SELECTED GROWTH MANAGEMENT TECHNIQUES
FOR USE IN MITIGATING TRAFFIC CONGESTION
IN MASSACHUSETTS SUBURBAN CORRIDORS

BY

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Submitted to the Department of Urban Studies and Planning on May 22, 1987, in partial fulfillment of the requirements for the Degree of Master in City Planning.

Abstract

This thesis selectively examines four planning concepts for use in mitigating suburban traffic congestion in Massachusetts: Areas of Critical Planning, Developments of Regional Impact, Negotiated Development Agreements, and Performance Zoning. These measures were chosen from a wide variety of growth management actions in use across the country for their potential effectiveness in handling suburban traffic congestion, and for their compatibility with the structure of local, regional, and state government in the Commonwealth.

The thesis presents the use of these four concepts as an integrated approach to local and regional cooperative planning. The experiences of this approach by the state of Florida and the Martha's Vineyard Commission are discussed, and the applicability of an integrated planning approach for widespread use in Massachusetts is explored. Specific recommendations for all levels of government to achieve an integrated approach to planning are made.

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INTRODUCTION

WHY ARE THE SUBURBS SO CONGESTED?

If a single problem alarms suburbanites the most, it is traffic. Drop in on any suburban cocktail party and you’ll hear horror tales of traffic snarls, ever lengthening commutes, local road systems sagging under burdens they were never designed to bear. Nonstop, daylong traffic congestion has hit Houston, Dallas, the San Diego Freeway in Orange County, and the Long Island Expressway. Others can expect it soon, reported syndicated columnist Neal Pierce in the Boston Globe on August 11, 1985.

Traffic congestion is a growing problem for many suburban towns across the country today. Reasons for congested suburbs vary slightly from region to region, but several facts clearly exist which cut across all jurisdictions, including state, county and local levels of government.

- Since World War II, the suburbs have experienced more commercial, industrial, and residential development than the urban centers have. Greater than 80 percent of all existing commercial office space built since 1980 has been built in the suburbs to increase the suburb’s portion of total office space from just 25 percent in 1970, to over 57 percent in 1984. (Cervero, 1986)

- The 1980s mark the first time that national statistics show more people commuting within the suburbs, than commuting radially from the suburbs into the city. (CTS, 1987)

- Increasingly, "urban villages" are "becoming the
nation’s dominant form of the late 20th century”, as the suburbs fill-in and increase in project density and use. (Pierce, 1985) These urban villages incorporate mixed use projects with residential, commercial and light industrial uses in an effort to create self-contained communities, places where people work, live and recreate.

Such facts and practices have changed and continue to change the nature of the suburbs: the character, historical function as primarily a residential haven, and the overall quality of life.

One only need drive around our nation’s capital city to witness the incredible boom in both residential and office park development in Alexandria, Virginia, whose Crystal City has sprouted high rises almost overnight. Prince George’s County in Maryland, currently in a development boom, is growing with few planning controls in place. Its neighbor, Montgomery County, has implemented an extensive plan to phase its growth to the infrastructure capacity. The lack of planning controls in one county illustrates how the effectiveness of planning controls in an adjacent county are reduced. The spillover effects from the Prince George’s County development, such as traffic congestion, noise pollution and air pollution, still invade Montgomery County to some extent.

Closest to home is the Boston commuters’ nightmare, where gridlock on Routes 128, 3, and 1 is the norm several hours each
day. Commuting hours for many begin at 6:30 in the morning, as commuters vainly attempt to beat the crush of the commuter flow. Area office park developers have erected pastoral, campus style executive office parks and high tech centers along Massachusetts Technology Corridor of Route 128, without regard for the transportation problems their locational decisions created. Not only are highways such as Routes 3 and 128 congested, the smaller, more local roads are congested with commuters seeking alternative routes to their places of work. While this tactic makes commuting easier for the driver, it compounds the mobility and traffic problems for suburban towns whose interior roads weren't designed for high capacity use.

Public transportation systems which follow the traditional radial corridor to urban center do little to service the needs of commuters who now commute across the suburbs in a scattered pattern. Massachusetts isn't alone; outdated transportation networks nationally cannot cope with the new patterns of commuter travel and suburban sprawl. Public transit inefficiencies thus uphold the single car, single occupant behavior of suburban commuters.

A recent article on traffic congestion in the Boston Phoenix described commuting in the Boston metropolitan area as driving on "highways of hell", where

the road warriors of commuting are the car commandos whose mission it is to alleviate the mind bending boredom of sitting still in a stationary vehicle, the homicidal frustration of trying to get to the office before millions of
other commandos get to theirs. (Caro, 1987:4)

Adding to the problem of crowded commuter corridors are the office park employers who require their employees to work traditional, "9 to 5" hours. Kevin O'Keefe, traffic reporter for Boston's WEEI radio says:

Traffic patterns follow industry. The high tech industries thought they would alleviate city traffic by moving onto Route 128, but all those high tech industries let out at the same time. You go over there at 4:30 p.m. and there's nothing. You go over there 45 minutes later and you can't believe it, 128 is jammed. (Caro, 1987:13)

The problem of suburban traffic congestion is reflected in a growing public dissatisfaction with commuting. Employees who spend on average one hour battling traffic, arrive to work in foul moods, and productive work time is lost while employees wind down from the morning battle. A University of California-Irvine researcher found that the length of a commute (for the commuter) is correlated with higher blood pressure, hypertension, reduced concentration and a weakened job performance. (Caro, 1987:4)

Transportation System Management (TSM) actions such as coordinated vanpooling or ridesharing programs are often cited as immediate prescriptions for reducing traffic congestion. However, these actions can be difficult to organize. Office "parks", as the name implies, are frequently designed with large set-backs, and a campus-style sprawl. They are not usually located on commuter corridors or public transit routes, and instead rely on interior suburban corridors for
transit routes. Commuters too, traveling across regions, are unwilling to compromise personal habits to carpool. Many employees need a car, either for work or to do errands before or after the workday, such as shuttling children to and from day care. There are a variety of social and institutional factors which reduce the effectiveness of voluntary TSM actions. It remains easiest for most commuters to be independent and to drive a personal vehicle to work. Most choose the trade-off of the one car convenience for the discomfort of traffic congestion.

The hardship of suburban commuting patterns and traffic congestion hits not only employers and employees, but the residents of the towns and villages with clogged downtowns and shortages of short term parking at peak hours of the day. The residents of five Bay Area suburbs took this issue of congestion to the ballot box in 1985 and 1986 by voting in measures to restrict further development. Walnut Creek, the first of the northern Californian towns to adopt such a measure, passed an ordinance restricting any type of development over 10,000 square feet until the level of traffic at designated intersections dropped from it current level of 95 percent of capacity, to 85 percent of capacity. Furthermore, the city rested the responsibility of the reduction in the hands of the business community by not sponsoring any city-wide actions to achieve the 85 percent rule.
Ballot box planning illustrates both a strong public reaction to a lack of good, local planning, and a successful method of implementing a regulatory action which is too politically charged to be handled by local public officials. Either way, this method of planning is often a "last resort", and steps towards proactive, long range planning need to be taken to avoid reactionary measures.

There are sound, successful growth management ideas at work across the country though. Cleverly designed, many of the regulatory actions are innovative and sophisticated in their impact analysis of development's side effects and detrimental impacts. The next chapters present ideas about regional planning as a concept and policy that Massachusetts should consider to properly plan for and control the rampant rate of current growth in-state, and its subsequent effects of traffic congestion.
CHAPTER ONE

MAPPING OUT A PLAN

This thesis attempts to marry the topics of traffic and land use control. A combination of regional planning ideas and growth management actions related to vehicle trip generation are presented as a method for reducing suburban traffic congestion in Massachusetts. The research for this thesis was done in conjunction with an ongoing project for the Massachusetts Department of Public Works (MDPW), in an effort to create a statewide strategy for traffic mitigation in congested suburban corridors. In researching the experiences of communities and states across the country, the MDPW team selected several complementary concepts which could work in Massachusetts. Initially, the criteria used in determining the potential success of each action reviewed included: each action’s cost to a town to implement, the cost to maintain, the political feasibility, and the legality of the action. In narrowing the field of options for further review, several growth management actions were considered, and subsequently discarded from inclusion in this thesis. However, these actions deserve some explanation to justify their exclusion from the package of concepts the thesis presents.

Typology Review of Regulatory Actions
The use of overlay districts to control local development through a special permitting process was considered. An overlay district is superimposed on one or more jurisdictions and is used to encourage certain development characteristics, or to protect environmentally sensitive areas. Bourne, Massachusetts, a single jurisdiction, has a special interim highway overlay district in use. The town chose to create a special set of requirements for project review which control for traffic generation from proposed development until the highway running through Bourne is completed. Areas of critical planning concern are presented in this thesis, and are essentially overlay districts, although not formally labeled as such.

The use of building moratoria was considered. Moratoria currently exist in at least ten percent of Massachusetts towns, and serve as temporary mechanisms to stop the issuance of building permits for specified land uses or project sizes normally allowed. In Massachusetts, the restrictions of a moratorium must be directly related to a significant local issue, and steps must be taken by the town to plan for measures to mitigate that issue during the moratorium. Even though a moratorium is politically popular as a temporary measure, this action was not included in the thesis as an effective method for mitigating suburban traffic congestion. Moratoria inadvertently encourage a deluge of building permit applications which otherwise may not have been filed. The
threat of a building moratorium by a town serves to flood the town's permitting process with developers seeking project approvals, hence projects often get built that otherwise would never have been proposed. Once a building permit is obtained for a site, a landowner's right to develop statutorily vests, or is grandfathered, and the imposition of a moratorium is ineffective for that site. This action was excluded from those presented in the thesis because it is easily circumvented by the developers whose vested rights are upheld by the Massachusetts General Laws, and at best is temporary in its effectiveness.

A third action considered was the use of the transfer of development rights (TDRs). A TDR program separates the right to develop a site from the larger group of property rights associated with land ownership, and transfers these rights to another parcel of land in the same jurisdiction. This measure was rejected from inclusion in the thesis because both the identification of a buyer and the identification of a site for commercial property TDRs are often difficult to determine within a single jurisdiction. This action didn't seem viable for use in a region with many local jurisdictions.

Lastly, downzoning was briefly considered, but was quickly determined to be a politically impossible action to promote for use in a region with several different jurisdictions. A zoned density as shown on a town's zoning map, is very difficult for the town to change once the density
has been established, since it is the zoning map which "blueprints" the permitted uses and densities within the town. The action of downzoning changes the permitted, buildable density for a site, and is politically unpopular with landowners seeking to protect the economic value of their property. This action was determined to be too difficult to implement on a large scale within one town, let alone as a idea to promote regionally, across many jurisdictions.

As my own work in this area progressed, I began to believe that no single action will work in mitigating traffic congestion, because this problem is a symptom of a greater problem: balancing the pressure of development with the social carrying capacity in a state experiencing fierce growth pressures. Traffic congestion in the Massachusetts suburbs is acute for two reasons: there is a lack of organization among local governments' development strategies and growth management actions, and the existing regional planning agencies (except one) lack the statutory power necessary to implement regional plans, or to approve development projects which clearly have a regional impact.

Since the effects from a development are never contained within a single town, the negative aspects of growth and development, such as traffic congestion, creep over town lines and influence the quality of life in other towns. There are innumerable examples where one town is conscientious in designating land uses and permitting development, only to have
an adjacent town encouraging development with little regard to its inevitable spillover effects. Hence, my perspective has evolved from seeing growth management as just a set of separate actions, to seeing it as a broader program to implement at a regional level; made up of a series of policies which each address specific, regional issues.

Building a Rationale for Regionalism

It is interesting to note that the subject of regional planning to address regional issues in the Commonwealth has a well documented history, spanning the past decade. Former Governor Sargent established the Inter-Secretariat Resource Management Policy Council in the early 1970s, to coordinate state and regional planning agencies with the Department of Community Affairs. Through the Department of Community Affairs, the State Land Use Project was administered to research land management in the state. The project ultimately presented a legislative proposal in 1975 for restructuring land management in the Commonwealth, entitled "State Land Use Policy Volume II: A Proposal to Restructure Land Management In Massachusetts", giving regional agencie land management authority over critical areas and developments of regional impact, following the Americal Land Institute's "Model Land Development Code." However, the Sargent administration was unable to implement any of the recommendations made by the State Land Use Project due to Governor Sargent's defeat by the
current governor, Dukakis. (Massachusetts Department of Community Affairs, 1975)

Governor Dukakis' administration brought further efforts to study growth management policy surrounding regional issues, and passed the Massachusetts Growth Policy Development Act. Under this Act, every town in the Commonwealth was required to carry out a growth policy planning effort. Towns were asked to comment on local, as well as regional issues of planning concern as a way for the state to determine current and emerging planning issues and growth patterns. (Massachusetts Acts of 1976, Chapter 350)

The Massachusetts Institute of Technology's (MIT) Laboratory of Architecture and Planning was contracted by the state during the first Dukakis administration, to conduct research in conjunction with the Growth Policy Development Act. The work of MIT researchers produced a series of publications for the Massachusetts Growth Policy Project. The five reports published in 1977 covered various aspects of the intent, passage, and implementation of the Growth Policy Development Act. Charles Perry, an MIT doctoral student involved with the Growth Policy Project, ultimately wrote his dissertation on a rationale for regional planning, entitled, "State Growth Management: Prospects for Consensus-oriented Land Use Planning and Conflict Resolution." (Perry, 1982)

Clearly, there has been much interest in the subject of regional solutions to managing growth in localities across the
state. The consequences of local decisions on development projects extends beyond local jurisdictions and town lines, hence the interest in growth management in some way, at the regional level. The fundamental issue of traffic congestion as a spillover effect or "negative externality" of development, leads some policy makers to question a local jurisdiction's ability to create innovative solutions to regional traffic congestion problems.

Proponents of a regional approach to planning and regulating growth cite several advantages. First, this approach provides a badly needed opportunity for institutional building between state, regional, and local levels of government.

Secondly, a regional planning approach would create coordination of growth strategies and development approvals between different local jurisdictions within a region, which could be defined along a transportation corridor. Regional planning of some type would further enforce coordination by providing a regulatory process in which the decisions with greater-than-local consequences are regulated in a uniform and predictable way that is more conducive to managing development's impacts than the ad hoc, incremental approach which currently exists.

Given the nature of the problem; as one that spreads across town lines and jurisdictions of authority, regional approaches to unlocking "suburban gridlock" seem attractive.
Some states have come to the same conclusion about the merits of a regional approach to planning. With respect to using a regional planning approach for solving suburban traffic congestion, the National Conference on Suburban Expressways and Beltways convened in Boston last June (1986) to discuss approaches such as this one. The conference papers provide well-documented evidence that comprehensive regional planning techniques for traffic management are being considered not only by the MDPW, but also by agencies in Virginia, Florida, Minnesota, Texas, and California.

Several models exist to define the relationship between and roles for different levels of government. The American Law Institute (ALI) wrote a model development code which served as the basis for Florida's Land and Water Management Act of 1972, and Massachusetts' Act Protecting Land and Water on Martha's Vineyard, in 1974. (DeGrove, 1984) I chose to use this model, and these two acts to develop an approach for solving suburban traffic congestion in Massachusetts.

The Road Ahead

The following chapters present useful concepts for managing growth and its negative effects by illustrating actions used nationally as well as locally. The thesis has a "top down" approach, and progresses from a macro, policy perspective for state action, to joint regional and local level actions, and finishes with a local government
Chapter Two presents Critical Area Programs and Planning as used by Florida and Massachusetts. This concept is presented because it embodies a sane, regional approach to controlling resource use. This concept does not address the issue of suburban traffic congestion directly, but addresses congestion in an indirect manner as a consequence of a lack of regional planning.

Chapter Three presents Development of Regional Impact, which is a regulatory mechanism for use in addition to the critical area plan presented in the preceding chapter. A Development of Regional Impact review identifies and creates a plan to manage the regional effects from large scale development. Uses of public/private negotiations for reducing the negative effects of regional projects is discussed.

Chapter Four explains Performance Zoning. Performance zoning is an additional set of regulations to use in conjunction with traditional Euclidian zoning. The attributes and the negative aspects of performance zoning in mitigating traffic congestion are presented, as well as the political feasibility of the action in Massachusetts.

Chapter Five is a Prescription for Action for state and local government.
CHAPTER TWO

AREAS OF CRITICAL PLANS

Over the last decade, we have finally realized a fundamental truth; environmental protection is inseparable from economic success. Massachusetts Governor Michael Dukakis

Definition of Critical Area Plans

Mandated with protecting the long term health and welfare of its residents, several states, including Florida, Maryland, Massachusetts, and North Carolina, have adopted critical area programs to create a balance between severe development pressure and the area's carrying capacity. Critical area programs are similar in concept to regional comprehensive plans because the program is a collection of policies and guidelines to regulate the uses of land in a region. The term region in this context, is generally used to indicate an area defined by geographic boundaries, rather than political ones. Critical areas can cover a larger, single, jurisdiction comprised of one county, or a designated group of smaller, local jurisdictions, or more commonly, an area defined by land or locational qualities rather than jurisdictional boundaries. Critical area programs in and of themselves, are not targeted, regulatory ordinances or additions to local zoning by-laws. Alternatively, these programs are complicated, comprehensive guides to regional resource use and development and do not control for any one effect from growth
and development.

An area of critical planning is defined as having regional or statewide significance because the area:

1. has a unique ecology and supports a rare, or fragile ecology, or has a unique social, cultural, or historic value, or

2. has a unique topography or contains unsuitable soils, the probability of flooding, or other man-made hazards, or

3. has economic value and supports agricultural or forest products or other raw materials needed by the state’s economy, or

4. has special locational characteristics, or

5. has major use as a public facility, such as a state or federal highway, or an educational institution; both which serve many jurisdictions. (Massachusetts Department of Community Affairs, 1975)

It’s clear from the definition that Areas of Critical Planning encompass both man-made planning issues, such as highway usage, and natural resource planning issues, such as watershed protection. This fact indicates the complexity of the individual, area plans which result from this designation.

The concept of areas of critical plans are still controversial, despite a 14 year existence in this country. Developers view the states’ programs as intrusions on their rights to develop, while environmentalists view the programs as too prodevelopment. However, the goal of every critical
area plan is to balance the ever-present tensions between land use, economic development, and natural resource conservation.

This chapter presents the approaches of two states: Florida and Massachusetts. The description of a critical area plan, and the potential application of this idea, in Massachusetts, to the problem of suburban traffic congestion is discussed.

Florida: Areas of Critical Planning

Rising out of the environmental movement of the late 1970's, Florida responded to an acute water supply problem and enacted the Environmental Land and Water Act of 1972 (Chapter 360, Florida Statutes). Section five of this act established the state's right to designate areas needing specific environmental management throughout the state. The Act permitted the Governor and the executive offices to only identify areas in the state which needed careful study and potential designation as an area of critical planning. The first step for Florida was the formation of a Land Use Study Commission which studied the issues of planning and environmental concern in the state for one year, and recommended areas for further study.

However, Florida enacted four amendments to Chapter 380 between 1973 and 1986, in an effort to make the law more effective. The largest reform included the creation of statewide Resource Planning and Management Committees. These
Committees, comprised of state, regional, local officials, and private sector business people, were charged with creating resource use and growth management plans for study areas statewide which had already been designated by the Governor’s Commission. The Committees each had one year to create the plans for their specific area, and the local governments in each study area had one year to review the plans. Local governments had the option of creating their own plan as long as the local plan involved tougher regulations and guidelines for resource use and development than those in the state’s plan for their area. If the local governments in each region failed to voluntarily adopt the Committee’s recommendations, to devise their own, or to jointly plan with adjacent towns, the regional Committee designated the study area as an area of critical planning, and assigned a plan for resource use and growth management to the region.

Florida’s success in implementing a land reform act of this magnitude is attributed to the quality of each Committee’s members and their work. Without serious, dedicated and technically proficient professionals working tirelessly on plan designs for study areas throughout the state, the adoption of resource use and growth management plans wouldn’t have occurred. (DeGrove, 1984)

In 1986, Florida added the latest addition to the critical area program. Florida has created "Growth Management Agreements" under Chapter 380 of the Florida Statutes, to
address growth problems between towns in a less formal, and more expedient manner than as a formal designation as a study area or area of critical planning. In Florida, two contiguous counties and one neighboring city were given the choice of a designation as a critical area, or of entering together into a growth management agreement with the state. The choice was made in favor of the faster process of consensus agreement which now permits the Department of Community Affairs to manage and protect the land and water resources in that locale. (Godschalk, 1987)

There are several attributes of critical area planning as an approach to designing workable resource and growth management plans for Massachusetts.

The first is that this approach encourages cooperative solutions to regional problems. Florida towns are encouraged to negotiate a development strategy between themselves which benefits the whole region and reflects the regional plan approved by the region’s Committee. Compromises are made for the collective good, but key concerns of each town such as traffic congestion or overdevelopment are addressed because an agreement must be reached and a plan written, as established by Chapter 380. It is in each town’s interest to negotiate on issues which matter most to it. Hence, a multijurisdictional region has the opportunity to tailor a critical area plan to fit its specific problems.

The aspect of negotiations for towns in a geographically
defined region serves to increase communication between neighboring towns which probably never exchange information. The negotiations process can potentially thwart future disputes towns might have with each other from the spillover of development across town lines by providing a forum for consensus building, communication, and the creation of a regional development strategy.

Politically, the concept of critical area planning was very difficult to pass through the conservative Florida legislature. Sweeping land reform measures may be equally difficult to pass in the Massachusetts legislature. Regional oversight of local government isn’t perceived as efficient, and is an added public expenditure. Regional or state oversight of local land use decisions would be especially unpopular in Massachusetts, where home rule pervades.

Implicit in Chapter 380 is state override of local decisions on land use and real estate development. The threat of a critical area designation created loud protests in Florida. Section five of the law was interpreted as a direct threat to home rule authority, and was largely ineffective the first six years due in part to local governments’ vehement protests, and in part to a lack of organization among the state administrative departments.

A similar uproar and public protest would occur in Massachusetts if critical area plans were introduced on a statewide level. Chapter 40A of the Massachusetts General
Laws protect the rights of property owners by tying the development rights to the strength of the town zoning map. Once zoned, a town's designated land uses and landowners' property rights are virtually cast in stone. The introduction of state or regional override of local land use decisions would be a tough battle to win politically because of the potential use and density changes a land reform would create.

**Massachusetts: Martha’s Vineyard Commission**

Modeled after Chapter 380, section five, the Massachusetts legislature passed an Act Protecting Land and Water on Martha’s Vineyard, and created Chapter 637 of the Acts of 1974. The purpose of the act is to force the Island to act as a cohesive planning body instead of half a dozen Yankee island towns.

The act establishes the Martha’s Vineyard Commission (MVC) to serve the same function as Florida’s land use committees do in critical area planning. The MVC has "the responsibilities, duties and powers established herein over the lands and island waters in Dukes County." (Acts, 1974: ch.637, s.2) The MVC was charged to prepare a growth plan to manage the Island’s real estate development and related impacts on the natural environment. The Commission’s statutory purpose is:

- to protect the health, safety and general welfare of Island residents and visitors by preserving and conserving...the unique natural, historical, ecological, scientific and cultural values of Martha’s Vineyard. (Acts,
The legality of the MVC as a regional planning body, and the designation of areas of critical planning has already been challenged by one Island landowner. The landowner argued for retaining his right to develop his land based upon prior local approvals to proceed, which he claimed vested his rights. The disputed site was inside a MVC study area and a potential area of critical planning. The MVC decided the proposed development was incompatible with the recommended uses in the area's development guidelines, and overrode the local planning approvals.

The Massachusetts Supreme Court upheld the MVC's right "to adopt regulations for the control of districts of critical planning concern." (Acts, 1974: ch 637, s.3) The importance of the court's decision lies in establishing the legality of a regional planning council's override of a local land use decision. (Strock v. MVC)

Implications of Critical Area Planning for Massachusetts

An important implication of the MVC for Massachusetts is the creation of a regional planning body with statutory powers to overturn local decisions in cases where the local decision is found to be incompatible with the regional plan, or critical area plan. With the exception of the MVC, regional planning agencies such as the Metropolitan Area Planning Council (MAPC), are permitted by law to act only in an
advisory capacity to Massachusetts cities and towns.
(Massachusetts G.L., 40B:s.5)

The MVC is able to promote development on the Island where development is environmentally feasible while protecting more fragile or overbuilt areas. This is significant for a region whose geographic boundaries pose a very real constraint on the region’s limits to growth.

Representative Carmen Buell from Greenfield, Massachusetts has introduced a bill to establish a statewide Land Use Commission. House bill 1577 (H 1577) creates a legislative Land Use Commission to study current state land use practices. It is not clear whether or not Representative Buell intends this commission to be precursor to the replication of Florida’s Chapter 380. However, the Commission sunsets after one year, and is created to make recommendations for a statewide policy to balance growth, development, and resource use. The members of the 19 person commission will be appointed by the Governor and the legislature.

Included in the list of criteria for a statewide program review, are transportation-related policies including the staging of regional development to adequate infrastructure facilities, and growth phasing to guide both the rate and location of development within regions of the state.

Although the single effort of one legislator at present, it is worthy to note that of those states which have enacted legislative changes to create statewide critical area
programs, each first established a land use commission. As previously indicated, the overall effectiveness of Buell's commission will reside in the leadership qualities and the level of participation and commitment exercised by the 19 members.

If the bill passes the legislature, it will unfortunately be only a legislative study commission and will have only members who are publically appointed or elected. This fact seriously reduces the effectiveness of the Commission's recommendations. A failure to include the private sector will result in recommendations for a state program or plan which won't have the business community's approval. Hence, the Commission's mission is weakened from the start.

Ideally, this Commission would be attached to a stronger movement in the state to move towards statewide designation of areas for critical planning and management. Under such a movement, the year-long Study Commission could designate areas needing more study or critical planning. Either the existing regional planning agency currently overseeing the newly-designated area, or a planning body newly created to plan specifically for the that designated area, would design and implement the critical area plan.

The problem of congested suburban corridors could be applied using points four and five of the definition previously described. Corridors such as routes 1, 2, and 128 fall under the definitions of "special location" and "use as a
major public facility." Although congested corridors cut across many local jurisdictions and existing, politically defined regions overseen by currently organized regional planning agencies such as Metrowest, areas of critical planning could be organized around these problem roadways.

However, a planning conflict looms if two distinct, regional planning bodies overlap territories. This problem would have to be dealt with at the state level. The solution could be to simply allow the transportation-related critical area plan to supercede the statutorily weaker regional plan of the regional planning agency.

A second effort is underway in Massachusetts to recreate the MVC and areas of critical planning on Cape Cod. Since regional planning is successful for the MVC, proponents of the proposed "Prospect: Cape Cod" effort believe the concept can work again. Attorney Don Connors of the Boston firm of Choate, Hall and Stewart, and Joel Bard of the MAPC are two such supporters. They believe that the Cape is a geographically distinct region within the state experiencing specific and relatively uniform development pressures on the coastal environment. "Prospect: Cape Cod" would transform the present regional planning agency from its current status as an advisory body to a regional, regulatory land-use agency. The agency would be able to overrule local planning boards in the event a local decision didn’t reflect the goals of the Cape’s plans.
Critics of the effort cite impossible political disparities among the Cape Cod towns. Although the Cape is a geographically defined region, the Cape is comprised of towns and villages with diverse social, economic, and political characteristics. In addition, critics say that local government resistance to this type of regional planning agency would preclude the creation of a Cape Cod Commission with statutory powers to overrule local decisions.

Both of the examples above illustrate an interest on the part of Massachusetts citizens, in looking at the current land uses and practices in the state. Many states already have state or regional planning which require local land use decisions to reflect a regional plan. Massachusetts is unique in its political structure of home rule authority. It is this factor which poses significant resistance to the concept of regional, critical area programs, whether they are defined geographically, politically or around specific planning problems. It is not that the concept is untried, unsuccessful or too risky to use in Massachusetts.

Critical area plans are one weapon in a state’s efforts to manage the negative aspects of growth and development, such as traffic congestion. This action presents a "conceptual umbrella" (Godschalk, 1987) that allows a state or regional planning body to address specific regional problems, and to design long range plans to mitigate the negative side effects from development such as traffic congestion.
CHAPTER THREE

DEVELOPMENTS OF REGIONAL IMPACT AND NEGOTIATED DEVELOPMENT AGREEMENTS

The last chapter presented the critical area plan as a statewide tool to use in designating regions of special planning concern. The experiences of Florida and Massachusetts illustrated how two states are currently using this concept on different scales, to manage land use and growth pressures. Chapter three discusses the Developments of Regional Impact (DRI) process, a regulatory mechanism of the regional planning agency, for review of development projects with regional impact or importance. Once again, the current experiences of Florida and Massachusetts illustrate DRI as a planning tool. A second section in the chapter discusses the use of negotiations as a "backdoor approach" to obtaining project approval. National experiences with negotiated development agreements have proved successful in yielding private provision of infrastructure improvements as well as other types of privately sponsored improvements which benefit communities. This section will illustrate how negotiations can be used as part of a regional DRI process to mitigate potential, future traffic congestion from proposed development.
Florida: Where DRI Began

Florida's Chapter 380 contains another major section which establishes a regulatory process for review of development proposals. Developments of Regional Impact is designed as a review process for projects such as large office park developments or shopping malls which, "because of their character, magnitude, or location, would have a substantial effect upon the health, safety or welfare of citizens of more than one county." (Florida Statutes, Ch.380, s.6)

Whereas areas of critical planning concern are established by a state land use commission and given to a regional planning body for design of a regional plan, the DRI review process depends heavily on the local initiative of the town government to identify proposed projects with potential regional impact through the use of a local performance based review process.

With respect to traffic congestion, Florida's DRI statute requires that each regional agency review development projects if the project is determined by the town to:

(have) an unfavorable impact on the environmental and natural resources of the region... (and) unduly burden public transportation facilities. (F.S., Ch.380, s.6)

The statute lists other criteria for regional impact review, however these two specifically address potential traffic impacts from large scale development projects. Also included
in Florida's DRI review are criteria pertaining to social, economic, and affordable housing issues.

In Florida, a town reviews a development proposal for a project of regional impact, the regional planning agency also reviews the project and makes recommendations to the local planning board. The regional government's overrule on a local government's decision as established by Chapter 380, occurs only in cases where a town approved project is clearly of regional impact, and was reviewed without adherence to DRI criteria. Florida currently has four geographically distinct areas of critical planning, and each region has DRI criteria specific to the problems and long range planning concerns of that region.

Several municipalities, such as Dade County, have designed their own "little DRIs" with tougher regulations than those under the regional DRI. Tougher regulations like the ones used by Dade County, are written into a performance based review and used by the local government in reviewing a development proposal. A more stringent review of projects of potential regional impact by a local government is actually beneficial to the developer because of the amount of time involved in entire the DRI review. A single, local jurisdiction with a stringent impact analysis during project review, is able to detect regulatory compliance problems with the proposed development much earlier than if the project were reviewed for DRI compliance by both the local and regional
governments. Early detection of compliance problems saves the developer money by notifying the developer early on in the review process.

How Does the DRI Work?

The effectiveness of regional review of development projects relies on the existence of a performance based review at the local level. To illustrate, assume a town has determined the amount, type and rate of growth feasibly managed each year, based upon the town’s current public facilities and infrastructure capacity. The town specifies in a zoning bylaw that any proposed, local commercial development project which generates more than 100 vehicle trips per average business day will be viewed as a development of regional impact, and subject to compliance with the regional DRI criteria. The project can’t be approved until it satisfies compliance with the regional DRI criteria, which mandates some action to manage the vehicle trips generated in excess of 100 per business day.

This illustrates the use of performance based regulations at the local level to define the maximum amount of vehicle trips per day the town will allow a development to generate. Performance based standards or zoning is especially suited to use at the local level when a second, or regional level of project review exists. A "nested" review process is created whereby the regional government establishes the maximum levels
of impact acceptable to the local government before the project under review is deemed too large and is designated as a project of regional impact. Chapter Four provides greater detail on the use of performance based zoning to manage growth at the local level.

Massachusetts: The Martha's Vineyard Commission

In addition to the creation of critical area plans, Chapter 637 of the Massachusetts acts of 1974 also established a DRI review. The law mandates the "recognition of developments of regional impact, and the review thereof by the regional commission." (Acts 1974, Ch.637,s.1)

In adopting standards and criteria for development guidelines, the MVC has several points relating to traffic generation, including:

- the size of the site to be developed,
- the amount of pedestrian and vehicular traffic likely to be generated,
- the extent to which the development would require the provision of municipal or regional services.

(Acts 1974,ch.637,s.13)

Carol Borer, director of the MVC, said in a telephone interview that the DRI process has generally worked well in both identifying and managing projects with a regional impact. Since the Island is rather small, few new development projects come under the DRI review. The Island's DRI uses performance based criteria to create a review process that works primarily off of the size of proposed project. Projects are subject to
the DRI regulations if the total commercial square footage is greater than or equal to 3000 feet, or if ten or more dwelling units. Ideally, the intricacy and depth of the impact analysis applied to a proposed project is a direct function of the square footage of the project reviewed, with successively tougher levels of review for larger projects. However, only two levels of performance based review currently exist on the Island: projects less than 3000 square feet are reviewed by the local governments, and projects greater than 3000 square feet are reviewed by the MVC. This occurrence is primarily due to the average size of the projects built on the Island, and the size of the Island itself. Very large scale projects, such as regional shopping malls are simply not built on an island as small as the Vineyard, hence the threshold for DRI review is quite low. Borer cited one problem with the DRI process in that project proposals are submitted to the local planning boards with the total square footage intentionally just beneath the 3000 square foot maximum, or threshold allowed for the local level of review. Circumventing the DRI process is frustrating to the MVC and the towns too, as projects with near-regional impact are built without having to meet the requirements set-up to manage the regional impacts.

Implications of DRI for Use in Massachusetts

The MVC’s use of DRI is an approach for use in other regions of the state. The legislature has already established
a regional planning agency with the power to overrule local land use decisions, and one which uses a regional review process for development of regional impact. The MVC relies on its own technical analysis of the Island's environmental capacity and on the need to manage the Island's finite set of natural resources. A logical step for the state or for an interested region, such as Cape Cod, would be to apply the MVC enabling legislation, critical area framework, and regulatory process to another geographically distinct region to further test the applicability of this model to managing growth and its negative effects.

The strongest argument against the use of the MVC model is the power given to the regional agency to override local government decisions.

THE ROLE OF NEGOTIATIONS IN SECURING INFRASTRUCTURE IMPROVEMENTS

The days of federally financed infrastructure expansion are gone. Consequently, Negotiated Development Agreements are used with more frequency as a means of privately financing badly needed infrastructure improvements, such as road widening, highway interchanges or the arrangement of transportation system management (TSM) actions. Negotiated agreements provide a process for both town and regional planning agencies to improve projects which don't meet local bylaws or regional DRI criteria. In this light, negotiated
agreements allow for solutions to unacceptable impacts from development projects, and allow for the approval of development projects which otherwise wouldn’t have been approved.

Cooperative agreements for infrastructure provision and related exactions have been made between developers and communities with tremendous success in nearly every state across the country. In contrast to clearly stated ordinances or impact fees, negotiated agreements are decided on case by case basis, providing both the developer and the town or regional planning agency an opportunity to determine an equitable cost sharing approach to the development. There are many impacts such as vehicle trip generation and traffic congestion, noise pollution, and an increased demand on municipal services which require indepth impact analysis to determine the extend of the effect on the town or region, from the proposed development. Negotiation of terms to reduce the negative impacts and spillover effects such as those mentioned, provides a flexible and creative process for joint problem solving, and allows for solutions to identified problems that pleases all parties involved.

An inherent question is raised when discussing the role of negotiations in securing infrastructure improvements, which is: what constrains a negotiation process? In other words, how much, and what types of power do towns and regional agencies really have in asking potential, large scale regional
employers, such as a GM or Wang, for exactions to pay for infrastructure improvements. The economic situation determines this power base, in part, but other variables play an important role, such as the diverse economic needs of one town in a region, versus the economic needs of a second town in the same region. To illustrate, consider the tax base and overall profile of two suburban Massachusetts towns in the same regional planning area: Medford and Winchester. The needs, wants, and ability to successfully negotiate differ among these two towns. This conflict is raised simply to point out to the reader, an unresolved tension in the application of securing negotiations for infrastructure improvements.

The Use of Negotiations in the DRI Review

Negotiations could be a formal part of the DRI review in Massachusetts. Local control over the negotiations process for projects beneath the DRI threshold, with regional guidance to encourage local compliance of regional plans, is probably a more politically acceptable approach to towns. The effective use of negotiations in securing private provision of infrastructure, TSM actions, or other strategies to reduce the potential traffic generated from a development, depends upon informed towns and regional planning agencies. The town or regional planning agency must first identify, analyze, and plan for the management of growth impacts to know which
improvements to negotiate for. Ideally, the town has a clear understanding of what its zone map says, and what the town would look like if it were developed to its full potential. Having a grasp on the "built out" scenario means a town can review more critically, the potential traffic impacts from a development, and proceed to the negotiations with a realistic set of necessary infrastructure improvements. In cases where the regional planning agency is negotiating improvements on DRI, an informed town will be in a better position to advise the agency of the needs of the town. Even though the town government lacks the power to approve projects of regional impact, the town still has a role in advising the regional planning agency during the negotiations.

A regional planning agency negotiates with a developer on all projects of regional impact, with the intent of creating a strategy to mitigate the regional impacts from the project. Following a regional plan, whether it be specifically for an established area of critical planning, or for a regional planning agency such as the MAPC, means that DRI criteria can be clearly written to uphold the goals of the plan.

Creating negotiation guidelines at the regional level which follow the growth strategy for the region, and reflect the DRI criteria for the region lays a clear path for local level compliance with regional goals and aids towns in understanding how to approach the use of this tool. Creating guidelines also ensures some form of consistency for
developers entering into a negotiation with a town or regional planning agency, and could offer some relief from the politics of the development review process for both parties.

Regionally provided technical assistance could educate towns in the art of negotiating if towns were interested. The regional planning agency could also aid the towns directly in negotiating development agreements on projects beneath the DRI size threshold. However, many Massachusetts town are presently too distrustful of the existing regional planning agencies to want to rely on a regional planning agency for help.

Negotiating development agreements between towns sharing the impacts of a development project such as traffic, and between the town and the developer is an problem-solving alternative which needs to be promoted and advertised. In areas experiencing severe growth pressure, the regulation of land uses doesn’t always produce beneficial results for the community because many spillover effects can’t be easily detected, let alone regulated, during project review. Negotiating solutions to fit those development projects which don’t fit neatly into a town’s review process enhances the potential gains to the town from the project.

Successful negotiating requires a public official, attorney or planner trained in and experienced at negotiating contracts. Most developers are quite good at arguing the attributes of their development for the community. The
community needs an equally persuasive spokesperson to negotiate a contract to ensure public’s position.

Developers too, need to realize that a negotiated development agreement is beneficial to the economic success of the project. All improvements, whether they be TSM and on-site, or the construction of a highway interchange, add to the overall success of the development by creating a project which fits into the surrounding physical, social, environmental and political environment. From the developer’s perspective, a successful project is the best public relations tool, and one that ensures an entry into development in other towns.

Developers often prefer open negotiation of specific issues than merely paying impact fees which go into a "blind pool". Negotiating is a direct approach to problem solving and gives the developers more control in overseeing which improvements are provided.

Several negative aspects of the negotiations process merit discussion. First, developer contributions usually go towards financing infrastructure improvements that directly benefit their projects, rather than towards improvements which benefit the community as a whole. Building only near-site improvements, such as increased capacity access roads, does little to alleviate traffic congestion dispersed throughout the town. Hence, publically funded regional improvements would be needed to link the near-site improvements with the existing road network, and thus necessitates a public
expenditure. (Cervero, 1986, p.131)

Second, there are significant transaction costs involved in a negotiation. The staff time for the public agency and developer involved, and the opportunity cost involved in project delay for all parties illustrates two negative aspects of the use of negotiations.

Third, issues of equity arise in the negotiations process. Who has the power in the negotiations? Who's interests are represented at the negotiations table? Can local government rely on a regional planning agency to fairly represent local interests in a negotiated agreement on a project of regional impact? Issues such as this one need to be addressed to make the use of negotiations an equitable process for all parties involved.

How Have Communities Used This Approach?

To illustrate, Montgomery County, Maryland has used negotiations to drive an infrastructure facilities ordinance and growth phasing plan. Consortiums of developers have created "road clubs" to pool their money and have negotiated to build badly needed infrastructure improvements, such as connecting roads to major corridors, which the county would have been unable to build for years. County approval of development proposals is contingent upon this infrastructure provision, and road clubs have become a means to privately finance the necessary improvements because they spread the
costs of the improvements across the developers who benefit from them. (Porter, 1986:88) Some towns, like Fort Collins, Colorado, have developed guidelines which give the developer the option either to pay specified exactions and fees, or to design their projects in such a way as to achieve the city’s goal of preserving the community’s quality of life. Dallas, Texas has a city policy stating that developers must share in paying for transportation improvements as development occurs. The city wants development to proceed, but doesn’t want to be overloaded by the congestion created by the development.

The negotiations between public (mostly city or county) and private sectors over roadway improvements has included some very substantial projects. In San Diego, California, a developer spent $57.5 million for new arterials, freeway overpasses and signal upgrades; in Pleasanton, California, $85 million was privately financed for interchanges, computerized signaling, and landscaping, near newly developed office parks. Other, smaller projects may consist of a single overpass or a widened road, but can still cost in the millions of dollars. (Cervero, 1986:133)

The successes of public-private negotiations for private infrastructure improvements are well-documented. The use of this tool as a creative, problem-solving technique to augment the DRI process should be considered by policy makers looking for solutions to traffic congestion from development.

Negotiating infrastructure improvements during the approvals
process allows the economic benefit from the built project to reach the region without the negative effects of the project impacting the region’s quality of life.
CHAPTER FOUR

CREATING A LOCAL PROCESS FOR DEVELOPMENTS OF REGIONAL IMPACT WITH PERFORMANCE ZONING

Conventional, or Euclidean zoning divides a town into districts by regulating and segregating uses of the land and the location, type and size of development on the land. Zoning is a legal regulation used by towns to implement a comprehensive land use plan, to promote development of compatible uses, and to protect the general health and welfare of the community.

Performance Zoning augments conventional zoning. Performance zoning establishes incentives for local developers based upon either permissible effects of the development on the surrounding area, or the permissible intensity of the land use, rather than restricting the land use. To develop a list of performance-related criteria for project review, towns must first ask themselves tough questions on what the community problems are, and how to manage them to protect the quality of life in the community. Once defined, these incentives prod developers into directly addressing the problems as identified by the community leaders.

The Use of Performance Zoning in Enforcing the DRI Review

Some performance zoning systems use point values for various criteria, and require a cumulative point total to
permit development. The point system is tied to an annual building permit limit in some towns, whereby only the highest point achieving developments are allowed to receive permits.

Performance zoning works well as an addition to traditional zoning because performance zoning influences the effects of development on the environmental capacity and the municipal services, and does not require a change in the zoned land use. This is a significant feature for use in here in Massachusetts, since it is often impossible for a local government to change a zone designation, especially when the proposed zone change is a move to downzone. A zone change can be quite difficult for two reasons, one being the state’s statutory provisions which protect property owners’ rights to develop their land once the zone map is established, and the second relating to the strength and structure of local government in Massachusetts. Given that the addition of performance zoning to a town’s bylaws doesn’t require a zone change, performance zoning may be more politically acceptable.

Another sound aspect of performance based zoning is that the criteria can be designed to act as a triggering mechanism with successively tougher levels of review built into it. It is this feature which illustrates the use of performance zoning with the DRI review. For a commercial development of a smaller scale with conceivably fewer impacts and demands on a town’s roads and services, local project approval is given if
the project fulfills enough of the specified incentives, or collects enough "points" in the review process. However, larger projects with a larger impact on the town, would not pass through the permitting process as easily. The performance guidelines could be written by the town, in such a way as to establish more stringent review for projects with larger impacts. These would require a more stringent traffic mitigating strategy to pass through the approvals process, and would therefore be required to pass the DRI review of the regional planning agency.

The creation of a "hybrid" review by local government, using traditional zoning to designate use, and incentive-based "triggering" mechanisms which in part, follow the review criteria established by the region's DRI, gives a town a solid framework to adequately analyze the traffic impacts generated by a proposed project. A process such as this one ultimately gives a town greater control over sharing the costs and impacts of development with the developer.

Performance zoning controls have a positive effect on suburban corridors. Trip generation from a proposed development can directly increase the demand on municipal roads and services, and by contributing to traffic congestion. In preparation, a town may move to develop an incentive-based program for office park developments which promotes on-site trip management in exchange for a higher buildable density. A trade such as this one benefits the developer by permitting
the developer to increase his rentable square footage and operating income while reducing the use of local roads, the demand on the local public works, and through-traffic congestion for the town. Additionally, the developer or employer would have to organize alternative means of getting employees to the site. Transportation management actions, such as ride-sharing, vanpooling, or park and ride shuttles would have to be coordinated to make up for the reduction in parking spaces. These actions would further lower the vehicle trips per day generated by the development.

An danger in using an incentive or performance based program is that smaller projects will unintentionally be encouraged because they don't trigger maximum level criteria, as in the maximum level of permissible vehicle trips per average business day. This very point was emphasized in Chapter Three with the experiences of the MVC and the problem larger commercial and residential development proposals coming in just under a performance established threshold of 3000 square feet. In the aggregate, several small developments may have an effect which exceeds the permissible level for any one large development. Several small, geographically diverse developments are more difficult to manage with public transit or transportation management actions; whereas the traffic generated by one large scale project is more easily managed. (interview with Philip Herr)

One way of controlling for this problem is to lower the
threshold for a permissible level of impact from a
development. The experiences of the MVC and other communities
that have done this suggests that developers introduce
development proposals with projected impacts that come in just
under the new, lowered threshold. Developers adjust to the
lowered permissible impact from development, and the problem
of controlling for an impact in the review process still
exists.

Planner Philip Herr says that this problem is manageable
if the control itself is well-drafted. If controlling for
traffic generated from new development, the limit should be on
trip density, similar to the Walnut Creek ordinance presented
in Chapter One. A control on the permissible vehicle trip
generation tied to the capacity of the road network, promotes
a control on the density of the traffic. Hence, the problem
of reviewing development proposals which are just beneath the
size threshold is abolished. There is no longer a size bias
or measurement in the threshold as it now limits density.

A potential problem with a point system review tied to an
annual building limit, is that project proposals can
"bottleneck" in the approval process. Towns often wait to
review as many proposals as possible before awarding permits
if there are a limited number of permits available in any one
year.

A Closer Look at Two Types of Performance Zoning Which Control
For Traffic Congestion

Phased Development and Commercial Development Scheduling both regulate the timing and geographic distribution of development by tying it to existing municipal infrastructure and services. Each project proposal can be ranked by assigning the project points based on its proximity to commuter corridors, on-site provisions such as retail services which reduce the need for a car, or access to public transit services. Following the performance zoning concept, both of these actions are often, but not always, enforced with an annual limit or cap on commercial development, and neither actions require a change in the zoning designations.

A Regional Approach to Phasing Development

Maryland’s Montgomery County plan for staging development to meet current and proposed infrastructure capacity is an attempt to manage the county’s rampant growth. The ordinance requires local officials to examine the ability of the existing infrastructure and services to support the project, before approval. First, the county measures the volume of primarily commuter traffic on major commuter corridors, then they consider how the county’s potential traffic is if the county were built out according to the zoning map, thus determining the "zone ceiling". They compared this ceiling with the total amount of development that could be handled by the current capital improvements program to determine how much
development the infrastructure can feasibly support. The threshold is the total amount of development supportable by the current infrastructure, and is important to the county's regulatory controls because it is the first phase of the development review process. The traffic generated by a proposed development is compared with what the in place infrastructure can handle. (Porter, 1986:87)

If it appears that a development will produce unacceptable levels of infrastructure demand, then the private sector and/or public sector, must increase the facility and service capacity before the proposal is approved. If no short term solution is possible, development in some areas of the county can (and has been) stopped completely. (Porter, 1986)

Maryland's state law allows the county to use the availability of adequate facilities as a deterrent to development. However, the same tactic was not upheld by the Colorado Supreme Court when Boulder County was seen as the public utility and sole provider of the necessary pre-development infrastructure. The Supreme Court found that Boulder County had a conflict of interest in providing the necessary infrastructure as well as constricting development based on the infrastructure. ((Robinson v. City of Boulder) Porter, 1986:36)

The question of whether or not Massachusetts could legally institute a regional approach to phasing growth should be considered. While some Massachusetts towns currently use
phasing techniques to slow residential developments' demand on local sewer and water services, there are no suburban Massachusetts towns using a cooperative regional approach to development's demand on transit supply.

Montgomery County's approach is largely successful as a wide scale plan because the county is a single jurisdiction, not a collection of towns, each with their own local decision-making body. The phasing approach isn't feasible for Massachusetts unless it is controlled by a regional planning agency. In Massachusetts, this would mean a tough political battle to create a multijurisdictional phasing strategy, and get agreement among the communities. In addition, Chapter 40B of the Massachusetts General Laws would have to be amended to give regional planning bodies the power to overrule local decisions in implementing the regional phasing plan if the plan were based on infrastructure capacity.

However, useful information can be gleaned from studying the Montgomery County plan. First, the plan attempts to balance public and private infrastructure provision with private development in a growing metropolitan area. The ordinance provides specific information to developers on the type of infrastructure that is missing, but required for development, thus enabling developers to quantify the cost of providing the infrastructure. Building roads has increased costs to developers, but still, roads have been built. The communities in the county still complain of terrible commuter
traffic congestion, but the county planning agency has calculated the demand and says it's only time before the capital improvements alleviate the congestion, as long as commercial development continues to be staged to the threshold level.

Second, this approach is more equitable to developers because it establishes project review very early on in the development process. By establishing an on-going county review, developers know if their project will be approved before on-site improvement and expenses incurred.

Third, as with Florida's Land and Water Management Act of 1972, this ordinance once again illustrates the effectiveness of a regional approach to planning and managing growth. Montgomery County is able to promote growth in the areas of the county which have enough infrastructure facilities to support the development, while planning for capital improvements in the less developed areas of the county.

Lastly, phasing growth to meet current of planned infrastructure improvements is only equitable if new infrastructure will indeed be built. There isn't much infrastructure being built to expand the network in the Massachusetts suburbs at present, hence, a town would have to have a plan to expand infrastructure capacity before the town could restrict development to capacity. Otherwise the ordinance could appear as a moratoria and be challenged in court.
A Local Approach to Commercial Phasing

Orleans, Massachusetts passed a Commercial Growth Phasing ordinance in 1985 by creating an incentive based system for project review. The ordinance sets a limit on annual, commercial development and the town awards building permits to those projects each year which pass the review process on a first come, first served basis.

A section inserted into Orleans’ bylaws review projects with criteria based on the development’s location and potential impacts on the surrounding area. Section 5:15 of the Orleans’ Zoning Bylaw asks questions such as:

Is the proposal to be located near uses which are similar to the proposed development, or, if not, are the nearby uses likely to benefit from or be damaged by having the proposal nearby?

Is traffic volume at this location such that this proposal will increase traffic by only a minor amount?

Orleans is concerned about two things: the rapidly changing town character, and the negative impacts from development on traffic circulation in the town (congestion, noise, parking, and pedestrian access). The town created a phasing ordinance attempting to control the development of commerce in the same way many other Massachusetts towns typically phase residential development to the supply of municipal services. (interview with Philip Herr)
Performance zoning is a flexible form of regulation for use by local government seeking to encourage specific outcomes from development. The use of this tool on a local level could model development guidelines established at the regional level which reflect a regional strategy and overall regional policy on growth and development.

There are several clear benefits to incorporating performance related criteria into a town’s bylaws. The first benefit is that performance zoning doesn’t require a zone change. The second is that performance zoning is created to reflect specific issues of local planning concern, and is a way for a town to promote a desired outcome from development. Using this tool well precludes a town’s understanding what it has already zoned for in order that the town be able to effectively draft its performance bylaws. The third, and perhaps most important feature of this regulation, is an ability to create successively more stringent levels of impact analysis for project review. This feature makes performance zoning well-suited for use with a regional DRI process. A natural progression could be developed, whereby the local government reviews projects of a smaller scale, and with fewer or more easily managed impacts. Projects which are larger impacts are reviewed by the DRI process, by the regional planning agency. A regulatory chain such as this one allows local government control over development decisions, except in cases where the project is clearly of a regional impact.
RECOMMENDATIONS AND CONCLUSIONS

The text of this thesis has attempted to show that there is a need for an integrated approach to planning in Massachusetts. Furthermore, Florida developed a concept for implementing regional plans which has been tried in Massachusetts by the Martha's Vineyard Commission. The MVC model could be tried in other regions throughout the state, using the tools of regionally negotiated strategies and development agreements among towns, and a performance based, DRI review process which identifies the regional impact from development projects. The regional impact of development projects, such as traffic congestion, can't be dealt with on a local level if towns and the state expect suburban congestion to improve. The problem with allowing local government to define their own growth strategy, is that an incremental approach to growth management develops with little regional cohesiveness. Hence, the planning efforts of conscientious towns are often unintentionally thwarted by a lack of planning effort from neighboring towns; and regional problems persist.

The following pages present a prescription for action by the state, regional, and local levels of government. The recommendations address the role of the regional planning
agencies in helping towns make prudent and informed decisions on land use. They do so by providing useful concepts and tools for towns to use to achieve compliance with the regionally established growth management plan.

State Role

The state should legislatively create a Land Use Study Commission to study the current patterns in land use and development statewide. The Commission would recommend to the state, the creation of areas of critical planning across the state for which specific management plans would be developed. A decision would have to be made concerning whether the designation of these areas. Would they follow the established designated regions, such as the MAPC, or would they be problem specific and designated based upon the severity of a problem such as traffic congestion along a corridor?

The state should also provide the necessary technical assistance that less professional towns might need to move towards compliance with a regional plan. Towns across the state badly need technical planning assistance to determine what they have already zoned for. Planner Philip Herr suggested that towns would benefit from the state providing a simple-to-use computer program which would enable towns to figure out their density at a fully built scenario, based upon the current zoning map. The Department of Public Works is one such agency which could provide this service.

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agencies in helping towns make prudent and informed decisions on land use. They do so by providing useful concepts and tools for towns to use to achieve compliance with the regionally established growth management plan.

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The state would have to determine the make-up of the
regional planning agencies. Would the members be the planners from local communities in a designated region, or the staff from the region's existing regional agency, such as the staff from the MAPC, or a combination of the two? This issue remains unresolved in the thesis, but merits attention from the state in setting up this approach.

Regional Planning Agency's Role

1. The Plan and Development Guidelines The regional planning agency for each state designated district would create a regional plan to manage growth based on the projected demographic changes, the infrastructure and environment's carrying capacity. The regional agency would write performance based guidelines for development in the region and the state would mandate that local government comply with these guidelines. These guidelines for development would specifically reflect environmental and development issues and problems related to growth management in the region.

2. DRI The regional planning agency would also write the DRI regulations, and would maintain the review of all large scale developments of regional impact in its jurisdiction. The DRI criteria would be performance based, and would review the impacts from development based upon stringent analysis from the regional planning staff. A negotiations process would be developed for representatives of the town, the
regional agency, and the developer to work out an approval for a project which is consistent with the regional plan, and beneficial to the town and to the developer.

3. Power of the Regional Planning Agency  The issue of what type and how much power the regional planning agency should have must be raised. The state would have to give the regional planning agencies statutory power to implement regional plans. This decision has significant political implications, but is necessary if the regional planning agency is to have control over the DRI process, or a regional plan tied to infrastructure capacity.

An important role for the regional planning agencies to continue to fulfill is as technical consultants and planning professionals to towns without a professional staff, or to towns that request help. It's probable that many towns would need substantial help to review their zone map and amend their bylaws to reflect a performance-based regional plan and development strategy. The regional planning agencies would continue to work in this capacity with the towns.

The Role of Local Government

1. Current Zone Map Analysis  Local governments across the state should carefully evaluate what the existing zone map allows, how much density has been zoned, and what the town would look like if it were built to the full potential established by the map. The personal computer software made
available by the state, would provide assistance in determining the various levels of impact from development, which are related to greater levels of development and density in the town.

2. Land Inventory Each town should also inventory the undeveloped land as preparation for the development of an open space, and acquisition program for preserving these areas.

3. Infrastructure Inventory Each town needs to inventory its present infrastructure capacity, and determine how that relates to the both the permitted development in the zone map, as well as the regional guidelines for development. Should a town elect to phase development to its infrastructure capacity, it would have to create a plan for upgrading and expanding its infrastructure.

4. Performance Zoning Lastly, towns need to develop performance based zoning to use in conjunction with the Euclidian use zoning as established in the zone plan. The performance criteria needs to fit into, and reflect the development guidelines for the regional plan, and should contain some threshold mechanism to identify potential projects which need a DRI review for approval.

CONCLUSIONS

I believe that the Commonwealth of Massachusetts suffers from a lack of regional planning. The political structure and strength of home rule authority prevents the regional planning
agencies from having any real power. The state has been very slow to dictate to the local governments, and the political popularity of measures such as the MVC or the proposed "Prospect: Cape Cod" is mixed, at best. There is a real reluctance on the part of the state to provide leadership or policy when the outcome is forcing the towns to comply against their will. However, failure on the state's part to provide leadership on serious problems results in local solutions which mirror a local definition of the problem. The state ends up with a fragmented definition of the problem, and solutions which are disjointed and incremental within regions. This incremental pattern is best illustrated by a current, local planning issue. Most towns along route 128 agree that there is a traffic congestion problem on the corridor. And yet a town on route 128 recently permitted the building of a large four-plex office park for a Boston-based developer, without requiring any TSM actions, infrastructure improvements, or any other type of traffic mitigating strategy. This town has continually been accused of ignoring regional problems in lieu of serving its own, local needs.

My thesis has presented concepts for use by the state, the regional planning agencies, and the local governments. I have described ideas and tools which could be used collectively as a process to manage growth and to mitigate the negative effects of growth which end up becoming regional problems, as traffic congestion in the suburbs clearly has.
The political viability in Massachusetts, of state mandated, regionally assisted growth management is the lingering question. I think that the ideas and recommendations that I presented in this chapter could be implemented because the local governments are retaining most of their power over land use decisions. If the state wants a strategy to mitigate traffic congestion, or to encourage other types of actions from the towns, then the state needs to take the leadership and create a process which will promote discussion amongst towns and will result in the development of usable plans.
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