A STRATEGY FOR THE
EXPANDED USE OF LAND BANKING

BY
MARK NELSON HOCHMAN
B.S. American University
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Certified by Thesis Supervisor

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Active acquisition, development and management of municipal land resources, often termed land banking, has often been proposed as a potentially useful addition to the land use controls commonly used in the United States (e.g., zoning, taxation, incentives). It has been postulated that existing land use controls have a limited value because they are principally negative or passive in character. Many feel that land banking might offer a method for representative government agencies to play a more active role in securing land uses to help produce desired economic, social and architectural changes for their constituencies.

The research for this paper examined land banking techniques and other land use control measures used both inside and outside the United States and analyses were made of their potential for producing the changes desired by their applicability on a wider scale. Some of the techniques uncovered by the research were then applied to the town of Concord, Massachusetts to test their potential for helping that town achieve its stated goals and objectives for managing its growth. The general conclusion was that an expanded land banking system in combination with improvements in the Town's other land use controls could substantially benefit the Town. Furthermore, it was discovered that creation of municipal leaseholds on banked land had the potential for generating enough income to help the Town undertake a more detailed land planning process and provide for some of its social equity goals.

Specific recommendations were made for the Town's action. The principal recommendation was that the Town select a full time land manager who would be responsible for developing and guiding the Town's land planning and management.

Some of the legal and other implications of the system's adoption were discussed. The general conclusion was that the legality of the methods recommended for the Town of Concord was untested. But it was felt that enough precedents had been set by the use of similar methods that the methods could be expected to stand further legal scrutiny.

It was also noted that the land banking system recommended might be of use to a wide range of towns and cities throughout the state and the country. On the other hand, it was suggested that
there was some danger that widespread adoption by towns without Concord's altruistic goals could create some unfortunate results.

Thesis Supervisor: Arthur P. Solomon
Title: Associate Professor, Department of Urban Studies and Planning
Associate Director of the Joint Center for Urban Studies
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I. INTRODUCTION

The rapid country-wide suburbanization process that occurred following World War II has changed many of the attitudes which precipitated the process. People in suburban communities throughout the country have come to the realization that the quality of the amenities they sought by moving to the suburbs (e.g., open space, good schools, lack of crime, low taxation) has been endangered by the congestion created by the number of people also seeking these amenities. As one result, the residents of many suburban communities have become increasingly active in seeking ways in which to control their towns' growth and the use of their land.

The concerns which many are feeling have been described widely in the popular press. One magazine noted that: "The land boom is somewhat paradoxically drawing strength from a new, more socially responsible public attitude toward land. States and localities are imposing stricter zoning laws and environmental standards, punitive taxes on speculators, even some outright bans on development."¹

Many feel that the most commonly applied land use controls in the United States (e.g., zoning, taxation, provision of public services, mortgage subsidies, incentives) have not been effective in either preserving a community's character or achieving it in a way that the residents desire. More than one town planner has stated that the town's key land use control, zoning, has failed

¹Time, 1 October 1973, p. 80.
to do its job, that more "active" or "positive" approaches are required. Many seem to ignore that the largest portion of towns' land use and much of their economic and social character have resulted from the success of zoning ordinances. For example, in the Boston suburb of Concord, Massachusetts (see Map 1), which will be the focus of later discussion in this paper, the existing zoning ordinance allows for much of the privately owned open space in the town to be subdivided for single family housing units on ½-acre to two-acre lots. As might be expected, much of the town is developed into lots of just that size.

There are increasingly fewer houses that people with modest incomes can afford. For example, the mean selling price of new housing in the town rose from about $40,000 in 1963 (adjusted for inflation to 1973 terms) to $63,000 in 1973. The average income required to afford the 1963 house was about $15,000 while the 1973 house required an income of about $28,000. But, as one zoning specialist noted, when zoning was first being attempted in the twenties, "the zoning map 'stabilized property values' and that was what the city fathers were interested in."  

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1 Compiled from town permit records showing cost and adjusted for selling price.

2 Average U.S. Department of Labor, Bureau of Labor Statistics data for upper middle income families were used to derive income from housing cost. Adjustments were made for inflation, increased property tax (about 35%), and changes in money costs between the two periods.

MAP 1

Location of Concord in the Boston SMSA

(Numbers shown designate census tracts)
The Concord zoning ordinance which set subdivision limits was first passed in 1928 when the Town was still largely rural (population 8000). The last significant change in the ordinance's density provisions occurred in 1959 as the Town began to grow more rapidly as towns closer to Boston became more densely populated (population 12000). At that time the Town adopted two-acre zoning for much of the Town's undeveloped land, and allowed for the construction of enough housing to accommodate approximately 40,000 people (the population in 1970 was 16,148 and is estimated to be about 18,000 at the time of this writing).

Many of Concord's citizens have been concerned about the effect suburbanization is having on:

- the Town's diminishing diversity because of the increasing wealth required to afford the higher and higher priced housing (and rising tax rate), especially on two-acre house lots;
- the limitations placed on feelings of openness, even in two-acre cluster zoned areas (that allow for development at higher densities in one section to provide more green space elsewhere);
- The increasing remoteness of government to the population.

In 1970 the Town established a Comprehensive Town Plans Committee (CTPC) to help gain a better understanding of the severity of these concerns and set goals for their alleviation.
Thus, there appears to be occurring in Concord and elsewhere a realization that maintenance of property values is not as important a goal as was originally thought, and/or that zoning was not the best device to choose in order to achieve Town goals. Whichever the case, towns across the country are presently searching for improved or new land use controls to achieve their aims.

Many are searching for ways to predict the impact of zoning more effectively and supplement its inadequacies with different approaches. Among the initial efforts to supplement zoning's growth management role has been the reduction of the developable land supply through increasing acquisition of "conservation land."

Moreover, community officials interviewed in towns in Massachusetts and elsewhere,¹ Concord included, have felt that public land acquisition might also be considered for developable land. The intent would then be not only to limit the amount of development but to determine the character of the development allowed. It has been hypothesized that if a community owned its developed and/or developable land it could take a more active role in controlling its economy and social climate.

For example, some of the aims of a system of municipal ownership of developmental land might be to:

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¹Some of the communities outside Concord more actively considering acquisition (e.g. Fairfax County Virginia, Boulder Colorado, St. George Vermont) are discussed in Chapter II.
control the price of the land and thus to some degree reduce speculation-caused price spirals;

designate the types of land uses and tenants (e.g. mixed incomes);

gain well-designed development;

derive the benefits of land price appreciation for the larger community; and

manage developed land so that decay would be precluded.

This paper will examine these hypotheses about the potential impact of the broader uses of municipal land reserves (these uses are often referred to as land banking), by examining how they might function in the Town of Concord and estimating their impact on the Town's economic and social structure. Then recommendations will be made for methods the Town might consider for using land banking in conjunction with other land use controls to meet the Town's goals.

Chapter II, Practices in Land Banking, will review recent successful experiences in land banking, often in combination with other land use controls, in Sweden and the United States; Chapter III, Land Use Issues in Concord, will examine the land use methods presently in use in Concord; Chapter IV, Land Banking Strategies for Concord, suggests alternatives for upgrading Concord's land use methods; Chapter V, Recommendations, recommends the adoption of a specific set of strategies; and Chapter VI, Implications, suggests some of the legal and other implications of the recommended strategies, as well as their potentially broader usage.
II. PRACTICES IN LAND BANKING

While land banking might appear to be a land planning innovation for the United States, many American towns have practiced it for years in one form or another. In addition to acquiring and managing land for schools, recreation and conservation, municipalities have actively acquired and used community land to effect specific social and economic objectives. Creation of industrial parks is one example; land acquisition and disposal for the purpose of residential and commercial/industrial development has been used by redevelopment authorities for a number of years; and recently, widespread purchase of conservation land specifically to control population has been practiced for some time in Concord and elsewhere (e.g., Weston, Massachusetts; Boulder, Colorado; New Jersey).

The difference between these efforts and those used in other countries appears to be the degree of organization of the effort. For generations land banking has been a well-planned part of land use planning in Sweden, France, West Germany and other countries where more dense populations per unit of land have had to be accommodated for many more years than in the United States.

A. The Swedish System

Sweden's system, particularly that used to control Stockholm's land use, appears to be well defined after about a 400-year evolution. Examination of some of its mechanisms and operating principles might offer some guidance as to the suitability of systems to help solve land use problems in this country. The Swedish use of the municipality as the key planning agency appears
to have relevance to development of a system at that level for Concord.

The heart of the Swedish system is a detailed land use plan developed by each municipality to guide its own growth and provide for renewal when appropriate. There is a great deal of emphasis in their planning effort to be certain that the plans made are implemented as projected. Plans made by developers and others must coincide with the municipality's plans. The described aim is for there to be a "municipal monopoly on planning,"\(^1\)

Typically, the municipalities use land banking to:\(^2\)

- continually modernize the plan and structure of their community by purchasing sections that require renewal;
- keep housing costs reduced by purchasing sites before values are substantially inflated; spreading high site costs to lower cost areas; and assuring an even production flow for developers; and selling parcels at appropriate times and prices.\(^3\)

The municipal land banks are partly supported by income derived from long term leases to developers. Also, income is derived from sale or financing of land to realize its appreciation after it has been held for several years or more.

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\(^2\) Ibid.

\(^3\) Discussion in the Urban Land Research Analysis Corp's. "Land Banks for Planning and Control" (December 1967) indicate that about 30% of a community's area must be municipally controlled for the municipality to regulate market prices for land.
To help make the land banks function and gain the land usage required, the municipalities also utilize:

- acquisition of a parcel's development rights
- subsidies and incentives;
- provision of additional community services, particularly road and transportation networks;
- joint ventures with other government, private and institutional land purchases and developers;
- taking of land through eminent domain (expropriation).

The community-wide land use plan details the land to be chosen to meet community goals. The plans for the timing of land acquisitions is critical. The earlier land can be acquired before its use is required, the less speculation will drive up its price. Negotiations for the purchase of land usually occur at least six to seven years ahead of when the land is to be used. Thus, "the municipality is able to utilize the landowner's spontaneous willingness to sell and thereby avoid having always to appear as the more eager party." ² And, land acquired too early ties up capital unnecessarily.

Land use decisions and plans for the acquisition, development and/or disposal of land for each municipality are based on their projected impact on the town's economy and demography 10 to 15 years ahead. Those communities too small to have the requisite in-house planning capability to develop such detailed planning

1 Ibid.
2 Ibid.
can rely on the technical services of a regional planning facility. The regional planning bodies also provide guidance and coordinate municipal efforts in their development of land uses that have region-wide impacts. The regional groups responsibility for regulating the municipalities is limited. Specification and regulation of each community's social and legal responsibilities are set nationally (e.g. administration of each municipality's portion of the National Housing Quota).

B. Comparisons to the United States

Many of the Swedish practices outlined above for land use planning, including land banking, have parallels or have been considered as potentially useful in the United States. Particularly, the development of interlocking municipal and regional plans as a basis for any land planning effort has been widely suggested and has been adopted to some degree in this country.

Massachusetts has regional planning agencies (RPA's) for all areas in the State. However, the RPA's lack a political constituency. They serve primarily as data development agencies and have had little impact on the development of municipal plans. Furthermore, they usually fail to integrate their efforts with the regional political structures, the county governments.

In some instances municipalities and states have combined variations of land banking with other land use planning methods to effect combined regional and municipal controls. For example, the State of New York and the unincorporated Buffalo suburb of Amherst, New York (including the incorporated entity at Williams-ville), have developed a system to accommodate a major expansion
of both the State University of New York at Buffalo (SUNYAB) within Amherst and the community's already substantial growth rate. The joint state-municipal system that evolved provided for the State to:

- acquire about 1/3 of the town's acreage, much of it undeveloped, on which it planned and provided land for the new town of Audubon and SUNYAB;
- help gain the subsidies for and stimulate the construction of the privately built new town of Ransom Oaks;
- specify the income ranges of housing at Audubon to include 10% low-moderate income units;
- help the town develop the comprehensive plans, controls and municipal services required to provide orderly growth up to the town's ultimate size and character.

Then the Town is to:

- implement and update the plans which were made in conjunction with the UDC;
- review and suggest revisions to private development plans, and give those that meet its requirements a designation of "exceptional development";
- provide municipal services at an affordable rate as outlined in its plans.

Unfortunately, most of these community-wide coherent planning and development efforts have not yet been utilized fully enough to estimate their impact. Furthermore, those efforts made on a more
limited basis over the past 15 to 20 years, especially in urban renewal areas, have had difficulty becoming institutionalized principally because of their requirement for a continual flow of Federal funds. Also, urban renewal as a focus is not yet appropriate to towns like Concord.

It has been noted that the differing political, social and economic institutions and traditions between the United States and Sweden would make adapting the Swedish system difficult in this country. For example, Sweden has a tradition of public ownership of land; before the nineteenth century there was almost no such thing as private land ownership because of takings by the Crown as far back as the sixteenth century. Private development under public leasehold has been a tradition for years.

Swedish cities have a number of other capabilities which appear to be lacking in the United States. Among these are:¹

- Fiscal autonomy - many of the fund raising and application abilities of the cities are common only to states in this country; the municipalities can raise and apply funds with much flexibility, giving limited attention to the equivalent of state enabling legislation (which is necessarily designed to serve the needs of cities of all sizes and rural areas simultaneously within a state).

¹The list is an expansion of one developed in the following: Sylvan Kamm, Land Banking: Public Policy Alternatives and Dilemmas (Washington, D.C.: The Urban Institute, 1970), pp. 16, 17.
Planning effectiveness - the city of Stockholm developed its first master plan in 1640. That plan included some aspects considered quite contemporary today. For example, developers of that era were given incentives for the timely building of structures desired by the municipality. Also, the planning function in Swedish municipalities today is given a much greater opportunity to be certain its plans are implemented by having at its disposal attributes that normally would be found in a city building department (e.g., issuance of building permits), a state or federal housing finance agency (e.g., influence on the availability of credit), and a state planning body (e.g., administration of the local component of the national housing quota, planning for mass transit development) and at other local, state and even federal levels.

Secrecy in land acquisition - land acquisition at the municipal level is performed much like a land developer in the U.S. would perform his job. The seller of the land to the municipality may never know that the municipality is the purchaser or that the purchase is part of a larger plan until after the transaction has taken place. Thus, prices are helped to be maintained.

Central city dominance of the suburbs - while the actual control the cities have over their suburbs may not be significantly greater than in the U.S., the cities have
used their economic strength and ability to provide services on a much broader scale than is typical in the U.S. and thus have helped retain a powerful influence over their environs.

Professionalism in planning - planning, particularly land use planning, has long been accepted as requiring the ability of professionals in Sweden. On the other hand, in the U.S. the tradition of local control at town levels and a lack of strong regional planning capabilities have continued the "conviction of the local decision maker that he is more competent to decide (land use) questions than his professional counterpart... The layman remains king in land use matters because he has not feared to grasp the nettle of land use regulation."¹

Nevertheless, the overwhelming concerns about the dislocations caused by residential growth and the social inequities of industrial and commercial expansion have changed many of the attitudes in cities around the U.S. Particularly in Concord, concerns about growth management appear to be leading normally conservative Americans to consider methods of land management that many might have rejected out-of-hand several years ago be-

cause of the restrictions imposed on the free use and exchange of land. Coincidentally, some methods being suggested, land banking in particular, parallel efforts being used in Sweden. The lack of tradition and philosophical differences with public ownership and development of land appear to be of less and less obstruction as many citizens, particularly in suburban towns, attempt to preserve what remains of the suburbs and small towns that they desire.

C. Land Use Innovation In the United States

Land banking is only one of the "newer" approaches to land use control being considered for adoption by cities and towns throughout the United States. Land banking along with a number of other innovations are being sought for their ability to supplement towns' existing controls, principally zoning and taxation.

The following four communities (Ramapo, New York; Fairfax County, Virginia; Boulder, Colorado; and St. George, Vermont) have been considered to be innovators in land use controls, and yet each has taken a somewhat different approach to managing the impact of growth on land use. The following will only briefly review the highlights at some of their more recent activities to provide outlines of a few of the newer approaches being attempted throughout the United States.
One of the best known growth control efforts undertaken recently has been in Ramapo, New York. Land for new housing in Ramapo can be developed only after its owner receives a "special permit." And, the permit is granted only if the community facilities (e.g., sewerage, drainage, recreation, roads, fire houses) are available or are scheduled to be installed in sufficient number to serve the development. The installation schedule must correspond to a town-wide, eighteen-year capital improvement program.

If the development meets the town's density and other requirements, but cannot be served by its capital improvement program, the developer can secure a special permit for the project if he agrees to construct and maintain the facilities not provided by the town. Thus, if a developer wishes to build at a rate not sustainable by the town's capital budget, he may do so but must pass all the costs onto the residents in his development. Thereby, the existing town residents need only to pay the cost of expansion of the town's infrastructure at a rate that they feel they can afford.

The plan has several advantages. First it limits the rate of growth and thus allows the town more time to pay for it. And, it gives the town the opportunity to keep its capital expenditures and corresponding tax rates within limits. Limiting expenditures has the side benefit of not forcing older people and others with fixed incomes to leave the town as the cost of living in it rapidly increases.
The plan was established as an ordinance in early 1972 and was upheld by a Federal Court of Appeals and by the U.S. Supreme Court in November 1972. Concurrent with the capital budgeting limitations to growth, the town created a number of other measures to help serve the town's land use goals. Among these were:¹

- creation of a Public Housing Authority to develop 300 public housing units to help maintain some income diversity within the town;
- applications were to be accepted for revision of residential zones only once every two years and then public hearings would be required; the aim was to correct a history of spot rezoning;
- a series of development moratoria that corresponded to replanning efforts to freeze the development of any use that would be inconsistent with the goals of the new plans;
- establishment of a development easement (roughly equivalent to conservation easement in Concord) program to restrict all development in sections of the town where the residents desired such restrictions.

2. Fairfax County, Virginia

Fairfax County, Virginia, a suburb of Washington, D.C., has been one of the fastest growing suburbs in the country. It is a sizeable piece of real estate (about 400 square miles), but even with that much area it has been having difficulty absorbing the

approximately 13,000 housing units per year that were built between 1970 and 1973.

A "comprehensive plan" was developed in 1959. Its principal implementation measure was a zoning ordinance. As discussed, the results produced by the use of a zoning ordinance as a community's principal land use control mechanism within a comprehensive plan have been felt to be less than desirable in many communities. The impact of Fairfax's ordinance had been even further diluted by continual amendments requested by property owners and developers. As one result, by 1972 the County had little left in the way of a comprehensive plan or comprehensive zoning ordinance. Furthermore, the availability of changes to the zoning ordinance encouraged others to make application resulting in increasing pressures on the capacities of the Board of Supervisors and the Circuit Court and escalating costs because of the time required to make presentations and costs of litigation.

Prior to 1973 the county had also adopted a number of land use control "innovations" including flood plain protection, stringent building codes, site plan and subdivision ordinances, and others. But, these controls were felt to be too site-specific and did not provide the county with the ability to develop a total plan that would help its residents determine the type of community it should become.

The concerns for controlling growth helped elect five new members to the nine-man county Board of Supervisors in January
1972. The five pledged to attempt to develop growth control measures. The result was the PLUS (Planning and Land Use System) program.  

The PLUS program was to help develop new land use planning techniques. But its most important activity was to be the establishment of a more efficient land planning and management system that would select and implement techniques as part of a comprehensive plan. During this planning effort the new zoning ordinance that was to result was to "be merely one of the several tools to implement land use control provisions" and recognized that "the existing land development process operated in reverse, using the 'plan' as a tool to justify the zoning ordinance."  

The PLUS program was created to help set up the planning staff, initiate comprehensive planning efforts, involve interested citizens, and seek innovative land use planning methods. Simultaneously it was to help solve the obvious problems then being encountered in the country's land use management systems (e.g., "the exorbitant amount of time spent by the Circuit Court on zoning cases").  

As a first step, the county recently expanded its planning staff (including the use of the attorney that helped establish the Ramapo capital budgeting controls) to begin to consider ways of developing its comprehensive plan. The staff began by

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1PLUS News (Fairfax County, Virginia: January 1974).
2Ibid., p. 2.
3Ibid., p. 2.
reviewing such techniques as land banking, transferable development rights,\(^1\) capital budgeting controls (as used in Ramapo), environmental impact statements and other land management methods. None of these was fixed upon as a solution, however. Instead, the stated intention is for these techniques and others to be selectively used as part of the implementation of a comprehensive plan. The final shape of the plan is yet undetermined but it is generally recognized that it must focus on setting goals helping residents define the type of community they desire and that the methods adopted for its implementation must avoid the rigidity and thus the inadequacy of past approaches.

While conducting its planning, the county established a moratorium (now being contested by builders groups and others) on new construction to attempt to slow the development until such time as plans could be made to help the county best accommodate it. Also, the new Board of Supervisors adopted a set of seventeen Interim Policies that were to serve as points of discussion by citizens groups and planning staff members in the formation of permanent policies. The Interim Policies suggest objectives for the county's achievement of social equity, an aesthetically pleasing environment, a stable economy, and other parts of a comprehensive plan.

\(^1\)See the discussion of transferable development rights in the following section, St. George, Vermont.
3. St. George, Vermont

St. George, Vermont, a suburb of the rapidly growing Burlington, Vermont, urban area, has established a land use control system to supplement the State's development controls (Act 250) (requiring a developer to secure a permit before he can build). Permits are granted if the project can be shown to meet a number of environmental criteria, not have an adverse effect on the area's aesthetic character, and be in conformance with local and State land use plans. The State legislation acts "principally to improve the quality of projects... It is of limited effectiveness in controlling and channeling growth."\(^1\)

The following summary of the St. George land use control system is extracted from a report\(^2\) prepared by one of the designers of the system:

St. George has been subject to growth pressures that have threatened a total conversion of the town from rural to low grade suburbia. The town has adopted a plan that creates a compact village where expected further growth will be focussed. The fulcrum of the plan is a parcel of land the town has purchased in the area where the town determined its growth should be concentrated. This parcel will become the center of a projected village with commercial, public, residential and industrial elements.

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\(^1\) Leanard U. Wilson, "Development Rights Transfer as a Basis for Land Use Control in the St. George, Vermont, Plan," research paper.

\(^2\) Ibid.
The town will use the leverage of the control of this land to persuade developers to participate in the community project on the town's terms. The town will negotiate with a developer to transfer to the town a specific number of development rights purchased as land from owners outside the project area in exchange for the opportunity to develop in the core village area. For instance, a developer wishing to construct 20 units of housing in the village area would have to purchase 20 acres of land zoned at one family to the acre elsewhere in St. George and transfer his acquired right of 20 units of housing to the project area. The 20 acres from which the rights were transferred will remain open land in perpetuity or until the town releases it to meet future needs. This land will be taxed only at its value as undevelopable land.

It was a St. George resident, Armand Beliveau, who first conceived of development rights transfer as a means of implementing the St. George new community plan. A citizen involved in local and regional planning, Beliveau learned by experience that the greatest hindrance to good planning and land use control in rural Vermont is the hostility of landowners who fear that zoning regulations will limit, if not eliminate, fair profits from the sale or development of land.

He sought a way of providing compensation for impaired property values at no cost to the municipality. He recognized the planning possibilities for the town if it were able to zone vast areas agricultural or open land with no complaint from landowners because they would be compensated. Planning for growth and implementation could truly be accomplished to the advantage of the majority.

Beliveau based his concept on the separability of the intrinsic value of land from its potential development value. The latter value could be established for one parcel but then transferred to another parcel. Consider an over-simplified example of the Beliveau formula: 'A' owns 100 acres of abandoned hill farm. In the district in which his farm is located, a density of one dwelling unit on two acres has been established as reasonable and equitable. 'A', therefore, owns 50 development "rights" or "credits" plus 100 acres of land. The area, however, has been zoned 20 acre agricultural reserve based on growth and development policies of the town. 'A' can sell up to 50 development rights and keep the land for non-development uses, or sell both land and credits. However, only a maximum of five development rights can ever be exercised on A's land. The other 45 must be used somewhere else in town.
A 2 acre piece of land owned by 'B' is located in the village area where concentrated development is regarded as appropriate. While it is zoned for four families to the acre, it has a development credit value of only one unit per acre to maintain a reasonable and equitable balance among all town landowners. With only 20 credits available with the land, 'B' must purchase an additional 60 to realize the full development value of his property. This, of course, creates demand for 'A's' development rights and, therefore, he receives compensation for them.

A portion of the property tax is assigned to the "Development rights" and a portion stays with the land (intrinsic value). Once development rights are sold or transferred, the property is therefore taxable at only its intrinsic value (much lower). The town does not lose the total taxable value since the "Development rights" are still taxable. Once development rights are sold from the land, the non developability of the land is made part of the deed. "Development rights" are transferred by the same procedure as deed transfers. "Development rights" could be sold by 'A' as he saw fit -- one a year perhaps.

The town, therefore, can direct development according to town growth policies in the town plan. The region could also direct development between towns according to a regional plan. The state might also use this concept to distribute growth throughout the state, if so desirable.

The number of development rights may be limited to fit a growth time of five years. Rights could accumulate at an annual rate as a means of fixing future growth rate, or the number of development rights could be reassessed every five years with increases proportioned out to original holders of development rights.

A simplified form of the Beliveau concept has been adopted as the basic land strategy in the St. George project. The number of development rights assigned to each property equals the number of houses that could be built on the property under present zoning. That is to say, 20 acres in a zone which requires two acres for a dwelling unit would have 10 rights available for transfer to the development area.

Further implementation of the transfer concept is contemplated when the actual building of the new community begins. The planners intend to propose a rezoning of the town to greatly reduced densities with the provision that the present number of development rights remain with each property. Property owners will be further restricted in the intensity of use of their land, but will be compensated by the sale of their unusable rights.

In effect, St. George is expanding on the "planned unit development" or "density zoning" concepts that encourage the concentration or clustering of residential units within a tract subject to the maintenance of an established overall density. However, St. George treats all properties in the town as if they were one holding by permitting the transfer of development rights from any property into the PUD area where the town itself holds the development rights.
Under this scheme, the economic and environmental advantages of concentrated development and open space preservation can be achieved within the framework of established community growth and location objectives. Moreover, the concept of the transfer of development rights points the way to the resolution of the problem of compensating landowners for property rights otherwise seriously impaired by land-use control. Taken a couple of steps further than in St. George, it could become the basis of a zoning system that rewarded all landowners equitably whether or not, and to what degree, their land was designated for development. Lawyers who have looked at the concept see no fundamental legal impediments while acknowledging that a substantial amount of complex legal analysis would have to be done before such a system could be made operational.

4. Boulder, Colorado

Boulder, Colorado\(^1\) is somewhat dependent upon Denver, 25 miles away, as a source of employment and amenities, but it has an economic base and social structure of its own. Its problems, therefore, are quite different from Concord's. Nevertheless, some of the land management methods it has adopted are worth observing because of their similarity to Concord's past efforts.

Boulder and Concord have both leaned heavily on the acquisition of conservation land (called open space in Boulder) to control and direct growth and preserve their open character. Boulder has taken a much more organized approach to its process, however. For example, it has developed a fairly specific plan of the types and locations of the land it intends to acquire. Whereas, Concord's approach has been much more opportunistic;

\(^1\)Boulder contains 14 square miles and 80,000 people and provides land planning, acquisition, and management to a planning district which is approximately 35 square miles (22,000 acres).
the Town has bought parcels if the money and the parcel were available, and if the parcel suited the inclinations of the Natural Resources Commission.

Yet, Boulder does retain some flexibility in choice of land and helps keep from driving prices up before purchase by making its acquisition mapping somewhat vague. Precise lines are not drawn around the parcels intended for acquisition but the criteria set for choice of land are fairly specific. For example, the town intends to have a greenbelt around its planning area connected to open space corridors that include creeks, lakes, mountain backdrops, and other attractive natural resources. Furthermore, the open spaces are to be located so that there is some open space near as much development as possible.

Boulder intends to acquire approximately 12,000 acres or about 33% of its land area to be retained as open space. Presently, the town owns about 6,000 acres, some acquired recently and some dating back to the turn of the century Federal Land Grants and parks that were acquired to fulfill a Frederick Law Olmstead Plan of about the same era. Thus, the town has acquired approximately one half the intended acreage (27% of the land area).

By comparison, Concord now has nearly 30% of its existing land under its own or other conservation control. And, if present ratios of undeveloped to developed land are maintained, about 60% of the land will be so controlled when the town is completely developed (see Table 3).
Boulder spent 3.8 million dollars on land acquisition in 1973. About one half this amount was realized from bond sales and the balance from a combination of direct appropriation, Federal funds, and a proportion of the sales tax revenue. The average price paid per acquired acre was about $3300.

Most of the land acquired was sold voluntarily to the town. In some instances, however, condemnation procedures had to be initiated. Only one of these was contested and the town was upheld; the parcel was shown by the town to be an integral part of its plan and thus to be acquired for a specific "public purpose."

The choices of land acquisition are made by the Open Space Board (a citizens board) after recommendation by the Open Space Coordinator (a city employee). The decisions by the board are made in executive session to insure the privacy of the seller and not divulge the town's purchasing strategy. Decisions made by the Board are subject to City Council approval.

The actual negotiation and purchase of the land is made by the Director of Real Estate Services who is also responsible for acquiring land for other city purposes (e.g. sewerage systems, roads). The greatest difficulties in implementing the entire land acquisition and management system have occurred at this level; the land use coordinator and the Director of Real Estate Services could not develop a good working relationship; the principal cause of the difficulty appeared to occur because the person acquiring the real estate, the Director of Real
Estate Services, had not been involved in the plans for its acquisition and therefore had only a limited ability to interpret the plans when negotiating for specific parcels. As of this writing, the person holding the position had left the post and no specific plan had been identified for overcoming the problem.

In addition to its open space planning, Boulder has undertaken a series of innovations to upgrade the use of its developed land and to maintain and/or acquire more heterogeneity of income groups in its population. Among these have been:

. Establishment of a requirement that all new developments allowed to connect to the town's sewer system set aside 15% of their units for low-moderate income housing as a condition of their connection.

. Fees paid to the Town by new developments were increased so that the amounts paid more equitably cover the town's expenditures to accommodate the developments. The fees are reduced on occasion, however, if the development provides low-moderate income housing or other attributes desired by the town.

. By use of its open space planning and incentives, the town is attempting to focus new residential development around the existing activity centers (e.g. shopping centers, transportation nodes) to keep traffic congestion to a minimum and reduce the need for a sprawl of private and public infra-
structure to serve the development. The town has also attempted to upgrade its public transportation, primarily bus service, to help serve new and existing activity centers and to make them more attractive.

The town is considering the purchase of some land in the downtown center to stimulate the growth of residential development near existing shopping and other services. The focus of the residential development initially will be low-moderate income housing.

The town's attempts at guiding the use of some of its developable land have not been planned in as much detail as those designed for open space. The focus of effort applied to developable land appears to be on setting aside at least some housing for low-moderate income people. But, there is no clear idea who the people are or why they would live in Boulder. There is some concern about the need for housing to serve city employees with moderate incomes, but few other groups are so specifically identified. The town has housed decreasing numbers of people of low-moderate incomes in recent years and has no plans of increasing the industrial development activities that might generate moderate income jobs and thus the need for moderate income housing. Accordingly, there is some question as to who might fill all the housing set aside for low-moderate income people. Accordingly, the strategy
for upgrading the residential character of the downtown area with low moderate income people might have some difficulties being implemented. Furthermore, even if it were successful there is some question as to whether establishing a core of low moderate income people will stimulate the kind of development Boulder might want in its downtown.

5. Summary

The four communities described above are by no means unique; many, if not most, suburbs and small cities similarly affected by growth are reviewing similar approaches to land use control. However, the techniques selected for land use control in the four communities have some great similarities in techniques being evaluated or selected, and yet some distinctly different approaches to their overall approach to land use control.

For example, the St. George approach depends heavily on the selection of an innovative, ingenious and potentially powerful set of techniques (e.g., transferable development rights and municipal land banking). Yet, the techniques appear to be the focus of effort rather than being parts of a comprehensive plan that attempts to have an impact on aspects of the town other than its size and density. Thus, it is possible that use of the techniques might control growth and provide some aesthetic benefits, but overlook the possibility of helping the town achieve any social equity, economic or other goals that its citizens might have.
The Ramapo system of control through capital budgeting also appears to be an example of a town focusing on a technique as opposed to a comprehensive set of goals. Some other parts of the town's planning effort attempt to provide for other town goals besides growth control (e.g., the provision of public housing units). But, the techniques used, however sophisticated, are not a substitute for the comprehensive approach to land use and other aspects of town planning that are required in most towns. Instead of being comprehensive, the strategies selected by the town have more of an appearance of being patched together. For example, the Town's provision of 300 housing units for low income families was made difficult by the reduction of Federal housing funds. As one result, the Town is left without any low or moderate income housing program and lacks the planning mechanism to choose an alternative.

Boulder Colorado's approaches to land management demonstrate an example of an organized, comprehensive approach to retaining open space and providing attractive surroundings through municipal open space acquisition. And, the successes and failures of its open space management system offer guidance to Concord and other communities who are using this approach. For example, the need to more closely bind land acquisition planning with its actual purchase should be instructive to Concord's and other's efforts.

On the other hand, the comprehensiveness of its land acquisition and management have not been extended to developable land.
Although, some of the incentives and other steps taken are of interest, there has been little attempt to assure that the combination of efforts apply to solving city-wide problems, or support the economic structure that will provide the kind of community that Boulder residents will want ten or twenty years in the future.

Fairfax County, on the other hand, appears more to be taking the Swedish approach that requires a detailed land use plan\(^1\) to be developed to help project the combined impact that land banking and other techniques might have in helping achieve comprehensive community goals. The county is considering, and has made appropriations for, such innovations as transferable development rights and land banking. But, it seems to have come to the realization that the only way that these techniques will be kept from looking as inadequate to their task forty years from now as the zoning ordinances of the twenties and thirties appear today, will be by establishing an on-going land use planning and strategy development process that has the ability to modify techniques to meet changing economic and social conditions and community goals.

\(^1\)The details of any American plan will probably have to be less site specific and more flexible, however, as will be discussed in Chapter V.
III. LAND USE ISSUES IN CONCORD

Examination of a sample land banking system in the United States could be made at almost any level of government. For example, the Federal government has extensive land holdings, as do state governments, counties, and cities and towns throughout the country. Furthermore, each of those levels performs some land planning role which affects every other level. For the most part, however, the character of land development is most controllable at the local level in the U.S. where each city and town adopts its own zoning ordinance and other controls (albeit within the rules set by state zoning- and property tax-enabling legislation and other state and sometimes federal guidelines). Also, most of the agitation for control of growth through land use planning appears to be coming from smaller suburban towns, sometimes in conflict with National or state policies. The limitations on growth in Ramapo, New York, searchings for a comprehensive set of techniques in Fairfax County, Virginia, refined techniques for conservation land acquisition and management in Boulder, Colorado, and attempts to use transferable development rights and land banking in St. George, Vermont are just a few examples of the efforts being made.

Therefore, if an expanded land banking program is to be developed and measured, a small city or town appears to provide the best place to make the attempt. Fortunately, the Swedish experience seems to show that towns and cities can play an effective
role in banking their own land. Furthermore, the relative autonomy of local governments in the U.S. would indicate that if a workable strategy of developing land banking from the bottom up is found, it will have a greater chance for proliferation than a system that is imposed from the top down.

A. The Town's Goals and Objectives

For this paper, the suburban town of Concord, Massachusetts, has been chosen to test a land banking system. Although, for Concord, only the name "land banking" will be new. Like Boulder, Colorado, the Town has been purchasing land for conservation and other uses consistently for a number of years. Thus, while examination will be made of expanded land banking systems, policy recommendations will also deal with ways that the Town could improve its existing land acquisition and management methods.

The task of suggesting approaches to land management for the Town is made somewhat easier because the Town has taken steps to define its own goals and objectives. While these goals and objectives will be reviewed for their realism, even in their present form they set the tone for designing a system to meet them.

The Town's Comprehensive Town Plans Committee's (CTPC's) mission has been to establish a comprehensive plan for the Town based on their interpretation of the Town's citizens' concerns about the development and management of the Town. The results of the questionnaire and the information gained from meetings of a

1The writer is a member of the CTPC.
number of Town boards and open hearings were assimilated into a **Goals and Objectives** statement. The five basic goals\(^1\) identified for the Town were:

- Preserve and enhance Concord's rural character.
- Control the rate of migration into the Town so that its 1985 population will not exceed 20,000 inhabitants.
- Foster Concord's historic heritage.
- Encourage the fullest possible citizen participation in Town affairs and maintain open town meetings as an integral part of Concord.
- Maintain long-term comprehensive town planning on an ongoing basis.

Following the development of the goals and objectives, a **Population Impact Analysis**\(^2\) statement was developed to project the effects the different rates of growth might have upon Concord's land use finances and services. Then, the CTPC began to use the data to develop the **Action Proposals**\(^3\) that would help the Town take the steps necessary to achieve its goals and objectives.

\(^1\)Many of the implications of the five basic goals are discussed in the Concord Comprehensive Town Plans Committee's **Goals and Objectives** (Concord: Town of Concord, February 1973). The character and tone of the goals and objectives are very similar to the Interim Policies adopted by Fairfax County (see Chapter II).


\(^3\)Concord Comprehensive Town Plans Committee, **Action Proposals** (Concord: Town of Concord, forthcoming).
The CTPC also established several subgroups to help in specialized ways. One group, Concord Dynamics, was created to use dynamic programming techniques to develop computer models of the Town for use in projecting some of the economic and demographic implications of various types and rates of Town growth. Unfortunately, the group writing the programs did not have access to planners or others who had the ability and could spend the time to suggest the appropriate relationship between variables tested by the model. As a result, the output has had a limited value. Another group, the Housing Policy Committee, was created to help design the housing portion of a comprehensive plan. The group was five months old at this writing and had yet to produce a product.

The Town attitudes reflected in the broadly stated five Town goals are best demonstrated by the subsequent discussion of the Townspeople's desires for housing and commercial/industrial development in the CTPC's Goals and Objectives and the methods for achieving them in the Action Proposals. The following briefly reviews the discussions.

1. Housing Goals and Actions

   The housing goals state that the Town should help:
   
   . provide housing for people with a variety of incomes and needs;

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1 The writer is a member of the Housing Policy Committee.

2 Concord CTPC, Action Proposals.
. provide housing in a variety of types; and
. maintain the Town's characteristic low residential density.

Then the action plans for the first goal state that specific groups' housing needs have been identified as requiring special attention if those groups are to remain in the Town. The groups are identified as:¹

. young married and single adults who are children of existing residents;
. elderly persons and couples;
. persons employed in the Town, especially those employed by the Town; and
. middle-aged persons and couples whose housing size requirements have shrunk because of their children's maturation.

The Goals and Objectives also note the Town's responsibility for accepting a "fair share" of subsidized housing units for low and moderate income families as required by State law² (Chapter 774's provisions require about 400 units). The Concord Homeowners Corporation (CHOC) was established to build the low-moderate income units and presently has plans for 60 apartments.

But it is stated that "the problem is income, not housing,"³ the inference being that the Town should first attempt to provide

¹Concord CTPC, Action Proposals.
²CTPC, Goals and Objectives, p. 13.
³Ibid.
housing for those with modest incomes who already work in or near the Town (e.g., Town employees). Then, the feeling appears to be that additional low-moderate income housing should only be established for those for whom local income sources exist or can be created (see the following section describing Business and Industry Goals and Actions) and that providing housing for those with no income source would be "cruelty masquerading as charity." This approach appears to be in substantial agreement with recent statements of officials interviewed at the State's Department of Community Affairs, the agency charged with gaining enforcement of Chapter 774.

As can be seen, the Town's goals are not simply restrictive. Instead, the Town appears to be searching for ways in which it can retain a specific physical character (i.e., open and rural) while finding ways in which to provide housing for people that appear to be unable to afford it (e.g., Town employees) or are being pushed out of the Town for other reasons, thereby sapping the Town of its historic population heterogeneity.

In many suburban towns, the decreasing population diversity is not as great a concern as it is for Concord's residents. Diversity of population and thus of thought has been fostered in the Town from the time of its founding as the first inland settlement. The Town played a significant role in the prelude to the American Revolution, and has since been an attractive residence

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1Concord CTPC, Goals and Objectives.
for a wide range of very unconventional people, including Thoreau, Emerson, Hawthorne, respected contemporary writers and academicians, as well as factory workers, farmers, managers, and others in a wide range of occupations.

The Town still retains vestiges of its demographic diversity, especially when compared to neighboring towns that have been under much the same suburbanizing pressures and have taken similar control measures (e.g., extensive conservation land acquisition). For example, while 47 percent of the Town's workforce is either professional/technical or managerial/administrative, the Town still has a somewhat greater percentage of non-professional and blue collar residents than the neighboring towns of Lexington, Weston or Lincoln (see Table 1 and Map 1). As a further indicator of its diversity, Concord has a relatively high median income when compared to the Boston SMSA ($16,453 in Concord and $11,449 in the SMSA), but one that is still much lower than that of its neighbors (see Table 1 and Map 1).

Furthermore, the Town's housing stock has a more varied character than that of its neighbors. It has a higher percentage of rental units and apartments than the other towns (see Table 2). And, a much higher proportion of its housing stock is old—pre 1939 (see Table 2).

Several years ago, seeing the trend toward a more typical late-twentieth century suburban population homogeneity within a wall-to-wall suburb, many in the Town began to search for ways to modify the land use controls to attempt in some way to retain
TABLE 1
COMPARISON OF CONCORD WORK FORCE AND MEDIAN FAMILY INCOME (1970) TO ITS NEIGHBORS

<table>
<thead>
<tr>
<th></th>
<th>Concord Number</th>
<th></th>
<th>Lexington Number</th>
<th></th>
<th>Weston Number</th>
<th></th>
<th>Lincoln* Number</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
<td></td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Professional, Technical</td>
<td>1821</td>
<td>31.2</td>
<td>4612</td>
<td>36.3</td>
<td>1225</td>
<td>30.0</td>
<td>748</td>
<td>41.1</td>
</tr>
<tr>
<td>Managers &amp; Administrators</td>
<td>922</td>
<td>15.8</td>
<td>1784</td>
<td>14.2</td>
<td>1011</td>
<td>24.8</td>
<td>331</td>
<td>18.2</td>
</tr>
<tr>
<td>SUB-TOTAL</td>
<td>47.0</td>
<td></td>
<td>51.0</td>
<td></td>
<td>54.8</td>
<td></td>
<td>59.3</td>
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</tr>
<tr>
<td>Sales Workers</td>
<td>481</td>
<td>8.2</td>
<td>877</td>
<td>7.0</td>
<td>398</td>
<td>9.8</td>
<td>139</td>
<td>7.6</td>
</tr>
<tr>
<td>Clerical</td>
<td>1016</td>
<td>17.4</td>
<td>2389</td>
<td>19.1</td>
<td>707</td>
<td>17.3</td>
<td>274</td>
<td>15.0</td>
</tr>
<tr>
<td>Craftsmen, Foremen</td>
<td>404</td>
<td>6.9</td>
<td>916</td>
<td>7.3</td>
<td>194</td>
<td>4.8</td>
<td>117</td>
<td>6.4</td>
</tr>
<tr>
<td>Operatives</td>
<td>336</td>
<td>5.8</td>
<td>660</td>
<td>5.3</td>
<td>134</td>
<td>3.3</td>
<td>42</td>
<td>2.3</td>
</tr>
<tr>
<td>Laborers</td>
<td>109</td>
<td>1.9</td>
<td>195</td>
<td>1.6</td>
<td>50</td>
<td>1.2</td>
<td>30</td>
<td>1.6</td>
</tr>
<tr>
<td>Farm Managers &amp; Workers</td>
<td>41</td>
<td>0.7</td>
<td>57</td>
<td>0.5</td>
<td>9</td>
<td>0.2</td>
<td>4</td>
<td>0.2</td>
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<tr>
<td>Service Workers</td>
<td>597</td>
<td>10.2</td>
<td>947</td>
<td>7.6</td>
<td>262</td>
<td>6.4</td>
<td>116</td>
<td>6.4</td>
</tr>
<tr>
<td>Private Household</td>
<td>124</td>
<td>2.1</td>
<td>98</td>
<td>0.8</td>
<td>88</td>
<td>2.2</td>
<td>20</td>
<td>1.1</td>
</tr>
<tr>
<td>TOTAL</td>
<td>5841</td>
<td>100</td>
<td>12535</td>
<td>100</td>
<td>4078</td>
<td>100</td>
<td>1821</td>
<td>100</td>
</tr>
</tbody>
</table>

Median Income

- Concord: $16463
- Lexington: $17558
- Weston: $23530
- Lincoln*: $21360

*Tract 3602 only, exclusive of Hanscom Air Force Base, See Map 1
<table>
<thead>
<tr>
<th></th>
<th>% Single-Family Units</th>
<th>% Rental Units</th>
<th>% Housing Built before 1939</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concord</td>
<td>84.2</td>
<td>20.0</td>
<td>42.0</td>
</tr>
<tr>
<td>Lexington</td>
<td>90.1</td>
<td>12.7</td>
<td>33.2</td>
</tr>
<tr>
<td>Weston</td>
<td>93.9</td>
<td>8.5</td>
<td>35.8</td>
</tr>
<tr>
<td>Lincoln**</td>
<td>93.9</td>
<td>16.4</td>
<td>34.5</td>
</tr>
</tbody>
</table>

*See Map 1

**Excluding Hanscom Air Force Base
the Town's diversity and open, rural character. Included in the efforts were the founding of the Comprehensive Town Plans Committee mentioned earlier, development of a cluster zoning by-law, the creation of a Housing Authority to help provide low income housing, and the formation of CHOC and a redrafting of the subdivision ordinance.

The results of these efforts have been limited; the Housing Authority has had some success in providing a few leased housing units; the CHOC has to depend upon volunteers who must divide their time among a number of roles and have encountered opposition to the site selected for their development because it is in a flood plain.

A redraft of the subdivision ordinance is likely to soon be adopted. Although it is too site specific to be considered a guide for Town land management, it is apt to be useful because it more clearly states the steps that a developer must take to move his plans through the various approval bodies in the Town.¹

The ordinance does require that the developer provide an "impact statement" detailing the "impact of the proposed subdivision on the . . . parcel, the neighborhood and the Town."²

¹ Included is the: (1) Board of Health's approval of septic system design and other public health issues; (2) the Public Works commissioners' review of the design of additions to the Town's non-school infrastructure (e.g., streets, sewers); (3) compliance with wetlands protection laws as certified by the Conservation Commission; as well as (4) the overall plan review provided by the Planning Board.

² "Rules and Regulations Governing the Subdivision of Land in Concord, Massachusetts," November 1973. (Draft.)
And, some general types of impact measurement concerns (e.g., surface drainage, ground water level) are required to be addressed. Yet, there is no clear course for the Town (through the Planning Board) to take to stop or change a development that is considered to have a negative impact, nor is there a determination of negative or positive impact.

2. Business and Industry Goals and Actions

The goals for business and industry also show a rather unique approach for a suburban town. For example, it is stated:¹

While the Town does not want a general expansion of commercial and industrial activity, it has nevertheless been quite ready to make exceptions when benefits seemed assured. ...It is generally held that the cost of servicing commercial and industrial sites is less than their tax yield so that there is clearly a net benefit to the Town. Often this is so. However, sometimes such simplified analysis neglects affects which may bring about quite the opposite tax impact. ...On the other hand, many people now commuting elsewhere would surely prefer to work in Concord, if only the right job came along. Moreover, if core city low income people are to move here, there must be jobs they can get to.

Thus, at least some people in the Town are aware of the potential pitfalls of industrial development for the purpose of taxes. And, more remarkably, there is some concern about actually developing some industry that might bring some low-skilled people to live in housing in the Town. It is uncertain what percentage of the Town actually feels this way. But it must be assumed that a substantial percentage of townspeople have these somewhat enlightened views or they would not have appeared in the goals

¹Concord CTPC, Goals and Objectives, pp. 20-21.
and objectives statements that were based on the town-wide questionnaire.

3. Summary

Accordingly, evaluation of the various land use controls examined in this paper will be made on the basis of their ability to help the Town reach its goals of a limited but diverse population, more diversity in housing, and a useful industrial/commercial group. First, however, will be a discussion of one of the issues central to decisions about land use planning, limitations on growth.

B. Growth Limitations

One of the most controversial issues in land use management is the attempt by many suburban towns to control the largely external market forces that stimulate growth with internal controls (e.g., zoning, taxation). Those who oppose growth limitations often call such limitations "racist" or "class exclusionary" and typify its proponents as those saying, "I've got mine, now everybody else stay away." The feeling is so strong that there have been laws passed attempting to force "wealthy suburbs" to accept a certain portion of the low income population from core city areas. Massachusetts' Chapter 774, the so-called anti-snob zoning law, has been passed in order to allow non-profit groups in towns to help legally remove the restrictions to the development of housing for low income people.
On the other hand, many feel that much is lost by the type of development that is typical of many suburbs. As land prices rise, open land is subdivided and the house lots in towns like Concord become developed; the resulting density of housing, roads, shopping, town services and other construction usually removes whatever open or rural character that the towns once had.

Furthermore, there is only a limited amount of growth that the towns can absorb without increasing expenditures to build and support new infrastructure (e.g., schools, sewerage, roads). The need will vary from place to place within each town depending on the amount of infrastructure utilization, but the long-term trend in most suburban towns (especially if the new families have children requiring schooling) will be to increasing levels of expenditure. As a result, growth in Concord and other similar towns has been accompanied by substantial tax rate increases that have steadily priced the towns out of reach of increasing numbers of existing Concord families and individuals with moderate and lower incomes (older individuals with fixed incomes have been among the groups to feel the impact most severely). Some of the other impacts of growth on towns like Concord have been:

Higher taxes and increasing land and building costs require that both existing and new town residents have increasingly higher incomes to be able to afford to live in the town. In addition to the example of the 58 percent increase in housing prices in the past 10 years noted in Chapter I, median family income in Concord increased
from $11,329 in 1960\textsuperscript{1} to $16,463 in 1970 (45 percent) by comparison to a 27 percent increase ($9,027\textsuperscript{2} to $11,449) in the Boston SMSA.

Noise and air pollution from increased traffic becomes more bothersome (many in Concord are already complaining about the steadily increasing traffic through the center of Town) and many are concerned about the potential pollution of aquifer recharge areas.

The opportunity for more personal anonymity is created, thereby offering the potential for fostering more petty crime and less feeling by individuals of a community responsibility.

Town government becomes more removed from the townspeople; only a small increase in Concord's population is apt to necessitate the abandonment or modification of open town meetings, as has happened in many other towns across the state (e.g., Marblehead).

The position taken in this paper will be much in line with that developed by the goals and objectives of the Town of Concord. That is, that some growth is necessary and inevitable, but more is to be gained by severely restricting it than by allowing complete suburbanization of the Town, especially if ways can be found to keep the growth controls from eliminating population diversity in the Town.

\textsuperscript{1} & \textsuperscript{2}Adjusted for inflation to 1970 terms.
This approach can be criticized as one that ignores the Town's responsibilities for relieving some of the pressures of population growth. But what most critics fail to take into account is that the population growth that towns like Concord accept becomes increasingly homogeneous at higher income levels until such time as the town becomes so densely developed that it loses its attractiveness and then slowly deteriorates. Southern Westchester County, New York, north of New York City, is beginning to show evidence of this cycle. To allow this cycle to continue seems to make no sense. Instead, it appears that towns like Concord should be able to preserve their attractiveness, make the effort to retain some diversity within their population, and avoid the inevitable decay.

When the issue of limiting growth is raised, many in the towns to be limited express concern that lack of growth will yield economic and social stagnation. Yet many European towns have been able to retain their economic strength and flexibility without the growth curves that are often considered necessary in the United States; often the towns have had to live with higher densities longer and have developed methods for accommodating them. The Swedish systems discussed earlier are examples.

The overall impact on a region of limiting the growth of towns like Concord might actually be beneficial. For example, in the Boston metropolitan area, where Concord is located, there are a number of towns which would welcome the people "shut out" of the Town of Concord when it reaches its growth limits. Older
manufacturing towns like Lowell, Lawrence, New Bedford, and others, could benefit materially from the income and capabilities provided by an infusion of higher-income, better-educated residents.

Certainly a regional, state, or possibly even a national plan for setting standards for a town's limiting or encouraging growth would be useful. In lieu of such standards, it seems like a foolish strategy to ruin the very significant virtues that towns like Concord contain for the sake of the moral responsibility of not being a "snob," especially when being one or not appears to have little effect on the evolution of a town's housing stock and its population.

C. Concord's Existing Land Management System

Concord's existing land management methods can be best described as diverse. It has no detailed land use plan or criteria for future acquisitions and the action proposals developed to implement its goals and objectives do not form a substitute, nor suggest one, except in the broadest terms. For the most part, each department owning land manages it separately, although some effort has been made recently to use the Natural Resources Commission's (Conservation Department's) crews to maintain land, especially open space, for the school, recreation and other departments.

However, one major municipal land holder, the Department of Public Works, retains its own land maintenance crews, and little effort has been made to integrate transportation land use planning into a total land management system.
Also, there have been limited efforts by the Town's land managers to integrate their efforts or achieve joint impacts with the land managers of the substantial open land holdings of such non-Town entities as Harvard University (650 acres, approximately 4 percent of the Town), or the large parcels owned by the Federal government, the County, private land trusts, clubs, and others owning the Town's open lands (see Appendix A).

The head of the Natural Resources Commission has been responsible for identifying and selecting much of 920 acres of the conservations lands that the Town has acquired. He has a reputation for doing this effectively (although he has an aversion to use of Federal funds because he is afraid of the "controls" that might accompany the money), but he probably could not do it for the entire Town even if called upon. He is simply too busy performing his present duties, which include the acquisition and management of the conservation land and the local administration of the Wetlands Protection Act (the Hatch Act).

In addition to outright purchase, the Town has two basic tools for controlling its land use--zoning (including subdivision regulation) and taxation. These and other controls are discussed below.

1. Zoning and Subdivision Control

The Town's zoning history roughly parallels that of Fairfax County. The Town's first zoning ordinance was passed in 1928, when the population of the Town was under 5,000. Two-acre zoning was adopted in 1959. The Town also has a building code, setting
standards of construction and public health, but the most sig-  
nificant internal control shaping the Town's physical character  
has been the zoning ordinance. The Planning Board interprets  
zoning and subdivision ordinances for developers and others  
wishing to build in the Town. Questions about their decisions  
are taken to the Board of Appeals. Requests for variances are  
permissible and are requested from time to time. However, the  
percentage of development receiving variances is relatively small,  
and the issue has not gained as much attention in Concord as it  
has in other towns.

There has not been an organized review and update of the  
ordinance since the development of an Adams, Howard, Greeley Master  
Plan in 1959. Instead, amendments have been offered by a number  
of groups and from time to time approved at Town Meeting (2/3 vote  
required to change the zoning by-laws).

Table 3 and Map 2 (Zoning Map) show the arrangement of Con-  
cord's zoning. The highest density zoning (B and C zones) roughly  
corresponds to the areas that were most heavily developed when the  
initial ordinances were drawn, along the Concord and Assabet River  
Valleys and the early transportation routes through Concord. The  
development in these areas began in the 17th Century and, as might  
be expected, the greatest development saturation (40.6% of the  
land is developed) has occurred there.

The lowest density zoning (AA and A zones) were placed around  
the periphery of the B and C zones. Areas so zoned contain the  
majority of the Town (52.2%) and have experienced the least devel-  
opment (only 19.8% developed).
### TABLE 3
COMPREHENSIVE TOWN PLANS COMMITTEE, CONCORD, MASSACHUSETTS 2/17/72
SATURATION POPULATION ANALYSIS *

<table>
<thead>
<tr>
<th>Zoning District</th>
<th>Minimum Lot Area Sq. Ft.</th>
<th>Total Acres</th>
<th>Total No. in Zone</th>
<th>No. of Parcels</th>
<th>Total Developed Acres</th>
<th>Total Undevel. Acres</th>
<th>Probable No. of Dwelling Units Per Gross Acre</th>
<th>Estimated Dwelling Units</th>
<th>Estimated Population 3.5 Per D.U.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AA Residential</td>
<td>80,000</td>
<td>5,692</td>
<td>677</td>
<td>959</td>
<td>17.6</td>
<td>4,690</td>
<td>.38</td>
<td>1,782</td>
<td>6,237</td>
</tr>
<tr>
<td>A Residential</td>
<td>40,000</td>
<td>2,655</td>
<td>844</td>
<td>1,114</td>
<td>24.6</td>
<td>649</td>
<td>2,006</td>
<td>1,504</td>
<td>5,264</td>
</tr>
<tr>
<td>B Residential</td>
<td>20,000</td>
<td>1,469</td>
<td>1,357</td>
<td>1,561</td>
<td>39.2</td>
<td>576</td>
<td>893</td>
<td>1,340</td>
<td>4,690</td>
</tr>
<tr>
<td>C Residential</td>
<td>10,000</td>
<td>453</td>
<td>999</td>
<td>1,051</td>
<td>45.2</td>
<td>205</td>
<td>248</td>
<td>868</td>
<td>3,038</td>
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<tr>
<td><strong>Total</strong></td>
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</tr>
<tr>
<td>C Res. Apts.**</td>
<td>3,500</td>
<td>453</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>248</td>
<td>2,976*</td>
<td></td>
</tr>
<tr>
<td>B Bus. Apts.**</td>
<td>3,500</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>74</td>
<td>888*</td>
<td></td>
</tr>
<tr>
<td>B Business</td>
<td>91</td>
<td>94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LB Limited Business</td>
<td>66</td>
<td>6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I Industry</td>
<td>172</td>
<td>17</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP Industrial Park</td>
<td>448</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>777</td>
</tr>
<tr>
<td>Tax Exempt</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,850</td>
</tr>
<tr>
<td><strong>Total Town Acreage</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15,975</td>
</tr>
</tbody>
</table>

*Data added by the writer.

**Can be built in Residential "C" and Business "B" zones instead of single family houses if an exception is granted by the Board of Appeals.
Approximately 6,000 more housing units could be built in all residential areas of the Town if all the remaining undeveloped land were built upon. At Concord's average of 3.5 persons per household, the Town would then gain approximately 20,000 people for a total of about 40,000.

Industrial and business zones comprise only a small percentage of the Town (4.9%). Tax exempt land, mostly owned by other government agencies, private conservation groups and several schools, occupies a significant portion of the Town (30.3%).

As discussed in section A above, the Town's subdivision control provides a set of guidelines for developers to follow in building streets and providing the other facilities that serve their development. As one result, the design of streets, septic systems, sidewalks, and other physical improvements, have been at least adequate for the subdivisions they serve. However, the guidelines have little effect on the subdivision's demographic or economic character.

The ordinance's requirement that developers outline the environmental impact of their project might be useful if the criteria for environmental impact were established as they are, for example, in Duxbury, Massachusetts' impact zoning ordinance. There, "the town allows the developer to build to higher densities,

1 Apartments will house about 2.0 persons per household, but more households would be built thereby generating about the same number of households.

2 This total is unlikely to be reached for reasons discussed in Chapter IV.
to cluster his units, or to build multi-family housing at his discretion. In return, the developer agrees to take the town's ecology into account, to mix his housing types in a way that would have a favorable impact on the school budget, and to set aside permanent open space.¹

Concord also grants exceptions to the minimum lot sizes for cluster development. Under the provisions of the exception, houses can be grouped more closely together so that more open land can be provided, usually owned in common by the owners of the houses. A number of developments have been built using the cluster zoning provision. But, though the developments themselves have been made attractive for their eventual tenants, the overall impact on the Town of Concord has been insignificant.

2. Taxation

The Town's other principal land use control, taxation, is more of a de facto control than is zoning. For example, backland and other open spaces have been typically taxed less than developed land, even though the State-enabling legislation does not necessarily provide for this type of activity. Nevertheless, any other policy might have spurred more subdivision of some of the many large individually owned tracts of land (1,300 acres of the Town (8.2%) are owned by only 14 families, or an average of only one residence per 93 acres) by their owners to reduce their tax load.

The Town has also established a system of conservation easements which enable a landowner to place an easement on part of his land to restrict its development in exchange for a lower tax rate. There have been few easements granted, however, because of landowners' concerns about the limitations they might put on the eventual use of their land by themselves or their families, the uncertainties of what types of use the conservation easement might bring, and the lack of any single town office to encourage landowners to provide the easements.

Eventually the assessors expect to be required by taxpayers' suit or other measures to revalue all the land in the Town at 100 percent valuation (unless the State law can be revised). And, if no changes are made, the principal tool the Town will have for reducing the pressure for development will be the widespread adoption of conservation easements.

State law also allows a reduced tax rate to be applied to agricultural land. This will have some limited impact on the Town which still has some agricultural land. The total land that can be so classified is unknown as of this writing.

3. Commercial Land Use

Traditionally, the protections accorded residential uses are substantially different from those provided for commercial areas because of two non-corresponding American objectives. "These objectives are protection of the single-family home and protection of the free market place. In land use policy, the first objective requires that government take positive action, the
second demands that the government refuse to take positive action."

Concord's land use planning for commercial uses, while not so benign as many, has also focused primarily on protecting single-family homes and allowing commercial and industrial users to fare for themselves. The Town's principal restrictions on commercial/industrial use have been aimed at keeping out large-scale shopping areas and maintaining a small retail center, not for the protection of the existing retailers, but to avoid the congestion often generated by large shopping areas. There have been numerous attempts to expand the retail area because of the feeling by many retail shopping developers that the Town is under-served. But, none have been successful and even attempts by existing small retailers to expand or provide better facilities have been resisted.

The Town has two relatively new industrial parks (see Map 3). The most heavily used of the two abuts several other industrial uses that date back 100 years or more. The parks are substantially under-utilized and few efforts have been made to increase their utilization even though the Town's goals state that additional industry should be acquired to at least fill the sites that are available.

Seemingly, while many realize the potential economic advantages of an expanding industrial base, they also are aware of

1Babcock, *Zoning Game*, p. 79.
the potential disamenities (e.g., traffic congestion). Moreover, no responsible Town official appears to be coming forward to offer to devote the time that would be required to design an industrial expansion program that might provide the fewest disamenities in proportion to the economic gain. Also, as noted in the Town's goals, there appears to be a consensus that housing should be provided for those who work in the Town. But, the overriding goal is to control population, and bringing in new industries with potential new residents would not serve that end.

Accordingly, there are no active industrial development efforts in the Town. The Chamber of Commerce serves more to protect the existing small merchants and does not even attempt the rudimentary "smokestack chasing" efforts of Chambers elsewhere.

The Town recently undertook a Town Center Study that was to provide guidelines for planning the principal retailing area of the Town. But the emphasis was on protecting the surrounding residential area from congestion and on making the appearance of the Town aesthetically pleasing. Little effort was made to assure that the commercial uses remain economically healthy.

Thus, the Town's commercial/industrial land use planning is residentially or aesthetically oriented when planning exists at all. Accordingly, the potential for damage is great; without further definition of policy for the use of the commercial/industrial space, the Town has no way of knowing whether the ultimate uses will continue to serve the Town's needs or even be compatible with its long range goals.
4. Other Restrictions on Development

There are three principal additional land use controls: a flood plain conservancy district; a historic district; and the requirements that exceptions be granted for apartments to be built. The Town's capital improvements program also provides some limited controls.

The flood plain conservancy district prohibits construction at a 123-foot contour along the Assabet River in West Concord. Its principal restriction is the prohibition of cutting or filling in the defined area if either will change the drainage. The impact of the restriction and its enforcement are limited because:

- Proving what will affect drainage now may be different several years in the future;
- Cutting and filling during a period of drought will change things far less radically than during wetter periods;
- The Town itself set a precedent for construction in the flood plain area by developing its own light plant within the 123-foot contour; and,
- The flood plain district does not extend to the principal tributaries and swamp areas serving the rivers. Substantial construction could occur in those areas and then have a major damaging effect downstream.

Yet there has not been substantial construction in the flood plain areas because of the availability of other more developable sites within the Town. Given future development pressures, however,
and lack of more stringent protection of the flood plain, it could easily be seen how development might become more active.

The Town has a limited capital improvements program which is intended to upgrade its infrastructure on a planned basis. And, developments proposed that cannot be served by infrastructure (e.g., sewerage) are not generally built. The most common structures, single-family homes, are not generally affected by this restriction, however. Nevertheless, the Town's budget does provide some control over growth, albeit without the same force or tested legality of the Ramapo system.

Also, the Town has an historic district to protect the character of the Town's older structures. And apartments are approved in Residence "C" zones only if they gain an exception from the Board of Appeals. The few exceptions granted (none in two years because of a moratorium) usually were traded off for some modification of the layout or density of the plan. But, the moratorium expires the summer of 1974, and new patterns for the tradeoffs will likely be established.

5. Summary

The principal defects of the existing system are:

- The continual acquisition of conservation land retains open space but reduces the supply of land for development and thus drives its price up. Accordingly, as the price of land increases, so does housing. And, the population diversity sought by the Town becomes increasingly difficult to maintain because of the increasing wealth required to live in the Town.
The present controls, principally large lot zoning, have a limited value in preserving the open character of the Town or reducing congestion resulting from development. While some clustering is possible on individual sites, the overall appearance of development will be one of continuing suburbanization.

Land that is acquired by the Town has been acquired for relatively specific purposes such as schools, recreation or conservation. Each department maintains its own land acquisition capability and the Town has no coherent land management plan which allows land to be purchased at the best time or stimulates multiple uses.

Only limited efforts have been made to secure available federal and state funds for land purchase, especially of conservation/recreation lands.

When Town-owned land is no longer suitable for its existing purposes, the Town's lack of coherent land management policies restricts its flexibility in reusing or selling the land.

Current population growth trends will provide increasing limitations on the open Town Meeting form of government; the difficulty with which current issues are resolved indicates that the Town Meeting is close to the limits of its effectiveness.

Few mechanisms exist for determining and then gaining the desired uses of the business and industrial land.
Any new land use controls system should attempt to correct these defects as well as meet the Town's broader population and social equity goals.
IV. LAND BANKING STRATEGIES FOR CONCORD

Realizing the need for other types of land use control, the Town has been acquiring land for conservation purposes (including agricultural), schools and other municipal uses, for a number of years. Concord directly owns approximately 1500 acres or just under 10% of its area. The largest portion of this is the 920 acres of conservation land. Over the past ten years, the Town and other preserves of open space (e.g., Federal Government, Land Trust) have been acquiring approximately two acres of land for every acre that has become developed. Recently, the Town has been the principal acquirer.

When the Town-owned land is combined with other public and private open space uses (not including agricultural\(^1\)), just under 30% of the Town's land can be considered preserved for open space in one form or another. Additionally, the Town has received conservation easements on about one hundred more acres of land and the flood plain zoning in the Town will provide some restriction on the development of more acreage. Adding all developed and preserved land together, totals about 50% of the Town's acreage (see Table 4).

In the near term, that acreage can be considered not subject to immediate change and thus not requiring the first attention from the Town's land use policies. That is not to say that those sections of town can be ignored; the State (with the Concord Reformatory on 233 acres), Harvard University (625 acres), or any

\(^1\)The Town owns much agricultural land but a number of private uses still exist and qualify for tax abatements.
Table 4: HISTORIC LAND USE DISTRIBUTION

<table>
<thead>
<tr>
<th>Year</th>
<th>Population</th>
<th>Vacant</th>
<th>Public Undeveloped</th>
<th>Public, Semi-Public Developed</th>
<th>Industrial</th>
<th>Commercial</th>
<th>Residential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>11,000</td>
<td>9.0</td>
<td>18.0</td>
<td>20.4</td>
<td>13.2</td>
<td>13.9</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>12,527</td>
<td>10.2</td>
<td>20.4</td>
<td>16.1</td>
<td>13.2</td>
<td>13.9</td>
<td></td>
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<tr>
<td>1972</td>
<td>16,904</td>
<td>13.2</td>
<td>27.8</td>
<td>13.2</td>
<td>13.2</td>
<td>13.9</td>
<td></td>
</tr>
</tbody>
</table>

of the other major owners could make decisions drastically affecting major portions of that land. But the anticipation and management of these problems might be handled by negotiation with those owners. The controls presently available to direct the use of the land most ripe for change--the undeveloped 50% of the Town--could allow the Town to grow to 40,000 people, twice its desired size.

As noted in Chapter III, the existing zoning the the Town will permit construction of enough housing units, at densities ranging from apartments at eight per acre to single family homes on two-acre lots, to allow the population of the Town to exceed 40,000. At that population level, the Town would probably lose much of its remaining open character. Furthermore, the congestion would be increased far in excess of the two and a half times increase in population because of the crowding that would result on the few arterials in the Town. Either that, or the road system would have to be substantially expanded, thereby further encroaching on the rural character of the community. Also, the Town government would probably have to be conducted by something more remote than open town meeting.

However, continuation of the present trends of land acquisition of substantial portions of its vacant land for conservation or other open space purposes (2:1) will limit the population to about 25,000 (see Table 5). On the other hand, the expense of buying and maintaining conservation land will probably continue to rise because of inflating values. Also, there is no assurance that the Federal Government and others will continue their conser-
Table 5: PROJECTED LAND USE DISTRIBUTION

<table>
<thead>
<tr>
<th>Population and Year</th>
<th>Vacant</th>
<th>Public Undeveloped*</th>
<th>Public, Semi-Public Developed</th>
<th>Industrial</th>
<th>Commercial</th>
<th>Residential*</th>
</tr>
</thead>
<tbody>
<tr>
<td>20,000</td>
<td>35.0</td>
<td>19.4</td>
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<td>25,000</td>
<td>61.4</td>
<td>30.7</td>
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</tr>
<tr>
<td>30,000</td>
<td>45.8</td>
<td>46.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* public undeveloped area: residential area ratio is 2:1 for all populations except 30,000 which is shown as 1:1

1Ibid.
vation acquisitions at the same rate. Thus, for the Town to maintain the present rate of 2:1 protected land to developed land, taxes will have to rise appreciably . . . a course that will be borne by the Town only to a certain limit.

Thus, some reduction in the effort could be expected if there are no ways to offset costs. Furthermore, the continuing trend of two-purpose land use, for conservation or market rate housing, provides for low-moderate income housing or the Town's other social equity goals. Certainly, the rising prices and taxes are apt to preclude the development of even moderate income housing (with the possible exception of a few units yet to be provided by the Housing Authority or CHOC).

A revised land banking strategy offers the Town the opportunity to:

- reduce its cost of holding land through establishment of public leaseholds;
- sell land to realize its appreciation;
- assure that housing is provided for limited numbers of specific groups of residents (e.g., low income) by Town designation and/or through incentives to developers.

For the strategies to be considered realistic, however, their implementation should indicate that incentives exist for private developers and that the tax burdens of social equity will not cause rejection by the Town.
A. Establishing a Cash Flow Model

Ideally, then, models of the Town's long-term cash flow would be constructed to test the effect of alternative approaches to the development of land management strategies (including land banking). The models' cash inflow and outflow variables might include:

Cash Out

. Operating costs (e.g., salaries of Town employees, infrastructure maintenance, supplies for Town offices)
. Capital costs (e.g., purchase of land, infrastructure construction, major equipment purchases)

Cash In

. Property tax
. Excise tax
. Federal, state and private grants and loans
. Bonding
. Fees for services (e.g., sewerage, leaseholds)
. Sale of assets (e.g., lands)

Simply stated, there is an apparent linear relationship between any increases in the expenditure of Town monies for land or other purposes and the required offsetting cash flow from some combination of the sources noted. Thus, in theory, projections of the amount of money required to be derived from a land bank (e.g., through sales of appreciated land or land leasing) to cover the cost of its acquisition and maintenance should be able to be modeled with some accuracy if any intervening variables can be held constant or their course predicted.
However, many of the intervening variables can not be held constant nor do they lend themselves to easy predictability. Furthermore, many of them affect both cash in and cash out thus requiring that the simple linear relationship become dynamic if the results of the model are to be considered accurate. For example, if more apartments are built in the Town than single family houses, historically the Town receives more property tax per new resident (higher valuation) and less excise tax (fewer automobiles); spends less on schools (fewer children) but more on sewerage treatment (septic tanks not generally usable).

The ratios of one expenditure to another change over time. For example, lately, as more land has been developed, land values have increased thereby both making each succeeding development more costly (plus changing the character of the new residents) and changing the valuation of the land for property tax assessment.

Thus a fully defined model should be able to chart the relationships between the cash in and cash out variables and such other variables as:

- Type of housing
- Money costs
- Character of the population entering, leaving, or remaining in Concord
- Auto usage
- The capability of each parcel of land to be developed to support development
Effects of zero population growth when the Town reaches the limits of development

Predicting the course of these variables is difficult and subject to wide errors. Additionally, the effectiveness of the Town's managers in managing the sources and uses of cash themselves will have a significant impact on the Town's cash requirements. For example, an effort by the Town to secure outside funding for land purchase might produce gains well in excess of the cost of the effort. Obviously, less effective management can have the reverse effect.

Thus, with each intervening variable held constant or predicted with a wide margin for error, additional room for error is built into the model. Yet, for illustrative purposes it might be useful to simply linearly project the costs of operating the Town with and without various land banking measures (using similar linear projections of land cost). Then at least some sense can be gained of the relationship of the cost of land acquisition and the offsetting reduction in operating costs (because of fewer people) and newly derived income from municipal leaseholds established on Town land.

Such simple models were developed by the Comprehensive Town Plans Committee to estimate the changes occurring in the tax rate until 1985 (including inflation) for different size populations using several levels of provision of school facilities.
(depending upon numbers of children)\(^1\) and the existing system of zoning by-laws. These data provided a useful base for comparing alternative land banking measures.

B. **Alternative Models**

The CTPC data were modified or additional information generated where necessary to project the impact of differing land acquisition programs and control measures represented in the following cost models. The "low" and "medium" cost estimates shown reflect the effect of different school utilization levels precipitated by "low" or "medium" numbers of children per household.\(^2\) "High" numbers were also estimated but not used for analysis because of their lack of realism given current demographic and social trends.

1. **Control Through Continued Conservation Land Acquisition**

Model No. 1 (in Table 6) shows the possible results of the Town and others continuing their existing policies of acquiring conservation land approximately two times as fast as its vacant land is being developed. Given the existing zoning, the Town

\(^1\) A Summary of the methods used by the Comprehensive Town Plans Committee in its Population Impact Analysis.

\(^2\) A medium rate would result from about the same ratio of children per household as has existed in the past few years. A low rate reflects a reduced futility rate more in keeping with the most recent trends.
Table 6

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Population</th>
<th>Total Operating Costs (millions)</th>
<th>Financing Costs of Add'1 Capital Outlays (millions)</th>
<th>Annual Costs 1985 Total (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>'lo'</td>
<td>'med'</td>
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<td>1</td>
<td>25,000</td>
<td>15.9</td>
<td>28.8</td>
<td>2.1</td>
</tr>
<tr>
<td>2</td>
<td>30,000</td>
<td>19.4</td>
<td>34.7</td>
<td>1.5</td>
</tr>
<tr>
<td>3</td>
<td>20,000</td>
<td>12.3</td>
<td>22.8</td>
<td>2.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Population</th>
<th>Estimated 3 Assessed Valuation (millions)</th>
<th>Estimated 4 Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>'lo'</td>
<td>'med'</td>
</tr>
<tr>
<td>1</td>
<td>25,000</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>2</td>
<td>30,000</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>3</td>
<td>20,000</td>
<td>200</td>
<td>200</td>
</tr>
</tbody>
</table>

1 Operating costs include the total Town operating budget and account for "low" and "medium" school costs (depending on enrollment); Financing Costs represent the amortization of Capital Outlays for schools and other Town infrastructure costs.

2 Total Operating Costs and Financing Costs (amortization) = Annual Costs

3 Based on a historical ratio of valuation to population

4 Annual Costs/Assessed Valuation (in 1000) = Tax Rate (Dollars of Tax/$1000 of Valuation)
will then have a population of about 25,000 people by about 1985. Model No. 2 shows what would happen if conservation land acquisition was slowed because of rising prices and other restrictions to a one-for-one basis; the population might then grow to 30,000. Model No. 3 shows the results of the Town deciding to substantially step up its land acquisition and acquire all the remaining vacant developable land within the next few years. The result is a population of about 20,000 people. The option of the Town taking no action and increasing to 40,000 does not appear reasonable and therefore was not considered.

A rather startling conclusion is that the difference in the cost of the three models to the Townspeople in taxes is practically insignificant even though up to $10 million more money is spent for land in Models 1 and 2 than in Model 3. Allowing the Town to grow to 30,000 people will only lower the tax rate by a very small amount. As noted earlier, the possibility for error in the tax rates forecast is great. But the relationships between rates are illustrative. The reasons for this similarity are:

- The increased cost of land has a limited impact on the year-to-year tax rate because it is amortizable through bonding;
- The increase in bonding to acquire the land is offset by the reduction in direct services that would have been required to serve a larger population in single-family houses (1.5 children per home);
The difference between acquiring enough land to allow 20,000 people to live on the remaining land instead of 25,000 is limited when the cost is amortized over 20 years.

Furthermore, depending upon the future mix of types of Concord residents, the tax rate in the Town should drop at the end of the twenty-year bonding period in each of the models. There will be no more land to buy and the Town will not have increased the expansion of its services and facilities. Of course, there will be some replacement and repair of facilities and upgrading of others, but these should not be as costly as new construction or adding to the services for an expanding population.

2. Creation of Municipal Leaseholds

If instead of purchasing only conservation land, the Town also bought developable land, the costs would increase but the Town would have the opportunity to gain lease revenues from the developable land. Also the Town could designate the specific type of development on the developable land, (e.g. a mix of housing for a range of income groups), set criteria for the selection of the tenants a developer might recruit and make other decisions affecting the Town's demography or aesthetic character.

The hypothetical economics of the process might be as follows if the developed land were used for apartments and acquired in addition to Models 1, 2, or 3.
At this writing, apartment developers were incurring site costs of about $5,000 per apartment unit for units built in suburban towns like Concord. They usually have to have about 20% ($1,000) or more of that price in their own equity, and will provide about an 8½% mortgage for twenty-five years for the remaining portion. Thus, their cost per year for the land for each apartment unit would be:

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>8½% on $4,000 for 25 years, level term</td>
<td>$387</td>
</tr>
<tr>
<td>Taxes (actual value, not assessed)</td>
<td>160</td>
</tr>
<tr>
<td>Value of $1000 equity @10%</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total per unit:</strong></td>
<td><strong>$647</strong></td>
</tr>
</tbody>
</table>

If, instead of buying land, a developer leased it from the Town¹ for the same $647 per unit, he would substitute an expense cost for much of his capital costs and thus acquire a valuable tax shelter.² If the Town then used funds raised through bonding to acquire the land, its annual owning costs would be:

---

¹The lease would probably be net, meaning that the developer, not the Town, would be responsible for all land maintenance and preservation costs.

²Normally, he can treat only his taxes and the interest portion of his debt service (not principal payments) as an expense and thus deduct it from his or his partner's income for Federal income tax purposes.
Bond repayment (4%, 1 20 years) including estimated acquisition and management costs of 20%\(^2\)

Thus, the Town's estimated lease income ($647) would exceed the cost of owning the land ($420) by about $227 per unit per year. On the other hand if the developer were to retain the ownership of the land and develop it conventionally the Town would recover only its $160 tax. Thus leasing the land would result in a net gain of about $67 per housing unit lot ($227 - $160 = $67).

If the Town were to acquire or convert enough land to develop 2000 units of housing (for approximately 4000\(^3\) people in apartments), it would recover $134,000 over the normal revenue derived through property taxes. These funds could then be applied to, among other courses:

- Improve or add community facilities (e.g. playgrounds);
- Subsidizing low-moderate income housing; or
- Reducing the tax rate (by up to $1.87 per $1000 of assessed valuation at a population of 25,000).

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\(^1\)This rate and the rate paid by the developer (8\(\frac{1}{2}\)%\) will fluctuate with national money costs but in approximate proportion to one another.

\(^2\)20% is somewhat arbitrary but corresponds with Boulder, Colorado's experience.

\(^3\)About 50% of the population increase between the present level and 25,000.
The above calculations do not account for additional revenues that might be forthcoming from the State or Federal Government or other sources. Any additions could substantially improve the net cash flow from municipal leaseholds.

On the other hand, if the banked, developable land is not leased soon after it is acquired by the Town, the Town will incur increasing costs which should be attributed to the land. The costs for owning the same $5,000 piece of property described above would be the same as above ($420) plus the loss of property tax ($160) for a total cost of $580 for each year the parcel remains undeveloped. The taxes lost would represent the comparative present value of the land to the Town. The on-going maintenance of a limited amount of the land might be able to be handled by the existing crews in the Department of National Resources. Even if additional people and/or machinery must be added, however, the cost increases should be minimal per unit of land area.

Thus, if a $5,000 piece of land intended for development remains unleased for one year, its cost will increase to about $5580 (5000 + 420 + 160) and will grow by $500 per year thereafter. Thus if the Town is to acquire land far in advance of development, as the Swedish system would appear to indicate as useful, the costs can be high, although the inflating costs would probably not be far in excess of the inflating land selling prices within the recent past. For example, given the land cost would
approximately double in ten years, not an unusual occurrence in Concord land value appreciation. Where possible land holding costs could be reduced by the Town acquiring options on the land instead making an outright purchase.

The additional $580 could be recovered by increasing the Town's taxes or the rents for the leaseholds. But, when the market will allow, the most appropriate source would probably be increased lease or sale income from the land incurring the cost (in proportion to its increased valuation); existing residents should not have to be forced to subsidize the entry of new residents.

Of course, charging all land costs to the last person in will require that the new residents be increasingly wealthy. But retention of costs in existing housing would be made easier. And some portion of the new housing could be required to be set aside by the developer and/or subsidized by the Town's lease income for people with more modest incomes (probably further driving up the cost of the other new housing to compensate).

As discussed in Section A above, a number of changes in variables can occur which will substantially affect the outcomes of the different land acquisition strategies. For example

- If single family units were developed on Town land instead of apartments, lower pay-offs per acre would result because of lower densities.
Tax rates would rise with population. The rise would be diminished somewhat if more people were accommodated in apartments than in single-family units because of the lessened school requirements.

The funds gained from leaseholds in excess of the normal tax returns would decrease as taxes increased to accommodate inflation or other increases in Town expenditure. Inflation rates can be estimated, however, so that cash flows could be projected with some accuracy. Also, the lease terms could be written to allow for rent escalations to accommodate inflation.

Obviously before adopting any one of the possible strategies the impact of these variables would have to be tested in detail. These tests are beyond the scope of this paper, however.

3. Capital Budgeting Method of Control

In addition to continuing to acquire land at its present rate, the Town could decide to attempt to limit its growth with a capital budgeting strategy similar to Ramapo's (assuming it is legal in Massachusetts). Determining how such a system might function is not the focus of this paper. Ramapo has a detailed point system for helping choose among development possibilities. For this paper, however, it will be only necessary to assume that a Ramapo or other non-land banking system will be able to control growth. Then comparisons can be drawn between the tax rate implications of a model of that system with Models
1, 2 and 3 (making the same assumptions).

Accordingly calculations were made for Model 4 (Table 7) showing the effect of purchases of no developable land and the restriction of growth by budget control of development to 85 housing units per year and continuation of conservation land creation on a two-to-one basis. Infrastructure expansion was geared to the slower rate of growth.

As can be seen, the costs to the Town and thus the tax rate have the potential for being substantially less than they would be if land acquisition alone were used to control growth. If two bedroom or less multi-family units were also allowed, more could be built than single family units because of the reduced impact apartments would have on the schools and, therefore, the Town budget. About 140 units per year could be built.

4. Use of Transferable Development Rights and Municipal Leaseholds

With the addition of the use of transferable development rights to models 1, 2 and 3 it is possible to demonstrate how the Town could keep its population below 25,000, acquire ownership of substantial portions of the Town to be able to exert the control desired, and yet achieve shadow tax rates that are equal to or lower than those shown for the Capital Budgeting system or throw

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1 The tax rates are shadow rates. That is, they are projections based on limited data and are for comparison data only.
Table 71

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Population</th>
<th>Total Operating Costs (millions)</th>
<th>Financing Costs of Add'l Capital Outlays (millions)</th>
<th>Annual Costs</th>
<th>1985 Total (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>20,000</td>
<td>'lo' 12.3 'med' 22.8</td>
<td>0.7</td>
<td>'lo' 13.0</td>
<td>'med' 23.5</td>
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</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Population</th>
<th>Estimated 3 Assessed Valuation (millions)</th>
<th>Estimated 4 Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>20,000</td>
<td>200,000</td>
<td>65.00</td>
</tr>
</tbody>
</table>

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2 Total Operating Costs and Financing Costs (amortization) = Annual Costs

3 Based on a historical ratio of valuation to population

4 Annual Costs/Assessed Valuation (in 1000) = Tax Rate (Dollars of Tax/$1000 of Valuation)
off funds as well as the municipal leasehold models.

The system might work approximately as follows:

- The Town would concentrate its land acquisitions on developable land allowing the highest densities.

There are approximately 300 vacant acres of 'C' zoned land where exception could be granted for the construction of apartments or higher density single family units.¹ It would also continue to acquire a moderate amount of conservation land.

- Then a system of transferable development rights could be established for all developable land. Each parcel would be issued a specific number of development rights and each right would allow the development of one housing unit. The system used might be similar to the one used in St. George, Vermont but with the Town retaining ownership of its land and establishing municipal leaseholds. The number of rights allocated to each parcel could be in proportion to its assessed valuation². Assessed valuation would be a particularly

¹If all 300 acres were acquired, the Town would have the capability of controlling the development of 36,000 units of housing at 12 per acre, generating a population increase of about 8,000 for a total of about 26,000. It is probable, therefore, that only limited portions of the land would be developed in concert with other private development to limit the Town's total population to about 25,000.

²A variation of this method is suggested in Leonard U. Wilson's discussion paper, "A Land Use Control System Based on Transferable Development Rights."
useful guide because valuation of parcel for tax purposes are reduced in proportion to the parcel's proportion of back-land, wetlands and conservation easements and thus are representative of the land's developability.

It is expected, then, that there would be approximately enough rights created town-wide to allow the development of the number and type of residences to permit the Town to grow to 25,000 people. About 4000 rights would be required. Of course, the rights could be used on the land generating them. It would be expected, however, the developers would have an incentive to buy to rights, remove them from parcels with substantial density restrictions (e.g. 2 acre zones), if an appropriate high density site can be provided for their application. If the Town were to buy and then lease its own high density site (without development rights) to the developer, it could place the development where it appeared to most benefit the town, restrict outlying development (the developer would have to buy and transfer rights to the high density site), and establish an income producing leasehold. The rights, when transferred to the high density area, would only produce about two persons per residence as opposed to 3.5 per dwelling unit in single family houses. Thus, the population could only grow by 8,000 people to generate a total Town population to 25,000.

If the same system of municipal leaseholds and transferable development rights were used, but with the acquisition of
enough additional conservation land, the Town's population could be kept even lower.

Some control might be gained of development by landowners who would rather develop than sell their development rights through the introduction of a capital budgeting restriction on development of land outside the town-owned land. Then, some of those interested in developing but who were forced to wait because of the restrictions, might become more interested in selling their development rights in the near term or developing on the Town land.

The economics of the combination of municipal leaseholds and transferable development rights can be attractive because:

- The Town need not acquire as much land as required by either the conservation or the pure leasehold models (1, 2, and 3) to gain control of the land, thereby lower capital costs; and
- the pay-offs from municipal leaseholds can be substantially increased over the pure leasehold model because more developable and less conservation land will be owned.

For example, the control provided by transferable development rights could allow the land acquired in Models 1, 2 or 3 to be reduced by one-half and still maintain the Town's population limits. The land acquired would be used at higher densities and/or held open. The development rights for that land would be acquired with the land and then either dissolved or reduced.
All new development rights for the Town's land (the site of principal Town development) would then have to be acquired by developers from other privately owned land elsewhere, thus preserving that land from development (or the Town could buy them and sell them to developers).

The price of the land acquisition would not be halved, however, because the higher density land would be somewhat more expensive. Recent land acquisition indicates that the premium will be about 25% to 50%. Using the higher number, Table 8 shows the results of adding transferable development rights to the leasehold Models, 1 and 2.¹

The resulting shadow tax rate is lower than that generated by the conservation method but higher than the Capital Budgeting method. But if 2000 units were built on Town land, the funds recovered from the municipal leasehold could be used to somewhat lower the shadow tax rate as noted in Part 2, above, (the land lease amount should be geared to the land's permitted density with no penalty added for accepting the transfer of development rights) by $0.54. However, if the Town is sincere in its social equity goals whatever funds are actually derived will be used to generate low-moderate income housing or help meet other Town goals. Probably the highest priority for fund expenditure,

¹It was assumed that the disamenities (e.g. increased congestion) caused by Model 3 would be avoided if the methods for their avoidance could be made affordable and still meet the Town's goals. Models 1 and 2 with transferable development rights offer that option. Therefore Model 3 was not shown with transferable development rights.
<table>
<thead>
<tr>
<th>Model No.</th>
<th>Population</th>
<th>Total Operating Costs (millions)</th>
<th>Financing Costs of Add'l Capital Outlays (millions)</th>
<th>Annual Costs 1985 Total (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>'lo'</td>
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<td>1.5</td>
</tr>
<tr>
<td>1 w/TDR</td>
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</table>

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Population</th>
<th>Estimated Assessed Valuation (millions)</th>
<th>Estimated Tax Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>'lo'</td>
<td>'med'</td>
</tr>
<tr>
<td>1 w/TDR</td>
<td>20,000</td>
<td>200</td>
<td>69.00</td>
</tr>
<tr>
<td>2 w/TDR</td>
<td>25,000</td>
<td>200</td>
<td>69.20</td>
</tr>
</tbody>
</table>

1 Operating costs include the total Town operating budget and account for "low" and "medium" school costs (depending on enrollment); Financing Costs represent the amortization of Capital Outlays for schools and other Town infrastructure costs.

2 Total Operating Costs and Financing Costs (amortization) = Annual Costs

3 Based on a historical ratio of valuation to population.

4 Annual Costs/Assessed Valuation (in 1000) = Tax Rate (Dollars of Tax/$1000 of Valuation)
however, should be the hiring of a land use manager to help plan the complex land planning systems that will be required. This step will be more completely discussed in Chapter V.

C. Summary

As discussed, the numbers in each of the above models make broad assumptions that probably will not prove correct in practice. Also, the values used reflect estimates at present conditions. Thus the results are very hypothetical and subject to change if more realistic values become available. Furthermore, there are many additional manipulations of the variables that would change the described outcomes.

The models were not designed to make accurate predictions, however. They are designed for comparing some of the more powerful variables that might accompany the adoption of one or more of the many forms land banking might take. The models might be of use to future Concord land use managers if they add in more of the missing variables and test the data more completely.¹

1. Economic Advantages

Even if the numbers in the models are not completely accurate, the comparisons should show relative differences; the prices used for land, services and other variables in each of the models were the same.

The option appearing to offer the greatest long term economic benefit, the combination municipal leaseholds and

¹The programs developed by Concord Dynamics might be an aid.
transferable development rights will provide new term tax rates slightly in excess of the Capital Budgeting method and somewhat less than the other options. Its real advantage, however, is the opportunity it provides to generate funds for developing the planning and land managing machinery required to develop land use control systems for the Town. Or, some portion of the funds could be used to provide subsidies for low-moderate income people or to take other steps to meet the Town's social equity goals.

And in the long term, when the land acquired is fully amortized and growth has halted, the tax rate could drop even further.

2. Non-Pecuniary Advantages of Each Model

In addition to controlling population and affecting the tax rate, each of the above models will have impacts on the other goals that the Town of Concord has set for itself. The models providing the lowest total population clustered at the highest densities have the best chance of helping the Town preserve its open and rural character by leaving most of the Town open and increasing densities where the congestion can be handled most effectively.

Interestingly, the high densities might also help establish more of the smaller, lower priced housing units required to provide more housing for the types of people the Town wishes to maintain. Therefore, it appears that while land banking can be
useful to the Town, a land banking system that includes both creation of municipal leaseholds and transferable development rights might help provide the greatest range of opportunities.
V. RECOMMENDATIONS

The analysis of the Models in Chapter IV indicates that several different land banking techniques are worth further exploration as strategies that might both help the Town meet its goals and help cure some of the defects in the existing land management systems outlined in Chapter II. Any one of the two principal techniques, the combination of municipal leaseholds with or without transferable development rights, or the continuation of the present use of conservation land acquisition, could help meet the goals in some ways. Criteria are discussed below for helping to decide which techniques are apt to produce the best results.

A. Choosing A Controls System

Of particular importance in choosing a technique will be the funds generated. Securing these funds offers one of the few ways in which the Town can reach its social equity goals (e.g. low-moderate income housing). Social equity is usually costly under any circumstances. In housing particularly, its costs are high and well defined after years of effort by government agencies at all levels.

The flexibility and cost savings allowed by the combination of a municipal leasehold and transferable development rights (the St. George system) (see Chapter IV) make that system appear to be the most attractive for the Town's use. Other methods for controlling growth offer attractions to the Town but none appear to
offer the possibility of simultaneously controlling growth, helping the Town acquire the self-sufficiency to be able to afford the detailed land use planning required to implement a new system, and providing funds for improved social equity in housing.

On the other hand, if the Town simply continues on its present course of acquiring conservation land at a reasonable rate, the Town's population density will still be limited by comparison to many suburban towns. Or, if further study shows that the capital budgeting system of limiting growth to an affordable level of capital spending is worth adoption, growth could be controlled and the tax rate kept from too rapid an acceleration without substantially restructuring the Town's land use controls.

Nevertheless, the potential benefits of the St. George system modified for the Town of Concord offer so many potential financial benefits and opportunities for the Town to meet its goals, that the Town should undertake the detailed analysis required to test its worth and provide for its adoption. Potentially, the St. George system and the capital budgeting system (as used in Ramapo) could be combined.

If the modified St. George model is adopted, the changes in Town policy will be slight. Use of conservation easements has already exposed the Town to the rudiments of transferable development rights; and, the Town has an extensive land
acquisition and management system. The principal change would be the creation of public leaseholds and potentially, the ability of the Town to freely exchange uses among all its land holdings.

On the other hand, institution of the recommended system should be undertaken only as part of a comprehensive town-wide land use planning effort. The focusing on technique instead of results (as discussed in the review of other communities' efforts in Chapter II) must be avoided if the Town is to develop the ability to continually improve its land use planning and management methods and develop ways of coordinating with other open space owners (e.g., the Federal Government, state government, land trusts). But, the Town would benefit substantially by the undertaking of a land use planning effort regardless of the implementation techniques selected. The difference is that the modified St. George system offers a way to help pay for it.

Planners have often recommended that municipalities undertake comprehensive or master plans to interrelate and thereby broaden the impact of individual plans for housing, services, land use and other Town characteristics. A more extensive Town land acquisition program, with or without the use of transferable development rights, makes a long range comprehensive plan absolutely essential; decisions concerning the acquisition and use of

1 The plan should be comprehensive but, unlike many past efforts, flexible in its approach to its ends. Section E will outline how such flexibility might be accommodated.
land are highly inflexible and mistakes made are not easily rectified.

Additionally, the management of the land acquisition and maintenance must be handled expertly if the Town is to realize the potential gains from the system. For the Town to take over parts of the land development process to secure its gains, it must capably manage the risks. The following outlines some of the required planning and management methods.

B. Development of the Concord Land Use Planning Process

As stated earlier, the Town has a Town Planne- and Comprehensive Town Plans Committee (CTPC) and several subcommittees (for housing, growth modeling) created for the purpose of establishing a comprehensive plan. However, because of the size of the task, the plans developed to date only suggest that a number of alternatives for land use control be considered. Among these are the various land banking and transferable development rights discussed in this paper. The data in this paper might help the CTPC and its subcommittees begin to choose courses of action or accelerate the analyses. Particularly, the Concord Dynamics group might use the data to estimate the tax rates and other outputs of the models discussed in Chapter IV with a wider range of input variable values.

But neither the committees nor the Town Planner has the time to complete the detailed planning or land acquisition and management process required to implement any of the land use control
strategies discussed. There is a need for a full time professional land manager to take responsibility for Concord's land use planning and management effort.

1. The Land Manager's Role

The land Manager should work under the supervision of the Town Planner to help him integrate land use controls into the Town's total planning effort. As part of his responsibility he should:

- Build the needs of the various public Town uses (e.g., conservation, transportation, recreation, schools) into an overall Town-wide land use plan that helps each Town department and the entire Town meet their goals;
- Undertake the acquisition, transfer and sale of all types of land under terms most favorable to the Town;
- Coordinate the Town's land management activities with those of the state, the Federal Government, Harvard University, and the other principal private and public Concord landowners;
- Establish and execute plans and documents for the derivation of income from Town land through development of leaseholds, sale of property, or other methods;
- Subcontract the maintenance of open land to the Natural Resources Commission or other appropriate private or public groups;
- Gain outside fund support from government agencies and private groups for public land purchase.
Thus, the Town Land Manager would not only take responsibility for many jobs now performed erratically by volunteers, the overburdened Town Planner or other officials, but also would take responsibility for the Town's efforts to more actively acquire and use its land.

He should also be responsible for making the best use of national, state and regional land use planning funds that might be made available through the passage of the proposed National Land Use Policy and Planning Assistance Act (the Jackson Bill), as well as funds from other government and institutional sources at all levels.

The Land Manager should report to the Town Planner and maintain contact with the Town's interests through the Comprehensive Town Plans Committee and its subcommittees and/or the Planning Board or newly-created land use subcommittees. His salary, overhead, use of consultants, and option monies to hold land until bonds are sold to buy it will have to be paid out of current revenues until his land banking plan gets underway. Then, if he creates municipal leaseholds, his operation should generate more than enough income to pay for his cost of operation (possibly $30,000 to $50,000 per year; $0.25 maximum on the tax rate) and still provide substantial discretionary funds.

2. Land Use Inventory Development

Before the new Land Manager can implement the recommended land use model, he must choose which land is both the most de-
sirable for developed and undeveloped uses and most vulnerable to change. He should first review the existing land use maps and data developed by the Natural Resources Commission, the League of Women Voters, and others to inventory and classify all the Town's land and re-map where required to identify major parcels of land (e.g., over two acres) by their:

- ownership, location and existing use;
- vulnerability to development because of development trends, soil conditions, town services (e.g., schools, sewerage, roads), transportation, and shopping;
- location and duration of existing zoning, easements, or flood plain and other restrictions to development; and
- any distinguishing natural terrain features that would make it useful for conservation or recreation and/or limit its usefulness for other purposes.

The resulting land use map will show which land is preserved from development for what period of time and which offers the best opportunity for the Town to:

- join parcels of similarly used land to gain more contiguity of conservation and recreation land; and
- protect environmentally important or large and/or strategically placed parcels from development, especially those apt to change use within seven to ten years.

Then the Town should continue the land use planning effort by designating how much and what kind of additional land should
be preserved, (although not necessarily which parcels) and which developed and at what densities. The choices could be made approximately as follows.

3. Selection of Residential Land for the Land Bank

The recommended land control model suggests that enough land be developed to accommodate a maximum of about 7000 to 8000 additional people to have the town reach 25,000 population at densities up to 8-12 units per acre (as few as 340 acres at 2 persons per household and 12 units per acre). The aim should be to cluster development where feasible to retain as much open space as possible and reduce the congestion that would result if the development were spread throughout the town.

Furthermore, higher density housing can be built less expensively than the single family units now prevalent in the Town, thereby helping provide for an intermixing of the less expensive housing that will help the Town meet its social equity goals.

The process should be opportunistic enough to take advantage of parcels as they become available, particularly those required for development. To keep from being bound to a rigid plan that would automatically drive prices up, a set of evaluative criteria should be established that can be satisfied by parcels in a number of locations. Then the land manager should negotiate for several parcels satisfying the criteria and choose to buy those that meet the greatest number of criteria at the lowest
price and for the largest number of housing units. For example, land acquired should meet as many of the following criteria as possible.

- **Existing High Density Zoning** - the process of changing the zoning after acquisition would probably be simpler for the Town than it would be for a private developer. Nevertheless, the least controversy that can be created in the conversion, the more easily the Town can implement its plans;

- **Access to Transportation Facilities** - ideally, the site will be within walking distance of one of the two existing commuter train stations connecting to Cambridge and Boston and not far from the Town's major access highway, Route 2. The aim should be to keep the density from creating as much inter- and intra-town vehicular traffic congestion as possible. If location near one of the existing train stations is not feasible, the density in the area might justify relocating the station if the development can be sited near the train tracks;

- **Proximity to Existing Underutilized Town Infrastructure** - it would be useful if the schools, sewerage system, and other costly services should be able to accommodate at least some of the development with their existing capacity;
Nearby Shopping - either nearby shopping should be available or shopping on the site should serve both the site and the surrounding neighborhood;

Lack of Environmental Concerns - in all likelihood, the site's development density will require that it be served by Town sewerage and therefore its effluent is not apt to be a problem on the site. Expansion of the Town's treatment facility will have to be considered, however. Most other potential problems (e.g., shadow, blending with the landscape, provision for run off) will be solved by a good site plan;

Non-existent or Low Density Current Development - the less disruption to existing users, the more easily the plans will be executed.

All of the above criteria are unlikely to be met by any single site in the Town. Probably the most significant of the above criteria, however, is the transportation requirement; the least disruptive the routes to and from the site are to the rest of the Town, the more acceptable the density on the site can be. The site accessibility to recreation and/or conservation areas will not be terribly significant (just as long as the development does not significantly damage any open space plan) because of the ability to develop facilities on the site.

4. Industrial Land Selection

Acquisition of industrial land could be productive if combined with an economic development program that helped secure usage of the land. The lack of an economic development effort to
date has helped preserve the industrially zoned land as open space. This condition cannot continue forever, however, and the Town should make a decision about whether it wants industry or not.

It is recommended that decision be made in favor of a Town effort to acquire users to fill the industrial space while the decision can still be made on the Town's terms. In other words, the present lack of pressure allows the Town to choose the kinds of industry it wants and possibly even the specific company it would like to have locate in the Town. Later, the Town might not be able to influence a decision as easily.

Yet, the typical industrial development approaches are probably inappropriate. Most often, towns will acquire industrial land and offer it to any industry that comes along at a low price so that the industry can lower its overhead and thus become more competitive. Difficulties occur because there are many more towns and sites competing for a limited number of companies locating new or branch offices on industrial sites. Moreover, the companies that are most often attracted to low cost sites are those most footloose and least likely to be looking for a long term future in the town or able to support a stable labor force.

Furthermore, often the most significant industrial growth in a town or city occurs not because of the relocation of a major manufacturing operation in the city but because of the combination of entrepreneurial and/or technological innovation. For example, few towns can boast of industrial development efforts, even on a large scale, that can have as much impact on their economy as has
been caused by such innovative companies as IBM in Poughkipsic, New York, Caterpillar in Peoria, Illinois and others. Yet, planning for the fostering of business development at its source through entrepreneurial development is extraordinarily difficult. Identifying entrepreneurs or inventions or weighing the costs of supporting such an activity against its potential return is difficult.

The process has been conducted successfully only in a few places in the entire country. And, it is probably unrealistic to expect the Town of Concord to undertake the effort for its own limited industrial sites.

On the other hand, there are a number of other towns near Concord that have similar problems. Potentially, Concord could lead the way in developing an organized approach to required industrial growth planning in conjunction with the other towns. Possibly the regional planning agency, the Metropolitan Area Planning Council, could be stimulated into helping the towns take action.

If the Town decides to take a more active economic development role, industrial land acquisition might be useful so the Town can realize more economic benefits and select the tenants it feels are appropriate. Until then, however, such an effort would only be diversionary.
5. Planning for the Acquisition of Land Not for Development

The processes of acquiring land for conservation, recreation, municipal services, and other non-developable uses require more definition than the methods used for developable land; location of such space is critical to its usefulness. Accordingly, though maps should be drawn designating its location, the experience in Doukle indicates that some lack of definition of the specific parcels to be acquired allows some flexibility. Furthermore, parcels designated for open space are usually not felt to be as desirable (by the sellers) as those wanted for development. Thus, the open space parcel owners tend to be more reasonable in setting their prices. Furthermore, more land than will actually be required might be targeted to allow for additional flexibility in its selection. The criteria used in selecting this land will be different from that used for residential or commercial/industrial development even though at some future date there might be a reason for exchanging uses. The criteria to be used for the selection of land for the use of an expansion of Concord's infrastructure are well known and have been exercised with some competency by the departments that use and manage the land. Needed, however, is the coordination of effort that a Town Land Manager could provide.

Conservation land has also been acquired and managed with some skill, but no accepted community criteria have been established for its selection. Therefore, it might be worthwhile
to outline the broad criteria that might be used to choose land for conservation/recreation use.

- Wetlands or flood plain areas;
- Suitable for active recreation in residential areas where no other similar sites exist within one-quarter mile;
- Related to regionally or nationally known historical events or having architectural significance;
- Agricultural tracts suitable for continuous farm use;
- Contiguous with other Town or public recreational, conservation or historic land;
- Offer attractive rural vistas if preserved in their existing state;
- Screen between industrial, traffic or other congestion and residential or recreational areas;
- Major aquifer recharge areas (areas that recharge the Town's water supply).

6. Conservation Easements

Concurrent with the planning of various land uses, the Land Manager should expand the Town's conservation easement program (discussed in Chapter III). Little land has been protected by the conservation easement provision because few in the Town appear to be aware of the ways in which the option can be used or have been encouraged to simultaneously do their civic duty and reduce their taxes by providing such easements.
Land controlled by easements may or may not reinforce the Town's overall land plans. Yet having the land restricted means that there are that many fewer sites that the Town would have to account for in developing controls for its entire land stock. It might be wise, however, for the Town to ask that the easements be revocable if the Town acquires a site that includes an easement. In this way, the Town's planning will retain its flexibility.

C. The Use of Transferable Development Rights

Development rights (TDR's) should be assigned to property based on its total assessed value¹ (presumably the value has been accepted by the landowner) less the value of improvements (which equals the intrinsic land value). Designation of the number of TDR's per dollar will be dependent upon the level of Town growth desired and the ability of the developable land to support the growth. There also must be a rough parity between the number of units a landowner could develop on his land and the number of TDR's he acquired to avoid controversy about illegal takings. Land acquired by the Town should lose its development rights, thereby requiring that development on the Town-owned developable land remove as much development as possible from other parcels.

If the Town acquired much of the remaining undeveloped approximately 1100 acres of B-zoned (1 unit per 20,000 square

¹Wilson, "A Land Use Control System" and discussion in Section
feet) and C-zoned (1 unit per 10,000 square feet) with an option of 1 unit per 3000 square feet) land (see Table 3), it would remove all but about 4600 development rights from the Town. Conservation and other public use purchases and easements should be able to absorb at least the 600 rights (or more, if the Town acquires less than 1100 acres) required to permit 4000 units to be built to accommodate 8000 persons (2 persons per unit apartments).

If some of the development includes 3 bedroom or greater housing units, the number of persons per housing unit will increase (up to 3.5 per average Concord, single family detached unit). The more of these units that are allowed, the more land the Town will have to assure is preserved by: conservation purchase or easement, withholding developable land from the market, acquisition by conservation groups, or other means.

Land with development rights would, of course, be taxed more than land without. However, the aim should be to keep the taxation level for each TDR below its value when it is sold. Thereby, the TDR owner is given some incentive to sell it rather than use it.

Sale of the rights should be able to be made easier if existing real estate brokers are given the authority and necessary commissions to bring buyers and sellers together. If there is an undue amount of resistance on the part of brokers and/or legal restrictions, the Land Manager might have to broker the rights in the near term.
D. Meeting Social Equity Goals

As noted earlier, the additional funds made available to the municipality through the creation of municipal leaseholds should be applied, at least partially, to the Town's social equity goals. And, for the most part, the goals in one way or another deal with helping people with modest incomes (e.g., town employees, older residents) live in the increasingly expensive town of Concord.

Accordingly, to help these people live in the Town, the funds could be used to provide them with some form of subsidy that makes living in Concord more affordable. To choose those who are to receive the subsidy, the Town could establish a point system which gives individuals or families increasing numbers of points for each category of desired resident specified by Town goals within which they can be classified (see Chapter II). As an example, if a Town employee is also over 55, he and his family would qualify for more points that a family where the principal wage earner worked for the Town but was less than 55.

Those receiving the highest numbers of points would receive the greatest opportunity for subsidies. The subsidies might take the form of:

- first choice of low-moderate income housing units provided by developers through a Town incentive zoning system (see the following section);
- reduced purchase price of land sold to them by the Town for their own housing; or
- lowered rental rates in housing on municipal leaseholds.
E. Other Land Control Measures

Concurrent with the development of the land banking and transferable development rights system, the Land Manager should continue to search for other innovations that help the Town achieve its goals at a reduced cost and with as little disruption as possible on both Town-owned and private land. Discussion of these methods is beyond the scope of this paper. However, a number of efforts that the Town has been undertaking should be pursued. Among these are the encouragement of:

- the subdivision of older, larger houses into two units;
- establishment of further planned unit residential development ordinances (allowing a mixture of uses);
- incentives to private developers to sell or rent a portion of their units (10% +) at prices low-moderate income people could afford;
- establishment of an impact zoning system that specifies areas of environmental fragility and requires developers to account for their project's environmental impact;
- promotion of conservation easements to ensure that open land can continue to be taxed at lower rates than developed land.\(^1\)
- coordinated efforts with adjoining adjoining towns to:

\(^1\)The Board of Assessors in Massachusetts towns are required by statute to assess all property at "full and fair cash value" as of January 1 each year.
preservation; secure more land use planning aid from the regional planning agency (MAPC); and, develop an organized approach to economic planning and development.

Each of the above might be useful, but are not as apt to produce the broader impact by themselves as the measures discussed in the preceding sections. Therefore, they should receive attention only if the provisions for their design and implementation can be drafted within the scope of the broader, recommended land use controls.

F. Land Acquisition Methods

The Town's present land acquisition methods have proven to be adequate for its recent needs. The method involves targeting land for acquisition, negotiating a price with the owner, and then developing a warrant article for a Town Meeting approval and subsequent appropriation and/or bonding to make the purchase.

In this way, the Town has been able to negotiate a price and terms in the privacy that is required for such negotiations and still allow the openness of a town review of its decision. Because of this method's political acceptability and lack of significant drawbacks, it should be continued where possible.

However, to properly develop and execute its plan, the Town must first integrate a reasonably fixed conservation land use plan with the opportunistic and highly flexible process of land development. Observation of the Swedish system outlined in Chapter II indicates that these seemingly incompatible roles
can be made to function together if enough time is allowed for
the planning process to be undertaken before substantial land
development gets underway. For example, the Town might:

- Plan its purchases of land approximately ten years before
  it is to be used so that it could be acquired about
  seven years before its planned use, thereby staying as
  far away from the speculative fever as possible;

- Using "straws" to represent the Town in negotiations
  when the Town's known presence might drive up the price
  of the land (thereby necessitating another choice as
  institution of the risky and expensive process of
  eminent domain).

- Not make any zoning changes until after the land is
  acquired so that the change will not precipitate a
  price rise;

- When the opportunity presents itself, and the carrying
  costs are acceptable, acquire more land than is actually
  needed to meet existing plans; the additional flexibility
  permitted might become invaluable and it might be found
  that the carrying costs for the land are offset by
  its appreciation in value.

The Town still should present its intended purchases to the
Town Meeting. But, they should be presented in much larger par-
cels than in the past; the impact of the acquisition should be
shown as it helps the Town meet its stated goals; and, how the tax
rate will be affected, if at all.
When the Town wishes to acquire a parcel of land that the owner refuses to sell or for which he requests an unreasonable price, the Town's plan should attempt to be flexible enough for other parcels to serve the objectives of the desired parcel. Or, if the attempt to purchase is made far enough ahead, the Town might be able to wait until the parcel it wants becomes available. Nevertheless, there might be occasions when the value of a particular parcel will be so crucial to the success of the Town's plan (and thus for a specific public purpose) that eminent domain will be required to be exercised. Conceivably, by that time the Town's experience in acquiring land will help it fairly establish a price for the taking. And, the Town's ability to receive income from the land will help to justify the price. If the Town wishes to acquire the use of a parcel for which it is the land lessor, it should acquire the rights to the lease for the depreciated value of the lessee's improvements plus some payment for his relocation.

G. Establishment of an Interim Plan

As noted, the recommended land use system for the Town will require extensive planning. And, until the plan is complete, the development of the Town's land can proceed unabated (with the exception of controls imposed by existing zoning and a moratorium on apartment construction lasting until June 1974).

One strategy undertaken by other municipalities contemplating similar land use management innovations has been to develop interim plans or moratoria on construction. Not uncommonly, gaining
acceptance of the interim plans might require as much effort on the part of the town as the final plan. And, if a substantial push is made to gain the acceptability of the interim plan, the Town might use up the goodwill that will be required to secure approval of its final plan.

Fairfax County, Virginia, as noted, is currently considering land banking, transferable development rights, and other innovations. Until the county finalizes its plans it has attempted to gain approval for interim control on growth and encountered substantial opposition. But, their need is great; they had been adding approximately 12,000 housing units per year over the last three years.

In Concord, where the growth rate has been relatively slow, it might be more useful for the Town to continue to acquire conservation land and encourage conservation easements. Then when its land use planning methodology has been fully determined, it should be presented (sold) to the townspeople for their review.

H. Implementation

Implementation of the recommendations made should begin as soon as feasible. The key to the effective implementation will be the early selection and hiring of a Land Manager, whose responsibility it will be to refine and implement the rest of the process. Accordingly, the first step should be the development of
a warrant article for the Town Meeting which shows the need for improved land use planning, its potential for helping meet Town goals and a request for an appropriation to select and hire a Land Manager to implement the plan.

1. Order of Implementation

Once hired, the Land Manager should take the following steps in approximate order:

- Outline the climographic and economic design for the Town when it is completely developed; broadly map a conservation/recreation plan.
- Set a land acquisition schedule that corresponds with a Town Capital improvement plan and secures control of the land most vulnerable for development first;
- Build ties with other agencies to develop coordinated land use plans;
- Establish a program for convincing landowners with developable parcels to provide the Town with conservation easements in trade for reduced taxes;
- Secure the writing of detailed legal briefs supporting the Town's land use control system;
- Begin the sale of bonds to support the Town's land acquisition program.

Under optimal conditions, the hiring of the Land Manager and the development of detailed plans will probably require one and a half to two years. As stated earlier, there probably should not
be an attempt to develop interim plans to protect the Town while the more detailed work is being performed.

2. Special Opportunities

On the other hand, special, one-time opportunities might occur which would justify the Land Manager's attention and which might modify the planning process. Land that changes ownership or use may not become available again within a lifetime. Thus, the Land Manager must be skilled enough and prepared to act on such opportunities with imperfect knowledge but without disrupting his total land use management effort.

For example, a local developer, Dean Comeau, has recently divulged plans to develop 220 housing units on 25-acres of appropriately zoned open space that he owns. There have been a number of conversations between various Town officials and the developer about the possibility of the Town gaining control of the site to help further some of the Town's goals.

In the instance noted, the developer does not want to sell the land to the Town because of the heavy tax burden that he would incur (the selling price would exceed the cost by many times). Instead, discussions have been held about his leasing the land to the Town and still performing construction on the site. He would also want variances to change his density loads and other requirements.
If the Town were to take such a lease, it would have the option of setting sub-tenant lease rates and controlling their mix to some degree. However, it would be also entering the real estate management business for which it is poorly equipped to handle.

Nevertheless, there are a number of options that a skilled land manager could explore with the developer. Among these might be: the possibility of buying the land with a long term payout to reduce developer's tax burden and possibly offering the development rights from the site for the developer's use elsewhere; and, buying the land from the developer on an extended term basis and leasing it back to him at a normal rental rate plus a rental pre-payment, some of which would offset his capital gains on the building, and thus reduce his tax burden; the rental pre-payment would mean a reduction of rents later received by the Town, but would serve the developer's needs and provide the Town with a substantial tax-free cash bonus which it could use to help accelerate its land management programs.

Thus, in the above or similar cases, the Land Manager could both move quickly to play the opportunistic role of land developer and build the opportunities selected into the Town's land plan.
I. Summary

The recommended set of land use controls for the Town of Concord focusses on land banking, but utilizes a wide range of techniques and approaches, many of which have been used by municipalities in the United States and abroad. For example, some of the approaches that have been found to be successful elsewhere and recommended for Concord are:

- creation of municipal leaseholds as practiced in Sweden
- establishment of a well thought out open land use acquisition policy as undertaken Boulder, Colorado
- use of transferable development rights as recommended in St. George, Vermont and other places

But, these techniques are not the significant steps that if undertaken will make Concord's land use planning effective. The most important step that the Town can take is the establishment of a well-designed land management process and the creation of a staff to make the process function.

The process will bear some similarities to the "municipal monopoly on planning" that exists in Sweden or the comprehensive planning efforts being attempted in Fairfax County. However, the similarities are not necessarily in the techniques adopted, but in the concept that land use management is an integral part of the Town's planning process and that it should be flexible enough to meet changing economic and social conditions but
comprehensive enough to help the Town achieve its broadest mark for reaching goals. Furthermore, as was discovered in Boulder, Colorado, the process of planning for land use cannot be separated from the execution of the plans if the impact achieved is to bear any resemblance to the planners' intention.

Accordingly, the effectiveness of Concord's or any other town's land use control will be dependent upon the effectiveness of the management system within which they are contained. And, that system's capability for meeting the town's goals will be the result of the competency and experience of the individual who is selected to operate and upgrade the system. It follows then, that the most important part of the recommended land management system for the Town is the proper selection of the system's manager.
VI. IMPLICATIONS

There are a number of important secondary issues surrounding the installation of a more advanced land banking and management system for the Town of Concord that require some discussion. Some of these are:

- The expected reaction to the system by private developers and others in the private real estate market; its functioning is highly dependent upon the developer's use of municipal leaseholds;
- Opportunities for innovations in land management offered as the system is put into effect;
- The legal constraints to the system's utilization;
- The impact the system might have if applied on a broader scale.

A discussion of these issues follows.

A. The Interests of the Private Market

Residential and commercial developers interviewed for this study for the most part indicated that they would have little difficulty in working with the land banking system described. The principal contact with the system would be as a lessee. And, land leases are not unique and are acceptable to both developers and financial institutions if the terms are long enough and the escalators do not occur too frequently.1

Moreover, a number of developers were more than mildly interested in the potential increased return they could receive by leasing land instead of purchasing it. The lease cost would be fully deductible from their operating expenses and thus would provide substantial tax benefits to them or to their investors if the development were syndicated. When they purchase land, the only benefit for tax purposes they receive is the allowance for deduction of any interest on a loan they might have taken to pay for the land. The cost of the land is not considered an expense and its value cannot be depreciated.

Furthermore, for many developers the lease terms need not be extraordinarily long. Many rental apartment developers receive most of their cash flow from their projects within the first five years or so through syndications or refinancings. Nevertheless, the lease terms will have to be lengthy enough to meet the requirements of financial institutions who hold the mortgages on the projects.

The principal objections from the private sector will come from land developers who will resent the competition from the municipality. This is not to be helped. And, there is some use to curbing the scope of land development; it drives up the cost of

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1Real estate project income statements frequently show net losses even though they actually have a positive cash flow (because of deductions for depreciation, a non-cash item). Syndication is a process whereby investors in development are able to use its losses to offset against their other taxable income and thereby improve their cash position.

2Halper, "Anatomy of a Ground Lease."
land without adding to its usefulness, encourages the division of land without regard to community need, and stimulates the continual destruction of open land rather than the renewal of under-utilized developed parcels.

The concept of municipally owned land and long-term land leases is well accepted. More wide establishment of the combination through creation of municipal leaseholds might be somewhat unique. But few of the better managed development companies appear to have much difficulty in accepting the concept.

B. Ongoing Management

It is expected that as Concord is developed to the limits allowed by its land use controls and the towns surrounding are in similar circumstances, the need for the land banking systems established will not be diminished. Rather, the emphasis will be transferred from protecting open lands to:

- preventing the type of decay that has already begun in some of the older suburbs in the country;
- upgrading or changing the uses of town-owned land to accommodate changes in population, economic conditions, social need and other occurrences. For example, the uses of land could be altered (e.g., industrial to residential, residential to recreational, etc.) and parcels could be sold to help maintain price levels or secure income for the Town;
- creating or dissolving leaseholds.

The changes undertaken should be based on the continuing evaluation of the ability of the Town to meet its goals through
the objectives established for its land use plan. Or, evaluation might show that new methods are required to meet a new set of goals.

C. Legal Implications

One of the first steps that the Land Use Manager must take in securing the approval of his plan will be the establishment of its legality. There are limited precedents\(^1\) for many of the land use management elements recommended in this paper. But interviews at the Attorney General's office and with attorneys working the field indicate that there are few if any explicit prohibitions to their use. Among the elements for which legality will have to be considered are:

- Municipal land acquisition
- Establishment of municipal leaseholds
- Bond sales to finance municipal land purchases
- Transferable development rights
- Designation of improvements and subtenants on the Town leaseholds

There have been instances where forms of these elements have been used under the guidance of certain provisos. But none of the provisos appear to conflict with the aims of the recommended land banking system.

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\(^1\)A thorough citation of case precedents will be required by the Town and its Counsel of some of the steps to be undertaken. This process was beyond the scope of this paper.
1. Municipal Land Acquisition

The rule of thumb for municipal land acquisition is that the land be acquired for a "legitimate municipal purpose." Land acquired to direct the Town's growth and help provide housing diversity, including low-moderate income housing, appears to be a legitimate municipal purpose. Urban renewal authorities and others have acquired land for similar purposes on many occasions.

The municipality's use of its eminent domain powers is likely to be more severely restricted than the outright purchase of land. Nevertheless, eminent domain is often accepted if it meets a "public purpose" although its acceptability varies between jurisdictions.

It is anticipated, however, that eminent domain will be very lightly used in the recommended land management system. Development of plans that allow the municipality to acquire land far enough ahead of its use should allow enough time for negotiation with land owners to help reduce the need for the exercise of the eminent domain power. Furthermore, if the plans are developed with some flexibility, one parcel could be substituted for another when the second is not readily available for purchase.

2. Establishment of Municipal Leaseholds

Establishment of leaseholds on municipally owned land is allowed in the Commonwealth of Massachusetts and has been undertaken in the past. The principal restriction appears to be that the leasehold not be designed to earn a profit. For the system
recommended for Concord, funds in excess of direct costs will be generated but will be applied to the indirect costs of planning the effort and/or providing for its development along the desired lines (e.g., provision of subsidies for low-moderate income residents). Whether land can be used for market rate housing development, however, is unclear and might be attacked as not providing for sufficient public purpose. On the other hand, if the Town wishes to create such leaseholds, and there is some question of their legality, sponsoring a special act in the legislature may not be too difficult a course to follow. A thorough discussion of this and other aspects of land banking can be found in the literature.  

3. Bond Sales to Finance Municipal Land Purchases

The financing of the land acquisition through bonding is performed frequently. For years, in Massachusetts and other states, land for schools, recreation, conservation, redevelopment, and other purposes has been financed through funds acquired through bonding.

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1Urban Land Research Analysts Corporation, Land Banks for Planning and Control (December 1967), Chapter V; Sylvan Kamm, Land Banking, Public Policy Alternatives and Dilemmas (1970), pp. 18-24.

4. Transferable Development Rights

Transferable development rights are extensions of the cluster, impact, and incentive zoning regulations that have been allowed in a number of municipalities. Duxbury, Massachusetts, is an example of a town that has recently adopted a town-wide impact zoning ordinance.

Sunderland, Massachusetts has recently established a TR system as part of a new subdivision code. The town's counsel feels the system is legal but no test has yet been made.

5. Designation of Improvements and Sub-tenants on Town Leaseholds

Ground lessors typically "should not look to the credit of the ground lessee for its rent but to the security of the improvements and the rent flowing from the sub-tenants on the premises." Thus, the town has both the right and the responsibility to designate the type of development and its character. Furthermore, it is common practice for neighborhood groups to select tenants for housing in urban renewal projects in Massachusetts.

6. Home Rule

Massachusetts is a home rule state and thus provides its municipalities with a great deal of leeway in the steps that they take. Usually, steps taken for valid municipal purpose are

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2 Ibid., p. 8.
acceptable unless specifically prohibited by state law. As best can be determined the steps taken to implement the recommended land use models are not prohibited and quite apparently suit a "valid municipal purpose."

Establishment of municipal purpose will be aided substantially by the detailed plan that is recommended for development by the Concord Land Manager. Accordingly, the plan should contain a legal section, developed in concert with legal counsel, the CTPC, and others and should give the case citations establishing the legality of the system.

D. Application of the Land Banking System On a Broader Scale

The land use control and management system recommended for Concord is particularly suited to the Town. It has a history of land acquisition and interests in innovation; other towns might not find it quite so compatible with their interests; and, more densely developed areas would have difficulty affording the price of the developable land.

On the other hand, the economics of town purchases of land for creation of leaseholds could be strong enough to help many towns overcome their inhibitions about purchase of land. The requirement for an effective, capable land manager might pose problems in towns where local politicians might be afraid of his potential.
Also, in center city areas where land is often already highly developed, the limitation of growth is not usually an issue. Instead, there is a concern about renewal and achievement of best use of land. Under such conditions, land banking might be very useful. There would be little requirement for purchase of conservation land or other open space uses and thus much more of the land acquired could be put to income producing purposes to offset its higher price than might be politically acceptable in towns of Concord's size and character.

Even when the city's interest is in writing down the cost of land to generate lower cost housing, land banking can be useful. Under those conditions, instead of writing the cost of a land acquisition down and then selling it, the city could retain ownership of the land, receive some income from leases in the near term, and have the option to gain the benefit of a capital appreciation created on the land by the city's wider renewal efforts. Thus, while the short term gains might not be as significant, there could be a long term recovery.

Without question, a system as powerful as the one suggested for the Town of Concord should not be encouraged for widespread use by municipalities throughout the State or the country without some guidance from government bodies with a broader concern; other towns might not have any of Concord's altruistic goals and could substantially restrict the development of housing for lower income people or other 'undesirables.'
Nevertheless, the development of State, regional, and nationwide plans will take several years at the very least to be developed. And, it is up to Concord to preserve its own character in the interim. Furthermore, there is no reason to believe that towns' resistance to unchecked suburbanization is wrong. Nor, should the Town be expected to necessarily share in the five percent growth rate that has occurred in the Boston area over the past ten years. In fact, if the Town does restrict the immigration of all people into the Town, those most restricted will be those who could afford the Town and not poor people from a minority ghetto. If this restriction is handled well by regional and state planning bodies, it could substantially benefit poorer towns who could use the influx of a wealthier population. Towns like Lowell, Lawrence, Newburyport, and others could benefit substantially by the receipt of Concord's overflow.

Furthermore, without creation of municipal leaseholds or some other similar active land management method, the Town of Concord is unlikely to have room for any lower or middle income people. Prices will be continually driven up as the Town fills and the demand grows for less and less available land.

Thus, by restricting its growth to an affordable level, and setting aside specific portions for different uses and different people, the Town is in a better position to help accommodate at least a small portion of the pressures for change and growth without ruining its unique attractiveness.
BIBLIOGRAPHY


Town of Concord, Rules and Regulations Governing the Subdivision of Land in Concord, Massachusetts, 1973, Draft.


_____. "Land Banks for Planning and Control: Some General Principles and a Specific Application." December 1967.


_____. "Development Rights Transfer as a Basis for Land-Use Control in the St. George, Vermont Plan." Waitsfield, Vermont.
PARTIAL LIST OF INTERVIEWEES

Clymer, John H. Hutchins and Wheeler, Counsellors at Law, Boston, Massachusetts.

Constantinides, Constantine. Division of Community Services, Massachusetts Department of Community Affairs.

Flynn, Paul J. Town, Manager, Concord, Massachusetts.

Herr, Philip B. Assoc. Professor, Massachusetts Institute of Technology.

Holgerson, Albert. Continental Real Estate Equities, Boston, Massachusetts.

Hurley, Kevin. Town Planner, Concord, Massachusetts.

Lee, Carter. Assistant Attorney General, Commonwealth of Massachusetts.


Marriner, Kenneth W. Jr. Natural Resources Commission, Concord, Massachusetts

Monahan, Daniel H. Department of Natural Resources, Concord, Massachusetts.

O'Connor, William J. Equivest, Boston, Massachusetts.

Rex, Deli. Open Space Coordinator, Boulder, Colorado.


Schanzenbacher, George W. Assistant Planning Director, Town of Amherst, Williamsville, New York.

1Others interviewed included mortgage loan officers at financial institutions, real estate developers, attorneys, town officials and others with an interest in land banking and development.
Seigneur, David R. Erie and Niagara Counties Regional Planning Board, Grand Island, New York.

Standish, Myles III. Revaluation Advisory Committee, Concord, Massachusetts.

Van Tresca, Michael. Department of Forests and Waters, Commonwealth of Massachusetts.

West, James. Concord Subdivision Ordinance Re-draft Committee.

Wilbur, D. Elliott Jr. Housing Authority, Concord, Massachusetts.

Wilson, Leonard U. Consultant, Waitesville, Vermont.

Wilson, John. Assessor, Concord, Massachusetts.