the members of the Project Advisory Committee, who ensured that the varied interests most concerned with the development of Northern Virginia were represented and provided the advice and insight essential to the success of this study. Special thanks goes to Carolyn Hyland Zeller who chaired the Advisory Committee. Though they cannot be mentioned by name, our thanks also go to the dozens of local and state officials and private citizens who shared their insights in interviews with the authors.

Plans are nothing: Planning is everything.

—Dwight D. Eisenhower

FINAL REPORT

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INTRODUCTION

Throughout the United States, transportation planning and growth management have become top priorities for many state and local officials. Indeed, traffic congestion is now endemic to America's largest cities. A recent survey found that 9 out of 10 drivers believe that the nation's roads are too crowded.[1] Moreover, it is predicted that, within 20 years, the number of miles driven annually by Americans will more than double.[2]

One of the areas of the country with particularly severe traffic congestion is the Washington Metropolitan area. Northern Virginia, which is part of the Washington Metropolitan area, has experienced rapid population growth and economic development. Since 1980, the population of many Northern Virginia communities has increased by 25 percent or more, but the number of vehicles in Northern Virginia has increased at twice the rate of the area's population.[3] Population growth in the region and the construction of new residences, retail outlets, and office facilities have contributed to a rise in commuter traffic and traffic congestion.

The traffic congestion problem is so acute that even the $1.4 billion of additional money committed to local transportation projects in Northern Virginia by the recent Baliles transportation initiative may not be enough to arrest the deterioration of traffic conditions there. Moreover, although emphasis has traditionally been on transporting commuters to the District of Columbia the largest (and fastest growing) proportion of Northern Virginia commuters now travel to work locations in

1. Schoolmuster, Ron. 1989. "Traffic is Top Hassle for Drivers." *USA Today*, October 3.
2. Rumsey, Anne. 1989. "Driving Doubling in Next 20 Years." *Fairfax Journal*, September 28.
3. *Id.*

other Northern Virginia suburbs.[4]

In order to adapt the transportation network to the changing patterns of development in the region, land use and transportation planning policies must be closely coordinated. Such close coordination, however, has been difficult in Virginia where land use planning is the responsibility of localities, and transportation planning is primarily the state's responsibility.

This study was undertaken as part of the Northern Virginia Sub-Regional Transportation Planning Process at the request of the Transportation Planning Division of the Virginia Department of Transportation. The policy planning committee of the sub-regional planning process, composed of senior municipal and county officials, members of the General Assembly, and other key state officials is in the process of refining and updating its transportation plan for the region. As part of that process, the committee has called for a "study of better methods for coordinating land use and transportation planning functions." The report that follows is a response to that request and is an attempt to survey the legal, institutional, and procedural environments within which these planning processes operate in Virginia.

STATE AND LOCAL GOVERNMENT IN VIRGINIA

Overview

In order to understand the nature of the relationship between state and local government in Virginia, it is necessary to explore the historical origins of local government in the Commonwealth. Local government in Virginia can be divided into at least two distinct categories: counties and independent cities. At both the county and the city level, however, local government exists by virtue of state authority.

In 1634 the Virginia General Assembly, desiring administrative efficiency, created eight counties (called "shires").[5] The primary functions of the county governments were to collect taxes, administer justice, and enforce the laws.[6] Eighty-eight years later, the first independent cities, Williamsburg and Norfolk, were created.[7] Unlike counties, however, cities were not created to meet any special administrative needs; rather, they were established because of pressures for municipal self-government. Because counties were created as administrative subdivisions of the Commonwealth, their powers were severely restricted.

The powers and duties of counties and cities have changed. Yet, today, the

4. *Northern Virginia 2010 Transportation Plan*, VDOT, January 27, 1989, p. 7.
5. Wirt, Clay L. 1989. "Dillon's Rule." *Virginia Town and City*, August, p. 12.
6. *Id.*
7. *Id.*

municipal officers of independent cities still have greater control over local matters than do their counterparts at the county level. This distinction, understandable in historical terms, fails to reflect the needs of unincorporated county areas with increasingly dense populations.

Even where counties and towns are similarly treated, their powers are closely circumscribed. The Virginia Constitution establishes the relationship between the state and the localities in Article VII. Throughout Article VII, the notion that localities are creatures of the state continues to be firmly embedded in the Commonwealth's constitutional law. For example, Section 2 of Article VII enables the General Assembly to provide for the organization and government of the localities. The Constitution states: "The General Assembly shall provide by general law for the organization, government, powers, change of boundaries, consolidation, and dissolution of counties, cities, towns, and regional governments."[8] Section 3 also demonstrates the omnipotence of the General Assembly: "The General Assembly may provide by general law or special act that any county, city, town, or other unit of government may exercise any of its powers or perform any of its functions and may participate in the financing thereof jointly or in cooperation with the Commonwealth or any other unit of government within or without the Commonwealth."[9] Therefore, under the Virginia Constitution, cities and counties have very little independent authority. Though the realities of providing daily services have strengthened the hand of the localities, the Commonwealth has adhered firmly to the belief that authority must always come from the General Assembly. This principle has been the bedrock of municipal law in Virginia.

Dillon's Rule

Since the General Assembly must grant a county or city the power to undertake some activity, there may be occasions when the authority of a locality is questioned. It is precisely on such occasions that Dillon's Rule, which is a rule of statutory construction, is applied. Under Dillon's Rule, the power of the locality is construed narrowly, thereby implying that the locality will most likely not have the power in question.[10]

Dillon's Rule was formulated by Iowa Supreme Court Chief Justice John F. Dillon, one of the nation's foremost nineteenth century authorities on municipal law.[11] The rule essentially consists of two elements. In the first element, the types of powers that a local government may possess are discussed. According to Dillon, "Local governments have only three types of powers: (1) those granted in express words, (2) those necessarily or fairly implied in or incident to the powers expressly granted, and (3) those essential to the declared objects and purposes of the corpora-

8. Va. Const. Art. VII, Sect. 2.

9. Va. Const. Art. VII, Sect. 3.

10. "Dillon's Rule: The Case for Reform," 68 Va. L. Rev. 693, 694 (1982).

11. Wirt, Clay L. 1989. "Dillon's Rule." *Virginia Town and City*, August, p. 12.

tion, not simply convenient, but indispensable."[12] More important, however, the second element of Dillon's Rule states that "if there is any reasonable doubt whether a power has been conferred on a local government, then the power has not been conferred."[13] Over the years, this aspect of Dillon's Rule has been used by Virginia courts to strike down local action as an exercise of power not granted by the General Assembly.

Chief Justice Dillon manifestly distrusted local government, perhaps because he lived during a period of American history when corruption was widespread among local government officials.[14] In addition, Dillon formulated his rule as a response to those individuals who claimed that local governments were endowed with certain inherent powers.[15] Bolstered by Dillon's Rule, state legislators throughout the country seized the opportunity to take control of inefficient and corrupt local governments and to pass laws concerning every conceivable detail of local life.[16]

In a number of states, citizens reacted to the control of local governments by state legislatures by proposing an alternative scheme. The philosophy of these reformers, known as the doctrine of municipal home rule, was based on the concept of a "moral" right to local self-government.[17] Under municipal home rule, the local government is given the freedom to control its own affairs without interference from state government. In those states that have adopted municipal home rule, the state constitution gives localities the right to enact home rule charters.[18] Citizens of a locality typically have the option of adopting a home rule charter or remaining under direct state authority. Under the charter, a city or county can reserve for itself the power to control affairs of local concern. Despite this broad grant of power, however, the state in most cases still retains a measure of control through its power to pass a uniform law that would curtail the localities' power in specified areas.

Although municipal home rule swept most of the nation, Virginia was one of a handful of states that retained the traditional Dillon's Rule approach to local government. The result has been that courts in Virginia have been quick to strike down ordinances or actions of local government that are perceived to be outside the scope of powers granted by the General Assembly. Ironically, however, the Supreme Court of Virginia has been willing to allow an implied local power where such a power was necessary to fulfill an obligation mandated by the General Assembly.[19]

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12. *Id.*
13. *Id.* at p. 12-13.
14. *Id.* at p. 13.
15. *Id.*
16. *Id.*
17. *Id.*
18. *Id.*
19. "Dillon's Rule: The Case For Reform," 68 Va. L. Rev. 693, 699 (1982).

The Transportation Context

The economic burdens that were placed on Virginia as a consequence of the Civil War resulted in a fear of bond financing for public works projects by the majority of citizens in the Commonwealth.[20] Indeed, the 1902 Virginia Constitution even contained a provision banning the use of bond financing for public works. In the area of transportation financing, an alternative method of funding state transportation projects was necessary. In 1923, the General Assembly created the pay-as-you-go financing scheme by imposing a gasoline tax for the first time in the Commonwealth's history. Under the pay-as-you-go approach, transportation projects would be financed only from the revenues that had been gained through taxes. Thus, the state could only build roads to the extent that tax revenues existed.

By 1932, the depression had hit Virginia, resulting in a fiscal crunch. In a move to cut government spending, State Senator Harry F. Byrd sponsored the Secondary Roads Act of 1932 (also known as the Byrd Road Law). The Byrd Road Law did not affect Virginia's pay-as-you-go financing system; however, it did place under state control all "public roads, causeways, landings, and wharves" that had formerly been under local control.[21] The county feeder-road system, which was the largest part of the state road network in terms of mileage, was included in the roads that were taken over by the state. In addition, the Byrd Road Law created a highway trust fund that would serve as a fund raising and fund allocation mechanism within the Commonwealth.

Although the Byrd Road Law represented a huge gain to Virginia's counties in terms of savings on highway expenditures, urban leaders and officials were skeptical. To cities of the Commonwealth, the 1932 Secondary Roads Act was merely an expression of the favoritism shown to Virginia's rural regions by the Byrd organization. Although the General Assembly would assume responsibility for construction and maintenance of county roads, city officials were responsible for building and maintaining streets. One example of the disparity in aid received between counties and cities is that in 1948-49, the Byrd-controlled General Assembly appropriated over $14 million in road funds to the counties but only $1.2 million to cities. Even more infuriating to city residents was the fact that they were paying state gasoline taxes to support county roads in addition to their own local taxes. This urban/rural schism would only deepen over time. Eventually, it undermined the strength of the Byrd political machine.

Pay-as-you-go financing continued to be the only means by which transportation projects were to be financed. When the pay-as-you-go system became an issue in the 1953 gubernatorial race, Senator Byrd staked his reputation on the merits of the system. Shortfalls in revenues, however, meant that the pay-as-you-go financing scheme would not be sufficient to meet the state's transportation needs. Al-

20. This section was adapted from an unpublished Virginia Transportation Research Council report entitled "The Baliles Transportation Initiative in Virginia, 1985-1988."

21. The Byrd Road Law did not apply to independent cities in Virginia or to Henrico County or Arlington County. These jurisdictions retained local control of roads.

though a massive influx of funds from the federal government through the Federal Highway Trust Fund in the late 1950s helped to alleviate some of the deficits, it became apparent by 1965 that there would not be enough money. Moreover, the pay-as-you-go system under the Byrd Road Law was not being administered equitably. Counties continued to receive the vast majority of highway funds, and cities were removed from the fund allocation process. This distribution scheme was codified in the Highway Acts of 1964, which adopted the Report of the 1962 Virginia Highway Study Commission (the Stone Commission). Under the 1964 Act, an arterial highway network was to be constructed almost entirely in rural areas, but city streets were removed from the state highway system.

The pay-as-you-go system came under fire from those who claimed that it really did not provide an alternative to debt financing. These individuals focused on the heavy debt taken on by cities to fund services not funded by the state as proof of the failure of pay-as-you-go. They argued that the pay-as-you-go system, instead of avoiding debt financing, merely transferred the debt to cities.

Recent referenda proposing that Virginia begin bond financing of transportation projects have failed to win the support of a majority of Virginians. Consequently, Virginia continues to work within the general transportation funding framework adopted in the 1930s, which involves pay-as-you-go financing and state responsibility for nearly all of the primary and most of the secondary roads.

State and Local Government Today

Intergovernmental tensions are still quite prevalent today, and funding for transportation projects remains a fundamental cause of that tension. Nevertheless, the conflict between urban and rural governments that was a fixture of the post–World War II transportation finance debate is not quite as dramatic today. This is partly a result of the increased political clout and leverage that urban districts such as Northern Virginia have had in recent times. Population shifts toward the urban areas of the Commonwealth, which are reflected in the 1990 census returns, may accelerate these changes.

Furthermore, there have been pressures in recent years to reject Dillon's Rule and adopt municipal home rule. Critics of Dillon's Rule argue that it is an anachronism relevant only at the time when local governments were marked by corruption and inefficiency.[22] They also argue that given the realities of modern life in localities, it is unreasonable and impractical for the state to retain control over the localities in areas such as transportation.[23]

Though attempts to reverse the Dillon's Rule approach to local power have

22. *See* Wirt, Clay L. 1989. "Dillon's Rule." *Virginia Town and City*, August, p. 15. See also, "Dillon's Rule: The Case for Reform," 68 Va. L. Rev. 693 (1982).

23. *See, e.g.*, "The Need to Review Virginia's Local Government Structure," Report of the Local Government Attorneys of Virginia, Inc., 65 *Newsletter of the University of Virginia Center for Public Service* 13 (1988).

never garnered enough votes to pass in the General Assembly, there has been some expansion of local authority. Proposals for change abound.

In fact, Governor L. Douglas Wilder proposed in October of 1990 that localities be given the option of assuming greater control over their roads. While many local leaders responded positively to the suggestion, others asked for assurances that any transfer of authority would be accompanied by adequate funding.[24] This seems to represent the crux of the issue today. Both state and local leaders stand ready for a modification of the Byrd system, but there is not yet a consensus as to how funding will be affected by any transfer of authority.

THE TRANSPORTATION PLANNING PROCESS IN VIRGINIA

Transportation planning in the Commonwealth, at least in recent years, has had both an engineering component and a political component. It is the interaction of these two factors that serves to create controversy when the state decides to build a highway. In the past, the engineering component was the predominant consideration in the planning process. More and more, however, as questions of funding and political power arise, the political component has become more pervasive in the decision-making process. In an era when citizens, and their elected representatives, are increasingly aware of the far-reaching effects of alternative transportation plans, traditional transportation planning processes are being challenged. Citizens', home-owners, and interest groups now often seek a direct voice in the process.

State Mandate and Mission

The principal actor in the transportation planning process is the Virginia Department of Transportation (VDOT). VDOT is responsible for design, construction, and maintenance of highways in most counties throughout the state. In the past, VDOT's recommendations have been tantamount to approval of road projects. After the need for new road construction in one part of the state is brought to VDOT's attention or is recognized by VDOT's staff, engineers study the situation, determine the most feasible route for the proposed highway, and then make the appropriate recommendation to the Commonwealth Transportation Board. It is this political body, which is composed of 14 members, that must make the final decision on whether or not to approve construction of the new road and what route it should take.

In the past, there was very little question that VDOT's recommendation would be adopted by the Board. Board members, as political representatives with little or no expertise in the field, would regularly defer to the judgment of VDOT's engineers. The recent controversy over state Route 288 in the Richmond area, how-

24. Harris, John F. "Wilder Proposes Giving N. Va. Rule of its Roads," *The Washington Post*, October 26, 1990.

ever, demonstrates that the Board is not willing to rubberstamp VDOT's recommendations.[25]

For a number of years, a bypass has been considered and proposed for the Richmond area to connect I-95 to I-64 and I-295. In response to the need for the construction of such a corridor, VDOT was requested to study the problem and recommend the most feasible route for the highway to take. The engineering staff of VDOT determined that the best corridor for Route 288 would be one that runs in a western direction south of the James River, then moved eastward after crossing the river, eventually joining I-295 where it intersects I-64. This route, however, met with strong opposition from residents of the region who would have preferred that Route 288 take an all western course that would connect with I-64 at a point west of I-295. VDOT's proposed route would pass through residential developments as it moved in an easterly direction to I-295.

The Commonwealth Transportation Board considered all of the proposed routes for the new highway and then—in a move that surprised many—decided to reject VDOT's recommendations and adopt the all-western path for Route 288.[26] This action signaled a rise in the relative importance of the political component over the engineering component in the planning process. The debate over Route 288 became polarized as communities in the Richmond area took sides depending on how the alternative proposals would affect their areas. For the first time, the Transportation Board acknowledged these tensions and accommodated to the political pressures they generated. The growing importance of the political component in the planning process is bound to have a significant effect on future highway construction decisions.

Once the Transportation Board has reached a decision and the General Assembly has allocated funds, VDOT is placed in charge of design and construction of the new road. At this point, land use decisions in the localities become particularly important since VDOT will have to acquire the right of way, make environmental assessments, and hold public hearings prior to construction.

Obviously, the General Assembly is another key player in the transportation planning process. Though transportation funding is usually allocated using predetermined formulas, the General Assembly retains the authority to fund individual projects. Indeed, this is the one area where the political component can be discerned most easily in the planning process. The battle for vital highway funds has traditionally pitted rural legislators against those from urban areas. There is evidence that this urban-rural schism may be giving way to a more complex political interaction. For example, in 1982, legislative delegations from urban Northern Virginia and rural Southwest Virginia cooperated in temporarily blocking passage of a proposed gasoline tax increase in order to obtain, among other things, increased funding for the Washington Metropolitan Area Transit Authority. These delegations cooperated again in the 1989 General Assembly to gain passage of several

25. Burrows, Claude. 1988. "Transportation Board Selects Western 288 Route." *Richmond Times-Dispatch*, August 19, p. 1.

26. *Id.*

transportation-related initiatives. One of these was an unprecedented move by the General Assembly, which, though it usually does not get involved in specific transportation projects, directed VDOT to spend some $700 million on improvements to U.S. 58 in Southern Virginia.[27] These examples illustrate, once again, the way in which transportation planning at the macro level is increasingly a product not merely of engineering inputs but also of political accommodation and interaction.

Local Participation

While Northern Virginia legislators in the General Assembly have sought greater support for highway construction in their region, localities in Northern Virginia have been working to gain greater control over actual decision-making in the area of transportation planning. Currently, however, the center of gravity of transportation planning in the Commonwealth is in VDOT.

Nevertheless, the localities have an important role to play in the transportation planning process. Since transportation planning focuses on improved mobility throughout the Northern Virginia region, regional cooperation among the various jurisdictions in the area has become a critical aspect of the process. Moreover, planning must include the District of Columbia as well as suburban Maryland since these regions also form part of the metropolitan Washington transportation network.

The Metropolitan Washington Council of Governments (COG), which is comprised of officials from Virginia, Maryland, and the District of Columbia, is a key player in the regional planning process. Although the COG was formed to deal with issues of interjurisdictional importance in a number of different areas, its National Capital Region Transportation Planning Board (COG/TPB) deals explicitly with transportation issues and is charged with formulating a long-range transportation plan for the area.[28] Yet the COG's role in the transportation planning process has been severely limited because, as a recent consultant's report notes:

> COG's constituents have not been willing to delegate their autonomy to the interstate regional body. They prefer the flexibility and the ability to deal with the needs of their own constituents. As a result, the main function of TPB has been to assemble and analyze regional data for long range forecasts.[29]

Another actor in the transportation planning process is the Northern Virginia Planning District Commission (NVPDC). Planning district commissions were created by the Virginia General Assembly to develop long-term plans for the region.

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27. Garland, Ray L., "The Larger Legislative Servings from Pork Barrel," *Roanoke Times & World-News*, September 14, 1989.

28. Kirby, Ronald F. "A New Long-Range Plan for the Region." *The Region*, Winter 1989, p.25.

29. Schwartz, Elinor and Callow Associates, Inc. *A Solvable Problem: Transportation in Northern Virginia.* p. 93.

Transportation, however, is one area where NVPDC's role has been extremely limited. The existence of other regional organizations such as the COG, Northern Virginia Transportation Commission (NVTC), and the Potomac-Rappahannock Transportation Commission (PRTC) has limited the demand for and the funding available for a significant NVPDC transportation-planning role. In the future, the NVPDC may acquire a more active role in the planning process by acting as a clearinghouse, providing an information system for VDOT that could update land use and transportation activity and predictions.[30]

The NVTC provides a policy forum for the coordination of mass transit contributions in Northern Virginia. This organization's role, however, is restricted to mass transit. Created by the state legislature in 1964, the NVTC also has the authority to levy a 2 percent gasoline sales tax to finance public transit.[31] NVTC's role in planning, however, is limited.

Thus, there are a number of organizations that could provide an active vehicle for regional cooperation in the area of transportation planning. VDOT has attempted to tap into these regional organizations. The ongoing subregional planning process is one example of such efforts to coordinate transportation planning. Effective coordination, however, has proved elusive.

The priorities of localities are sometimes in conflict, even on a given highway.[32] Far from ameliorating these local conflicts, the patchwork collection of regional organizations has sometimes exacerbated them. Some experts have suggested that VDOT would be most effective if it were to develop a brokering role, that is, if it were to convene localities and even regional organizations to resolve disputes.[33]

LAND USE CONTROL IN VIRGINIA

Government restrictions on the use of private property, while never wholly absent from American life, were neither widespread nor systematically codified until the 1920s.

Local Mandate and Mission

In 1925, the Virginia General Assembly enacted legislation permitting local governments to plan and regulate land use. However, as late as 1976, almost three-quarters of Virginia was not governed by a comprehensive physical plan and

30. *Id.* at 98.
31. *Id.* at 97.
32. *Id.* at 98.
33. *Id.* at 101.

supporting zoning ordinance. In 1975, the General Assembly mandated that all counties, cities, and towns in Virginia create local planning commissions and develop comprehensive land use plans by 1980. The General Assembly indicated that its purpose in delegating such police power to the localities was

> to encourage local governments to improve the public health, safety, convenience and welfare of its citizens and to plan for the future development of communities to the end that transportation systems be carefully planned; that new community centers be developed with adequate highway, utility, health, educational, and recreational facilities; that the needs of agriculture, industry and business be recognized in future growth; that residential areas be provided with healthy surrounding for family life; that agricultural and forestal land be preserved; and that the growth of the community be consonant with the economical use of public funds.[34]

Comprehensive Planning

In the United States, unlike Europe, land use controls were imposed in response to specific threats to the urban environment and not from any desire to plan comprehensively for the physical future of communities. This *ad hoc* use of zoning powers has proved inadequate to the challenges facing communities in the last decades of the 20th century. In response to the state's mandate, all Virginia localities have now adopted a comprehensive plan for physical development.

A comprehensive plan actually consists of a number of interrelated plans in any or all of the following functional areas: land use, transportation, community facilities, historic preservation, and redevelopment. It must show existing uses and planned or projected uses. It usually contains maps, plats, charts, and verbal descriptions of the planned long-range general development of the locality. Statutory and case law in Virginia require that the plan be general in nature, prospective, comprehensive, and based on thorough research and analysis.[35] The Code also requires that the plan be reviewed at least once every five years to keep it up to date.[36]

VDOT and other state agencies with responsibility for public facilities are required by statute to cooperate with the localities in the development of local comprehensive plans "to the end that the plan will coordinate the interests and responsibilities of all concerned."[37] The comprehensive plan, besides fostering long-range planning by public officials, serves to allow private development interests to conform their plans to desired community ends. One of the main purposes of the plan

34. *Code of Virginia* § 15.1-427.

35. Stephen P. Robin, *Zoning and Subdivision law in Virginia: A Handbook* (Charlottesville: Institute of Government, University of Virginia), pp. 14-17.

36. *Code* § 15.1-454.

37. *Code* § 15.1-457.

is to provide private parties and courts with a clear policy statement against which to judge zoning decisions.

Among the variety of persuasive and coercive means of implementing the plan that are available to local governments, the most frequently used are the official map, subdivision ordinance, site plan review, and zoning ordinance. Persuasive means of implementing the plan include those arising from local government proprietorship of public facilities and lands and those arising from the fiscal powers of local government. The taxing policies of local governments can have a powerful effect on land use, especially when they are tailored to do so, as in the case of special taxing districts. The spending policies also affect land use and may be tailored to the comprehensive plan through the use of a capital improvements plan.

Official Map

The *Code of Virginia* enables localities to adopt an official map showing the location of existing and future public streets, waterways, and public areas. In preparing an official map, the local planning commission must consult with the Commonwealth Transportation Board as to streets under the Board's jurisdiction and must submit the map to the Board for review.[38] After receiving the recommendations of the transportation board, the planning commission may submit the map to the local governing body for adoption. Any divergence from the recommendations of the transportation board must be brought to the attention of the governing body.[39]

Before adopting the map as an official map of the locality, the governing body must hold a public hearing.[40] An adopted official map is filed with the clerk of the local court.[41] It can be modified only in accordance with the regular subdivision recording procedure or upon the approval of the governing body after a public hearing concerning the proposed changes.[42]

This procedure is designed to require some level of cooperation between local and state planners and to ensure public input into the process. It could be used as the basis of a "cross-acceptance" policy by VDOT and local planners. The map is a valuable tool for coordinating planning, but it does not have the legal effect of taking or accepting the properties marked out for public purposes.[43]

Subdivision Ordinance

Virginia requires the governing body of each county, town, and city to adopt

38. *Code* § 15.1-462.

39. *Id.*

40. *Code* § § 15.1-459, 15.1-431.

41. *Code* § 15.1-460.

42. Mead, Martha Johnson, *Virginia County Supervisors Manual*, 5th ed. Charlottesville: Center for Public Service, University of Virginia, 1988.

43. *Code* § 15.1-458.

an ordinance to ensure the orderly subdivision and development of its land.[44] Any division of a parcel of land into three or more lots, into lots of less than five acres each, or involving a new road is subject to any regulations and development standards that are in force in that jurisdiction. The purpose of subdivision control is to prevent congestion of population and to provide land development in accord with planning goals. The regulations usually establish standards to be met in the construction of public infrastructure and often require the developer to provide basic improvements before the sale of any lots.[45] Subdivision ordinances in Virginia must include "reasonable regulation" of lot sizes, drainage and flood control, water, storm and sanitary sewers, public utilities, streets, and other community facilities.

Much of the content of subdivision ordinances bears on access and transportation concerns. Such ordinances typically include regulations and development standards for minimum lot size; the coordination of streets as to location, interconnections, widths, grades, and drainage; the dedication of land for streets; street surfacing; etc. A property owner who desires to subdivide land must submit a plat of the proposed subdivision to the local planning commission. If the plat is approved by local planning authorities, it is recorded by the circuit court clerk. Recordation of a plat has the effect of transferring any platted land that is set aside for streets, alleys, easements, or other public uses to the county or municipal government.

Thus, one of the functions of county subdivision regulations is to ensure that streets built by private developers to allow access to and within newly subdivided property meet VDOT's standards for acceptance into the secondary road network.[46] Local governments have a strong interest in guaranteeing that minimum standards are met in order to avoid expensive repairs, improvements, or liability for roads that are not accepted into the state network.

Zoning Controls

The most powerful single tool that localities employ in implementing the comprehensive plan is the zoning ordinance. Though Virginia does not require zoning controls, each of the jurisdictions in Northern Virginia has adopted a zoning ordinance. The *Code of Virginia* mandates that a zoning ordinance, if enacted, must give reasonable consideration to each of the following, where applicable:

- the provision of adequate light, air, access to property, and safety from fire, flood, and other dangers
- the control of congestion in travel and transportation
- the facilitation of the creation of a convenient, attractive, and harmonious community

44. *Code* § 15.1-465.

45. John W. Dickey, *Metropolitan Transportation Planning* (Washington: Hemisphere Publishing, 1983) p. 470.

46. *Board of Supvrs. v. Ecology One., Inc.*, 219 Va. 29, 245 S.E.2d 425 (1978).

- the facilitation of the provision of public services (including transportation)
- the protection of historic areas
- the protection against overcrowding of land; undue density of population in relation to the community facilities existing and available and other dangers
- the encouragement of desirable economic development
- the protection of agricultural and forest lands.[47]

To effect these purposes, the county or municipal government may divide the locality into zones and stipulate the uses to which real property in those zones may be put. It may control the size, height, area, bulk, location, construction, alteration, maintenance, and removal of structures and the areas and dimensions of land, water, and air that may be occupied.[48] Recent amendments to the Code have permitted Northern Virginia localities to use civil as well as criminal penalties to enforce their zoning ordinances.[49] This was a major improvement since civil remedies are usually more effective than criminal ones in enforcing a locality's land use regulations.[50]

Special zoning powers that allow greater flexibility in dealing with development proposals have been granted to Northern Virginia localities by the General Assembly. Currently, each of the Northern Virginia jurisdictions is authorized to employ conditional zoning.[51] Since July 1990, high-growth jurisdictions, including those in Northern Virginia, have had the option of imposing impact fees instead of receiving proffers as they have under the old conditional zoning regulations.[52]

Site Plan Review

Unlike comprehensive planning and subdivision regulation, site plan review by county and municipal governments is optional in Virginia. In jurisdictions that require review, a developer applying for a building permit may be required by local ordinance to submit a site plan showing the proposed development or redevelopment and the existing and proposed roadways that will provide access to the site. The local planning commission may use this review to ensure compliance with regulations contained in the zoning ordinance.[53] The procedure for local review is the

47. *Code* § 15.1-489.
48. *Code* § 15.1-488.
49. *Code* § 15.1-499.1.
50. Robin, *Zoning and Subdivision Law in Virginia*, pp. 33-35.
51. *Code* § 15.1-430(q).
52. *Code* § 15.1-498.1 through 15.1-498.10, effective July 1, 1990.
53. *Code* § 15.1-491(h).

same as that for proposed subdivisions of land.[54]

At the county's discretion, a site plan may be submitted to VDOT for review. In Northern Virginia, the site plans are submitted directly to the Planning and Permits Division of the VDOT District Office. The recent adoption by VDOT of a procedural guide for site plan review has regularized VDOT's role in the process.[55] VDOT's Northern Virginia District office provides advice on the impact of a proposed development on the state highway system.

Capital Improvement Plan

A capital improvement plan (CIP), which consists of a schedule of capital improvements (including methods of financing) proposed to be constructed by the locality within a period not to exceed five years, may be prepared by any local government.[56] The CIP can be a valuable fiscal planning tool, affecting the pace and placement of growth. However, overt attempts by localities to use the CIP to restrain growth have been overturned by Virginia courts.

In *Fairfax County Board of Supervisors v. Roy G. Allman,*[57] the Virginia Supreme Court held that public facilities must follow development, and the absence of such facilities cannot be used to deny rezoning applications, which would result in increased development. Even though a CIP cannot be used to restrict growth arbitrarily, it may be used under certain conditions to guide the timing or spacing of growth in a rational manner.[58]

Regional Coordination of Land Use Planning

Though the basic police power resides at the state level, land use regulation has traditionally been delegated to localities. In Virginia, as in most other states, land use planning is a jealously guarded local prerogative, and this contributes to a general lack of coordination among localities on land use planning issues. In spite of this, regional organizations play a limited role in coordinating land use controls across political boundaries in Northern Virginia, the District of Columbia, and Maryland.

Council of Governments

The Metropolitan Washington Council of Governments (COG) has been the

54. *Code* § 15.1-475.

55. This procedural guide was proposed by B.H. Cottrell, Jr., as part of a very useful study of county-VDOT cooperation in site plan review. "Evaluation of Site Plan Review Procedures—Final Report," Virginia Transportation Research Council, 1988.

56. *Code* § 15.1-464.

57. 211 S.E.2d 48 (1975).

58. Robin, *supra* note 32, at 13.

major regional player in both transportation and land use planning. It maintains a "zone land activity" database, which allows COG and local planners to test land use alternatives. It conducts specific land use studies such as those on the land use impacts of mass transit and zoning around airports. In its role as the Metropolitan Planning Organization (MPO) for transportation planning in Northern Virginia, COG's Transportation Planning Board (COG/TPB) coordinates, reviews, and approves work programs for all proposed federally assisted technical studies, including those related to the transportation impacts of land use, and coordinates federal funding for such state activities as VDOT review of site plans for local government land use planners. In addition, COG has recently established a Joint Task Force on Growth and Transportation, which provides a forum for coordination issues.

Planning District Commission

Though it has traditionally not been involved in land use planning issues, the Northern Virginia Planning District Commission (NVPDC) recently sponsored a conference entitled "Transportation and Land Use: Striking the Balance in Northern Virginia" and a "summit" for local elected officials on growth management and land use. NVPDC also purchased a computer-aided mapping system and is seeking funding for an effort to develop a regional map of existing land use plans.

Informal Coordination

Perhaps even more important than the formal coordination of land use planning decisions is the informal exchange of views and information among local planning staffs and officials. Efforts by NVPDC, COG, and VDOT to bring local government officials to agreement on contentious issues have been successful in most instances. There is still, however, a simmering dispute over land use controls between the more developed counties and those less developed. Less developed counties claim that the land use policies of the more developed counties discriminate against residential development. Since most residential development requires a greater expenditure in public services than it creates in tax revenues, it is economically beneficial for localities to attract commercial development while minimizing additional residential development.[59] Despite some regional discussion of land use and growth control issues, there is currently no effective regional forum for the resolution of tensions that increasingly arise from the highly decentralized process of land use planning. Even if the process of informal coordination were working flawlessly, it would not address the absence of responsibility focused at the regional level: there are simply too many regional actors, and not one of them is responsible for the coordination.

59. For a very useful discussion of this phenomenon, with reference to the problem in Northern Virginia, see Andy Taylor, "Beggar Thy Neighbor," *Virginia Business*, April 1989, pp. 29-41.

State Involvement

Virginia's traditional deference to local jurisdictions in land use control is no longer absolute. With the passage of the Chesapeake Bay Preservation Act in 1988, the General Assembly effectively opened the door for state involvement in land use planning decisions. The Chesapeake Bay Local Assistance Board has promulgated regulations that specifically require local governments to modify their comprehensive plans, subdivision ordinances, zoning ordinances, and other land use regulations to meet certain guidelines set by the state.[60] In other states, state controls on local land use decisions for the purpose of protecting the environment have preceded a more general state involvement in land use planning.[61] In Florida, for instance, the state has become involved in land use planning for growth management, even passing the equivalent of a statewide "adequate public facilities ordinance." Though New Jersey's role in land use planning and development control has grown more gradually than Florida's, New Jersey now wields significant control over its localities' land use decisions.[62] In Hawaii, comprehensive planning is performed by a state agency.[63]

Whether Virginia's foray into statewide land use planning with the Chesapeake Bay Act presages a broader state role in land use control remains to be seen. Any coordination of land use and transportation planning that draws state (including VDOT) planners into land use decisions will have just such an effect. To the extent that the state does involve itself in land use planning, it should be aware of the experience of other states, which seems to show that state regulation of land use works well only when accompanied by substantial state funding for the additional planning and coordination activities and for the public improvements necessary to meet state goals.

Resort to the Courts

Challenges to land use regulation have been common in the nation's courts since the earliest days of municipal planning efforts. The nature of governmental power in this area was defined by the United States Supreme Court in 1926 in a case involving the Village of Euclid, Ohio, in which the Court held that the purpose

60. See James D. Campbell, "Local Government's Role in the Chesapeake Bay Preservation Act," 24 *Virginia Town & City* 11, for an argument that "the state is asserting itself directly into land use decisions and control which were heretofore delegated to the local governments."

61. See F. Bosselman and D. Callies, *The Quiet Revolution in Land Use Controls* (1972); Mandelker, *Environmental and Land Controls Legislation* (1976); Healy & Rosenberg, *Land Use and the States* (1979); and I. Hand & B. McDowell, eds., *The Practice of State and Regional Planning* (1986).

62. Jerome G. Rose, "Creeping Incrementalism and Cumulative Synergism: New Jersey's Approach to Statewide and Regional Planning and Control of Development," 34 J. *Urban & Contemp. Law* 133.

63. *Hawaii Rev. Stat.* ch. 205 (176 Pepl. Vol.)

of zoning is to prevent incompatible uses from co-existing.[64] This "Euclidian" conception of zoning power focuses on the present use of land and not the control or phasing of future growth. Virginia's Supreme Court adopted this conception of zoning in its 1959 *Carper* decision:

> The purpose of zoning is in general two-fold: to preserve the existing character of an area by excluding prejudicial uses, and to provide for the development of the several areas in a manner consistent with the uses for which they are suited. The regulations should be related to the character of the district which they affect; and should be designed to serve the welfare of those who own and occupy land in those districts.[65]

On the basis of this conception of the proper purposes of the zoning power, the *Carper* court struck down an attempt by Fairfax County to focus new development in the eastern third of the County by zoning the western two-thirds of the County for large-lot development.

Fairfax County, which has been the major testing ground for growth control efforts over the years, was the scene of several court battles in the early 1970s. Many of Fairfax County's attempts to limit and channel growth have fallen to judicial challenge on the basis of a strict application of Dillon's Rule. When the Board of Supervisors amended the zoning ordinance to prevent a change in the use of some properties for which special use permits had already been issued, the Virginia Supreme Court struck down the action on the theory that the right to develop the land had become "vested."[66] When Fairfax County later tried to stop a development by downzoning a property that had recently been zoned for a high-density use, the Court struck it down—establishing the rule that a Virginia locality must show that there has been some mistake or change in circumstances in order to adopt a "piecemeal" downzoning on its own motion.[67]

In the mid-1970s in yet another attempt to slow growth, Fairfax County denied a number of requests for development. The Board of Supervisor's rationale was that it was entitled under the *Code of Virginia* to determine when public facilities will become available and that it had an obligation to "protect against undue density of population in relation to the community facilities existing or available."[68] The Virginia Supreme Court rejected this argument, however, announcing that public facilities should follow rather than precede development.[69]

In desperation, Fairfax County began a major replanning program in 1973.

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64. *Village of Euclid, et al. v. Ambler Realty Co.*, 272 U.S. 365, 71 L.Ed. 303, 47 S.Ct. 114 (1926).

65. *Board of County Supervisors v. Carper*, 200 Va. 653, 107 S.E.2d 390 (1959).

66. *Board of Supervisors v. Cities Serv. Oil Co.*, 213 Va. 359, 193 S.E.2d 1 (1972) and *Board of Supervisors v. Medical Structures, Inc.*, 213 Va. 355, 192 S.E.2d 799 (1972).

67. *Board of Supervisors v. Snell Corp.*, 214 Va. 655, 202 S.E.2d 889 (1974).

68. *Code* § 15.1-427.

69. *Board of Supervisors v. Thomas R. Williams*, 216 Va. 49, 216 S.E.2d 33 (1975). See also, *Board of Supervisors v. Roy G. Allman*, 215 Va. 434, 211 S.E.2d 48 (1975).

While the new plans where being developed, an interim zoning ordinance was enacted that suspended the submission or approval of new site plans or subdivision plats for eighteen month in order to avoid a rush to beat the new ordinance. This too, was struck down by the courts on the basis that the ordinance exceeded the County's authority under a strict application of Dillon's Rule.[70]

A 1981 study of this line of cases concluded that the Virginia Supreme Court had employed a single criterion of validity in judging zoning disputes:

> The Virginia Supreme Court has decided these zoning cases as if only one of the eight purposes of zoning set out in the enabling act is valid—"to encourage economic activities."[71]

However, this same report noted that three zoning cases handed down in 1980 and 1981 might signal a doctrinal shift. The judicial approval in these cases of local decisions not to allow zoning changes for more intensive uses "appeared to interrupt the steady doctrinal evolution that had occurred from 1955 to 1978."[72]

Though Virginia courts are now handing down more decisions favorable to local land-use planning and growth control efforts, the weight of judicial precedent still leans in favor of private property interests. Circuit courts in Virginia seem to be divided in their application of Dillon's rule in zoning cases: in 1985, the Fairfax County Circuit Court upheld the downzoning of 60 acres in the Occoquan watershed;[73] but in 1989, the Virginia Beach Circuit Court struck down a similar attempt at downzoning.[74]

In the 1980s, a new dimension has been added to the court battles over the application of the zoning statute in Virginia. When localities began claiming the right to require developers to build roads or other public improvements in exchange for approval of rezoning requests, many of these ended up in the courts as well—with mixed results. The planning officials based their authority on state laws permitting "conditional zoning." This flexible zoning authority allows local officials to approve rezoning requests on an *ad hoc* basis, subject to a "proffer" by the developer to take certain actions for the protection of the community.[75] Virginia Supreme Court decisions upholding local officials in the exercise of this power stress the "vol-

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70. *Board of Supervisors v. M.S. Horne*, 216 Va. 113, 215 S.E.2d 453 (1975).

71. Lillian R. BeVier and Denis J. Brion, *Judicial Review of Local Land Use Decisions in Virginia* (Charlottesville: University of Virginia Institute of Government, 1981), p. 105. Other purposes of the zoning statute are listed on p. 13.

72. *Id.*, p. 100. The three zoning cases are *Board of Supervisors v. Lerner*, 221 Va. 90, 267 S.E.2d 100 (1980), *Board of Supervisors v. Jackson*, 269 S.E.2d 381 (1980), *Board of Supervisors v. International Funeral Servs.*, Inc., 275 S.E.2d 586 (1981).

73. *Aldre Properties, Inc. v. Board of Supervisors*, Fairfax County Circuit Court, in Chancery Nos. 78463-A, 78476, 78450, 78425.

74. *See* "Beggar Thy Neighbor," supra n. 22 at p. 37.

75. *Code* § 15.1-491.1.

untary" nature of the proffered improvement.[76] Decisions by the same Court striking down local attempts to exact such improvements invariably rely on Dillon's Rule.[77]

In a recent study, "Local Plans and Land-Use Controls in Relation to Highways and Their Use," David Heeter suggested that the most serious threat to local planning efforts is not from the courts, but from the legislature's reluctance to clarify the authority of local governments to use novel zoning techniques to protect highways from the impact of development.[78] This probably accurately reflects the situation in Virginia. As the courts begin to demonstrate an increased openness to local planning needs, the need for a clear legislative pronouncement on the scope of local powers in this area becomes all the more urgent.

Assessing the Effectiveness of Land Use Planning: Tyson's Corner

There have been very few systematic attempts to assess the impact on transportation of land use controls. In fact, the impact on transportation of land use decisions often does not become an issue until mobility problems are so great that land use controls can do little to remedy the situation. It is clear that the fiscal constraints with which local decision makers in urban areas (or areas that are quickly becoming urban) are faced often overwhelm other interests (including transportation concerns) that might play a role in land use decisions.

Just 30 years ago, Tyson's Corner was a sleepy intersection in Fairfax County with a single gas station and a small grocery store. Today it boasts 14 million square feet of office space to which almost 80,000 people commute every day. Available office space is expected to double within a decade. This phenomenal growth was caused in part by a good transportation network. Located at the intersection of what were two free-flowing arterials (Routes 7 and 123), the region was considered "extraordinarily accessible" when it was developed.[79] Since that time, other major thoroughfares have been added, including Interstate 66, Interstate 495 (the "beltway"), and the Dulles access road.

Ironically, Tyson's Corner now has a national reputation as a transportation nightmare. Despite the best efforts of Fairfax County planners, the explosive growth quickly outstripped the transportation facilities, which are only now being improved. Land use controls were ineffective to prevent the sort of unplanned development pattern that one critic has described as "a box and a parking lot."[80] Many attempts to slow growth fell as a result of judicial challenges. Growth was

76. *Board of Supervisors of Prince William County v. Sie-Gray Developers, Inc.* et al. 334 S.E.2d 542 (1985).

77. *Blair W. Cupp v. Board of Supervisors of Fairfax County* 318 S.E.2d 407 (1984).

78. David G. Heeter, "Local Plans and Land-Use Controls in Relations to Highways and Their Use," 2 *Selected Studies in Highway Law* 936-N139 (Transportation Research Board, 1988).

79. "Is it the Tyson's of Tomorrow?" *The Fairfax Journal* (February 23, 1989).

80. *Id.*

not guided by any comprehensive plan, and new development preceded the roads that would be needed to serve it. Amenities such as restaurants, dry cleaners, day-care centers, and banks, which can mitigate traffic problems if developed within walking distance of major office projects, were only haphazardly integrated with the major developments at Tyson's Corner. A giant two-phase shopping mall at Tyson's Corner remained largely inaccessible except by private automobile until business owners in the area formed a transportation management association (TMA) to provide shuttle service to office workers in the area. Despite private and public efforts to mitigate the transportation problems, the levels of service on area roads are decreasing, and much remains to be done.[81]

Since congestion has made the Tyson's area a less attractive business location, growth has begun to shift west to Reston and even to the Dulles corridor. However, a proposed update to Fairfax County's comprehensive plan calls for an even greater concentration of development in the Tyson's Corner area, thereby focusing the highest density growth in that area and making it the largest "downtown" in Virginia. This "urban village" concept has been promoted by urban development theoreticians as an effective way to control urban sprawl.

It remains to be seen whether the burgeoning suburban city at Tyson's Corner will prove to be manageable in transportation terms. As its density reaches the threshold for efficient mass transit, new opportunities will arise for both internal and external linkages. Even in an area where, by most accounts, there has been an utter failure to link transportation and land use policies in planning for the future, new opportunities for effective coordination exist.

TOOLS FOR COORDINATION

The preceding brief review of the processes by which transportation planning and land use control are accomplished in Virginia should begin to make the problems of coordination apparent. Both processes are highly complex; they involve numerous actors at all levels of government and in the private sector who have disparate and sometimes competing objectives.

Of course, it makes sense to begin consideration of how the land use and transportation planning processes may best be coordinated by examining how they are coordinated at present. That task turns out to be more difficult than might first appear because there is no consensus as to how existing mechanisms operate.

The traditional school of thought emphasizes the primacy of future land use projections as the basis for coordination. It would seek to fit current practice in Northern Virginia into a straightforward theoretical model that describes coordina-

81. Christopher Conte, "The Explosive Growth of Suburbia Leads to Bumper-to-Bumper Blues," *Wall Street Journal* (April 16, 1985); *see also*, Marcia McAllister, "Urban Hub at Tysons is Backed," *Fairfax Journal* (December 11, 1989).

tion of the two planning systems as a natural byproduct of their operation. This might be called the classic planning model (see Figure 1).

The Classic Planning Model

Under that model, the long-range transportation systems plan uses established future land use characteristics as its driving force.[82] Next, land uses anticipated or planned for a future year (usually by the local jurisdiction) are evaluated in terms of their future trip-making characteristics by applying indicators found through personal trip-making surveys. The third step determines what transportation system improvements have already been identified for that same year. These system improvements are typically drawn from earlier transportation system plans. Additionally, improvements, which might be needed based upon the future trip-making characteristics identified above, are determined.

Following the completion of these activities, the future demand for transportation facilities (as indicated by the future land uses) is distributed geographically throughout the area being studied. This step involves breaking down each trip into distinct origins and destinations and then matching the ends of each trip to geographically unique areas. This is usually accomplished through the use of a "gravity model" wherein trips are matched on the basis of size and proximity.

Once this geographic distribution of trips has been accomplished, a determination of the potential future mode of travel is made. This step basically separates travel by automobile from travel by transit.

At this point, the future travel by automobile is actually placed on the future highway system; and classically, the same activity is performed for transit trips. The various transportation subsystems are then examined; and, those portions not performing satisfactorily are examined further, thereby leading to possible changes in future land use (demand) or future facilities (supply).

Supply and demand are eventually balanced, and the product becomes the long-range transportation systems plan. In many places, however, technological or financial constraints exist such that the plan concerns only one or two modes, or subsystems.

According to the classic model, this balanced long-range transportation systems plan feeds directly into an implementation process that translates the plan into reality (see Figure 2). Several activities are tied together with the product of one step becoming the beginning of another.

However, this classic model is not universally accepted, nor does it adequately represent the complex reality of the process in Northern Virginia. Descriptively,

82. The following description of the classical model of planning process in Virginia was developed by the project advisory committee.

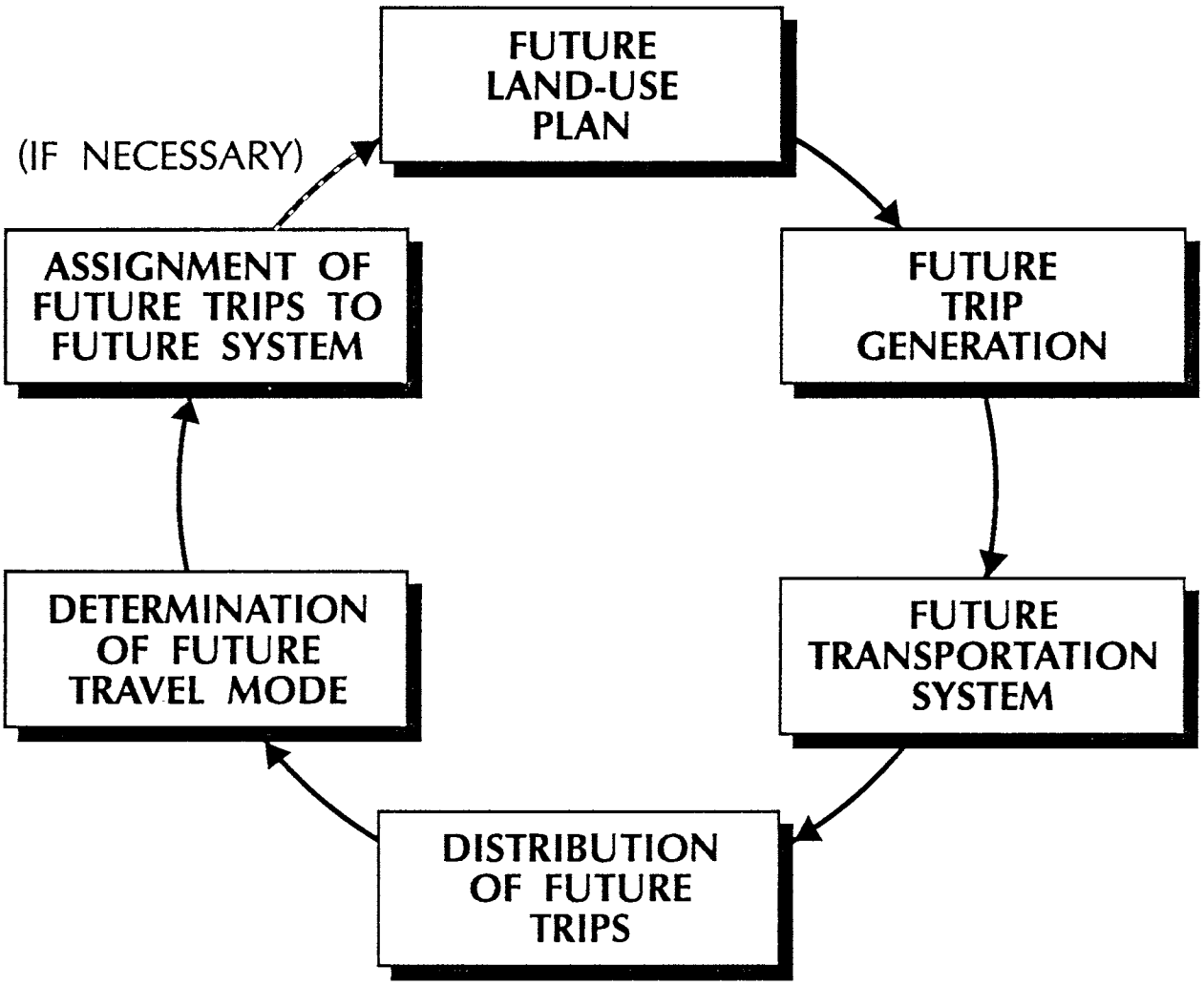

Figure 1. Traditional transportation systems demand modeling process.

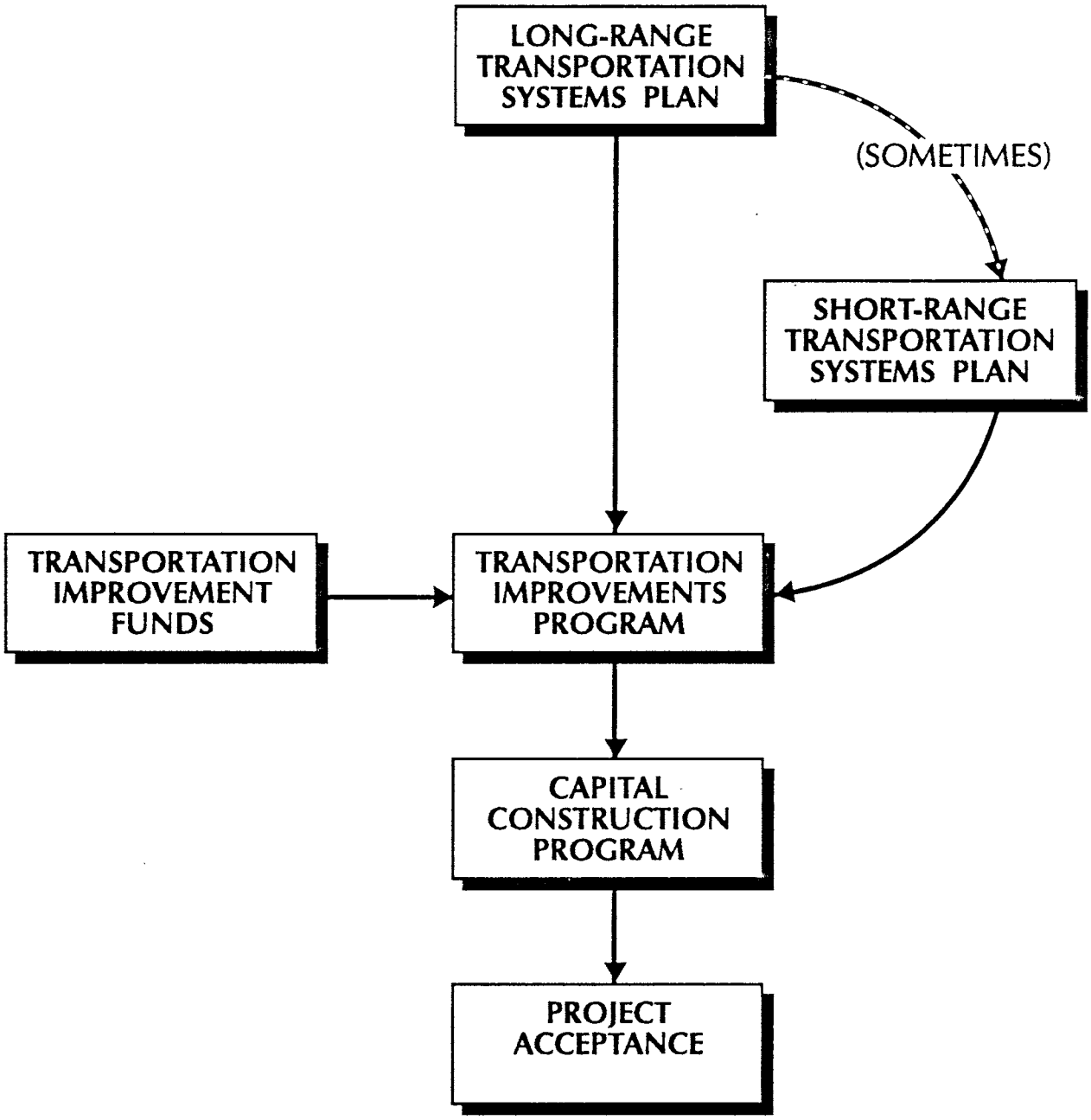

Figure 2. Traditional transportation systems implementation process.

it does not do justice to the complexity of attempts, such as that in Fairfax County, to simultaneously feed land use and transportation alternatives into its Comprehensive Plan update. Normatively, it may not even be a desirable model. The claim that it accomplishes coordination by bringing supply and demand into "balance" is a dubious one in light of Northern Virginia's experience. Financial, environmental, and other constraints limit the amount of transportation "supply" that can be accomplished. Political and legal constraints limit the ability of local officials to make drastic changes in land use that would significantly reduce demand. This mismatch of supply and demand cannot readily be explained or remedied in terms of the classic model.

One alternative model is the flip-side of the classic model. It emphasizes the primacy of transportation planning in the process of coordination. The future transportation system leads the overall planning process, and land use options are evaluated in light of a proposed future transportation system.[83]

Yet another alternative is that alluded to above in reference to Fairfax County—that of a simultaneous input of land use and transportation alternatives. Whether such a "third way" is a viable option or whether, instead, one or the other discipline inevitably leads the process is the subject of some dispute. What is clear is that the supply and demand factors are truly dynamic. They are not susceptible of easy quantification. Each of the models described here has advantages and disadvantages that tend to appear based on factors tangential to the technical planning process itself (e.g., the local political environment, land-use regulations, availability of capital construction funds, etc.)

In light of this ongoing debate over which model best describes or is capable of improving the process of coordinating land use and transportation, the authors offer an alternative conception of coordination. Rather than trying to understand and to implement coordination through the formal processes represented by the models described above, a flexible approach should be employed. Since none of the formal models fully represent the broad range of efforts at coordination that now exist or could be implemented, the models themselves may serve to inhibit our conception of the scope of activity that should be considered under the rubric of coordination.

The discussion that follows argues that coordination can best be advanced by the flexible employment of a number of tools. Some of these tools are described below. Some are presently in use in the Commonwealth, others are not. What is important about the tools described below is that each can contribute to the overall process of coordination by serving to link one or a few transportation decisions to land use decisions. The tools do not represent a formal system or a model for coordination. Instead, they are offered as an alternative to the formal approach.

The flexible approach, which relies on developing as many individual linkages between land use and transportation as possible, is not as easy to reduce to a diagram as the formal models are. It suggests that the relationship between differ-

83. This approach has recently been applied in Orlando, Hartford, and Raleigh-Durham.

ent elements in the process is more complex, interactive, and messier than the formal models suggest. This alternative approach is not totally fragmentary however. It conceives of links formed not on the basis of formal authority but on the basis of informal exchanges in money and information. It relies on these exchanges of money and information to accomplish coordination among formally independent decision-makers.

In some instances, the long-range recommendations are further refined through a short-range plan, which concentrates typically on a 5- to 10-year timeframe. Included within this category of documents are implementation plans, traffic impact analyses, phasing plans, etc. In other cases, the recommendations from the long-range plan are directly matched to specific sources of funding.

Transportation improvement funds can be public in nature, coming from governmental agencies such as VDOT or the Federal government, or they can come from private individuals through mechanisms such as proffers. This phase of the process can take as long as all other steps combined, particularly in times of economic recession. However, once funding is found for the specific transportation improvement, the process continues into the design and construction phase, where all project-related details are worked out. It is during this phase that actual engineering plans are developed, additional right-of-way needs are secured, and actual construction is complete (if appropriate). The final step in the process involves acceptance of the improvement by the appropriate governmental jurisdiction. This acceptance certifies that the improvement meets all appropriate standards and is safe for use by the public.

Alternative Conceptions

In an article reviewing Virginia's transportation choices for the 1990s, Jeremy Plant distinguishes three possible approaches to the management of transportation systems: hierarchical, jurisdictional, and coordinative (see Figure 3).[84]

A hierarchical approach is the simplest form of management. Decisions are easily coordinated because they are concentrated in a central authority. A jurisdictional approach is also simple in a way. It vests decision-making authority in local authorities who can coordinate local decisions, but have difficulty influencing or planning for decisions in adjacent jurisdictions. The coordinative approach is more complex. The decision-making authority is more dispersed: local officials and central authorities share decision-making responsibility. However, some medium of exchange must be employed to allocate authority and responsibility. Either money or information can serve as the medium by which such an allocation is accomplished.

Plant argues that Virginia's current system is hierarchical: policy-making is clearly separated from the implementation of policy, and various functional areas

84. Jeremy F. Plant, "Transportation Choices for Virginia" in *Virginia Alternatives for the 1990s* (Fairfax: George Mason Univ. Press, 1988).

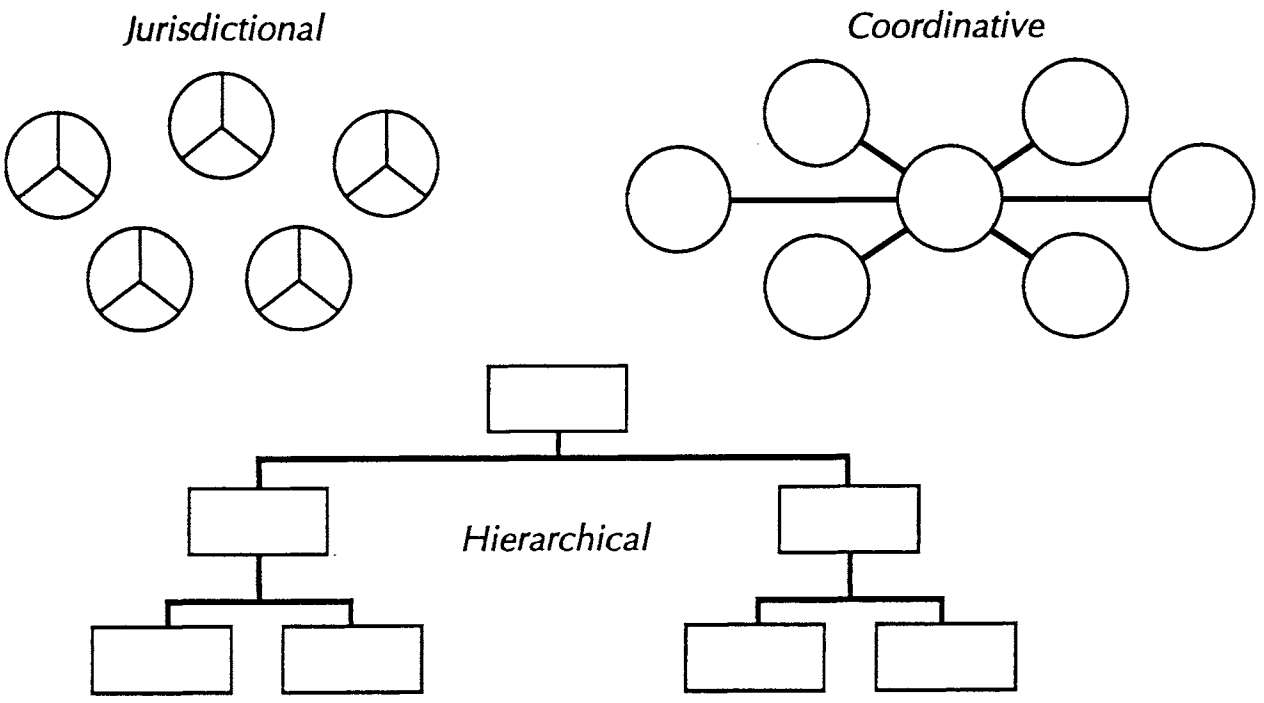

Figure 3. Management models.

are compartmentalized. Even though it could be argued that policy formation and implementation are linked in the transportation planning process, there is still a horizontal separation of the various planning functions in Virginia (e.g., urban highway planning is segregated from transit and rail planning). Like any hierarchy, Virginia's current Department of Transportation places a high premium on routinization of functions and management control. Governor Baliles' Commission on Transportation in the 21st Century supported a sort of fiscal coordination of transportation decision-making:

> In order to maximize and coordinate the investment, management, and distribution of new revenues for transportation needs, it may be preferable to concentrate them in a single entity that would have the authority to finance the construction of all modes of transportation.[85]

This fiscal mechanism is a highly centralized and hierarchical one, however, unlike the coordinative fiscal mechanisms discussed below.

Estimates of the effectiveness of such recent efforts at coordination vary widely. Although some commentators focus on the organizational and fiscal changes that now link the various modes of transportation planning, others believe the changes are cosmetic and that highway planning still eclipses multi-model planning in Virginia. Whatever the estimates of the progress of and prospects for link-

85. Financial Options Subcommittee of the Governor's Commission, report dated July 28, 1986, p. 20.

ing the various modes of transportation planning through fiscal and organizational coordination, it is clear that linking the transportation planning process with the land use control process in Virginia will be even more difficult.

Land use control is now managed jurisdictionally for the most part. Each locality makes land-use decisions on the basis of local criteria. This has the advantage of facilitating coordination with other local decisions. However, since most transportation decisions are not made at the local level, coordination of land use and transportation is difficult.

The preceding discussion makes it clear that an effective linkage cannot be accomplished within either the jurisdictional or hierarchical models. Since land-use control is largely accomplished on a jurisdictional basis and transportation planning on a hierarchical basis (with increasing elements of the coordinative approach), the process of linkage must be capable of encompassing both local and central decision-makers. This can best be accomplished by employing a coordinative management strategy.

A coordinative approach to linking land-use control and transportation requires some medium for linking actors. The medium for linking actors in a hierarchical model is authority—authority emanates from a central decision-maker to whom the other actors respond. The coordinative approach, which rejects this authority-based structure, can replace it with other mediums such as money, or information. Decisions can be coordinated through the pooling and dispersing of dollars or of information. In order to develop this idea further, some fiscal and some organizational (based on information flow) tools for coordination are discussed below.

Fiscal Tools

Many changes in fiscal policy have the potential to drastically affect the balance between growth management and mobility in a community. A differential rate of property taxation for commercial and residential property might radically alter the patterns of development in Virginia. Likewise, a development excise tax could change the relationship between land use and transportation.[86] Among the myriad possibilities for effecting the coordination of land use and transportation planning through fiscal tools, a few stand out.

Proffers

One of the most direct ways in which money is used as a medium for coordinating decisions between local land use planners, private developers, and state transportation planners is through the conditional zoning process. Conditional zon-

86. *See*, Strauss & Leitner, "Financing Public Facilities With Development Excise Taxes: An Alternative to Exactions and Impact Fees," 11 *Zoning and Planning Law Report* 1 (1988).

ing is an adaptation of traditional zoning that allows local governments to make approval of rezoning contingent on the receipt of "proffers" from the party seeking the rezoning. The proffers can take the form of off-site improvements, such as roads, schools, or sewers, or they can be cash payments. Though this type of zoning is practiced on the basis of traditional zoning powers in some states, Virginia's strict adherence to Dillon's Rule precludes localities from employing it in the absence of specific legislative authority.

In 1973, the General Assembly added § 15.1-491 to the *Code of Virginia*; it gave broad conditional zoning power to Fairfax County. Later acts of the legislature extended the powers to Arlington, Loudoun, Prince William counties, cities and towns within these counties, and to counties east of Chesapeake Bay. Four years later, when other localities began to seek similar powers, the General Assembly added Sections 15.1-491.1 through 15.1-491.6 to the Code, allowing limited use of conditional zoning statewide. The statewide conditional zoning differed from the broader power granted to Northern Virginia and the Eastern Shore in some important respects. It barred cash contributions and proffers for off-site road improvements.

During its 1989 session, the General Assembly created an intermediate tier of conditional zoning powers. It applied to those cities and counties that do not have the "old style" conditional zoning authority but that have experienced a population growth of 10 percent or more since the 1980 census. It also applied to certain adjacent jurisdictions. This legislation allowed for cash contributions and off-site road improvements, while requiring strict conformity with the local comprehensive plan and capital improvement plan.

This "proffer" system has not only served to coordinate land use and transportation decisions by linking development to transportation construction but has also provided a significant fiscal benefit to local governments in Virginia. In Fairfax County alone, proffers brought in over $100 million in just 5 years, which compares favorably with the $130 million raised through a bond referendum that will take 40 years to pay off.[87] It must be noted, however, that the money from proffers went largely to on-site improvements and is therefore not a substitute for general transportation funding methods.

A 1988 Joint Subcommittee of the General Assembly studying off-site road improvements found that the proffer system has at least three significant advantages as a tool for funding and coordination:

- flexibility in resolving site-specific problems that may not be addressed easily under general "formula" approaches to developer contributions
- significant savings in time, as in direct land dedications or developer construction of facilities rather than public acquisition or construction
- significant reductions in litigation over land use and development.

87. C. Kenneth Orski, "Traffic and Transit Futures" in Wayne Attoe, ed., *Transit, Land Use, and Urban Form* (Austin, Texas: Center for the Study of American Architecture, 1988) at p. 42.

Since "proffers" can only be sought for facilities that are required by the rezoning, the process requires some quantification of and public/private dialogue concerning the transportation impact of new development. In this way, not only can land use and transportation decisions be coordinated in an individual project, but an overall balance between development and mobility can be informally pursued.

Although developers have sometimes seen the system as an organized system of extortion, they have chosen to work with the localities rather than to seek changes at the state level.

Impact Fees

Another fiscal tool for the coordination of transportation and land use decisions was recently added to the arsenal of local governments in Northern Virginia—the impact fee. After a very contentious debate, the General Assembly passed legislation on the last day of the 1989 session authorizing Northern Virginia cities, counties, and towns to impose a fee on new developments calculated to cover the cost of off-site road improvements necessitated by the development. The bill became effective on July 1, 1990. Localities in Northern Virginia can now choose to impose impact fees instead of receiving proffers on new development projects.

Impact fees are assessed on the basis of the projected impact of a new development on the existing transportation system. A locality wishing to impose such fees must first hold public hearings, develop a capital improvements plan that contains all projects to be funded, and divide the jurisdiction into districts for the purpose of administering the fee system. Then, sophisticated computer models must be developed to forecast the traffic impact of new developments within each district. Only the actual impact of a new development is chargeable to it, and the funds collected must be used for the direct benefit of the property on which the fee is assessed.[88]

Like conditional zoning, this method of funding off-site road improvements has the advantage of creating a specific link between land-use decisions and transportation decisions as well as between public and private decision-makers. In fact, since the actual transportation impact must be gauged with some precision, it arguably establishes a closer link. Many studies have pointed to benefits of impact fees over proffers, including greater rationality and certainty.[89] One significant advantage is that impact fees can be imposed even where no zoning change is required and, therefore, a proffer is not likely.

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88. This so called "rational nexus" test has evolved in the courts as a check on governmental discretion in the administration of impact fees.The limits of state authority are articulated by the U.S. Supreme Court in its decision in *Nollan v. California Coastal Commission*, 107 S. Ct. 3141(1989).

89. *See, e.g.*, Robert Cervaro, "Paying for Off-Site Road Improvements Through Fees, Assessments, and Negotiations: Lessons of California" (Jan/Feb 88) *Public Administration Review* 534, and Ernst & Grasewicz, "Paying the Piper: Using Development Impact Fees for Infrastructure Finance" in Bohland, ed. *Planning in Virginia* (Blacksburg, Virginia: Virginia Polytechnic Institute) at p. 6.

However, impact fees also have severe limitations.[90] They can be assessed only for impacts within the districts and not for the significant cumulative impacts that a development may cause outside its immediate vicinity. To avoid costly litigation, most localities that impose impact fees have had to discount their assessment of the actual impact of a new development (in some places, such as Montgomery County, Maryland, the assessments are discounted by as much as 50 percent).[91] In fact, some planners believe that impact fees would not generate as much revenue as Virginia's current proffer system has.[92] Beyond the uncertainty over the effect on revenues, looms the problem of the planning requirements inherent in the Virginia law. In order to implement an impact fee system, a locality would need to collect and analyze a volume of data which exceeds that required by any planning model currently in use. The requirements of the Virginia law, while undoubtedly rational, may in fact be utopian. In light of this, it seems unlikely that impact fee ordinances will be widely adopted in Northern Virginia.

Transfer of Development Rights

Yet another fiscal tool that would allow an informal linkage of land use and transportation decisions is the transfer of development rights (TDR).[93] Used in conjunction with zoning powers, this tool can be very effective in linking development to the availability of adequate transportation facilities without inviting lawsuits. The concept of transferable development rights rests on the idea that property ownership is not a single monolithic right, but instead a bundle of rights, which can be separated from each other. Virginia law has long recognized such a principle with regard to such component rights as mineral rights and mortgage liens.

In some other states (notably Illinois and Maryland), development rights (DRs) can be alienated from other ownership rights and bought and sold independently. The idea is that part of the value of land derives from its potential for development. Under this theory, each piece of land has an inherent number of DRs irrespective of how it is zoned. Land use controls may diminish the value of the land by restricting the owner's right to develop it. If, however, development rights are transferrable, then the owner can sell the development rights he cannot use for use on another piece of property, where more intense development is permitted. The advantage of this concept is that it allows government planners to take actions that have a significant impact on the value of property without creating "windfalls" for some property owners and "wipeouts" for others. When such actions (e.g., downzoning) are taken, owners of property on which development is restricted may sell their excess DR's to owners of property open for more intense development.

TDRs have been used quite successfully in Montgomery County, Maryland,

90. *See* "Impact Fees May be Ineffective in Promoting Efficient Land Use," Lincoln Institute of Land Policy *Landlines*, December 1989, p. 5

91. *Zoning News* (March 1989), The American Planning Association, p. 2.

92. "Fairfax Transit Planner Prefers Proffers Over Fees," *The Fairfax Journal*, January 29, 1990.

93. *See*, Costonix, *Development Rights Transfer: An Exploratory Essay*, 83 Yale L. J. 75 (1973); and Marriam, *Making TRD Work*, 56 N.C.L. Rev. 77 (1978).

where areas that are zoned for agricultural purposes are limited to one house per 25 acres, but farm owners can sell rights to develop five additional structures to landowners in areas where higher densities are permitted. In Montgomery County, courts have even upheld a downzoning where landowners could recoup their losses by selling their DRs.[94]

TDR's allow competing land use and transportation goals to be efficiently adjusted through decentralized market transactions rather than relying on central regulatory mechanisms.

Special Tax Districts

A special tax district is usually organized to provide one or more services. Beginning with the toll road and canal corporations of the 1800s, such limited-purpose governmental districts have been used to perform functions that general purpose governments could not or would not provide.[95] In 1987, the Virginia General Assembly passed three bills authorizing the creation of special tax districts to fund transportation projects. Two of the bills explicitly established the Route 28 and Route 234 Tax Districts in Northern Virginia. The third bill authorized Fairfax, Loudoun, and Prince William Counties to form additional districts. Unlike similar entities in other states, Virginia's special tax districts are tightly controlled by the county governments in whose territory they lie.

Special tax districts in Virginia are normally governed by a commission composed of elected members of the surrounding counties' boards of supervisors. An advisory board composed of landowners from the district advises and reports to the commission. A special tax district can come into being by resolution of the boards of supervisors of the counties pursuant to a request by the owners of at least 51 percent of the assessed value of the real property zoned for commercial and residential purposes within the district. Special tax districts are empowered to impose special assessments above the regular property tax on all business and commercial property within the district. The local governments that create the district may advance or match the funds collected through the special tax for the improvement of highways within the district. However, the district may not actually construct or improve a road without the approval of the Commonwealth Transportation Board and the counties involved. Although the three districts that have been formed have by all accounts worked fairly well, no others have been created.

A measure that has recently garnered support in the General Assembly will make participation in a special tax district the threshold for the "vesting" of the property rights of landowners. Once a property owner's rights are "vested," the government cannot diminish those rights by putting further restrictions on the use of the property. If this measure becomes law, it will make such districts much less at-

94. A very helpful review of the use of special districts both in Virginia and in other states is contained in Porter, Lin, and Peiser, *Special Districts: A Useful Technique for Financing Infrastructure* (Washington: Urban Land Institute, 1987).

95. *Dufour v. Montgomery County Council*, noted in *Land Use L. & Zoning Dig.* 19 (June 1983).

tractive to the counties that must form them and to those individuals who serve as commissioners since property within the tax district would effectively be exempt from growth-control measures such as "downzoning" by the counties.

Transportation Corridors

A tool that is related to but relatively more potent than the special tax district is the transportation corridor. A legislatively defined geographic area focusing on a planned or existing transportation facility may be constituted into a transportation corridor.[96] A well-mapped corridor would include not only all necessary rights of way, but also the entire area impacted by the transportation facility at its full capacity. The land surrounding the facility that has undergone or is likely to undergo development as a result of increased mobility should be included. The formation by the General Assembly of such a corridor could facilitate both the planning and funding of new transportation projects within the corridor. The coordination of planning efforts between different levels of government (vertical coordination) and between different functional areas (horizontal coordination) could be achieved by focusing planning efforts on discrete and integral geographic areas that naturally serve as a nexus for Virginia's commercial and high-density residential development: "Within this regional framework for multi-discipline planning, local, regional and state governments can capitalize upon the well documented link between the timing and location of transportation systems and land use."[97]

Beyond this planning benefit, however, these corridors create fiscal benefits in several ways. First, they can reduce the cost of acquiring rights of way. Courts have traditionally required public bodies that exercise the power of eminent domain to show that a particular condemnation is necessary for the accomplishment of some public purpose. Land cannot be taken for a speculative purpose. One effect of this requirement has been that rights of way cannot be purchased until quite late in the process of planning a new transportation facility. Ironically, because the announcement of a new transportation facility causes the value of adjacent land to appreciate rapidly, the cost of acquiring land for the project is artificially increased by the project itself. This problem can be averted. If the General Assembly legislation creating a corridor carefully specifies the public purposes, these purposes can then justify the acquisition of all land needed for future rights of way in the corridor. Since the public purpose in view is no longer the actual construction of a highway but rather the sound planning of the corridor, there is no need for courts to examine the time between the condemnation of the land and the construction of the high-

96. The corridor concept described here is not based on any particular model in existence but instead represents a combination of measures used in various parts of the country as described in Robert H. Freilich and Stephen P. Chinn, "Transportation Corridors: Shaping and Financing Urbanization Through Integration of Eminent Domain, Zoning, and Growth Management Techniques," 55 UMKC L. Rev. 153 (1987). *See also*, Beuscher, "The Highway Corridor as a Legal Concept" (Highway Research Board, National Research Council, Highway Research Record No. 166, 1967 at 9-13).

97. Freilich and Chinn, "Transportaion Corridors" at p. 169.

way.[98] Second, corridors can assist in the public recapture of the value of increased mobility through joint public/private development. By reserving highway interchanges, multi-modal connection points, transit stations, and even air rights in these areas for public/private development, planners can channel high density growth more effectively and at the same time realize a profit from rental income, which can be ploughed back into transportation projects. The Washington Metropolitan Area Transit Authority (WMATA) is expected to realize $9.32 million in rental income in 1990 from its joint development projects.[99] In addition to the rental income, WMATA profits from the travel to these joint development projects. Because they are convenient to the transit system, up to 50 percent of all trips to these projects are made via WMATA's subway. Finally, the corridor, which encompasses the land that will directly benefit from the transportation facility, can serve as an appropriate area for a uniform imposition of impact fees and special taxes even across local political boundaries. As such, it can serve as a geographic and functional framework within which to apply the other fiscal tools of coordination listed in this section. Since transportation facilities are "the most effective and significant growth and land use determinant," they can serve as the centerpiece for an effective regional growth management system: "They can provide a perspective which is broader than the one from which the problem of explosive population growth is traditionally viewed—the local government."[100]

Organizational Tools

The theoretical distinction between fiscal tools, which rely on financial mediums of coordination, and organizational tools, which rely on institutional interaction as a means of coordination, becomes somewhat blurred in practice. The corridor concept discussed above certainly has elements of institutional linkage as well as fiscal coordination. Likewise, the various organizational tools discussed below each utilize some form of fiscal coordination.

Regional Funding Authority

The idea of vesting significant authority for regional transportation planning, funding, and implementation in a single regional organization has obvious appeal. A single authority empowered to deal with regional transportation issues would be in a strong position to guide long-term land use decisions as well. However, depending on its composition and relationship to local governments, it might do so at the expense of accountability at the local level.

The Tidewater Region of Virginia provides a convenient case study of how a regional funding authority might be developed. While the plans have not been implemented, the localities of that region have expended significant energy in explor-

98. *Id.* at 211.

99. *Id.* at 183.

100. *Id.*

ing the feasibility of and developing support for a strong regional transportation authority. A consultant's report that recommends the formation of a regional transportation authority has been formally approved by several local governments and is pending in others.[101] If local governments approve plans for the authority, which are being supported by the two planning district commissions in the area, they would have to receive General Assembly approval. As presently conceived, the authority would be empowered to plan, raise money for, and build major transportation projects within the region. It would raise funds through the imposition of a gasoline tax, a regional sales tax, development impact fees, and, if permitted by the federal government, the imposition of tolls on urban federal interstates. The plan is billed as a way to ensure that transportation needs can be met even in an era of reduced federal and state contributions to transportation; it would be a self-help organization.

Beyond its role in raising much-needed revenues for transportation projects, the authority is seen as a major step toward more comprehensive regional planning. Some suggest that the proposal has "galvanized local officials toward a regional mentality."[102] As the primary transportation planning agency for the region, such an authority would inevitably have to face the issue of where future needs will be, where growth would occur, and where it should be limited. Since funds raised from local citizens would be placed in a pool of funds that would be allocated by this regional organization, local governments would have a significant incentive to resolve land use and growth issues on the basis of regional interests. Both fiscal and institutional changes would be used to foster coordination. However, it should be noted that this vision of a regional transportation authority depends on the cooperation and even the encouragement of the Commonwealth. Without some "carrot" — such as new local taxing authority, a greater share of a state tax, or a relaxation of Dillon's Rule — full participation by the localities in the region will be hard to achieve.[103]

Whether or not the Tidewater area goes ahead with this proposal for a regional transportation authority, it must be recognized that Northern Virginia's problems are in some ways different from those in Tidewater. The transportation problem has been in the public consciousness longer, and there are more organizations actively concerned with transportation issues in Northern Virginia. Northern Virginia localities have already been experimenting on their own with some of the innovative funding options that Tidewater's authority is designed to facilitate.

Despite these differences, the transportation authority concept has been proposed in Northern Virginia. Gubernatorial candidate Marshall Coleman cam-

101. Isle of Wight County and Hampton have approved the plan, though other localities are moving more slowly. *See*, "Localities wary of action on regional transit financing," *The Ledger-Star*, November 15, 1989.

102. "Financing called key to mass transit," *The Virginian-Pilot*, July 25, 1989.

103. In fact, as this report goes to press in 1991, the prospects for a regional authority in Tidewater appear much dimmer. If the proposal ever did "galvanize" local officials toward a regional mentality, the progress is no longer obvious, and efforts appear stalled. *See*, "Hampton Roads Nixes Transit Authority," *Arlington Journal* (January 4, 1991).

paigned in 1989 on a proposal for a transportation authority that would plan and finance major transportation projects in Northern Virginia. The authority would have been modeled on other authorities (such as the airports'). Coleman, like many officials in Northern Virginia, identified the fragmentation of transportation decision-making as a major impediment to rational long-range planning and coordination with other regional objectives.[104] His transportation authority proposal was intended to achieve better coordination: "...transportation isn't the sole problem. You have to interrelate it with land use, facilities planning, and education. I believe that we lack in planning in this area."[105]

Coleman's proposal had several positive aspects. It would have had high-level connections to VDOT, and it would have been chaired by a deputy transportation commissioner for Northern Virginia. It would have expanded the present regional focus by including Fauquier and Stafford Counties, now usually excluded from Northern Virginia bodies. By pooling federal, state, and local transportation funds, it would have served as an incentive to regional decision-making by linking funding to regional planning.

The plan also had some serious drawbacks. As John Milliken, now Virginia's Secretary of Transportation, pointed out at the time, it would have separated transportation policy-making from the political accountability of local elected officials. It also left unclear the future of several organizations now performing functions that would be incorporated into the new authority. The Northern Virginia Transportation Commission and the Potomac Rappahannock Transportation Commission now play a significant role in the region and must be taken into account.

The rapid decline in interest in this proposal after the election may be evidence that it is not an idea with which most officials in Northern Virginia are comfortable. The creation of a single transportation authority empowered to perform the full range of planning, funding, and implementation functions would, in any case, be much more problematic in Northern Virginia than in the Tidewater area. Any such centralization that did not take into account the positive work being done in various local and regional organizations might be futile, or worse, counter-productive.

Regional Compact

A much more promising possibility for effective regional coordination is the regional compact. In Contra Costa County, California, a regional compact helped to produce a regional political consensus for transportation improvements that had earlier been rejected.[106] In 1986 a new regional 5 cent sales tax was proposed to fund transportation projects. Polls showed that transportation was considered a

104. "Coleman Proposes Transport Authority," *Washington Post*, August 1, 1989.

105. "Colemen Seeks New Northern Virginia Transit Agency," *The Fairfax Journal*, August 1, 1989.

106. *See*, "Contra Costa County Links Transportation Tax to Growth Management," *Urban Land*, June 1989.

major problem in the suburban county. Local city officials and the Conference of Mayors supported the measure. The referendum campaign received generous financial backing from developers and seemed likely to pass. However, a citizens advocacy group composed of homeowners, environmentalists, and senior citizens worried about future growth organized a campaign against the measure and defeated it.

When local officials faced the issue again in 1988, they were better prepared. A subregional planning process, much like Northern Virginia's, was formed to develop a plan for transportation improvements. The plan that eventually resulted, which was called "Measure C," proposed not only new funding for specified transportation projects but also tied the new funding to growth management measures in order to attack the growing traffic problem on a broad front.

A transportation commission, composed of elected local officials was formed to implement the work of the subregional planning committees and to administer the new transportation fund. A portion of these funds was to be allocated to localities for repair and improvement of local streets on the basis of adherence to growth management guidelines. The remainder was to be used for the major transportation projects recommended by the subregional planning committees.

Besides enacting legislation allowing localities to assess the transportation sales tax, the state of California also had a policy of earmarking special transportation funding for "self-help" counties. This gave the new transportation commission leverage for additional state and federal funding.

When "Measure C" went to the polls, it received broad support, even among groups that had initially opposed the transportation sales tax. The measure not only linked transportation improvements to growth control measures, it also linked new funding sources to agreement among localities on major highway improvements. By developing a broad approach to solving the region's traffic problems and seeking a consensus both among citizens (through the plebiscite) and local governments, the measure's backers were able to gain a firm commitment from the various localities to work within a framework that would be mutually beneficial. Instead of having fragmented efforts to achieve growth control and free traffic flow in each jurisdiction at the expense of its neighbors, the region now has a sort of contract among the localities to work together toward a regional solution.

The Northern Virginia area already participates in a successful compact to establish mass transit. WMATA, which runs the Metro subway and bus system, is a compact among jurisdictions in Virginia, Maryland, and the District of Columbia. This successful experience could serve as a model for the development of a compact to attack other transportation and growth management problems. In fact, the transportation improvement plans that have developed out of the Subregional Planning Process could serve as the basis for such a compact. General Assembly approval for new funding sources would be necessary. And the implementation of the plans would have to be supervised by some permanent organization with staff capabilities beyond those available to the subregional planning process, which relies on

other local organizations for staff assistance. The formation of a truly regional transportation commission would greatly facilitate the implementation of a regional compact aimed at coordinating transportation and land use policies.

Transportation Management Associations

Transportation Management Associations (TMAs), despite their title, do considerably more than "management." They are associations of developers, employers, and other private interests who engage in a wide range of activities designed to increase mobility in their own geographic area.[107] TMAs promote ride-sharing, provide vans for pooling, assist members in meeting trip reduction mandates, finance street improvements, and even assist in long-range transit projects such as rail extensions. Many TMAs also work with city planners on housing policies, environmental issues, and other mutual concerns. In addition, they serve as an effective tool for integrating land use and transportation concerns in private planning decisions.

One of the earliest groups formed was the Tyson's Corner Association. It has started an areawide vanpool program for employees and a shuttle circulator for shoppers. Other such organizations are springing up rapidly and have the potential to substantially improve mobility in Northern Virginia.

One way in which these efforts could be more effectively linked with public efforts is by encouraging the formation of a coordinating council for the TMAs, which could be represented in major public forums for discussion of transportation issues. Among the chief benefits of TMAs is their flexibility. As a free-wheeling, entrepreneurial framework for addressing problems, they can respond with greater speed and imagination than many public institutions to the transportation problems posed by intense land use.

Regulatory Tools: Trip Reduction Ordinances

A trip reduction ordinance requires developers and employers to develop and implement transportation management measures to reduce the percentage of solo automobile trips made to their establishments during peak hours.[108]

In some localities, such as Pleasanton, California, all businesses are subject to the ordinance and must meet certain trip reduction goals. In other jurisdictions, only developments that exceed certain traffic-generating levels are required to participate in the trip reduction measures.

The City of Alexandria has taken a third approach. Rather than include all businesses or only those that create certain levels of traffic, Alexandria has de-

107. *See*, Robert Cervaro, *Suburban Gridlock*, (New Brunswick, New Jersey: Center for Urban Policy Research, 1986). pp. 96-99.

108. *Id.* pp. 118-21.

signed legislation that requires all developments over a certain size (office developments larger than 50,000 square feet and residential developments larger than 250 units) to obtain a special use permit. To obtain the permit, the developer must conduct a traffic impact study projecting the effects of the development on the volume of traffic on local streets and intersections.

On the basis of this study, the developer must prepare a transportation management plan that will achieve one of two goals, either a shift of 10 percent to 30 percent of peak hour traffic to travel modes other than the single-passenger auto or a trip dispersion rate that results in fewer than 40 percent of the single-occupancy vehicle trips occurring during the peak hour.

Upon approval of the transportation management plan, the development becomes eligible for the special use permit. Once issued, the terms of the permit bind not only the developers but all subsequent owners of the property as well.

This type of special use permit allows local planners to link land use and transportation planning goals directly with regard to specific development projects. It shifts some of the burden for linking transportation and land use concerns to private decision-makers without raising "takings" issues or threats of lawsuits as many of the more drastic growth-control measures do. Also, unlike some of the regulatory tools contemplated by local governments, it seems likely to survive scrutiny by the courts and the General Assembly.

The down side of these trip reduction ordinances is that they seldom set specific penalties for noncompliance. If appropriate mitigation plans have been developed and good faith efforts have been made to implement them, usually no further action or enforcement is provided for, even if reduction goals are not met.

STRUCTURAL IMPEDIMENTS

Although a closer coordination of transportation and land use decisions is as much a question of policy integration as it is of structural change, there are certain structural or institutional impediments that should be addressed as part of the overall effort.

The Labeling Problem

In the American system of government, local governments are creatures of the state. Virginia's counties have traditionally served as administrative and electoral subdivisions of the state; they have performed a limited role as service providers for a mostly rural population. As urban population began to develop, municipal corporations were chartered in Virginia. With the Constitution of 1902, a sharp distinction was drawn between counties, cities, and towns. The increasingly formal

distinction among these forms of local government was influenced by the needs they served. Cities, which served the largest urban populations, were given complete independence from the surrounding counties and granted fairly broad powers to raise revenues, provide services, and regulate the development of the community. Towns, too, were given substantial powers to raise revenue and provide services, though they were not legally independent of the counties in which they were located. Counties, which usually were rural areas, initially exercised very few powers independent of the state's administrative apparatus.

As greater concentrations of urban and suburban populations have come to reside in unincorporated county areas, Virginia has gradually increased the power and discretion of counties. The sharp distinction between counties, cities, and towns was blurred somewhat by the 1971 Constitution, which deals with counties, cities, and towns in a single article.

However, there remains a significant disparity between the powers and discretion of counties and municipal corporations. The 1980 census found half of Virginia's most populous jurisdictions to be counties. Fairfax county is more populous and has a larger budget than several states. These new concentrations of population into unincorporated areas of the state have created a "jumble of jurisdictional types: counties that provide city services, cities that have thousands of agricultural acres, and towns that have their own school systems."[109]

A Commission on Local Government Structures and Relationships (the Grayson Commission) was established in 1986 to review the existing scope and distribution of local governmental powers and to recommend changes to the *Code*.[110] In 1989, the Commission made a report proposing the voluntary reintegration of all but the largest independent cities with their surrounding counties. It proposed that the threshold populations for incorporation be increased and that local governments be offered inducements for functional consolidation of services offered. This proposal has been debated and placed on the agenda for future sessions of the General Assembly. It is anticipated that the draft proposal will undergo significant revision.

The 1989 session of the General Assembly approved legislation creating a Local and State Government Infrastrucutre and Revenue Resources Commission.[111] This body will review the growing demands placed on local governments for infrastructure (including highways and roads) and the debt and taxing authority those governments have available to deal with the demand. The Commission is scheduled to report to the 1991 legislature on any measures that are necessary to empower local governments to meet the challenge of burgeoning demands for infrastructure.

Despite these positive steps, significant disparities unrelated to current conditions remain in the relative powers of local governments in Virginia. For exam-

109. *The Need to Review Virginia's Local Government Structure: Report of the Local Government Attorneys of Virginia,* 1988.

110. *Summary of Proposals: Commission on Local Government Structures and Relationships* (Richmond: Division of Legislative Services, 1989).

111. House Joint Resolution No. 432, 1989 Session of the General Assembly of Virginia.

ple, independent cities, and even towns, have jurisdiction over local roads, whereas counties (except Arlington and Henrico) do not. One result of this is that counties have significantly less authority to regulate traffic and transportation problems.[112] This link between local authority and mobility seems to be born out by the fact that the road capacity deficit is much less severe in Arlington and the cities of Northern Virginia than it is in the other counties. Incidentally, it is also less severe in Henrico than in neighboring Chesterfield County. The borrowing powers of cities and counties also differ significantly. Although cities can issue general obligation bonds without referendums, counties must either get voter approval for each general obligation issue or get a general bonding power approved by referendum. It has long been contended that state funding formulas for roads and other transportation improvements are skewed. Funding for county roads, which are operated by the state, must compete with other line items in VDOT's budget, whereas funding for city and town roads is provided directly to these localities.

The problems of coordinating land use and transportation planning within a given local jurisdiction, as well as across jurisdictional lines, would be greatly ameliorated by a move to rationalize the powers and functions of counties, cities, and towns in Virginia.

Dillon's Rule and Local Authority

The authority of local governments to employ basic land use control and transportation management measures is limited by Virginia's strict adherence to Dillon's Rule. Under this rule of statutory interpretation, courts will strike down any attempted exercise of local power that is not expressly authorized or necessarily implied by state authorization. If there is any reasonable doubt about the legitimacy of a local action, that act is held to be unauthorized. The strict application of Dillon's Rule in Virginia is discussed earlier in this report. The effect of the rule on local land use controls can be seen in the cases discussed in this section.

The tension between local autonomy and state authority is not new. When the Virginia Constitution was revised in 1971, the Commission on Constitutional Revision proposed that Dillon's Rule be reversed and that local authority be broadly construed. Believing that the General Assembly had been responsive to their concerns, local government associations opposed the change at that time, and the measure went down to defeat in the General Assembly. However, the perception on the part of local leaders that the General Assembly can be counted on to be responsive to local needs, especially the needs of rapidly growing localities, has changed.[113] A legislature still dominated by rural concerns has throughout the 1980s rejected many measures sponsored by legislators from urban areas designed to allow those

112. Fields & Wiley, "Town-County Relations in Virginia," 56 *University of Virginia Institute of Government Newsletter* 2 (June 1980).

113. The Virginia Municipal League and the Virginia Association of Counties now strongly support a reversal or at least a weakening of the rule. See Clay Wirt, "Dillon's Rule," *Virginia Town and City*, August 1989.

jurisdications to deal with their rapidly changing needs. Even when it has not rejected proposed local measures, the General Assembly has used much time — which arguably could be better spent in dealing with statewide problems — debating such local concerns as whether the Town of Vienna should be allowed to require trash haulers to report collections in order to stop illegal dumping in vacant lots.[114]

Legislation calling for the establishment of a joint subcommittee of the General Assembly to study the effect of Dillon's Rule was defeated in the 1989 session, as similar measures have been before.[115]

The constant trek of local government officials to Richmond to lobby for the authority to take care of local problems and to raise local money to do it should be stopped. At the very least it means costly delays in formulating solutions to local problems, including transportation and growth-control problems. Even worse, it inhibits an effective local or regional coordination in those cases in which goals are dependant on factors that are beyond the control of local officials. When Northern Virginia legislators banded together in 1989 to obtain permission from the General Assembly to raise revenues locally for transportation problems, they came away with a far different package than the one they had proposed—one which appears to be less adaptable to local conditions and which has yet to be implemented. The lack of flexibility in local taxing and regulatory powers has acted as a major brake on the formation of regional solutions to local problems.

Fragmentation of the Regional Role

Even if local governments were to be given greater flexibility in dealing with local problems and inconsistencies in the relative powers of local entities were eliminated, there is no assurance that better area-wide coordination of land use and transportation planning efforts would result. Perhaps more important than either the local or state roles in the process of coordination is the regional role. Since efforts to control growth and ease transportation woes have an immediate and sometimes detrimental effect on neighboring jurisdictions, these efforts must be coordinated on a regional basis.[116]

The problem of regional coordination in Northern Virginia is acute. There is no shortage of organizations designed to contribute to regional coordination. In fact, there are so many organizations that regional efforts are fragmented. The Washington Metropolitan Area Transit Authority (WMATA) is the primary regional provider of public transportation, whereas the Metropolitan Washington Council of Governments (MWCOG) is responsible for coordination of transportation planning.

114. Paul Edwards, "Dillon's Rule Keeps Assembly Clogged with Local Bills," *The Washington Post*, February 16, 1976.

115. House Joint Resolution No. 370, Offered January 24, 1989.

116. For a good description of the detrimental effects that local growth control measures are having on neighboring jurisdictions in Northern Virginia see A. Taylor, "Beggar Thy Neighbor," *Virginia Business*, April 1989.

The Northern Virginia Transportation Commission (NVTC) provides a policy forum for Northern Virginia localities to coordinate mass transit contributions and allocates local, state, and federal funds to transit services in the area, including WMATA. The Potomac-Rappahannock Transportation Commission (PRTC) performs a role similar to NVTC for Prince William county. The Northern Virginia Planning District Commission (NVPDC) has so far played a limited role in the regionalization of transportation and land use goals, but it has plans to sponsor a major land use summit and has acquired the capability to perform computer-aided mapping that would facilitate the formation of a regional data-base for land use and transportation planning.

Beyond this dizzying array of public regional organizations, there are also state organizations that play a major role in regional relations on transportation and land use issues. VDOT's Northern Virginia District, which deals with transportation concerns on the regional level, is becoming more aware of the land use effects of its decisions, and it is also becoming more involved in the process of coordination. The Chesapeake Bay Local Assistance Board has the power to dictate land use rules to localities within its jurisdiction. This gives it the capacity to drastically affect regional land use planning efforts.

The proliferation of organizations with overlapping and sometimes competing missions is exacerbated by the fact that there is no clear definition of what constitutes Northern Virginia. The jurisdictional reaches of these regional organizations are not coterminous. Effective regional cooperation should be based on a commonality of interests, which is likely to arise out of common problems facing localities impacted by the suburban sprawl emanating from regional growth. The area of impact has, of course, changed over the years. Any attempt to streamline the process of regional cooperation must address this disparity in the jurisdictional scope of existing regional organizations.

Though each of these regional actors has attempted to play a positive role in achieving regional cooperation in its area of concern, the fragmentation of the regional role among so many organizations has been an impediment to any meaningful linkage between land use and transportation concerns at the regional level. Any attempt to untangle the web of overlapping responsibilities of regional organizations in Northern Virginia should take into account the lessons learned by other regions in Virginia in their efforts at effective regional coordination.

In Richmond, even though there are fewer organizations involved than in Northern Virginia, the process of regional transportation planning has been called an "alphabet soup" where so many organizations are involved that "when things don't work, nobody is responsible."[117] Like the MWCOG in Northern Virginia, Richmond's Metropolitan Planning Organization (MPO) is primarily responsible for regional transportation planning. However, the Richmond Regional Planning District Commission (RRPDC) performs most land use and growth planning. Some area citizens believe that this division of regional planning efforts not only impedes agree-

117. R. Saunder, "Regional Highway Planning Criticized," *The Richmond News Leader*, November 6, 1989.

ment among localities on issues that cut across the lines of responsibility of the regional organizations but also weakens the ability of local citizens and governments to impact the decisions of VDOT and other state organizations. The Richmond region provides no model for creating an effective and integrated regional voice.

One area of the State which seems to be making progress toward sorting out its regional "alphabet soup" is the Tidewater area. Though it does not have the problem of coordinating with localities in another state as does Northern Virginia, the Tidewater area has labored under many of the same difficulties as Northern Virginia. It has gone far toward resolving those difficulties. An effective regional forum for transportation concerns has been created in the Tidewater Transportation District Commission (TTDC), which has been called "one of the most innovative public transportation organizations in the United States."[118] In addition to operating transit services, the Commission serves as regional coordinator and broker of public transportation and encourages private participation. This combination of operational and brokering functions seems to offer an improvement for coordination over the situation that exists in Northern Virginia with WMATA and the various localities handling operations, NVTC and PRTC doing the brokering, and MWCOG doing the planning.

Like Northern Virginia, the Tidewater area has regional organizations with different jurisdictions, thereby complicating the task of regional coordination. However, progress has been made through the cooperation of some of these organizations. For example, although the area falls into two different planning district commissions, these bodies have been able to work together to achieve a regional voice that corresponds more closely to the actual extent of regional concerns. Although planning in the region has traditionally been performed separately, these two planning district commissions have now joined forces to study regional transportation financing options and have jointly proposed a new financing authority.[119]

Each of the areas discussed above is at a different level of regional integration. A comparison of the institutional framework reveals much about the efficacy of the regional role in planning processes. Concern for a coherent regional voice in the process arises not only from the need for better coordination between localities, but also from the need for better coordination between local government and state agencies. To the extent that growth control issues are now discussed primarily between local governments and transportation issues are now discussed primarily between local and state government, an effective regional voice could do much to connect the issues. The subregional transportation planning process is a step in the right direction. It has helped to foster this discussion. However, it is a process and not an institution. As such, it has no staff of its own, and it suffers from many of the liabilities inherent in the fragmented organizational climate it is designed to coordinate. The subregional process did not consider land use alternatives, nor did

118. Schwager, Lysy and Krett, "Regional Public Transportation Organizations," 1206 *Transportation Research Record* 4 (1988).

119. See *A Transportation Financing Strategy for the Hampton Roads Region*, prepared by Linton, Mields, Reisler, and Cottone for the Southeastern Virginia Planning District Commission and the Peninsula Planning District Commission, October 13, 1989.

it look at travel-demand management strategies as a possible mechanism for reducing congestion. Although the subregional process provided a forum within which these matters could be discussed, they were kept "off the table" during the crucial initial phase of "base plan" development. Furthermore, it is a temporary process without the longevity to ultimately resolve the problems. A regional organization that reflects the growth control concerns of local governments could interact with the Northern Virginia District of VDOT and do more to foster coordination between land use planning and transportation planning than perhaps any other institutional change. We make some proposals later in this report for accomplishing this.

Organization and Role of VDOT

The final structural impediment that this report addresses is perhaps not a single impediment but an interrelated network of checks on the process of coordination that arise out of the organization and the role of VDOT in the process. VDOT has often been criticized for a lack of responsiveness to local concerns, especially in Northern Virginia. Localities accuse VDOT of managing problems that arise with or among localities by waiting for a default solution instead of serving as an effective broker in relation to the facilities and services it provides. Some observers have even claimed that VDOT prefers the sort of fragmented regional process described above in which no unified political pressure is brought to bear on VDOT officials.[120] Even if these charges are exaggerated, they do highlight the difficulty VDOT faces in dealing with local governments, especially those under great fiscal strain and public pressure related to traffic congestion as is the case in Northern Virginia. In 1984, VDOT recognized the difficulties it faced in dealing with Northern Virginia's burgeoning travel demands and carved a new Northern Virginia District out of what had formerly been the northern section of the Culpeper District. Efforts have been underway since then to create a "full service" district, which will be more self-sufficient and therefore more flexible and timely in dealing with local concerns. These efforts have been accelerated in accordance with a 1987 plan of action for decentralizing authority and responsibility in the Virginia Department of Transportation.[121] These efforts should be supported and expanded.

Although the devolution of authority to the district level of VDOT carries great potential for improving VDOT's flexibility in dealing with local concerns, there remains at least one structural impediment that limits the effectiveness of efforts to coordinate land use planning and transportation planning decisions—the geographic scope of the Northern Virginia District. The Northern Virginia District includes Arlington, Fairfax, Loudoun, and Prince William Counties. However, several areas that are substantially impacted by Northern Virginia's regional problems are left out. Stafford and Spotsylvania Counties, which are part of VDOT's Fredricksburg

120. See, *eg.*, R. Saunder, "Regional Highway Planning Criticized," *Richmond News Leader*, November 6, 1989.

121. *A Plan of Action for Decentralizing Authority and Responsibility in the Virginia Department of Transportation*, (Charlottesville: Virginia Transportation Research Council, 1987).

District, have become bedroom communities of Washington, D.C.[122] Similarly, Fauquier County, which has remained part of the Culpeper District, is experiencing the type of suburbanization that marks it as part of the Northern Virginia region.

The creation of a VDOT district encompassing the jurisdictions substantially impacted by Northern Virginia's regional problems with the authority to perform planning and brokering functions independently of Richmond would remove a major structural impediment to the coordination of land use and transportation planning efforts. Such a modification in VDOT's structure might also work salutary changes in VDOT's role in the overall process. Historically, VDOT has seen its role primarily in technical terms—to build superior roads. Engineering concerns have dominated VDOT's attention, and it has attempted to avoid a direct role in these political disputes that transportation decisions are increasingly spawning.

However, it is becoming increasingly difficult to separate technical issues in transportation planning from political ones. It is no longer possible for transportation planners to simply look at demographic trends, forecast future demand, and make plans to meet that demand in the most technically efficient manner. The development of each new road in an area such as Northern Virginia is as much a political as an engineering question. In such an environment, considerations of mobility must be balanced against other community concerns such as growth control.

Even where the demand for greater traffic capacity is acute, as in Northern Virginia, well-engineered plans to alleviate congestion are not always welcome. Highway improvement projects may be opposed by local citizens as "development roads" that are more likely to spawn new demand than to alleviate current problems.[123] The criteria for judging a road improvement project then must include political as well as technical considerations.

Another facet of the same problem is evident in the changing role of the General Assembly. Historically, the legislature has left the resolution of transportation problems to professionals at VDOT and the Commonwealth Transportation Board. However, that practice may be coming to an end. In 1989, the Assembly became deeply involved in setting transportation priorities as it earmarked funds for a major highway improvement project across the southern part of state. In what was seen as the last hurrah of rural interests in a legislature that will be dominated by urban and suburban representatives after the 1990 census, a highway linking the less developed southwest region of the Commonwealth with the ports of the southeast was mandated. With this precedent, a new urban-dominated General Assembly may not be shy in applying political criteria to set transportation priorities in the future.

Thus, the challenge that faces VDOT is to adapt to an environment where it must be more responsive to political concerns without sacrificing the technical efficiency that has long been its central focus. District administrators must increasing-

122. *Organization Guide to VDOT*, 1989, p. 67.

123. See, e.g., R. Malone, "Chantilly Battles State Over Road Widening Plan," *The Fairfax Journal*, November 27, 1989.

ly act not just as engineers, but as brokers, arbiters, diplomats, and even statesmen. The Department must become responsive to policy considerations that will not fit neatly within traditional planning criteria.

The traditional analysis of what effect a transportation project would have on levels of service must now be balanced against an analysis of what effect it would have on the quality of life. This balancing of technical and political concerns necessarily depends on local conditions. A move to make district boundaries correspond to areas of common transportation concern coupled with a decentralization of authority to such truly regional districts could have the effect of allowing a more localized accommodation of particular political concerns with engineering considerations.

COMPARISON TO OTHER STATES

The related problems of growth management and effective transportation planning are not confined to Northern Virginia or to the Washington Metropolitan Area. Urban areas across the United States are experiencing the conflicts associated with rapid economic expansion and the provision of adequate transportation facilities. The result has been a nationwide traffic congestion problem that will only worsen unless drastic measures are implemented soon. In a recent *USA Today* survey, it was reported that 77 percent of rush hour traffic in America in 1990 will be rated as congested.[124] This is in comparison to a 40 percent rush hour congestion rating in 1975.[125] Therefore, an examination of how other states have been coordinating land use and transportation planning and of their level of success is of critical value to this study.

California: San Diego

Since the mid-1970s, San Diego has been experiencing almost nonstop growth at the rate of 55,000 new residents per year.[126] As a result, San Diego is today the eighth largest city in the United States. Once known only as a retirement community and a navy town, San Diego has become a major commercial center, attracting over 175,000 new jobs over the last 10 years.[127] The expansion of the San Diego economy has meant increased traffic congestion in the region (along with other problems attendant to economic growth). To combat the potential ill effects of unbridled economic growth, the city of San Diego and surrounding cities have implemented comprehensive growth management plans. Through such plans, the ci-

124. Julie Stacer, "Statesline: How We Commute," *USA Today*, September 18, 1989.

125. *Id.*

126. Douglas R. Porter, "San Diego's Brand of Growth Management: A for Effort, C for Accomplishment," *Urban Land*, May, 1989, p. 22.

127. *Id.*

ties have tried to channel growth into certain areas and provide for adequate public facilities to match the expected economic development.

In 1979, San Diego enacted a comprehensive growth management plan that provided for four tiers of development: (1) urbanized areas, (2) planned urbanizing areas, (3) future urbanizing areas, and (4) parks and open space.[128] The plan met with great success in its early stages: it attracted far more people to the urbanized areas than to the planned urbanizing areas.[129] In 1984, the growth management program received a generally favorable review from a city-sponsored task force.[130] Despite the anti-growth movement, however, several referenda to enact more stringent growth controls were defeated.[131]

Recent evaluations of San Diego's growth management program have focused on its shortcomings. Although the city has attempted to channel growth into specific areas, it has not been very successful in dealing with the myriad problems that accompany rapid development. Perhaps the gravest problem facing the San Diego area is growing traffic congestion. Between 1980 and 1986, freeway traffic increased by 50 percent.[132] As one commentator has noted, "San Diegans today own more cars, travel farther to work, and make more trips in smaller groups than before."[133] Moreover, over the next 20 years, the projected rate of growth in vehicle miles traveled is almost twice the projected population growth rate.[134] Efforts to encourage citizens in the San Diego area to use public transportation have been ineffective.[135] In addition, efforts to provide regional solutions to the transportation problem have been stymied by intransigent local governments unwilling to relinquish decision-making authority.[136]

Thus, San Diego provides an illustration of a growth management program that looks wonderful on paper only. In practice, the plan has failed to combat the most basic problems that rapid development brings. In fact, the "city's growth management efforts appear to have been ineffective in steering development toward patterns of land use that would support a workable transportation system."[137] The impact of the San Diego growth management plan was best summed up as follows:

> To an outside observer, it appears that San Diegans have yet to reach consensus on the kind of city (or region) they want in terms of land use, density, transportation systems, and urban form. The 10-year-old tier system and pay-as-you-grow mechanism for facility financing fail

128. *Id.*
129. *Id.*
130. *Id* at 23.
131. *Id.*
132. *Id.*
133. *Id* at 24.
134. *Id.*
135. *Id.*
136. *Id.*
137. *Id.*

to meet many of the needs of today. Continued patching and mending of the present system seems to offer no great hope of major breakthroughs. The alternative would seem to be a rethinking of the city's approach to city building.[138]

Florida

Since 1970, the state of Florida has experienced tremendous growth in terms of both population and commercial development. By 1988, the population of Florida had reached nearly 12 million people.[139] Demographic experts predict that by 2000, 15.4 million people will live in Florida.[140] Much of this growth, however, has not taken place within the central cities of the state.[141] Rather, population growth has occurred in the metropolitan areas surrounding cities such as Orlando, Miami, and Tampa.[142] Consequently, Florida has been experiencing a growth phenomenon known as urban sprawl. This sprawling development pattern has placed huge burdens on state and local governments to provide necessary services.[143]

In an effort to combat the ills associated with urban sprawl, Governor Bob Martinez created a task force to study the problem. The Governor's Task Force made a number of recommendations, many of which may be applicable to the problems of Northern Virginia. The task force recommended that the state commit its resources to promoting concentrated urban development patterns as opposed to low density sprawl.[144] Such developments could be encouraged through the use of both economic and regulatory incentives. Two specific proposals, however, relate directly to the subject of this report. First, the task force recommended that urban sprawl be attacked through improved intergovernmental coordination.[145] Moreover, the task force recommended that transportation planning be integrated with any plans to fight urban sprawl.[146] These two measures go right to the essence of the problem in Northern Virginia.

In Florida, as in Virginia, counties and cities have been in constant competition with respect to providing the necessary services to residents.[147] As urbanization has crept into surrounding counties, county governments have increasingly

138. *Id* at 26.

139. Florida Dept. of Community Affairs. 1989. *Final Report: Governor's Task Force on Urban Growth Patterns*. Tallahassee, Florida, p. 3.

140. *Id.*

141. *Id.* at 7.

142. *Id.*

143. *Id.* at 3.

144. *Id.* at 11-12.

145. *Id.* at 33.

146. *Id.* at 35-37.

147. *Id.* at 33.

found it necessary to provide services that were traditionally reserved for cities.[148] Given the increased difficulty in distinguishing county and city functions, the Governor's Task Force has recommended that more intergovernmental cooperation take place to provide for county-wide planning.[149] Four elements in the task force's recommendation bear particular importance to the problem:

1. The county-wide planning system should be independent of any local government to provide for more effective decision-making.
2. The system should be independently funded and have an independent staff.
3. Authority should be granted to the planners to draft a macro-level county-wide comprehensive plan.
4. The system should be given enough authority to resolve disputes between local governments on issues of development approval, establishment of urban service boundaries, and on issues of county-wide concern.[150]

In addition, the Task Force proposed that "[f]or municipalities and counties that institute a county-wide planning system . . . consideration should be given to providing increased home rule authority. This could include, at local request, increased local flexibility in accessing revenue sources, as well as enhanced delegations of state decision making authority."[151] This is the sort of trade-off that is vitally important to the coordination of functions that are focused at different levels of government. It provides the "carrot" for cooperation and coordination.

Also, in Florida as in Virginia, nowhere is the need for intergovernmental planning more apparent than in the area of transportation planning. Transportation planning is not easily confined within jurisdictional boundaries—one jurisdiction's traffic congestion is a problem for all neighboring jurisdictions.[152] To meet this problem, the task force made the following observation: local transportation planning must be strategic in deploying a range of transportation facilities and services to obtain larger urban objectives, particularly those concerning land use and urban form.[153] The following points summarize the task force's findings:

1. There must be a local transportation planning process that embraces entire urbanized areas and balances the competing needs of the affected cities and counties.
2. The local transportation planning process cannot function effectively if the local planning responsibility for different transportation modes (e.g., highways and public transit) is fragmented among different agencies.

148. *Id.*
149. *Id.* at 34.
150. *Id.*
151. *Id.*
152. *Id.* at 35-36.
153. *Id.* at 36.

3. There must exist locally the capability to analyze the need for transportation facilities and services based on a county-wide or regional view of local land use plans. Local transportation plans should be devised in a manner that will support local land use objectives and lead to achievement of the locally desired urban form.

4. Florida must maintain a high degree of flexibility for local governments to organize themselves to achieve the objectives of both the growth management and transportation statutes. The state should not unduly limit the ability of local governments to develop unique approaches to this issue.

5. Florida needs a formal process for certification that the transportation improvement programs . . . support and are consistent with the land use elements of the local comprehensive plans.[154]

There was one proposal from the Governor's Task Force that was particularly innovative. The task force recognized that "[t]he process of promoting more compact urban areas will potentially generate increased opportunity for disputes over land use plans and comprehensive planning in general."[155] The solution to this problem, as envisioned by the task force is alternative conflict resolution—that is, resolution of problems through means other than the traditional arenas of the courts and administrative hearings.[156] This is an idea worthy of consideration in Northern Virginia, and it is discussed further in the recommendations appended to this report.

Maryland: Montgomery County

Montgomery County, Maryland, situated to the north and northwest of Washington, D.C., has experienced rapid growth similar to that being faced in Northern Virginia. Unlike the jurisdictions of Northern Virginia, however, Montgomery County has long had a well-articulated plan for dealing with such growth.

The general plan that is presently in effect was written more than 20 years ago.[157] Essentially, the plan directed that growth within the county be channelled into two primary corridors: I-270 in the west and U.S. 29 in the east.[158] The resulting "wedges and corridors" concept was designed to preserve the "wedges" between

154. *Id.* at 37.

155. *Id.* at 38.

156. *Id.*

157. Christiller, Norman L. *Wrestling with Growth In Montgomery County, Maryland.* Urban Land Institute, p. 82.

158. *Id.*

the "corridors" as open agricultural space with some low-density residential use.[159]

One of the primary tools that Montgomery County has employed in its fight against urban sprawl has been its "adequate public facilities ordinance." This ordinance is

> To be the principal mechanism by which [Montgomery County] would coordinate the timing of private development with the timing of the public provision of the infrastructure needed to support it. In its simplest form, the adequate public facilities ordinance directed the planning board to reject a requested subdivision of land unless the board could find that the public facilities would be adequate to serve it.[160]

Among the various public facilities that must be examined for every proposed new subdivision of land is the adequacy of existing and future transportation facilities.

Evaluating the effects of new development on existing transportation facilities involves two separate levels of inquiry. At the first level, a "traffic shed" is fixed that determines the total amount of new development that could be accepted.[161] Then, "[i]f the subdivision clears this obstacle, it may then be tested for its more localized impacts on intersections or road lengths.[162] The determination of "traffic sheds" or policy areas was directly linked to the availability of transit facilities. Thus, "where there was greater transit availability—that is, more available alternatives to auto travel—than in those places, [the county can] tolerate greater congestion than in places with lesser amounts of transit service."[163] In considering the problem of transportation congestion, the county has been willing to allow greater congestion near development nodes than elsewhere.[164]

Another aspect of Montgomery County's efforts to coordinate transportation planning and land use control has been the creation of so-called "road clubs." The road clubs are essentially private developers who cooperate in building major roads that the state would not have been able to build for many years.[165] Still other plans call for van pooling and other techniques for solving transportation problems that do not have to do with physical improvements to roads.[166]

Planners in Montgomery County have realized that their "wedges and corridors" concept is not static. As growth continues, congestion continues to be a major concern. Consequently, county planners have focused on a vision for the future. This new plan is titled "centers and trails." Under it, growth is expected to occur without excessive congestion. The notion that drives the new plan is that communi-

159. *Id.*
160. *Id.* at 84.
161. *Id.* at 85.
162. *Id.* at 86.
163. *Id.*
164. *Id.*
165. *Id.* at 88.
166. *Id.*

ty and accessibility can be combined. The "centering" idea focuses on creating communities in which people can link up on a human scale. It evokes "main street" in our collective memory. The "trails" idea focuses on the need to provide mobility and access. It is deeply rooted in the notion of freedom. In order to achieve this optimum goal, however, certain conditions must be satisfied: (1) new travel networks must be introduced; (2) land use must be clustered at points along the new networks; and (3) actions must be taken to help people break the automobile habit.[167] County planners have determined that in order to achieve growth without congestion, the number of actual cars on the roads must be effectively reduced.[168] Inherent in such a vision is the primacy of linking land use planning and transportation planning. As the Montgomery County Comprehensive Growth Policy Study states:

> Land use intensification should accompany any transportation strategy that seeks to reduce the auto driver proportion of the work trip by providing alternative means of travel. Without the private land use pattern reinforcing the public infrastructure pattern, the travel behavior objective is unlikely to be achieved.[169]

One final comparison between the Montgomery County and Northern Virginia situations should be noted. In 1948, Montgomery County became a chartered county thereby giving it a great degree of home rule.[170] Thus, unlike Northern Virginia, the county does not operate under all of the constraints of Dillon's Rule. It is not clear whether Montgomery County's success in linking land-use and transportation planning can be attributed to this factor; nevertheless, Montgomery County has enjoyed a degree of flexibility in options and decision-making that is not available to jurisdictions in Northern Virginia.

CONCLUSIONS

The problems of improving the coordination of land use and transportation planning admit of no easy solution. They arise from the inherent tension between freedom and community and between mobility and urban growth. These tensions cannot be "solved"; they can only be managed. The tension can be creative or it can be destructive. An approach to the problem that eschews the search for a "silver bullet" solution can concentrate instead on developing both structures and policies that channel this inevitable tension into creative rather than destructive outlets. In the past our "solutions" have been narrow and myopic. The traditional "solution" to

167. Montgomery County Planning Department. 1989. *A Policy vision: Centers and Trails*. August, p. 2.

168. *Id.* at 18.

169. *Id.* at 19.

170. Christeller, Norman L. *Wrestling With Growth in Montgomery County, Maryland*. Urban Land Institute, p. 82.

the problem of transportation gridlock has been more roads.[171] The traditional "solution" to controlling growth has been ever stricter regulation of land uses.[172] But the problem is not solved.

Limits of a Demand Responsive Approach

Laying down more miles of asphalt has not solved the mobility problem. One observer has captured the irony of the attempt:

> The American traffic solution is to widen the road . . . The result is always the same. Better roads lure more people to settle alongside them, bringing more cars, which jam the better roads. This angers the people in the traffic jams, who elect new politicians promising to solve the traffic problem by building better roads.[173]

Of course, this cycle does not go on forever. Eventually the angry people turn to growth control measures as a way to keep out the new people and their cars. But this "solution" also proves limited.

Limits of a Regulatory Approach

Kenneth Orski, president of the Washington-based Urban Mobility Corporation, has documented the results of suburban growth control movements in many areas of the country. Where the search for a quick solution to the traffic problems associated with suburban growth has led to an anti-growth backlash, the results have not often been productive.[174] Orski argues that, in fact, keeping development densities artificially low through drastic growth control measures can actually have an adverse impact on mobility—causing people to migrate to distant suburbs, hastening urban sprawl, and keeping densities too low for effective mass transit and too high for the comfort of automobile commuters and residents.[175]

These conclusions are corroborated by William Fischel, a Dartmouth College economist who has surveyed the empirical evidence and findings of over 120 studies

171. K. Orski, "Learning to Live with Traffic Congestion," *Colorado Economic Review* (Third Quarter, 1988), p. 10

172. L. Dalton, "The Limits of Regulation: Evidence from Local Plan Implementation in California," *APA Journal*, Spring 1989, pp. 151-68.

173. R. Baker, quoted in K. Orski "Learning to Live with Traffic Congestion"

174. C. Kenneth Orski, "Managing Suburban Traffic Congestion: A Strategy for Suburban Mobility," 41 Transportation Quarterly 465-67.

175. Orski, "Learning to Live with Traffic Congestion," p. 19.

of the effects of growth control measures.[176] Fischel concludes that, although land use controls

> do provide some benefits that would be difficult to obtain under less coercive conditions . . . . growth controls and other aggressive extensions of land use regulations probably impose costs on society that are larger than the benefits they provide.[177]

Because the immediate harm is limited to a small minority of voters, communities tend to adopt growth controls that are much more extreme than necessary, which result in the long term in a decline in the community's standard of living.

Despite the severe limitations of regulatory tools, planning departments focus most of their energies on the regulatory means for implementing comprehensive plans.[178] Other tools for plan implementation, such as capital improvement programs and social and fiscal tools, receive far less attention in most municipal planning departments. This heavy dependence on regulation in plan implementation can have significant detrimental consequences. It reinforces an *ad hoc* approach to planning by emphasizing bargaining and negotiating with regulated developers, thereby resulting in piecemeal adjustments to the plan. If, as one study contends, "the central problem for a planning system is how in seeking to cope with change it should balance flexibility with certainty,"[179] then the system that prevails in Northern Virginia can be seen as sacrificing certainty for flexibility. Transportation plans developed over the years in Northern Virginia have suffered as changes in underlying land use plans have contributed to the piecemeal dismantling of proposed improvements under pressure from local citizens and governments.

Greater certainty, continuity, and coordination in the planning process may prove elusive as long as regulatory tools are overused in the plan implementation. The implementation of plans has traditionally been viewed as a hierarchical process with regulators vertically separated from regulated developers. This has led to a reactive planning posture that allows developers to establish the agenda for the planning agency. It is much more realistic to view the process of implementing a plan as an interactive one in which actors affect each other's decisions.[180] According to Patrick McSweeney, former Director of the Richmond Regional Planning District Commission:

> Land use controls, such as zoning and subdivision regulations, are not—and never have been—effective in any significant way in curbing, slowing, or even determining the overall quality of growth in Virginia.

176. The conclusions of Professor Fischel's forthcoming book are contained in a recent article "Do Growth Controls Really Matter," *Lincoln Institute of Land Policy Land Lines*, November 1989, p. 1-2.

177. *Id.* p. 2.

178. Dalton, "Limits of Regulations," p. 151.

179. D. Thomas, et.al., *Flexibility and Commitment in Planning* (The Hague: Martinus Nijhoff, 1983).

180. Dalton, "Limits of Regulation," pp. 152-3.

> These regulations are always reactions to development pressures . . . . Instead of rushing to regulate, we should first consider whether government is actively contributing to the very forces that cause undesirable development patterns. Avoiding public investment in infrastructure that will promote undesirable growth in sensitive areas, for example, is a far more effective course than attempting to counter development pressures with zoning regulations once that infrastructure is in place.[181]

This reality stems from the cyclical nature of the relationship between land use and transportation. Figure 4 shows that transportation improvements result in more accessible land, which increases in value, is developed for higher uses, generates traffic entanglements, and eventually necessitates new improvements.[182]

The challenge of integrating land use and transportation planning, then, is to achieve a balance between land development and the transportation system in such a dynamic environment. This balance is as much political as it is technical. It will require both demand response and demand management. It cannot be achieved either by individual localities acting alone or by statewide mandate, it must be sought at the regional level.

The Need for Effective Regional Planning

The problems of suburban growth and traffic congestion are regional in scope. The people of Northern Virginia must find an effective regional forum for dealing with these problems. No new organization need be created. In fact, efforts should be made to merge some of those already existing.

In 1989, prior to his appointment as Virginia's Secretary of Transportation, John Milliken, who has also chaired WMATA and NVTC, proposed that NVTC and PRTC be merged into a single body and that this body should be "the review and coordinating authority for all of Northern Virginia's transportation planning." This review would cover not only plans for the construction or expansion of transportation facilities but also funding schedules and land use plans.[183] Since the Commissions are made up of representatives from county boards of supervisors and city councils, state legislators, and VDOT, they are capable of serving as a forum for effective coordination.

These two organizations are already working together on some projects. For

181. P. McSweeney, "What Changes Are Necessary to Equip Virginia's State and Local Governmental Structure to Better Deal with Growth?" (Speech before the Virginia Growth Management Forum, September 14, 1989), pp. 1-2.

182. Stover and Koepke, *Transportation and Land Development* (Englewood cliffs, New Jersey: Prentice Hall, 1988), p. 2.

183. J. Milliken, "...Let's Turn Once Again to Transportation Issues," *Washington Post*, November 19, 1989.

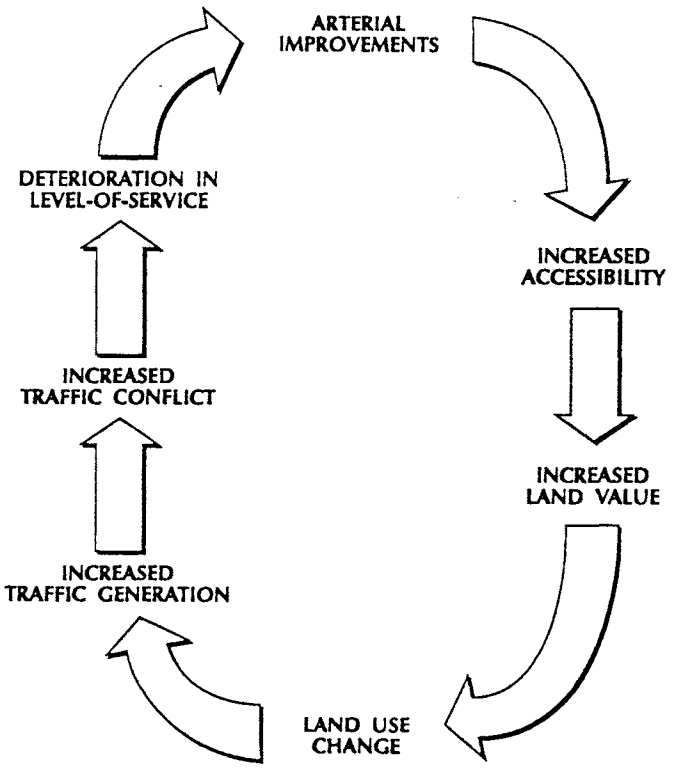

Figure 4. Relationship between land use and transportation.

example, the Virginia Railway Express operations board, which will run a $125 million commuter rail project now being planned, is a joint committee of NVTC and PRTC. This kind of cooperation in service provision should be expanded to include planning issues and should be institutionalized by the merger of the two organizations.

Some commentators have also suggested a merger of the NVPDC with the Transportation Commissions.[184] Though such a merger would be more difficult in light of the statutory status of the planning district commissions, it does make sense if PDC is to have the role in transportation planning that it seeks. All three of these organizations—NVTC, PRTC, and NVPD—were formed to encourage cooperation among local governments. But the increasing importance of transportation as a political issue in Northern Virginia has created the potential for "turf battles" and competition for resources rather than for consensus and cooperation.

The creation by merger of such a strong regional voice in the process would have an impact on other actors. It would serve to unify the input of Northern Virginia in the Washington Metropolitan Council of Governments. It would also create a more unified voice for localities in their dealings with VDOT. This would provide both an opportunity and a challenge to VDOT. To deal effectively with a regional voice representing local concerns, VDOT would have to be able to deal with regional problems in a regional context. This can only be accomplished if VDOT's Northern

184. L. Richardson, "Regional View of the Future," *Washington Post*, November 9, 1989.

Virginia District is expanded to include all jurisdictions significantly impacted by suburban sprawl related to Washington, D.C. This expanded District should be given sufficient authority to deal with local and regional concerns without undue interference from Richmond. The full-service-district concept has been a step in the right direction, and the process should be accelerated.

Achieving Political Consensus

These structural changes will mean very little, however, unless effective policies are adopted. The kinds of policy disputes that have divided local jurisdictions attempting to deal with growth control and traffic congestion might be ameliorated by putting them in a regional perspective, but they will not go away. What is needed to achieve a regional political consensus is a kind of "package deal" that combines growth control, funding for new facilities, public input into the planning process, and state and federal support for jurisdictions that participate in regional efforts to mitigate the problem. Contra Costa County, California, achieved such a political consensus in 1988, when a diverse coalition of developers, environmentalists, business people, and citizen groups came together to support "Proposition C." These groups were able to cooperate because the proposal explicitly linked a new regional sales tax to growth control measures. A public/private committee thrashed out a growth management program tied to a $155 million fund earmarked for local transportation improvements to be allocated on the basis of adherence to the growth management goals. These funds will be supplemented by state funds that are earmarked to aid "self-help" jurisdictions.

A package similar to this one would be much more likely to gain the approval of voters in Northern Virginia than the local option income tax approved by the General Assembly in 1989. After a significant effort at organizing the Northern Virginia delegation to the General Assembly to support a new funding tool, the delegation brought back a local option income tax proposal that local governments, which were faced with taxpayer revolt, were not even willing to put to the voters. Even before this failure to gain consensus on how to attack the transportation problem, one far-sighted local official was proposing that the sub-regional planning process should provide an opportunity to "wrap the transportation plan and its financing into a more comprehensive package of initiatives" that would include growth control coordination among the jurisdictions of Northern Virginia.[185] Indeed, the sub-regional planning process, which has brought together a diverse group of state, local, and regional officials, does provide an opportunity to build a regional consensus on coordinating new construction with growth controls.

Even the idea of using federal and state funds to encourage such cooperation is not out of the question in Virginia. Federal Secretary of Transportation Samuel Skinner has stated that:

185. Albert Eisenberg, who is Vice Chairman of the Arlington County Board, in an article called "Getting There is Only Part of It," *Washington Post*, February 26, 1989.

> It is our principle and will be a principle that by using federal funds to leverage state funds and get greater local involvement, we will get greater participation and greater accountability and greater decision-making by local officials."[186]

This shift in federal policy will affect state transportation policy and funding formulas. One proposal currently under consideration by the Commission on Local Government Structures and Relationships would establish a fund to encourage new functional consolidations of facilities and services, including transportation.[187] Though the General Assembly has delayed taking action on this and other proposals relating to local government until next session, it should move ahead with incentives such as this one or even formulate an incentive program specifically designed to aid self-help localities.

In the waning days of his administration, Governor Baliles proposed a compact among Virginia, Maryland, and the District of Columbia to fund major transportation projects.[188] Though this may be desirable, there is an even greater necessity for a compact among the localities in Northern Virginia that would link funding from local, state, and federal sources to agreement on goals in both transportation and land use planning.

RECOMMENDATIONS

The authors' primary objective has been to provide an analysis of the structural impediments and possible tools for improvement in the coordination of land-use control and transportation planning. Policy options are numerous and cannot be adequately developed in this study. What follows, then, is a nonexhaustive list of recommended actions for improving the coordination between transportation and land-use control.

The identification of these policy options is a byproduct rather than the primary product of this study. Each of these options warrants further consideration and perhaps an individual feasibility study.

State

- *The General Assembly may wish to consider legislation authorizing the creation of transportation corridors.*

186. D. Phillips, "Skinner to Propose User Fees to Fund Transportation Work," *Washington Post*, January 11, 1990.

187. Summary of Proposals, Commission on Local Government Structures and Relationships, prepared by Division of Legislative Services, Commonwealth of Virginia, September 12, 1989.

188. S. Fehr, "Baliles Urges Regional Transportation Compact," *Washington Post*, December 14, 1989

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Where transportation corridors have been created, they have served both as the key organizing framework for growth management utilizing full state, regional, and local planning and the focus for the financing of transportation capital infrastructure through development-generated fees and joint public-private development at major transportation interchanges within the corridor. Many of the tools associated with these corridors are already in use in Virginia. Conditional zoning is providing development-generated fees. Impact fee legislation is in place. Innovative joint development projects are underway. Special tax districts have even been created to recapture the value of highway improvements.

However, these innovative planning tools often are not viewed in a geographic framework that would allow coordination of land use plans with highway construction plans. Fairfax County has enacted a form of highway corridor regulations aimed at combatting the worst elements of commercial strip development, but these corridors use a limited number of tools and apply only to drive-in banks, fast-food restaurants, convenience stores, and gasoline stations.

This concept could be broadened to include other tools and to encompass all land uses in the affected area, not just these quick-turnover businesses. A broader concept of the corridor is one way in which innovative land use control techniques can be integrated with more traditional "Euclidian" zoning tools to achieve a coordination of land use and transportation goals.

• *The General Assembly may wish to consider legislation explicitly authorizing transferable development rights.*

A system of transferable development rights (TDRs) could facilitate the coordination of land use control and transportation planning on several levels. One important benefit of such a system is that it could bring greater certainty to long-range land use planning by defusing lawsuits brought by landowners adversely affected by each planning decision. For example, a TDR system can be used to distribute the benefits and burdens of a downzoning action so as to avoid costly litigation and uncertainty over the legality of such an action.

Another benefit of TDRs is that they allow coordination of public and private decision-making about land use, thereby providing greater certainty for transportation planning efforts.

These benefits warrant some attention to the possibility of supplementing the traditional planning and zoning techniques used in Virginia with a TDR system.

When Loudoun County attempted to adopt such a system in 1986, the General Assembly rejected it. Though unable to defeat it in the county council, local opponents of the measure did win in the legislature with the assistance of the Virginia Association of Realtors.

In the wake of the recent General Assembly battle over Fairfax County's downzoning, which a TDR system could have done much to avert, the legislature may be more amenable to allowing localities to use such a system. With a TDR sys-

tem, landowners in a downzoned area would not lose the potential development value of their land, and they would therefore be less likely to sue.

However, in light of Loudoun County's experience, it is clear that the General Assembly would have to act before localities in Virginia could experiment with such a scheme.

• *VDOT could play a greater role in brokering disputes between local jurisdictions over issues of land use and transportation planning. Alternate dispute resolution remains the most effective and efficient method of resolving conflicts in land use control and transportation planning that cut across local boundaries.*

There is presently no effective way to resolve disputes between the various jurisdictions in Northern Virginia over issues of land use planning and transportation planning. All too often, local jurisdictions must turn to the judicial system when negotiations fail. Reliance on the courts, however, can be an extremely costly and time-consuming endeavor. VDOT should recognize that, in an area as potentially diverse and controversial as the coordination of transportation planning and land use policies, it will have to play a greater role in brokering disputes between local jurisdictions.

In order to achieve this goal, VDOT should assess the feasibility of establishing an alternative dispute resolution system. Although the contours of such a system might be shaped to meet VDOT's needs as well as organizational structure, the system should be formalized. When jurisdictions are in conflict over issues within the purview of VDOT, VDOT should have a formal procedure for hearing the parties' positions and for providing assistance in resolving disputes.

Local

• *Local comprehensive plans could be statutorily strengthened. State agencies should then be required to abide by the plans and the plans should provide for cross-acceptance.*

Though Virginia has required localities to have a comprehensive plan since 1980, the scope and effect of the plans have been largely left up to the localities. Local governments have developed comprehensive plans in varying degrees of detail, and have adhered to these with varying degrees of particularity.

These variations in the quality of comprehensive planning have led courts and state agencies faced with decisions to weigh the plans against other factors on an *ad hoc* basis. At present, state agencies are obligated by statute to cooperate in the preparation of local comprehensive plans but they are not strictly required to abide by those plans in their subsequent actions.

The effectiveness of these local comprehensive plans should be increased. Instead of having courts and administrative agencies free to depart from plans on an

ad hoc basis, a procedure should be established for the regular submissions of such plans to affected state agencies and for the "cross-acceptance" of relevant elements of the plan. For example, if VDOT were given an opportunity to make transportation concerns an issue at the plan-making stage, then it would be required to abide by the plan once adopted.

A statutory strengthening of local comprehensive plans would not only alleviate the problem of *ad hoc* deviations from the plan in implementation, but would also provide greater certainty for private decision-makers seeking to adhere to community development plans.

• *Other localities in Northern Virginia may wish to consider adopting special use permit ordinances aimed at traffic mitigation similar to that now in use in Alexandria.*

In 1987, Alexandria adopted an ordinance which requires that the developer of any major project (office developments larger than 50,000 square feet and residential developments larger than 250 units) obtain a special use permit. In order to obtain the permit, the developer must conduct a traffic impact study projecting the effects of the development in terms of traffic volumes and levels of service on involved streets and intersections. On the basis of this study, the developer must prepare a transportation management plan that will achieve, either a shift of 10 to 30 percent of peak hour traffic to travel modes other than the single-passenger auto or a trip dispersion rate that results in less than 40 percent of single-occupancy vehicle trips occurring during the peak hour.

Upon approval of the transportation management plan, the development becomes eligible for the special use permit. Once issued, the terms of the permit bind not only the developers but also all subsequent owners of the property. This type of special use permit allows local planners to link land use and transportation planning goals very directly with regard to specific development projects. It shifts some of the burden for linking transportation and land use concerns to private decision-makers without raising "takings" issues or threats of lawsuits as many of the more drastic growth control measures do. Also, unlike some of the regulatory tools contemplated by local governments, it seems likely to survive scrutiny by the courts and the General Assembly.

Regional

• *VDOT should consider the need for reorganization in Northern Virginia so that the entire problem area is covered.*

The Northern Virginia District presently includes Arlington, Fairfax, Loudoun, and Prince William Counties; however, several areas that are substantially impacted by Northern Virginia regional problems are left out. Stafford and Spotsylvania Counties, which are part of VDOT's Fredricksburg District, have become bedroom communities of Washington, D.C. Similarly, Fauquier County, which has re-

mained part of the Culpeper District, is experiencing the type of suburbanization and traffic problems that are characteristic of the Northern Virginia region.

As Northern Virginia evolves toward a true district with a regional perspective and decision-making processes, the exclusion of localities that are in fact part of the region will become an even greater problem. If VDOT is to play a positive role in regional problem-solving, it must develop a regional perspective.

It may be that the current division of the state into nine VDOT districts will prove cumbersome as the major metropolitan areas spread across district boundaries. In that case, consolidation into a smaller number of districts that correspond to regions with similar interests and problems may be useful.

• *An effective regional body capable of addressing both land use and transportation issues should be created. One means of accomplishing this is through the consolidation of functions now performed by different organizations.*

The problems of suburban growth and traffic congestion are regional in scope. Northern Virginia must create an effective regional forum for the coordination of local efforts in these areas. Instead of creating a new organization, this forum could be created by merging existing organizations that have responsibilities in these areas. The NVTC and PRTC, which perform similar functions in different geographical areas, could be merged. This body should then have some explicit responsibility for coordinating transportation and land use, even though it would not have exclusive authority. Many of the issues addressed in the subregional transportation planning process could be addressed under the auspices of such a regional Transportation Commission.

In order to more effectively link transportation planning concerns with wider planning efforts, the Transportation Commission should affiliate itself with NVPDC. The resulting organizations might operate much as MWCOG and its TPB do. Such consolidation would not only streamline the regional interaction of local governments but would also allow more efficient use of staff efforts to solve regional problems. Though each of these organizations is now headed by a policy board composed of local elected officials, the same official from each government seldom sits on both the Transportation Commission and the Planning District Commission. A merger of these boards would have the effect of creating a "regional portfolio" in each local government. An effective regional organization in which local governments could seek consensus on transportation issues would give them greater bargaining power in dealing with state agencies such as VDOT and interstate organizations such as WMATA and MWCOG.

The kind of cooperation that has occurred under the subregional transportation planning process could be made much more effective if it were taking place under the auspices of a regional planning organization with an independent staff capability. For example, the Citizen's Advisory Committee of the subregional transportation planning process has noted that the "fragmented transportation responsibilities that exist among local jurisdictions, regional transit authorities and VDOT" make citizen input into the process difficult. A regional transportation or-

ganization with its own staff, unlike the subregional planning process, could alleviate such a difficulty by creating an ombudsman's office, which might direct citizen input into the process and follow up on results. An effective regional organization would help to make the process less confusing for the public by serving as an initial reference for transportation problems, whether local, regional, or VDOT action is required.

• *The state should provide greater incentives for regional cooperation among the various Northern Virginia jurisdictions.*

One of the proposals being studied by the "Grayson Commission" on Local Government Structures and Relationships would require the General Assembly to establish a fund to encourage consolidation of facilities and services by local governments. Localities that cooperate in providing such facilities or services, including transportation, would be eligible for disbursements from the fund as would jurisdictions that went beyond functional cooperation to merge into a single governmental entity. Though the proposal was prepared for the 1990 session of the General Assembly, no action has yet been taken.

The state of Vermont has recently adopted a similar fund with the much broader purpose of encouraging consistent local, regional, and state agency planning. The municipal and regional planning fund, which receives part of the proceeds of a property transfer tax, may be used by recipient localities for acquiring development rights or rights of way, among other things. Along with this commitment of new resources to achieve planning goals, the statutory planning goals themselves were broadened to include growth control, economic development, and transportation components. The statute requires new plans or updates adopted by regional planning commissions, state agencies, and municipalities to be consistent with statutory goals. Regional planning commissions review proposed amendments to municipal plans, and a council of regional commissions is created to review state and regional plans and to mediate disputes. Tying new money for achieving planning objectives to higher standards in planning consistency has made the action palatable to the various organizations that must relinquish some autonomy in order to achieve greater planning consistency. Whether or not Virginia goes as far as Vermont has, it should provide some fiscal incentive for regional cooperation among local governments.

Private

Both state and local jurisdictions could do much to encourage the use of transportation management associations similar to the TMA already in operation in Tyson's Corner.

TMAs, despite their title, do considerably more than "manage." They are associations of developers, employers, and other private interests who engage in a wide range of activities designed to increase mobility in their own geographic area.

TMAs promote ride-sharing, provide vans for pooling, assist members in meeting trip reduction mandates, finance street improvements, and even assist in long-range transit projects such as rail extensions. Many TMAs also work with city planners on housing policies, environmental issues, and other mutual concerns. In addition, they serve as an effective tool for integrating land use and transportation concerns in private planning decisions.

One of the earliest groups formed was the Tyson's Corner Association. It has started an areawide vanpool program for employees and a shuttle circulator for shoppers. Other such organizations are springing up rapidly and have the potential to provide substantial gains in mobility in Northern Virginia.

One way in which these efforts could be more effectively linked with public efforts is by encouraging the formation of a coordinating council for the TMAs, which could be represented in major public forums for discussion of transportation issues.

Among the chief benefits of TMAs is their flexibility. As a "free-wheeling, entrepreneurial framework" for addressing problems, they can respond with greater speed and imagination than many public institutions to the transportation problems posed by intense land use.