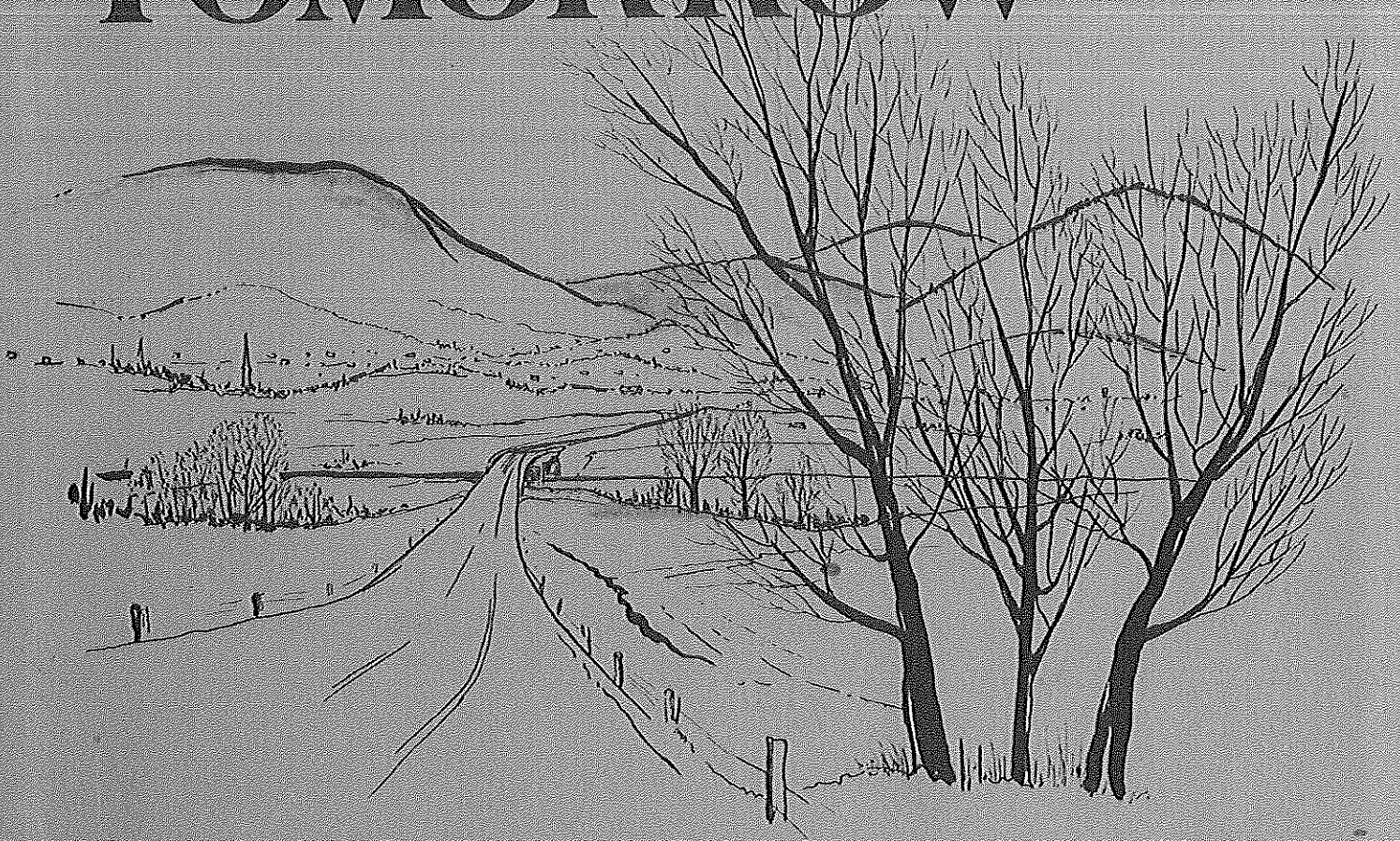


PATHWAY TO TOMORROW



A Master Plan
for Northfield

① From City Planner - 774-3167
Queen. H. Smith -
Family?
Water - not in P

② Planning & Research Bureau (1-617-727-3551)
(Turned adm div 7/45)

③ Planning Assistance Bureau
(Community affairs dept - 23 B/10 (1-617-727-3264))
a) indebtedness by municipalities 4/4/7
Town may incur debt for Planning
(w/ debt limit) - 2/3 vote

④ Mass Muncip Ass - 1-617-⁴²⁶~~426~~-7272

⑤ Master Plan gl 41/810 - Town author.

⑥ Univ of Mass "Regional Planning Dept"
(Water, etc)

PATHWAY TO TOMORROW

A MASTER PLAN FOR NORTHFIELD

Presented to the Town of Northfield
by the Northfield Planning Board

Northfield Planning Board

Richard G. Parsons, Chairman
Harold Newton
John Hogan
Arthur Knapp, Jr.
Edwin LaMontagne, Jr.

Former Planning Board Members who made substantial
contributions to the Master Plan

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Cover drawing by August Mello

1977

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Section I

Introduction

Purpose

The first question facing any group when it considers a Master Plan is, perhaps, "Why bother?". The first and probably least important reason is that there is a statutory responsibility to prepare one. A far more important reason is to find the best ways of using the resources available to the town for fulfilling the needs and desires of the townspeople. Many of these needs are common to all families--good housing, pleasant surroundings, freedom from lawlessness and adequate provision for public services are but a few. Many other needs and desires are far less universal--a job near home that pays adequately, business opportunities for individual endeavor, preservation of forest land and wilderness areas are goals that some groups place very high in priority while others are far less concerned.

It is in the area of diverse goals and opinions that this Master Plan has attempted to uncover what people really want for Northfield's future, and to explore the infinite number of possibilities for using our resources to reach these most commonly held goals. One important fact that became apparent very early in the planning process is that many goals are mutually exclusive if both are to be achieved in the same area. Examples of this are the preservation of large forest and wildlife areas and the establishment of new housing concentrations in undeveloped areas. Another is the establishment of industrial activity close to residential developments. As a result of this mutual intolerance of land use, some areas will of necessity be recommended set aside for specific uses while other areas may be excluded from that same use.

A third reason for preparing a Master Plan is that it helps the many town officials and departments to coordinate their activities in a manner that eliminates the duplication of effort in diverse town projects that work toward opposing goals. If this purpose can be achieved in practice, the results should be an efficient delivery of public services at a minimal cost.

The resources available to Northfield are many and varied. Some are here naturally, such as the land, the streams, the forests. Some we have made or otherwise brought under our control: water systems, roads, buildings, machinery. Another but far less obvious resource is the people--

their individual abilities and talents, and the multitude of social institutions they have developed: families, government agencies, businesses, schools, churches, etc. At one point or another, most of these different kinds of resources have been thoroughly discussed in the preparation of this Master Plan.

This Master Plan has been prepared primarily through the active participation of townspeople. Over 180 people were actively involved in neighborhood study groups. Many more were involved in task force study groups or were interviewed directly by the Planning Board. The latter group includes nearly all town boards, major business interests in Northfield, public and private schools, and others. Appendix A of this plan lists the detailed procedure carried out, and Appendix B lists the reports resulting from the various activities. In 1974, early in the Master Plan process, a town-wide questionnaire was mailed to all Northfield households. With 41% of the questionnaires being returned, a most revealing and useful view of town opinions was obtained. The attitudes and priorities of that questionnaire have guided many of the discussions as well as the resulting recommendations of this Master Plan. Appendix C includes a summary of a very extensive computer analysis of the questionnaire.

The role of the Planning Board in the preparation of this plan has been primarily to provide an opportunity for townspeople to express their views, to provide the basic information necessary to productive discussion (maps, references, economic data, etc.), and to make specific judgments and priority choices in areas where public opinion is lacking consensus. The Planning Board has intentionally limited its use of outside consultants to achieve two very definite goals. First, it has greatly reduced the cost of preparing a Master Plan. Second, it has ensured to a high degree that this Master Plan reflects the real views of the people of Northfield regarding the future development of the town.

Use

A most important aspect of this Master Plan for Northfield is that it is only a beginning. To fulfill its purpose it must be discussed thoroughly and critically. It must be frequently updated to meet changing conditions and pressures. For in spite of every effort, no one, including the people of Northfield, can accurately predict the influences that will affect Northfield's development five, ten, or thirty years in the future. Even during the preparation of this plan, changes have occurred that make early suggestions impractical or unnecessary. The need for planning ahead will

not end with this particular document. It can only make future planning more effective.

The greatest value of this plan will be realized if all town boards and departments refer to it before new projects or programs are started, to see if proposals enhance or detract from the overall goals of the town. This frequent reference will have the added value of pointing out any weaknesses that exist and will again strengthen the planning process for providing a means for efficient town government.

The materials involved in the preparation of this Master Plan could fill several volumes. They include discussions and investigations of every conceivable aspect of the natural resources and human activities in the town. These materials are available for inspection in the Planning Board office for those interested in greater research. However, this plan is intended to be brief and to the point so that it can be more easily understood and put to good use.

Basic Goals

In the areas where the Planning Board has of necessity exercised judgment and choice, four very basic goals have been established and used as a general guide to all recommendations: 1) to provide essential public services at the lowest possible cost; 2) to promote economic activities that provide jobs for Northfield people, a greater choice of goods and services to residents, and greater potential for development of Northfield business enterprises; 3) to encourage development in areas that will not cause excessive municipal cost or result in undue damage to Northfield resources; 4) to create, within the limits of the measures available to the town, the atmosphere and the environment most desired by Northfield people as expressed in questionnaires, group discussions, interviews and elsewhere.

Without doubt and in spite of great effort to the contrary, errors in information or judgment have crept into this plan. Hopefully, the plan will be reviewed and critically examined by many interested citizens, and any shortcomings will be brought to public attention. Only in this way can necessary changes be made and the ongoing planning process continue. Equally, there may have been important facts or information left out in the planning process. These, too, should be brought to public notice at an early time to improve the quality of Northfield's effort to guide its own future.

Section 2

Northfield Described

Geography

Northfield's most prominent feature and the greatest factor in the 300 years of its development is the Connecticut River. Unlike other towns along the entire course of the river, Northfield's territory embraces land on both east and west banks. Both to the east and to the west, the land rises to rocky hills that for many years have formed a natural protective barrier from enemies in the early days and from the pressure of development in more recent times. Due to a long series of "near misses," Northfield has somehow escaped being in the direct path of major highways, centers of commerce, and industrial concentrations. The Connecticut River itself was too large in the early years to be harnessed and used. The fact that neither the Ashuelot River nor the Millers River is located in Northfield has resulted in the leather and paper industries locating just north or just south of Northfield itself. Had it been otherwise, Northfield's character would undoubtedly be much different than it is today.

The geological accident that offset the Connecticut River just a few miles from Turners Falls to the French King narrows resulted in nearly all north-south travel on U.S. Rte. 5 being routed through Greenfield and on to Brattleboro, Vermont. One has but to observe the development along present day I-91 to see how this kind of traffic would have changed Northfield if the Connecticut River ran in a straight northerly direction above Deerfield and Greenfield. Both Mass. Rte. 2 and N.H. Rte. 9 also missed Northfield by just a few miles. Had either of these major highways brought traffic from the populous Eastern Massachusetts area, it would also have been a different history that we could write for Northfield.

Because of these "near misses," Northfield's growth and change have been at a very steady and conservative pace. This low rate of growth combined with the wide variety of landscape has allowed Northfield to retain much of its original natural beauty, charm, and potential for providing a very desirable environment for its citizens.

Bordered on the north by both Vermont and New Hampshire, and by sparsely populated towns on its eastern, southern and western sides, Northfield in municipal affairs tends to be lightly involved with other towns. At the same time,

Northfield people are equidistant from the business and industrial centers of Greenfield, Brattleboro and Keene, where many residents find their source of income in a variety of jobs.

In attempting to predict the source of future pressure and change, it would appear that the greatest demand for living space would come from the south, where in recent years many city dwellers in the Hartford-Springfield-Holyoke areas have become disenchanted with their environment and have sought more peaceful surroundings in rural areas. Another noticeable influence has been the expansion of the University of Massachusetts at Amherst to a population center well in excess of 25,000 people. Housing demands for this area have proved overwhelming in towns but a few miles to the south of Northfield. While still far enough away to have escaped the major impact, a number of new Northfield residents are representative of the academic or professional community of the Amherst area.

Northfield's location in respect to the seat of State government in Boston over the years has had a noticeable effect on the conduct of municipal affairs. Separated from the State House by 100 miles, Northfield has tended to develop a rather independent and individualistic attitude. This is not a recent development, since there seemed to be some considerable annoyance toward an overriding authority even before the colonies became independent of England. Vastly improved transportation and a greater involvement of State government in town affairs have increased the interchange between local and State functions, but the early attitudes still greatly flavor these activities.

Geology

Northfield's natural resources consist primarily of its soils, the products that can grow on them, and the special qualities that the widely varied landscapes provide. The Connecticut River itself is important to the town through its contribution to the operation of the Northfield Mountain Pumped Storage Project and through its ability to provide recreational activities. The alluvial soils that are a product of the river generate substantial income through the production and sale of milk and other crops. The higher levels of alluvial soils are the site of Northfield's population centers. These include the Northfield Center and East Northfield areas, as well as the residential sections of Rtes. 63 and 142. In those sections the alluvial deposits are greatly varied with clays and hardpans, limiting agricultural use and frequently causing water and sewage problems for homeowners. In West Northfield a major gravel deposit of

especially high quality has been the basis of a major industry for many years. Above the alluvial soils the steep and rocky mountainous areas on both east and west are presently largely forested. In the early 1800's, many of these areas were farmed, but the meager fertility of the soil and the grueling work of farming stony soils soon forced the areas to be abandoned and left to the forests. Aside from their substantial forest value, these upland areas hold a great potential as water sources and living space for a wide variety of wildlife.

In an overview, Northfield contains just over 22,000 acres of land. About 4600 are presently in agriculture or other open land uses, over 800 acres are wetlands, nearly 800 more are in urban use, while the balance of approximately 16,000 acres is in forests. Of the 16,000, something in excess of 2000 acres is in the Northfield State Forest.

History

Northfield's settlement is a tribute to persistence, for it took three separate attempts before a permanent settlement was founded in 1714. The first settlement was in 1673, but the danger of destruction by the Indians in King Philip's War forced its abandonment in 1675. In 1685, another attempt was made to settle the town and this time the effort lasted five years, until in 1690 raids by the French and Indians forced a second abandonment. There was little peace even in the third settlement, since the French and Indian wars did not cease officially until after 1750.

Very noticeable trends occurred in each of the three centuries of Northfield's history. Through the 1700's, subsistence farming or homesteading was a major way of life, with small mills and shops being constructed on local streams or thoroughfares to provide the necessary services and goods for the inhabitants. Through the 1800's, farming was expanded to cover much of the town with miles of stone walls through present day forests giving mute testimony to the back breaking toil of that century. The founding of the Northfield Schools also occurred in the 1800's, and has since greatly influenced Northfield's character and image.

The 1900's has seen a reversal of the expanded farming activities. Many small farms were consolidated into large commercial units that ship most products to other areas for consumption. Most small mills and shops have also ceased to operate in favor of larger commercial units located in Greenfield, Brattleboro, Keene, and on the Ashuelot and Millers Rivers. Commerce also has tended to gravitate to these urban centers with Northfield's own commercial community providing a much smaller proportion of the goods and services used by

townspeople than in the prior century.

For nearly a century, railroads have played a major part in Northfield's economic and social activities. Established in the middle and late 1800's, this major link with the "outside world" opened up easy access to major population areas where Northfield products could be marketed. Many "old-timers" well remember the "milk trains" and the frequent passing of freight and passenger trains. At least four stations with freight and passenger service were located in Northfield.

The railroad industry was a major factor in town activities until the late 1930's and 1940's, when major highway improvements and the development of the heavy trucking industry became a strong competition. Interstate highway construction reinforced this change in the 1950's and '60's, with present day railroads fighting for survival. Now the railroad stations are gone, the sidings unused, and most trains pass without stopping.

Recent dramatic increases in energy costs have given the railroads a new breath of life, but the future for this mode of transportation is still unclear.

Social Aspects

As Northfield's landscape is widely varied, so also are the groups of people who live there. It is only natural for rural people to think and act independently since their smaller numbers and greater isolation dictate they solve most problems by themselves. Where neighbors are close and communications more frequent, such as Northfield Center or East Northfield, it is natural that some problems are common to many with a common solution being a natural result. This is best demonstrated by the development of water systems and sewer systems in these residential areas. Frequently, issues of town concern affect one area far differently from another area. The most vivid example of this is the present day discussion of the care and fate of Schell Bridge, which daily affects greatly the lives and finances of West Northfield people, but has little effect on Northfield Farms residents.

Another easily identifiable social group is the Northfield-Mount Hermon School community. Faculty especially find their working and social lives almost completely involved with the school or related activities, with little time left for involvement in other town affairs. While other employees may be less involved socially in school activities, they

nevertheless are easily identifiable as a part of that community. With the Northfield-Mount Hermon School community representing such a significant part of the town's total population, it is only natural that this group would have a significant influence on town affairs over a period of years.

Other social groupings are sometimes visible. These would include the retirement community, the farming community, the blue collar workers, and the business community. The questionnaire of 1974 attempted to identify the feelings and preferences of many of these groups. It appears as though the questionnaire was reasonably successful in doing this and has aided greatly in shaping the recommendations included in this Master Plan.

Since the earliest settlement, churches and religious groups have greatly influenced the personal and social affairs of Northfield people. Unitarian and Congregational groups are the oldest denominations still visible. The fervent evangelism of D. L. Moody was a dominant force from the middle 1800's through the early 1900's, presently evidenced by the on-going educational programs of the Northfield-Mount Hermon Schools. More recent congregations include Baptist, Roman Catholic, Advent Christian, and others. These religious groups have greatly influenced Northfield's past through myriad subtleties and social pressures. While all are subject to an evolution of ideology and emphasis, they remain a highly valued and potent force for guiding Northfield's future.

Change

While change has occurred at a slow but steady pace in Northfield, it is important to identify the factors that will decide the future pressures on the town. Economic activity and advancing technology are probably the greatest forces that have shaped Northfield in the past and will continue to do so. The economic power of large corporations as illustrated by the paper companies on the Ashuelot and Millers Rivers and the tool industries located in Greenfield were probably the root cause in the decline of the small shops and mills in the Northfield of the 1800's. The ability of these large corporations to move at will to any point in the country has added a noticeable uncertainty to the local economic climate in recent years. The noticeable stimulus on our local business activity during the building of the Northfield Mountain Pumped Storage Project is another example of change coming as a result of great economic power. The tax contribution of that facility remains as a significant factor in how much Northfield people can spend for municipal functions.

Another major influence on Northfield's future will be the magnitude of highway construction and the location of future highways. Highways have the power to transfer both the assets and the liabilities of great urban populations to our own doorstep in a relatively short time. Of particular note will be the manner in which Rte. 2 is completed from Orange to Greenfield.

Success or failure in Northfield's farm community may well depend on national agricultural policy far more than on any local factors. This influence is beyond the control of Northfield people, and yet the highly productive alluvial soils could someday return to forests or housing developments if farmers cannot make a satisfactory living operating the land.

The great mobility of present day professional people is another source of change that is less obvious but far-reaching in its effects. Teachers, clergymen, doctors, lawyers and other professionals frequently are products of an environment and social system far different from Northfield's. In daily school and work activities, the values and ideas of these other cultures are adopted bit by bit and over any extended period of time result in a change in attitudes in the local community. These changes greatly show up in the kind of municipal services expected, the manner in which social activities are conducted, and even in the basic organization of family life.

Another source of change in the conduct of town affairs is the assumption of State-mandated programs. The institution of a State building code has greatly increased Northfield's municipal activities. State requirements in educational programming are less obvious but have had a profound effect on the cost of local educational programs.

Another stimulus to change is the appearance of an unfamiliar problem. For many years, Northfield voters rejected the idea of zoning or any other land use regulations. There seemed to be no apparent need for these since most people seemed to be quite satisfied with conditions as they were. The initiation of the Northfield Mountain Pumped Storage Project with its hundreds of temporary jobs brought the possibility of large numbers of mobile homes being located in Northfield. This apparently was of great enough concern to stimulate activity that resulted in a zoning bylaw that severely limited the use of trailers, as well as providing broad guidelines for residential development. Another problem of this type, whether real or imagined, has been the spectre of large multiple housing developments coming to Northfield. Whether or not this is economically feasible has not been

determined, and yet the voters approved a moratorium completely banning such developments temporarily. The only drawback of this kind of change stimulus is that frequently the remedy cannot be properly designed due to a lack of time. In some cases, the remedy may end up as a greater problem than the original problem.

Attitudes

Throughout the preparation of this Master Plan, a prime concern has been to find out how people feel about a number of specific issues regarding future development. Some of the conclusions are these:

Residential Development. It appears that most Northfield people prefer future development to be heavily weighted toward single family houses located in a traditional manner on adequate lots. It would appear that limited multiple housing units would be acceptable, but frequently the expressed limit is four family units within a single structure. Since this is far smaller in scope than most housing developments seen in Amherst, Sunderland or Greenfield, it would follow that definite town regulations will have to be developed if our preferred style is to prevail. Facilities such as retirement communities have been seen as very acceptable since they generally are a self contained unit that requires little of municipal services and would provide substantial job income and tax opportunity. It also appears quite obvious that a majority of Northfield people would prefer that new housing be concentrated near the present population centers where municipal cost would be lower and the damage to natural resources less severe. While not a unanimous sentiment in any sense, there is a growing concern for the preservation of large open space areas for the protection of natural beauty, wildlife populations and recreational opportunities. These are generally incompatible with residential development.

Industry. The town's attitude toward the development of any industry is more variable and more complex than toward many other facets of development. Retired people, professional people, and many others living in our centers of population appear to be very wary of any form of industry, apparently in concern for their living environment and the potential destruction of natural resources. At the same time, residents of more rural areas have tended to recognize our lack of job opportunities and have willingly considered potential sites for "desirable" industries. The net indication seems to be that with some limitation the development of industry would improve the economic opportunities in Northfield, contribute to municipal revenues, and have little negative effect on our natural environment.

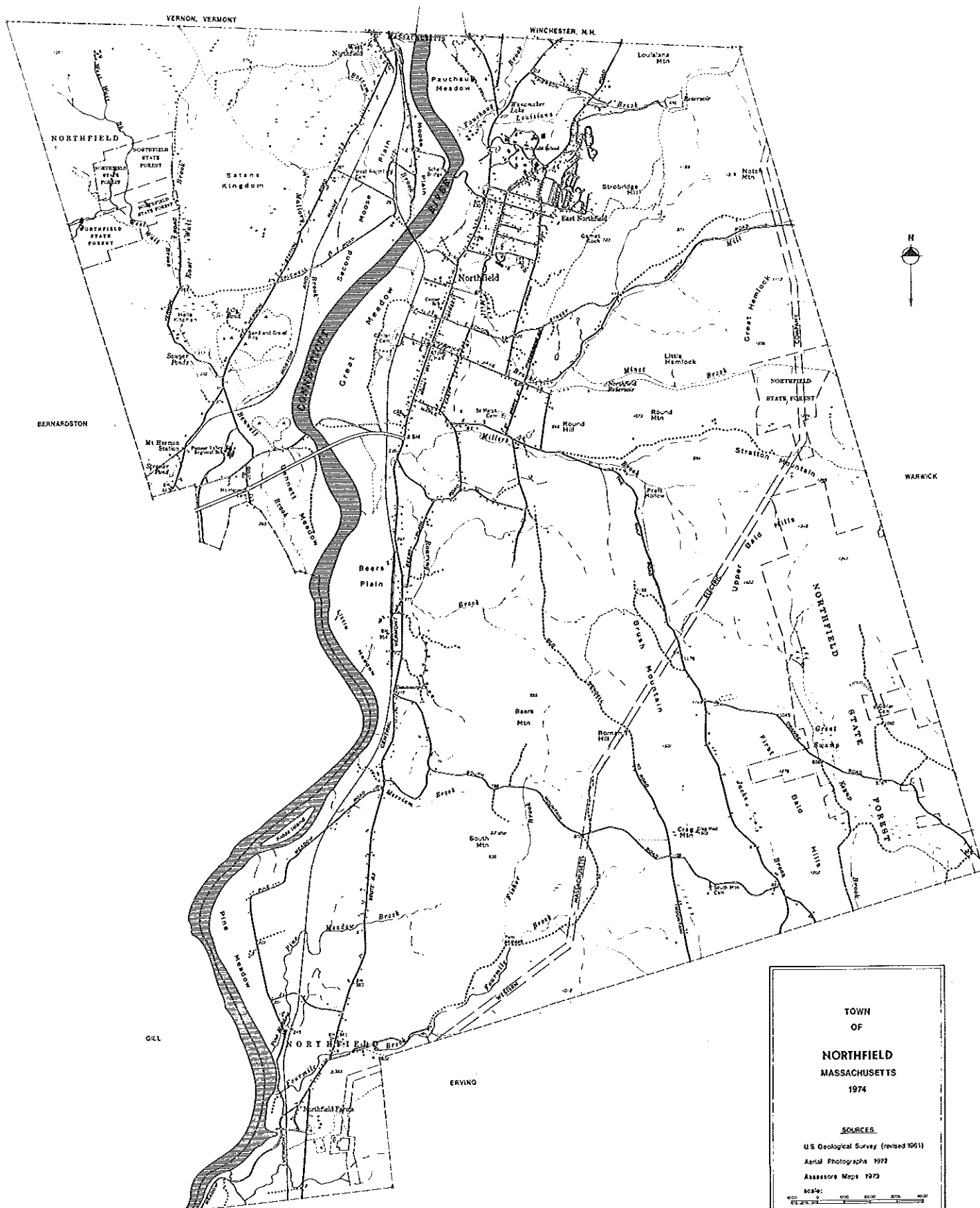
Agriculture. It appears that a vast majority of Northfield people think kindly of our agricultural industry, not only for its economic contribution, but for its preservation of open space and very pleasant surroundings. It is recognized that farms do not require much in municipal services, and with a large investment in facilities are contributing substantially toward municipal revenue. How the town can promote the welfare of Northfield agriculture will be treated in another section.

Commerce. Commercial activity in Northfield has been severely hampered over the years since most business has been conducted on Main Street where very limited expansion potential exists and additional parking space is practically nonexistent. The conflict of business activity with the preservation of Northfield's unique Main Street appearance has usually resulted in a stalemate situation. Commercial enterprises have for several years continued doing business in the same buildings on the same lot and with the same parking opportunities. In the face of greater mobility of customers and the greater variety of services offered in more urban centers, the inevitable result has been a gradual constricting of profits and business potential. It would appear that Northfield people in general would like to see greater commercial activity but are at a loss to know how this can be accomplished without seriously affecting our historical and architectural heritage. Several recommendations and suggestions toward solving that enigma will be made at other places in this Master Plan.

Regulations. It is not uncommon to hear the many regulatory codes presently in existence decried as overbearing, unreasonable, or unnecessary. However, the 1974 questionnaire as well as many other expressions indicates that a substantial majority would not elect to dispose of regulations on future development.

As town officials have been obligated to enforce both local and State regulations in recent months, it appears that a subtle change has taken place in public opinion. Apparently, when faced with a real choice between living with the same rules for all or ignoring the statutory requirements for a few, a growing number of Northfield people have opted for support of town officials in their enforcement duties. Frequently, it has been with great reluctance that officials have taken enforcement steps, but in doing so it seems apparent that the acceptance of the validity of regulations has been strengthened.

Municipal Services. The general attitude of Northfield people toward the services and functions of town government is conservative in nature. Northfield people feel the burden of real estate taxes as acutely as any other locality. And while in comparison to many other towns the Northfield tax rate is favorable, it should be remembered that many jobs are located outside of Northfield and in recent years in industries that do not offer high job security. As in every town, there are some special services that some groups feel highly important while other groups may see as of little value. Street lighting and the maintenance of the town landfill would probably fall into this category. In keeping with this conservative philosophy, the recommendations of the Master Plan do not include any dramatic increases in municipal function or service.



Section 3

Economy

GENERAL COMMENTS

Prepared by Philip B. Herr & Associates
May 13, 1976

The economic well-being of town residents is an important determinant of the quality of life in Northfield. Primarily, economic well-being depends on jobs. Over seventy percent of personal income in Franklin County is "earned", derived from wages, salaries, and payments to proprietors*. Success in increasing and maintaining income through job opportunities is dependent on four factors:

1. Job supply - availability of enough jobs to meet the demand created by the number of people in the labor force;
2. Job diversity - choice of a reasonable range of employment opportunities (in terms of type and pay scale) relative to the interests and skills of the population;
3. Job location - possibility of easy, efficient access between place of work and place of residence;
4. Income generating jobs - capability of bringing new money into the community rather than just recirculating existing wealth.

A review of Northfield's existing economic situation provides a complex picture. On the one hand, average family income is higher than county and state averages. Employment in Northfield has been growing faster than population and faster than county employment. On the other hand, there are not enough jobs to support the town's present population (creating net out-commuting primarily to other locations in Franklin County). The local economy is not very diverse (heavy dependency on the future of private education). Most jobs located in town are in service-oriented industries (drawing on income already in Northfield rather than generating new income). Northfield's largest source of income is

*U.S. Bureau of Economic Analysis as reported in State of the Economy: 1975, by the Franklin County Planning Department and Philip B. Herr & Associates, 1975.

from commuters working outside the town. Northfield is neither a totally self-sufficient community nor completely a bedroom town.

JOBS AND POPULATION

Jobs and population affect each other in a number of ways which shape the future of a community. Expanding job opportunities increases the number of people who want to live in an area. This in turn places pressures on environmental resources and on public services. Just as jobs bring people, so people bring jobs. Jobs in town government, finance, insurance, and real estate, and some jobs in construction, retailing, transportation, and other services primarily depend on the local population. Over half the jobs now existing in Northfield primarily service the needs of Northfield residents. It has been estimated that, for Franklin County in 1970, there was one such service job for each five residents*. In 1974, there was one job in a service-oriented industry for about each seven residents. Therefore, as a rule of thumb, each 5 to 7 new town residents may be expected to support one new service job in Northfield.

The final relationship between jobs and people is that new residents need jobs. Some will find jobs in town, but others will have to commute elsewhere. If a town cannot provide enough jobs for new residents, then it must function as a bedroom community. This can have important fiscal effects since private job development is fiscally profitable while residential development is usually fiscally unprofitable. There can also be significant social consequences in being a bedroom community. Because people travel outside to work, there are fewer relationships among residents, thereby creating a less cohesive community.

TOTAL EMPLOYMENT AND ECONOMIC STRUCTURE

There is no good single measure of jobs in Northfield. In order to estimate the extent and composition of the town's economic activity, it is necessary to investigate several sources of information and make certain assumptions based on characteristics of the regional economy**.

*Herr Associates, People, Jobs and Taxes, July, 1972, Table 24, p. 48.

**See Philip B. Herr & Associates, State of the Economy: 1975 (October, 1975), and People, Jobs and Taxes (July, 1972), prepared for the Franklin County Planning Department.

Table 1 summarizes the structure of Northfield's economy. We estimate that two-thirds of the town's labor force is engaged in "basic" economic activity (i.e., bringing non-local money into the community). However, most of these people commuted to jobs outside the town. Of the estimated 665 jobs located within Northfield, about 45% were in "basic" industries (private education, agriculture, mining and manufacturing). These basic jobs export goods and services to outsiders and bring dollars into Northfield. This economic activity does not depend on town residents to buy its goods, but rather services the region, state, or nation. The remaining 55% of the jobs located in Northfield are in service-oriented industries. It should be pointed out, however, that some of these jobs may be classified, at least in part, as basic (not all cars or gasoline sold in Northfield are bought by residents of the town). Determining the "basic component" of these service jobs is difficult, but it is reasonable to assume that there is about a fifty-fifty split between basic and non-basic economic activity in Northfield.

Closer examination of the town's economic structure, however, is a bit more sobering. Nearly one-third of all employment and almost three-fourths of basic employment is dependent on a single firm - Northfield/Mt. Hermon School. Agriculture, so important in providing many of the town's special qualities, plays a relatively small part in the local economy. Furthermore, agriculture in Franklin County has been analyzed as a declining industry, though the decline has been less precipitous than for Massachusetts on the whole*.

MAJOR EMPLOYERS

In Northfield it is easy to identify some major sources of employment either because they are large (e.g., Northfield Mt. Hermon School) or because they are limited and easily countable (e.g., dairy farms). Such local employers are the best sources of information for supplementing state and federal data. Table 2 lists some of the town's major employers and their estimates of current employment.

*Herr Associates, State of the Economy: 1975, p. 33.

Table 1
ESTIMATES OF JOBS IN NORTHFIELD, 1974

	DES Covered ^a	Total Jobs ^b
<u>Largely supported by "outsiders'" income</u>		
Agriculture	3	40 ^c
Mining	17	30 ^d
Manufacturing	10	15 ^e
Private education	0	210 ^f
Local basic jobs	30	295
Net out-commuting	-	430 ^g
TOTAL BASIC EMPLOYMENT	30	725
<u>Largely supported by residents' income</u>		
Construction	22	30 ^e
Trade	73	80 ^e
Transportation, utilities, finance, insurance, real estate, services	104	150 ^e
Government	0	110 ^h
TOTAL NON-BASIC EMPLOYMENT	199	370
JOBS IN NORTHFIELD	229	665

Notes:

^aMassachusetts Division of Employment Security.

^bHerr Associates estimates, rounded.

^cNorthfield Planning Board estimate of current local jobs in dairy farming x 1.33 (assumes three-fourths of agricultural jobs are in dairy farming); note, 51 Northfield residents (16+ years) held agricultural jobs in 1970.

^dBased on average number of jobs at Northfield Sand & Gravel.

^e(DES covered jobs in the sector) x (county ratio of covered to total employment for the sector)

^fNorthfield-Mt. Hermon School Accounting Office.

^g1,090 (Northfield residents in labor force) minus 665 (jobs in Northfield) rounded to nearest ten. Northfield residents in labor force = 1975 population x .69 (% 1970 population 16+ years old) x .64 (percentage 16+ in labor force).

^h1970 Franklin County ratio of 44 governmental employees per 1,000 population x 2.47 (# 000's Northfield population, 1975).

Table 2
MAJOR PRIVATE NORTHFIELD EMPLOYERS

	Employees
Northfield Sand & Gravel	16-40*
Northfield Inn	0-40*
Northfield-Mt. Hermon School	210**
Dairy Farms	30
Other Commerce	50

*Indicates seasonal variation

**Jobs on the Northfield campus. Total employment by the school is about 450.

Source: Northfield Planning Board; Northfield/Mt. Hermon School

TRENDS IN COVERED EMPLOYMENT

Detailed records kept by the Massachusetts Department of Employment Security are the best regularly maintained source of data on local employment and its change over time. Unfortunately, they exclude government jobs, private education, the self-employed (such as farmers), and those employed in very small and/or very seasonal enterprises. Only about 35% of the jobs in Northfield are "covered" by state employment insurance.

As shown in Table 3, the number of covered jobs in Northfield doubled between 1960 and 1974. Part of this increase is undoubtedly due to new job categories being counted by DES. However, excluding the four year surge of construction employment for the Northfield Mountain Project, about ten new covered jobs were, on average, created annually over that period.

Table 4 compares recent job growth, as reported by DES, with the town's population growth and with county employment trends. Over the seven year period covered employment increased much faster than population. For Franklin County generally, employment growth was greater than population growth. However, the town's rate of job growth was four times that of the county during that period.

Nearly three-fourths of all covered jobs in Northfield are in the trade and service industries (see Table 5). These figures provide additional evidence that the local economy is much more service-oriented and much less manufacturing oriented than Franklin

Table 3
NORTHFIELD ANNUAL AVERAGE COVERED EMPLOYMENT, 1960-1974

Year	Covered Employees
1960	114
1961	106
1962	106
1963	99
1964	104
1965	105
1966	116
1967	146
1968	391
1969	797
1970	773
1971	468
1972	269
1973	259
1974	229

Note: 1968-1971 "bulge" due to Northfield Mountain construction employment.

Source: Division of Employment Security

Table 4
EMPLOYMENT GROWTH

	1967	1974	% Change
Northfield Covered Employees (Ann. Avg.)	146	229	+57
Northfield Population	2,424	2,464	+ 2
Franklin County Covered Em- ployees (Ann. Avg.)	12,978	14,831	+14
Franklin County Population	58,032	62,770	+ 8

Source: Division of Employment Security; Herr Associates popula-
tion estimates based on 1965 and 1975 state decennial
censuses.

Table 5
COVERED EMPLOYMENT BY INDUSTRY, 1967-1974

	<u>1967</u>		<u>1974</u>		<u>1974</u> Franklin County by Industry
	#	% Total	#	% Total	%
Agriculture	4	3	3	1	1
Mining	16	11	17	7	0
Construction	28	19	22	10	5
Manufacturing	8	5	10	4	39
Transp., Comm., Util.	5	3	6	3	6
Trade	71	49	73	32	25
Finance	2	1	1	0	3
Services	13	9	97	42	20
TOTAL	146	100	229	100	100

Source: Division of Employment Security

County's economy generally. Between 1967 and 1974 there was a substantial increase in the relative importance of covered employment in service industries and a decrease in the proportion of trade jobs, while other industries stayed about the same.

OCCUPATIONAL CHARACTERISTICS OF TOWN RESIDENTS

The federal census tabulates the employment and occupational characteristics of Northfield residents, wherever they work. Table 6 summarizes the industries in which town residents were employed in 1970. It shows considerable fewer manufacturing workers than for the county generally and many more persons engaged in professional and related services. Employment in agriculture, mining, personal services, and public administration was also greater among town residents than county residents. Unfortunately, this type of data was not tabulated for Northfield during the 1960 census, so comparisons over time are not possible.

COMMUTING

The number of town residents in the labor force greatly exceeds the number of local jobs, meaning that there is considerable commuting out of Northfield to other jobs (see Table 1). The 1970 federal census reported that eighty-nine percent of Northfield's workers held jobs located within Franklin County (see Table 7).

INCOME

In 1970 the median income of Northfield families was higher than both county and state averages (see Table 8). Sixty-seven percent of the families had incomes over \$9,000 compared to only 57 percent of Franklin County families. On a per capita basis, Northfield incomes are above average for the county, but below the state average. The Census Bureau estimates that in 1972 per capita income in the town was about 98% of the Massachusetts average.

Table 6
JOBS OF NORTHFIELD RESIDENTS BY INDUSTRY*, 1970

	#	% Total	Franklin County % Total
Agriculture	51	4.5	3.0
Mining	14	1.2	0.0
Construction	79	7.0	7.6
Manufacturing	165	14.7	28.2
(Durable Goods)	(86)	(7.7)	(14.8)
(Non-durable Goods)	(79)	(7.0)	(13.4)
Transportation	34	3.0	3.0
Communications, Utilities & Sanitary Services	24	2.1	3.0
Wholesale & Retail Trade	122	10.9	16.9
Finance, Insurance, Business and Repair Services	26	2.3	4.5
Personal Services	53	4.7	4.4
Professional and Related Services	509	45.3	25.7
(Medical)	(50)	(4.4)	(7.3)
(Public Education)	(75)	(6.7)	(9.9)
(Private Education)	(336)	(29.9)	(4.3)
(Misc.)	(48)	(4.3)	(4.2)
Public Administration	47	4.2	3.2
TOTAL	1,124**	100.0	100.0
Percent of Population 16+	64%		

*Employed persons 16+ years

Source: 1970 U.S. Census of Population, 4th Count Data

Table 7
PLACE OF WORK, NORTHFIELD RESIDENTS, 1970

	#	% of Total Reporting Place of Work
Franklin County	901	89
Hampshire County	48	5
Worcester County	7	1
Windham County, Vt.	55	5
TOTAL REPORTED	1,011	100
Not Reported	90-113	

Source: 1970 U.S. Census of Population

Table 8
INCOME OF FAMILIES, 1969 and 1972

	Northfield 1969		Franklin County 1969
	# Families	Cum. %	Cum. %
Under \$3,000	10	1.6	6.2
\$3,000-5,999	57	12.7	20.9
\$6,000-8,999	140	33.3	42.9
\$9,000-11,999	175	61.5	66.6
\$12,000-14,999	99	77.5	82.4
\$15,000-24,999	121	96.9	97.4
\$25,000+	19	100.0	100.0

	Northfield	Franklin County	Mass.
1969 Median Family Income	\$10,933	\$9,874	\$10,835
1969 Per Capita Income	\$ 3,308	\$3,069	\$ 3,408
1972 Estimated Per Capita Income	\$ 3,965	\$3,696	\$ 4,052

Sources: 1970 - U.S. Census of Population, General Social and Economic Characteristics; 1972 - U.S. Census Bureau, Current Population Reports: Population Estimates and Projections, Series P-25, No. 566, June, 1975.

Addendum

As described by Philip B. Herr & Associates, Northfield people are highly dependent on out-of-town employment opportunities (e.g. Franklin County, Windham County, Vt., and Cheshire County, N.H.). Additionally, a large proportion of in-town jobs are related directly to a single enterprise, the Northfield-Mount Hermon Schools. These employment factors are largely outside the control and influence of the town of Northfield, and, therefore, prosperity in town is highly dependent upon area wide economic activity.

One of the basic goals of this Master Plan as listed in Section I is improved economic opportunity for Northfield people. There are several ways to favor an increase in in-town jobs. They include strengthening present businesses through bylaw changes and other policy decisions that allow for easier expansion and more effective merchandising to compete for existing markets. The same kinds of changes are necessary to favor the establishment of new enterprises. Currently, no commercial or industrial activity is allowed anywhere in the town without a variance. Without doubt, this is a definite negative influence on the establishment of any new business. Specific short and long term actions to remedy the situation are listed in Section 8 of this report.

Additional residential development, which may be the greatest growth factor in the near future, would create a temporary stimulus in the building trades and in the long run would add to the potential commercial market in the area. However, long term tax revenue from this kind of development may not equal additional municipal costs, possibly resulting in long range tax burdens that further discourage new investment of venture capital.

At several points in the discussions leading to this report, consideration was given to the effect of nursing home facilities or a retirement community on the town economy and tax climate. The general consensus seems to be that this kind of facility would create new jobs, stimulate the building trades, and would not add job seekers to the labor market. If advantageously located, this kind of facility would require little additional municipal service.

In view of New England-wide economic lethargy, due in great part to energy costs and related factors, substantial industrial or commercial activity is questionable for the near future. This applies not only to Northfield but to most of the surrounding area. In view of Northfield's present land use bylaws, which exclude all industrial or commer-

cial activity except by variance, any significant development in town is highly unlikely unless changes are made. In Section 8 of this report, several recommendations are listed that are designed to increase economic activity, maintain a sound municipal fiscal condition, and preserve the esthetic integrity of the town.

Provision of water and sewer services are a major factor in attracting or directing development of any kind. For several reasons, Northfield's public utilities are currently insufficient to use as a management tool for directing future growth. These limitations as well as recommendations for future changes are described more fully in Section 6. While the general recommendation of this report is that sewer and water service be provided for business concerns only if they are located on existing lines, any long range planning should include a full awareness of utilities as a tool for attracting, encouraging, or guiding economic activity.

Both economically and in the realm of municipal finance, the Northfield Mountain Pumped Storage Project has been a major factor in Northfield's success for the past 10 years. Currently, this facility, along with real estate and other property owned by Northeast Utilities or member companies, contributes a full third of the total tax dollars for the operation of the town. This has allowed a very reasonable tax rate relative to other towns. It must be remembered, however, that it is highly unlikely that a project of similar size will be constructed in the town in the foreseeable future. Therefore, either spending must be held in restraint or other forms of development must be found to increase the tax base. Investments in farm properties are progressing at a vigorous pace, but due to a very limited land resource the total number of jobs and the related tax yield will probably remain stable.

Section 4

Town Government

Northfield's municipal affairs are conducted through a total of 151 elected or appointed positions, which require widely varying degrees of commitment and time. Selectmen, Sewer Commissioners, Town Clerk, and others who have on-going functions may devote 10 to 40 hours per week to their responsibilities, while other town officials such as fence viewers, field drivers, and others may only rarely perform in an official capacity. This form of government with its extensive citizen participation is a vivid tribute to the willingness of Northfield's people to effectively govern themselves.

The primary quality of the Town Meeting form of government is that all boards and officials can conduct their official business only as prescribed by State statute or in accordance with the instructions of the voters at Town Meeting. In effect, this means that no money for any project can be expended unless voted and appropriated at Town Meeting, and no programs or projects can be initiated except by Town Meeting action or by statutory directive. In a small town such as Northfield, this gives every registered voter a voice in the conduct of town affairs.

Essential to the operation of this form of town government is the willingness of the citizens to accept formal responsibility through election or appointment, and, equally important, the willingness of office holders to become fully informed of the scope and responsibilities of their positions. When these two conditions are met, town government proceeds both smoothly and effectively, and at a very low cost to the taxpayer.

Inherent to the Town Meeting form of government is the chance that qualified people can not be found to fill the many offices, and also the possibility that those willing to serve may not be qualified to carry out the required duties, whether it be by background, training, or a conflicting personal situation. Should any number of public officials lack proper qualifications at a given time, on-going programs can suffer great losses in efficiency and effectiveness. The one contributing factor that prevents the situation from going out of control is the direct review of all spending and operating programs by all eligible voters at Town Meeting.

A full review of all town offices, boards and departments would be enlightening in this report, but would not serve a purpose equal to its cost. In lieu of a complete description, a list of the 151 positions is included. In general, the many municipal bodies are highly fragmented in their responsibilities. The Board of Selectmen is the major administrative body and is directly responsible for maintaining the town's fiscal records, borrowing programs, the highway department and the police department. This board works cooperatively with many other departments, but is not in direct supervision of many town functions. The Sewer Commission, Recreation Commission, Planning Board, and others have duties and responsibilities mandated by State statute and carry out those responsibilities independently of other town boards. On some occasions, this leads to a lack of communication between boards and the resulting failures in cooperative planning efforts. The extent to which problems arise varies greatly from time to time, depending on the town projects in progress and the personalities in charge.

As the responsibilities of elected officials and the accompanying paperwork and administrative procedures have increased over the recent past, the problems of coordination and advanced planning have become increasingly burdensome. From this situation, there has developed a reluctance on the part of some highly qualified citizens to run for office since their business and personal obligations do not allow the freedom necessary to undertake public office. Hence, less qualified people must serve if the government is to function at all. Growing complexities also mean that without greater coordination, tax dollars do not buy their full potential in new or continuing municipal services.

Two possible remedies to facilitate the day-to-day planning and administration of town government were discussed in the preparation of this plan. One is the preparation of a Capital Expenditures Plan that would program the addition of buildings and machinery, resulting in an even appropriation of funds from year to year to the end that the tax rate can be held as constant as possible. Presently, Northfield is in a favorable financial condition regarding debt or the need for substantial capital improvements. This pleasant state of affairs can continue if foreseeable capital outlays are carefully planned.

X A solution to the problem of coordinating town departments that has proven effective in more than 32 Massachusetts towns is the employment of an administrator or executive secretary by the Board of Selectmen. This position absorbs much of the time-consuming detail work of the Board, such as sending

and receiving mail, preparation of budgets, contact with the general public, and coordination with other town boards. While the position represents an additional cost to the taxpayer, it is frequently concluded that an effective administrator can institute efficiencies far in excess of his salary. This position may or may not include the duties of various other officials appointed by the Selectmen.

Over an extended period of time, as responsibilities have become greater and more complex, many functions of the Selectmen have been delegated to newly formed boards or departments. Characteristic of this trend is the creation of an independent Board of Health in 1972. The long-term effects of this trend are: first, to involve more citizens in active government; second, to weaken the position of the Board of Selectmen relative to total town government; and third, to increase the need for extensive coordination of independent town boards. Employment of an administrator under the direction of the Selectmen is viewed as a viable alternative to further fragmentation of town government.

Both the Capital Expenditures Program and the addition of a town administrator are currently under investigation by committees of Northfield citizens. Their conclusions and recommendations are scheduled for the 1977 Annual Town Meeting.

Two new positions in town government have recently been added. These are a Health Officer, appointed and supervised by the Board of Health, and a Building Inspector, appointed by the Board of Selectmen.

A Health Officer was felt useful and necessary in the conducting of percolation tests and other duties included in the State Sanitary Code. Previously, this work was done by out-of-town personnel with varying levels of performance and availability. The need for reliable tests promptly taken is additionally important since the passage of a town bylaw which relates minimum lot size and the issuing of building permits to soil types and the availability of on-site septic capabilities.

State statute has recently mandated the application of the State Building Code to all areas of the State. Inherent in that code is the appointment of a Building Inspector. Faced with the choice of having an in-town inspector or participation in a regional program, Northfield chose its own Building Inspector on the assumption that service is more responsive to local conditions and in a more convenient manner.

Elected Offices

	<u>number of positions</u>	<u>length of term</u>
Moderator	1	3 yrs.
Town Clerk	1	1 yr.
Selectmen	3	3 yrs.
Assessors	3	3 yrs.
Tax Collector	1	3 yrs.
Treasurer	1	3 yrs.
School Committee	5	3 yrs.
Pioneer Valley Regional School Committee	2	3 yrs.
Library Trustees	6	3 yrs.
Cemetery Commissioners	3	3 yrs.
Tree Warden	1	3 yrs.
Constables	4	3 yrs.
Planning Board	5	5 yrs.
Board of Health	3	3 yrs.
Sewer Commissioners	3	3 yrs.
Recreation Commission	7	3 yrs.
Total	<u>49</u>	

Appointed by the Moderator

Finance Committee	6	3 yrs.
Franklin County Technical School District	<u>1</u>	3 yrs.
Total	7	

Appointed by the Board of Health

Animal Inspector	1	1 yr.
Health Inspector	1	1 yr.
Plumbing Inspectors	<u>2</u>	1 yr.
Total	4	

Appointed by the Board of Selectmen

	<u>number of positions</u>	<u>length of term</u>
Accountant	1	3 yrs.
Chief of Fire Dept. & Forest Fire Warden	1	1 yr.
Assistant Fire Chief	1	1 yr.
Captain	1	1 yr.
Deputy Fire Wardens	3	1 yr.
Chief of Police	1	1 yr.
Special Police Officers	9	1 yr.
Special Police Officers for Special Assignments	6	1 yr.
Superintendent of Streets	1	1 yr.
Gypsy Moth Agent	1	1 yr.
Public Weighers	11	1 yr.
Field Drivers & Fence Viewers	3	1 yr.
Surveyor of Wood & Timber	1	1 yr.
Dog Officer	1	1 yr.
Forest Warden	1	1 yr.
Registrars of Voters	3	3 yrs.
Election Officers	6	1 yr.
Conservation Commission	7	3 yrs.
Building Commissioner	1	1 yr.
Inspector of Gas Piping and Gas Appliances	1	1 yr.
Historical Commission	7	3 yrs.
Zoning Board of Appeals	5	5 yrs.
Associate Members	3	1 yr.
Building Code Board of Appeals	5	5 yrs.
Associate Members	3	1 yr.
Planning Board-Board of Appeals	5	5 yrs.
Associate Members	<u>3</u>	1 yr.
Total	91	

Section 5a

Community Facilities and Services

Town Buildings

Town Hall

Built in 1927, the Northfield Town Hall has completed its first half century of service. With walls of brick veneer and masonry, and wood framing internally, this building shows little deterioration considering the length of service. As the center of all municipal activities, this building is the most important single structure the town owns. The only noticeable deterioration over the years has been minor roof leaks and some disintegration of concrete at the front steps and in a few lintels. The masonry work has very recently been repaired and the roof has been given attention on several occasions during the past ten years. The heating system is only five years old and seems to be operating well with only minor difficulties resulting from failures in switches or other electrical devices.

Several town departments operate from the town hall. These include the Selectmen, Building Inspector, Town Nurse, Police Department, Planning Board, Board of Health, and Sewer Commissioners. Several other officers and boards could perhaps serve more effectively if they were to establish an office in the town hall. Of special note would be the Town Clerk's office and possibly the Assessors and Tax Collector. There are two major concerns for these latter offices being housed in private homes. First, the possibility of fire generally is greater in a residence than in a building such as the town hall. The loss of records in any of these offices would be extremely harmful to the conduct of town affairs. The other major concern is that in the event of the death of an incumbent officer, public access to his home might cease for an uncertain length of time, again causing great disruption in the normal conduct of town business. A third reason for locating in the town hall is that many citizens might feel much more at ease meeting with these officials in a public building at regular hours rather than in a private home.

The town hall serves as a center of activities for many social and recreational events as well as town business. This added activity indicates that the Northfield Town Hall is heavily used and thereby is serving the citizens well.

A distinct shortcoming at the town hall is the lack of a meeting room for groups from 25 to 75 people where acoustics and seating arrangements are favorable for satisfactory communication. A facility of this type would be especially useful for hearings and many of the meetings organized by town boards such as the Historical Commission and the Recreation Commission.

Slate House

The Slate House was purchased by the town several years ago to enlarge the town hall lot and improve traffic flow in the area. A town meeting vote has recently empowered the Selectmen to sell the building while retaining the lot itself. This would give opportunity for expanding short-term parking at the town hall, greatly improving the landscape potential and providing much better access to the parking lot at the rear of the town hall. An alternative storage area will be needed to house the Recreation Commission property currently stored at the Slate House.

Boy Scout House

Formerly the town fire station, this two-story wood frame building is in good condition structurally and needs only an occasional painting to remain useful for some time to come. Used presently only by the Boy Scouts, this building has some capacity for additional storage use.

This building is located in such a way as to greatly hamper traffic flow to and from the town hall parking lot. It has recently been suggested that the building could be moved to the back of the town hall lot and continue to serve its present or additional functions. This move would increase parking capacity by approximately 30% in the town hall lot.

Nurse's Garage

A one-car wood frame garage formerly used to house the nurse's automobile is located directly behind the Boy Scout House. While structurally sound, its only present use is seasonal storage. It is equally an impediment to parking and traffic flow, and probably would best be sold for removal from the site.

Recommendations

Two major projects for improved use of the town hall and lot should be undertaken in the near future. First and perhaps least expensive is the removal of the Slate House and

the moving of the Boy Scout House to the rear of the lot. This should be followed by paving of additional parking area and appropriate landscaping to enhance the visual appearance of both the town hall and the adjacent house to the south.

The other major project that should be undertaken is a comprehensive review of the office needs of all town offices and boards, followed by a thorough analysis of the town hall building to determine the most efficient and effective plan for meeting these needs. This should be done by people competent in the field of office management and public relations as well as individuals knowledgeable in construction and choice of materials. Included in the planning process should be the exploration of ways to more fully utilize the main auditorium and the basement meeting room, including recreational and cultural use of both these facilities. This type of use has been dampened in recent years by concern for wear and tear on the building, provision of adequate security, and the interference with other municipal functions in the building.

Fire Station

The Northfield Fire Station is about 25 years old, provides three street level doors for truck entrance, and contains an adjacent office, kitchen and meeting area. Generally in very good condition, the building has received roof renovations very recently and with that step taken should serve very adequately for many years to come. The heating system, installed at the time the building was put up, shows signs of pipe deterioration and will probably need considerable attention in the near future if heating efficiency is to be maintained. It is important to note that four fire trucks are housed in a garage designed for three. It seems obvious that additional space should be found as soon as practical.

Town Garage

The town highway department has its headquarters in the basement of the fire station. The facility consists of a three-bay garage and adjacent office and tool storage area. While in very good condition, this facility cannot hold the larger pieces of equipment and is even constricting on the choice of trucks when new ones are purchased. Even a casual observer would note that additional garage and maintenance facilities are imperative if the highway department is to provide efficient service at low cost.

Highway Department Storage Shed

This 30' by 60' metal building provides secure storage for many of the seasonal machines in the highway department. With no heat or insulation, this building cannot well serve as a garage for active machinery or for repairs. The building has suffered some minor damage to the metal skin and could well use a coat of paint. With adequate maintenance, this building could be expected to serve for another 20 years.

Sander Shed

This three-bay metal frame structure is used for seasonal suspended storage of sanders. It has a metal roof and no side walls. It is structurally sound and serves its purpose well, but could use painting and some screening or other type of side walls to improve the appearance of this area.

Recommendations

Even the casual observer would quickly note that the building housing both the Fire Department and the Highway Department is overcrowded. Four fire trucks housed in a space designed for three, and the necessity of the two most expensive pieces of highway equipment being stored outside year round, are the two most obvious indications of severe overcrowding. The most logical step to solve this problem is to design and construct a new Highway Department building that can adequately house all storage, maintenance and repair functions of the department. This in effect dictates a building with at least six bays to house the three highway trucks, the grader and the loader. The sixth bay should be devoted to cleaning and maintenance facilities, including but not limited to high pressure hose, air blast cleaning, steam cleaning and similar functions. Depending on design, this bay might or might not be useful as a painting facility. To a large degree, building code requirements and specifications would determine whether this additional function could be incorporated into the same area. While definite dimensions are not listed here, it is suggested that any new facility be deep enough to allow the largest piece of highway equipment to be housed with all accessory equipment mounted, and leave six feet of free space both in front and back. Doors should be wide enough to allow an 18" clearance on each side, and at least a 12" clearance overhead. The most logical place for a building of this type would be on the lot where the present highway operation is located. This would allow efficient long-term use of the present facilities.

By moving the Highway Department to a new facility, additional space would be available to the Fire Department. It is also conceivable that any remaining space in the present highway garage could be well-utilized by other departments such as the Town Nurse (automobile housing), the Tree Department, Sewer Commissioners, or others.

A recent proposal for federal funding of a highway department facility indicated that the total cost would be well in excess of \$200,000. It is not clear at this point whether a less expensive facility would be acceptable in the absence of State or federal funding, or if the same basic requirements would be involved due to the application of the State Building Code. Before any substantial commitment is made to either planning or funding this project, this area should be extensively investigated. It is recommended that a general planning process for a new facility be started in the very near future.

It is recognized that a new highway garage represents a substantial capital investment for the town. It is equally important that we recognize the investment in machinery necessary for an efficient highway operation, and that to protect the machinery investment, adequate housing is of utmost importance. Adequate facilities are also of great importance in providing working conditions that yield the greatest productivity per man employed. The time involved in starting and warming up diesel-powered machines in severe winter weather is both expensive and non-productive. The facility outlined above is recommended to the end that weather would not be a factor in waste of man hours, deficient maintenance procedures, or excessive wear on any town owned highway equipment. As in most capital projects, funding opportunities from various sources are available from time to time. If the basic planning is complete, making competent, effective applications is relatively simple. Therefore, planning should progress forthwith, but funding may of necessity be indefinite.

Dickinson Library

Perhaps the most impressive of all town owned buildings is the Dickinson Library built in 1898 of split Northfield granite. The massive construction methods employed in this building have prevented any sign of deterioration either inside or out. Internal bearing walls are brick while horizontal surfaces are supported by large wooden beams. For many years the basement has been unused open space containing nothing more than a small heating plant. Very recently, a children's reading

room has been constructed to help absorb the expanding demand for library services. The main floor has been the active library facility and remains in exceptionally good condition. The second floor for many years has been largely unused except for storage and display of several collections. The second floor auditorium is suitable for gatherings of up to 75 people. The greatest deterrent in modernizing this building over the years has been the difficulty of installing either a modern heating system or a modern wiring system, through the heavily constructed walls and floors. Additionally, the building was not originally designed with public safety features in mind.

With modernization of heating and electrical systems, the Dickinson Library possesses extensive opportunity for public use far into the future. Along with expanded library services, the auditorium could add substantial opportunities for cultural and social events. The peripheral rooms on the second floor could also be valuable research and study locations for many municipal or other town groups. It seems reasonable to expect that any investment in the Dickinson Library would return useful service for a period of perhaps 100 years or more. In most instances the building itself will likely far outlast facilities installed inside.

Field Library

The Field Library located in Northfield Farms is not strictly a public facility. Under the ownership of the Ladies Benevolent Society established in 1893, the library was established with funds from a private donor as well as funds raised by the Society. Library activities are supervised by a Board of Trustees whose membership is generally limited to residents of the old No. 4 School District. The building is in very good condition and should last for some considerable time.

Recommendations

The excellent condition of the Dickinson Library suggests a great opportunity for serving public needs if proper investment is made in updating the building to modern standards. Basic to all further use is the installation of adequate wiring and heating systems. Installation of proper safety exits on the second floor must be made before any public use is acceptable. Following these steps, extensive additional use is a matter of redecorating, rearrangement of library materials, and the assignment of areas for specific use. It is recommended that the trustees begin at once to develop a plan for the total use of the Dickinson Library building, and prepare preliminary drawings and specifications that would permit prompt application for any

funding opportunities that occur. The plans should include additional parking space, and provision for a town hall annex facility for housing important historical and municipal records. This planning phase should be undertaken even though the necessary land is not owned by the town at this time. Further, the plan should be subdivided into units that would allow a step by step accomplishment of the total plan in the event that funding is available in smaller amounts over a period of time.

Pine Street School (Historical Society Building)

This former school building has been used for many years by the Northfield Historical Society for storage and display of historic records and artifacts. It is in good structural condition and could serve a storage function for some time to come. However, the use of this building is extremely limited due to a lack of running water, inadequate heating and lighting systems, and its location on a narrow street with difficult access. Wood construction also poses a severe fire hazard to valuable historic properties.

Center School

Built in 1940, this two-story brick and masonry school building is in excellent condition and serves its purpose effectively. Under the able supervision of the School Committee, this building should not require replacement in the foreseeable future.

The Old High School

This former high school building was built in 1911 of brick and masonry construction with much of the internal construction of wood. While lacking in design for modern educational use, it is well maintained and structurally sound. Unless design standards for school buildings become prohibitive, the structure can continue to serve as an elementary school building for the foreseeable future.

Also located in this building is the semi-public meeting room known as Alexander Hall. This facility, which was constructed partly with private funds, is administered by the Fortnightly Club and is available by arrangement as a meeting place for up to 60 people.

Recommendations

Two factors indicate that present school facilities may well remain adequate for the foreseeable future. At present the school population shows a modest decline from recent highs. Additionally, recent birth rate data and population projections forecast a decline to continue for some years. For these reasons it is recommended that no additional school facilities be added.

Recent efforts to provide additional cafeteria, gymnasium and special education facilities have met with voter disapproval. It is not entirely clear what definite requirements have been made mandatory by the State Department of Education or by the legislature in the area of special education needs. Based on the expressed sentiment of the voters and on the school population projections, the above recommendation is made regardless of further State mandates.

Service Programs

Highway Department

Personnel. Northfield Highway Department staff consists of a superintendent, a mechanic, a foreman-heavy machine operator, and three drivers. The superintendent reports directly to the Selectmen and is in charge of the entire department. The foreman provides on-the-job supervision in the absence of the superintendent. Hourly pay rates start at around \$3.35 and range upward to slightly over \$5.00.

Equipment. The basic heavy equipment consists of three dump trucks used for hauling, snow plowing and sanding, a loader and grader. One truck was purchased new in 1977 while the other two are six and eight years old. During the last year, the trucks as well as other equipment have been upgraded into very serviceable condition. The loader was new in 1974, while the grader is in only fair condition and is approximately 15 years old. Additional equipment includes a pick-up truck, sanders, chain saws, snow plows, air compressor and various assorted tools.

Supplies. The primary source of gravel for building and maintenance of highways is a town-owned bank on Caldwell Rd. in West Northfield. The bank contains various types of gravel ranging from fine, clean sand to stony gravels. By appropriately choosing and mixing the types available, high quality gravel for most highway purposes is readily available. This resource has effectively reduced highway costs for many years.

Road sand and salt are both purchased from commercial suppliers.

Recommendations. Maintenance of competent personnel and a high level of employee morale are two essentials to delivering efficient service. Over the past several years, there have been wide variations in both these important elements. During the preparation of this plan, substantial improvements have been noted and present highway department performance is highly acceptable. Recognizing human frailties, the Board of Selectmen is encouraged to constantly monitor performance to prevent unnecessary decline in efficiency.

An overall view of highway department equipment is encouraging, especially with the recent addition of a full-time mechanic to the staff. However, two basic points are recommended for serious study. The present grader does not have the capability for sustaining prolonged use free of "down time," and

does not have precise control for high quality grading work. In view of its advanced age and generally worn condition, it is recommended that this piece of equipment be scheduled for replacement at the earliest possible time. It is further recommended that a replacement machine be of sufficient quality and design to allow year-round use for snow and ice removal activities in the winter as well as road grading and ditch clearing functions in the summer. This use predicates an operator's compartment that is reasonably warm in the winter and at least tolerable in summer.

Associated equipment in addition to the customary grader blade would be rippers for loosening road beds, a front snow plow, and both left and right wing plows. With these accessories, this single machine can replace the conventional dump trucks in the most severe snow plowing situations, and in combination with the loader can accomplish excavation and road bed replacement functions currently accomplished with hired machines. While it is recognized that the cost of such a machine will be much greater than a simple grader, the extensive year-round use accompanied by the reduction in wear on the dump trucks is expected to prove a wise investment.

With all dump trucks presently equipped with gasoline engines, it is recommended that all future purchases be made specifying diesel power units. While this means a moderate increase in the cost of a new machine, much lower fuel costs, reduced maintenance costs, and longer engine life are expected to prove very advantageous. It should be noted here that adequate garage space is essential to efficient operation of all diesel units. Therefore, the construction of a new highway garage facility will become increasingly imperative as more sophisticated machines are added to the department.

Fire Department

Personnel. Northfield's fire department consists of a 30-man volunteer force including a chief, assistant chief, and other officers as required to maintain a disciplined response to fire emergencies. Most inspection duties reside in the chief's office, along with permit issuing and investigation activities.

Traditionally, key volunteers have come from small businesses located in the center of town. They have provided the quick response element during normal working hours when other department members may be at work out of town. There is some concern that attrition of local businesses may shrink this source of manpower, making reduced capability or full time employees the only alternatives.

As in many municipal functions, State mandated inspections, reporting, and record keeping procedures are continually increasing. These have placed a noticeable stress on the available time of volunteers and detract from the main purpose of the department, which is fire control. Possibly the inspections result in a measure of fire prevention, which, if actually accomplished, is highly desirable.

Barring rapid growth, the present volunteer department is considered adequate for the near future. The department has excellent morale, maintains its equipment in top condition and supports continuing training programs.

Equipment. Northfield's fire department operates four major pieces of equipment:

1. 1953 Maxim Pumper
2. 1968 Ford Tanker (1964 body)
3. 1972 International Forest Fire Truck with 4-wheel drive
4. 1942 International Forest Fire Truck

Also in use are a full line of hand fire tools, a crash saw, protective suiting, and life support equipment. cursory inspection indicates the equipment is well maintained in service-ready condition.

Water Supply. Fire fighting water supplies are primarily roadside fire ponds or brooks in most areas of Northfield. The Northfield Water District provides minimal flow in its Main Street lines and in areas where mains are new. Pressure is inadequate for direct hydrant use, but a portable tank extends the value of the available supply. The East Northfield Water Company provides excellent pressure and flow in its service area from a 28 million gallon reservoir. Most housing and other development are located too distant from the Connecticut River for that to be a useful fire control supply. Access is severely limited, further reducing its value as a means to recharge the tankers.

Fire Insurance Ratings. A non-profit, independent organization, the Insurance Service Office, periodically rates the town for insurance purposes. This organization is privately supported by insurance companies and establishes a classification for a town based on equipment, water supply, manpower, training, and communications capabilities of the local fire department. Seventy-eight percent of the rating is based on equipment and water supply.

While the details of the rating procedure are not readily available, it is known that year-round water supplies and definite pump and tank capacities are very important elements.

For Northfield, this points to a substantial upgrading of the water distribution system in Northfield Center, and development of new major supplies and storage facilities. Section 6 more specifically treats this subject.

For most rural areas, additional fire pond construction is indicated, including frost-proof hydrants and adequate approach ramps.

Northfield's last documented fire insurance rating occurred in 1932. With surrounding towns recently receiving attention, a new rating is expected very soon. While a very effective means of controlling major fires in practice, the Tri-State Mutual Aid System does not appreciably affect insurance rates.

It is recommended that Fire Department officers and the Selectmen study the insurance rating procedures in detail to provide a better basis for guiding future expenditures for equipment, water supplies, and distribution facilities.

Municipal Expense. A recent Town Report indicates annual expenditures of above \$15,000 for the operation of the Fire Department, including salaries, expenses, and minor equipment purchases. This investment, modest by comparison to other municipal services, provides excellent coverage for a town of Northfield's size.

Not included in this expenditure is the purchase of new fire engines, which occurs periodically, whether due to obsolescence, normal wear, or insurance rating procedures. Recent inflationary trends have made this step a major town investment, and worthy of careful equipment selection and close fiscal scrutiny. A request for a new pumper is expected soon.

It is recommended that all future fire truck purchases be programmed in concert with other town capital expenditures to prevent excessive total expenditures in any given year.

Police Department

Northfield Police Department consists of one full-time chief and five special officers. The chief operates on a 24-hour call basis and is relieved by special officers one day each week. The total budget approximates \$25,000 per year, with primary costs being salaries, one police cruiser and its associated operating costs, and radio equipment linking the Northfield department with other county departments and the State Police.

Police calls have shown a steady increase over the past six years, with total calls per year doubling in that length of time. The explanation for this increase may be attributed partly to the greater awareness and availability of a full-time officer, and partly to a subtle change in community attitudes regarding the solution of a wide variety of legal or domestic problems. In former times, many calls such as animals running at large, minor accidents, family problems, and motorist assistance were handled by the people themselves. Calls of that nature were seldom sent on to police officers. Presently, this kind of call comprises a substantial portion of police activity. Other activities such as vehicle identification checks and radar traffic surveillance are the result of new State regulations or increasing technology. These also comprise substantial police effort. It appears that Northfield's police department is fully occupied but serving the demand satisfactorily. Considerable credit must go to the special officers who spend in excess of \$500 each in equipment alone to prepare for part-time service.

Of considerable importance in Northfield police activity is the presence of a private security force at the Northfield-Mount Hermon Schools. This relieves the municipal department of many lesser calls, especially those having to do with trespassing or errant students.

During the preparation of this Master Plan, consideration was given at several points to the establishment of a voluntary auxiliary organization that could assist the uniformed police in patrolling and surveillance in areas where vandalism or petty theft occur with unacceptable frequency. In many areas of the country where limited police personnel cover large rural areas, this seems to be a satisfactory method of improving coverage at little or no cost to the taxpayer. While recognizing many limitations of this approach, an effort should be made to study it further, since property security seems to be an increasing problem.

Recommendation. At the present time, police protection for Northfield seems adequate, and therefore no increase in personnel or equipment is recommended for the foreseeable future. Any major change in population or business activity could alter the situation, requiring a new appraisal.

Education

Information provided by Edwin F. Harrington, Superintendent of Schools:

Northfield is an educational member of Massachusetts School Union #18, a five town, K-6, organizational structure capable of sharing administrative and itinerant support services in the form of central office functions, art, physical education, music (vocal and instrumental) and special needs resource personnel. They are also a member of the four town Pioneer Valley Regional School District at the secondary 7-12 level. The rationale for such membership lies in the securing of shared services and program formats, administration and supervision, at a financially advantageous level to member towns, which, in and of themselves, do not possess a student population base conducive to providing programs at a reasonable per pupil cost. This form of membership allows Northfield to maintain an autonomy of action at the K-6 level by virtue of a five person elementary school committee, and to share in secondary decisions via three representatives to a twelve member, four town regional school board. Twice a year the six systems, representative of Bernardston, Gill, Leyden, Northfield, Warwick plus Pioneer Valley Regional School, meet to plan and effect a sharing of services and costs that are incorporated into local operational budget plans. The total educational cost, and service format, inclusive of regional assessment (P.V.R.S.), has most recently been expanded by membership status in the 17 town Franklin County Regional Vocational Technical School. The vocational training thrust of this institution began September, 1976 and transfers Northfield's prior dependence on the Greenfield and Smith Vocational programs, to the Montague facility, serving grades 9-12.

It is only with understanding of the interlocking educational relationship shared above that one can appreciate the financial planning that results in a gross educational dollar cost to Northfield of some \$769,049. A breakdown reveals a K-6, Northfield Elementary School operating budget of some \$339,523; a P.V. assessment share of \$358,216 (operating) plus a capital share at Franklin County Vocational Technical School equals \$49,455 - all of which reflect Fiscal Year 1976 cost levels. One must also realize that the vocational assessment essentially reflects current capital (construction) costs, to be greatly increased by actual operating costs beginning September, 1976, forward. It is significant that P.V.R.S., geographically located within the Northfield boundaries, will complete its 20 year bond issue in a final payment July, 1976, thus eliminating future capital assessment to the four member

towns. The total financial picture is complicated by proration of costs, assigned various shared programs and personnel, based on October 1 enrollments each planning year. Very simply, Northfield, being the largest of five towns, contributes approximately 22% to such program budgets. The total fiscal picture must also include state reimbursement levels, which in December, 1974 totaled \$169,867, and allowed the total net cost to decrease some \$34 per pupil in Northfield over the prior year.

Northfield's educational population totals approximately 610 students and includes 293 K-6, Northfield Elementary School; 275 at P.V.R.S., 7-12; 7 vocational at Smith and Greenfield; 34 private, at Northfield-Mount Hermon School, and some eight residential special needs students. The Northfield Elementary School program is located on a twelve acre site and is housed in two buildings constructed in 1910 and 1940, locally known as the North Building and Center School, respectively. Both facilities face Main Street and collectively contain 13 classrooms and related spaces in the form of a basement kitchen-cafeteria, assembly area and public meeting and service area known as Alexander Hall. The secondary regional site of some 23 acres is geographically located off Route 10. The building proper contains some 28 learning stations plus offices, cafeteria, kitchen, auditorium, gym and related rooms. The facility, rapidly approaching its 20 year anniversary, has parking and adjacent athletic areas.

The secondary school program serves a comprehensive span of offerings, as designated within college prep, business, secretarial, general and career education oriented program formats. The daily program services 600 enrollees and is further supplemented by a full spectrum of co-curricular activities, athletics, clubs and recreational after school endeavors. A two semester schedule is augmented by independent study opportunities and mini-course programs, in an effort to meet the varied needs of students from four small, rural communities functioning within a relatively small high school environment.

The elementary program has responded to state mandates and identified learning needs. It currently offers curriculum and prescriptive activities within an individualistic teaching approach. Its membership in Union #18 allows the visiting expertise of art, music, physical education, remedial programs, speech therapy via Franklin County Public Hospital, and the cost sharing of visiting resource persons, staff in-service training, student enrichment programs and centralized supervision, coordination and management effort.

The educational future of Northfield rests on some form of collaborated membership, a greater financial share by state and federal sources and an ever responsive attitude toward meeting the needs of children. The town has demonstrated a consistent educational effort and support level, has combined with others to effect regional facilities, and is geographically in the midst of numerous private and alternative institutions. Its proximity to an exemplary five college area bodes well for those desirous of continuing their educational plans.

A Planning Board View

By far the greatest tax burden and the single greatest municipal endeavor is the public education system. The responsibility for providing education has long been a major town concern as well as a State mandated function of local government.

In recent history, many of the elements of local control and policy formation have been preempted by a long series of State legislative actions. Ultimately, most aspects of curriculum, teacher training and qualifications, and physical plant standards are now within the discretionary powers of the Massachusetts Department of Education. Control of State subsidy funds for educational purposes is a very effective tool for enforcement of State objectives.

Local school boards presently function within narrow confines of State policy and are primarily concerned with hiring individual teachers, negotiating salaries, and determining schedules. Local boards also develop the school budget and present this to the Town Meeting. Unlike most expenditures, town meeting cannot realistically reduce a school budget. Legislative action and court decisions have for all practical purposes mandated the towns to appropriate funds in accordance with the school budget as submitted.

The basic thrust of State educational programs over the past 25 years has been toward regionalization of school activities to form larger student populations which allow for more efficient use of buildings, equipment, and personnel. This movement has permitted a greater variety of course offerings, and has institutionalized many relationships which in former times were dealt with on a personal student-teacher-parent basis.

Numerous conversations with parents of school children in Northfield disclose widespread dissatisfaction with many elements of larger scale populations. The close personal relationships between teachers and students of former times have

been replaced with brief, fragmented contacts with many teachers of differing academic interests or professional responsibilities. A noticeable decline in student motivation, discipline, and academic achievement is attributed to this institutionalized form of personal contact.

Another long range effect of regionalization of school programs and the concurrent loss of control is a loss of identity of the school as "our school." Sharing costs, administration, and policy decisions with other towns as well as State agencies greatly dilutes the quality and extent of interaction between town residents and the school facility. Visible evidence of this is apparent in participation, attendance, and enthusiasm at school functions, sports contests, and public school programs. Even after 20 years of regionalized education in Northfield, this negative aspect is frequently mentioned.

The challenges facing present day schools are great if the personal qualities of past times are to be regained. Resources available to this Master Plan process are sufficient only to identify the problem. They are not adequate for making recommendations.

Library Services

Dickinson Memorial Library. According to a recent survey, the basic clientele of the Dickinson Memorial Library are adults reading for pleasure and entertainment. However, there are several special groups that regularly use the library and present significant demands for service. Of special note are the elementary school pupils who use the Dickinson Memorial Library facilities exclusively for library use training, resource materials, and general reading assignments. A regularly scheduled story hour for pre-school children is also offered, as well as a reading discussion group for adults.

A broad potential exists for reaching new clientele through special services. Noteable in this area are services designed for handicapped persons who can enjoy many library materials through braille or audio-visual techniques. Also, students and researchers, especially in the area of local history, could be served through materials available nowhere else. Due to the limitations of funding and physical plant, extensive technical or professional materials are not likely to be available for some time.

Recent Improvements and Developing Programs. A recent addition to the Dickinson Library is a children's room located in the basement and especially designed to serve the needs of the elementary school pupils and other young library users. This facility is expected to reduce the pressure on other reading areas and should greatly enhance the library for adult use.

Over the past several years, substantial numbers of town records and other local documents have been microfilmed and are available for public viewing at the library. While this is a significant first step, there still remains an urgent need to provide secure storage of the microfilm, proper indexing of the material, and a convenient viewing area. Currently, additional town records are being surveyed and scheduled for microfilming. These also will need secure storage of a type described elsewhere in this Master Plan.

There has been limited progress in establishing an audio-visual facility at the Dickinson Library. Aside from the microfilm viewer, the equipment includes a film projector, screen, and a filmstrip projector. Films and other materials are available on advance order from the Western Regional Library System.

There is an expressed need for a meeting room for the presentation of cultural, academic, and social subjects. The Dickinson Library contains such a facility, but due to insufficient heat and primitive electrical wiring the room is unavailable for public use. Additional rooms suitable for individual research and study are also available when heat and wiring are brought up to a reasonable standard.

Recommendation. It is recommended that the Library Trustees continue to upgrade the on-going programs in an orderly manner, and provide additional services to the extent that finances and facilities permit. It is recognized that services will continue to be limited by physical plant restrictions for the near future, but recent progress has been encouraging, and with recent improvements additional services are anticipated.

The Field Library. The Field Library serves primarily an adult population in the Northfield Farms area, mostly with books designed for leisure time enjoyment. With limited clientele and functions, no major changes are anticipated in library services. The Field Library also serves a significant role in providing a place for neighborhood social activity.

Northfield Board of Health

General Description

Prior to 1972, the Board of Selectmen performed all the functions of the local Board of Health. Due primarily to an increasing work load and a wider scope of responsibilities, the town voted to establish an independent elected Board of Health in 1972.

The Board of Health functions in a wide range of matters relating to public health, including maintenance of a home nursing service, licensing and inspection of public eating establishments, licensing of local food processing facilities, and the issuing of permits for the installation of all plumbing and sewage disposal facilities. Of this wide range of responsibilities, the home nursing service requires the greatest expenditure of municipal funds and the largest demand for on-going administrative effort.

Local Health Services

Most health services available to Northfield people originate in the population centers of Greenfield and Brattleboro, where hospital facilities and resident physicians are available. In recent years, there has been no resident doctor in Northfield, in spite of an ongoing recruitment effort. One dentist maintains an office in Northfield, and according to interviews with Northfield health officials this service is probably sufficient at the present time. A locally based ambulance service is available to Northfield people, and is subsidized through an annual town meeting appropriation.

A recent report by the doctor recruitment committee indicates little likelihood of attracting a resident physician to Northfield in the near future. Distance from hospital or clinic facilities is probably the primary reason.

Areas for Decision

Regionalization of local nursing service. Currently under study is a proposal for regionalization of several town nursing services in Franklin County, under the administration of the Franklin County Home Health Care Corporation. A primary motive for this move is the recent requirement for regular supervision of local nursing personnel to qualify for certification under the medicare program. Also mentioned frequently is the potential for better training, greater availability of service through a personnel pool,

and more comprehensive record keeping and reporting procedures. On the negative side are the potential for loss of local control of budget and personnel, depersonalization of nursing care, and a greater proportion of non-productive effort being applied to additional administrative procedures.

The details of the proposed regionalization plan have not been sufficiently available for a recommendation to be made on the proposal. However, it has been demonstrated through other regional programs that there is a serious potential for a loss of local control both in quality of service and municipal cost. Additionally, citizens tend to identify less with a regional program, and, therefore, citizen participation in the process weakens. It appears advisable that this regionalization plan be carefully studied and exposed to wide public awareness before any decision is reached.

Health Officer. Recently, the Northfield Board of Health has employed its own Health Officer, primarily for the function of making percolation tests on proposed building sites. This move developed in response to a need for greater control over testing procedures, a quicker response to requests for service, and a greater awareness of the sanitary and health problems developing in the town. At this writing, a Health Officer is not required to be a licensed engineer or other formally recognized professional. Possibly in the near future a State mandate could require this to be the case. At the present time, however, local health officials and other municipal officers conversant with health issues are well satisfied with the present arrangements.

Sanitary Landfill

Northfield Sanitary Landfill is a facility that serves its purpose quite well but does not meet State standards for location and management. In earlier years the site was managed with open burning and occasional bulldozing and covering of the residue. Since the advent of pollution control laws and stricter regulation of waste disposal, this method of disposal has been abandoned in favor of a simple burying procedure. The original site was partly in a wetland area, a fact which makes the site unacceptable under new regulations. It also lacks the physical qualities for keeping leachate materials from entering ground water. Alternative disposal sites and methods have been discussed at great length for several years with no satisfactory arrangement yet in view. Cooperative facilities with neighboring towns are suggested in a recent study sponsored by the Franklin County Planning Office. Other attempts at regional solutions have been made from time to time, but no plan of action has resulted. It would appear that the present site will be sufficient under present management conditions for approximately ten more years. At that time, alternative sites or disposal methods must be made available. The only recommendation feasible regarding this facility is that planning efforts be continued to solve the problem before the present site is fully utilized.

Tree Warden Program

The basic responsibilities of the tree warden are the removal of dead and diseased trees from public ways, and the enhancement of the town's appearance through the planting of trees and the maintenance of seasonal flower plantings. With Dutch Elm Disease and maple die-back taking a heavy toll of roadside trees, a great potential exists for additional roadside plantings. Resilient species must be used to withstand disease and road salt.

It is recommended that the town nursery be used more fully to produce transplant stock and that increased public information be developed to promote additional plantings on both public and private property.

Recreation Program

The Recreation Commission has offered a variety of programs for citizen involvement for several years. Commission members report good levels of participation that indicate a continuing demand for the programs.

A major emphasis is devoted to a summer playground program for elementary school age children, operated for six weeks and including a variety of sports activities, public programs and training in arts and crafts. Local people are hired to lead this program.

Swimming lessons have been offered to town children for several years, usually consisting of 15 lessons over a three week period. The Northfield-Mount Hermon schools have made their indoor pool available for this activity in 1977.

Tennis lessons are offered over a six week period when courts are available, followed by a tournament at the end of the season.

Adults are offered an opportunity to participate in subsidized bus trips to professional sports events and concerts. This program is less formal in planning but receives an enthusiastic response.

The \$6600 yearly budget is a moderate investment. Continued critical evaluation is recommended to ensure maximum participation and benefit. Since recreation is a lower priority than more traditional services, any budget increases should be subject to careful scrutiny.

Cemeteries

Northfield cemeteries are widely dispersed, but unfortunately several of the locations have been used to capacity and there is no room for expansion. South Mountain and Collier Cemeteries have been inactive for many years with no additional space available, and maintenance held at a minimal level. The Center Cemetery, which for many years was the primary facility for the town, has no further space available. It is well maintained, but with no adjacent suitable land available represents a closed facility. There is a moderate amount of space available in the West Northfield Cemetery, and informal reports indicate a modest expansion is planned. Mount Hermon Cemetery also has some space available and the total area, while not large, will be doubled when a current project is completed. The greatest amount of space is available in the Northfield Farms Cemetery where approximately one-third of the total area is still available. St. Mary's Cemetery, owned and maintained by St. Patrick's Church, is sufficient for parishioners for 50 to 100 years. The surrounding land is also undeveloped at this time and is suitable for expansion should the need arise.

Maintenance of cemeteries is financed by two sources. One source is town appropriation, which has shown a steady increase in recent years. Perpetual care funds have been a traditional method of privately financing long-term care. However, continued inflation has reduced substantially the ability of these funds to carry current costs. The greatest need for cemetery space is quite obviously in the town center area. While a committee has been actively searching for a new site, no concrete proposals for land acquisition have been presented to the town.

Recommendations. The primary recommendation regarding cemeteries is that the committee considering new sites renew its efforts to locate appropriate property and present a purchase and development plan to the town in the near future. Also, the expansion in West Northfield should be pursued and the project at Mount Hermon be finished.

An additional recommendation is that the Cemetery Commissioners and other appropriate officials review the price of lots, potential demand and maintenance costs in order to prepare a more realistic schedule of prices, and guidelines for establishing adequate perpetual care funds.

Civil Defense Program

Recent Civil Defense activities have been limited to preparation of nuclear safety and evacuation plans for areas near nuclear power plants. Northfield lies in the affected area of the Vermont Yankee power facility in Vernon, Vt., and therefore is involved in those plans. On-going activities include identification of fallout shelters and inventorying supplies. Most supplies have been in place for some time with no rotation taking place. Also, radiation detection devices are available.

Participation in the Civil Defense program qualifies the town for purchase at low cost of a wide variety of government property for municipal use. It is recommended that greater effort be made to utilize this property acquisition opportunity to reduce cost when town needs coincide with property availability.

Section 5b

Transportation

Highways

Inventory

Major Feeder Highways. The major highways that affect Northfield's day-to-day life do not fall within town bounds at all. Route 2, the major Boston-Albany highway, is the most important link with major urban centers, both east and west. Interstate 91 is the major north-south route and connects Northfield with all points from New York City to the Canadian border. Without doubt, these two highways are more responsible for Northfield's growth or lack of growth than any other factors. The fact that both roads by-pass Northfield has allowed Northfield to develop at a very slow and modest pace and without heavy pressure for commercial development. Route 9 travelling east and west through southern Vermont and New Hampshire is similar to Route 2 in effect but lesser in magnitude.

In-Town Numbered Routes. Routes 10 and 63 for many years have connected Northfield with nearby urban centers and have been a source of economic stimulus. As other major routes have been constructed (Route 2 and I-91), these highways have tended to decrease in the proportion of through traffic but have retained their use as main connector links between local urban centers such as Greenfield, Keene, Amherst, etc. An additional numbered route is Route 142 which is a major link between Brattleboro and all points south and east of Northfield.

Town Roads. Approximately 67 miles of town highways are currently considered "official" public roads. Throughout the Master Planning process, it has repeatedly been evident that many town roads, so called, have not been legally established in a strict interpretation of law. While this has not hindered the maintenance of an adequate highway system for everyday travel, it has been an especially nettlesome problem in managing zoning regulations, estimating growth potential, and determining how best the town can guide its future development.

An unofficial list of town roads may be found in Appendix E.

Traffic Problems

Even a cursory view of Northfield's traffic pattern quickly points out the major limiting factor in the town's highway system. At some point between Millers Brook and Moody Street (Map 5b I, #1), nearly 100% of all through-town traffic from any point east or west, north or south is funneled onto Main Street. In a northerly or southerly direction there is no readily available alternative, and on the occasion of relatively minor house fires, severe traffic congestion has resulted, requiring several police officers strategically located to move traffic around the site of the fire. All traffic from Warwick or Erving travelling to any point west of Northfield also inevitably enters Main St. This established pattern allows for no flexibility and represents a serious and growing safety hazard for both pedestrians and motorists throughout Northfield's busiest area.

Prior to the recent reconstruction of Rte. 10, some discussion was heard regarding a by-pass highway that would direct more through traffic to a new non-Main Street course. Conversations with officials of the Massachusetts Department of Public Works affirm that a tentative plan was prepared for a new highway to be located west of Main St., generally paralleling the Central Vermont Railroad and rejoining Rtes. 10 and 63 in the vicinity of the Northfield-Mount Hermon campus. For a variety of reasons, it was decided that the situation did not warrant such extensive rebuilding at that time, and this proposal is currently considered to be totally inactive.

In recent years, much reconstruction effort has been directed to highways that connect with other towns. Consequently, Mt. Hermon Station Rd. and Gulf Rd. have been largely rebuilt. The one remaining road under town jurisdiction is Warwick Rd. (Map 5b I, #2), which is greatly in need of substantial improvement. The remaining sections of Rte. 63 (Map 5b I, #3) are scheduled for reconstruction by the Mass. D.P.W., but time schedules are very indefinite.

A general category of town highways that has received little rebuilding effort, due in part to State aid funding systems, is the in-town roads that service only local residents or traffic. Notable among these are Warwick Ave., East St., Birnam Rd. and Beers Plain Rd. (Map 5b I, #4). It seems illogical that this group of streets, which generally services larger numbers of people and vehicles, has received less attention.

A group of town roads that hold a very heavy cost potential are the unpaved country roads where there is little or no residential use (Map 5b I, #5). Many of these have been largely omitted from maintenance schedules and therefore have not been a burden to the taxpayer in recent years. There is, however, a substantial risk that land speculators could purchase adjoining real estate, subdivide large lots, and merchandise the property to homebuilders. Northfield is currently faced with a request for extensive highway rebuilding due to this type of speculative endeavor. It is generally considered that the tax contributions of single family dwellings do not equal the additional municipal expenses they generate. Therefore, these country roads represent not only a growth potential, but also a substantial cost liability.

A specific routing problem that has caused extensive inconvenience and considerable frustration, especially for truckers unfamiliar with the area, is the present configuration of Rte. 142 (Map 5b I, #6). Only a few years ago this route was changed from the Schell Bridge area to a point connecting with the Gill Rd. intersection of Rte. 10. In so doing, the new route took on two additional stop sign intersections with 90 degree turns; a steep winding hill, icy in winter; conflicting traffic associated with Pioneer Valley Regional School, and a very narrow bridge crossing. Numerous truckers have found they were unable to appropriately negotiate the turns or the steep winding hill, and some were forced to retrace their route to avoid overloading the narrow bridge. The present intersection at Rte. 10 has been the site of several serious automobile accidents, and any change that reduces traffic can only help reduce such occurrences. With an alternate route readily available, a change is indicated.

Perhaps the most controversial question in Northfield's highway system is the usefulness, maintenance and cost of Schell Bridge (Map 5b, I, #7). While deemed absolutely essential by many residents, the cost of maintaining the structure has led others of lesser convictions to voice the opinion that it no longer warrants the necessary expenditures. As this report is being written, a detailed engineering study is being reviewed by the town. That report includes not only an evaluation of the bridge itself, but also the estimated cost of the various kinds of maintenance and repairs indicated.

Recommendations

1. The solution to lessening the impact of excessive Main St. traffic is composed of several parts. First and least expensive is to provide alternative travel between in-town neighborhoods by either upgrading present roads or adding strategic links. The shortest and most easily accomplished step would be to reestablish a paved highway from the north end of East St. to the south end of Highland Ave. (Map 5b II, #1). The immediate effect would be to lessen the traffic flow at the Moody St., Pine St. and Holton St. intersections. The long term effect would be to increase development potential in an area easily serviced by sewers, water mains and other municipal services. Any acceptable development here would provide tax revenue with relatively minor added cost.

Another highway link of greater magnitude and with greater capacity to reduce Main St. congestion is a new highway laid out from the south end of Birnam Rd., southerly and westerly to the area where Maple St. and Beers Plain Rd. intersect, and thence westerly to the intersection of Routes 10 and 63 (Map 5b II, #2). This, combined with an upgrading of Birnam Rd. and Warwick Rd., would provide not only an alternative route for in-town traffic, but also would divert all traffic from Warwick and Erving headed west to a non-Main St. area. This route would be especially beneficial for access to and from the East Northfield and NMH school campus areas. Additionally, much of the traffic heading for Winchester, N.H. would travel a non-Main St. route. An additional benefit of this route would be the enhancement for development of areas easily serviced by sewers and water mains, and it would provide potential commercial areas of exceptionally high quality.

The most extensive and by far the most expensive solution to the Main St. problem would be the establishment of an alternate route west of Main St. (Map 5b II, #3). While this step seems to be in the far distant future, it is important that the route be kept relatively free of residential or commercial development to prevent unnecessary destruction of buildings or facilities when the time arrives that the corridor is needed. The absense of development along that corridor greatly enhances the visual qualities of the town at present, providing open space and a pleasant vista of the Connecticut River and the adjoining fields.

2. As long as State funding assistance dictates an emphasis on roads connecting other towns, it is recommended that funds so encumbered be spent in rebuilding Warwick Rd. In the absence of a comprehensive plan for the total road system, it is further recommended that construction be undertaken first between the School St. intersection and the Warwick town line (Map 5b II, #4). With some consideration being given to re-routing Warwick traffic to School St. instead of Warwick Ave., it could prove inefficient to spend large amounts until the final routing is decided.

The remaining section of Rte. 63 through Northfield Farms is not subject to in-town control (Map 5b II, #5). However, it is recommended that the appropriate officials stay in close contact with the Mass. D.P.W. regarding both layout and timing, since extensive concern was voiced in the neighborhood study groups, not only for the need of an improved road, but also for the potential esthetic damage that could be done if the design is not cognizant of community needs and desires.

3. Two in-town streets that are severely lacking in surface condition, shoulder width and pedestrian safety are East St. and Warwick Ave. (Map 5b II, #6). While the two streets serve extensively, neither has received much attention in recent years. As proposed sewer lines are laid in the East St. area, it is recommended that if at all possible, all widening, resurfacing, water line replacement or repair, and any essential surface drains be coordinated to the end that when the reconstruction is completed, no further disturbance to the East St. area will be necessary for some time to come. It appears that reconstruction or extensive repair of Warwick Ave. would be mostly a matter of widening the road bed, laying appropriate granular material, resurfacing, and the installation of culverts and drainage facilities. With State funding methods constantly changing, it is inappropriate to prescribe a strict time schedule for these improvements. The purpose of this recommendation is primarily to point out that these two streets serve large numbers of people, and therefore are of higher priority than extensive country roads that serve only a few, if any, households.

4. The problem of establishing priorities in Northfield's extensive rural road system can not be solved in a simple fashion. Not only are the identity, status, and location of these roads frequently in question, but the extensive mileage indicates potential costs far in excess of the town's ability to make significant improvements in a short length of time. Additionally, the function of a town road system as a tool for encouraging or controlling growth and development has not been

considered to any great degree by the various town bodies that control financing or actual highway maintenance. Several very basic steps must be taken to adequately prepare a maintenance schedule for rural roads:

a. First and foremost is the need for identifying all roads that are legally defined as public ways. Roads that do not fulfill the legal requirements and are considered essential to the town's highway system should be laid out, bounded, and formally accepted in the correct manner by the town. It should be noted that this process has started on Four-Mile Brook Road and South Mountain Road.

Inherent within this procedure is the possibility that some roads that are not essential or are in poor repair may be abandoned if it is in the best interests of the town.

b. In order to efficiently carry out road maintenance and provide the maximum return for highway dollars spent, a long term comprehensive plan for maintaining and improving public ways is essential. A great many factors would influence the priority rating of roads in a plan of this sort. The primary factor in any decisions would be the intensity of traffic on the road, whether for residential, commercial, or through traffic use. Perhaps of equal importance would be the coordination of highway improvements with the installation or repair of sewer and water lines. The function of any road in alleviating congestion in adjacent areas must also be considered.

While not generally considered in highway maintenance programs, the greatest long-term effect of a maintenance program may be the manner in which development and associated municipal costs are affected by the location or condition of roads in any given area. It is strongly recommended that such considerations be thoroughly examined before town funds are committed to any given program. Essential to this subject is an established policy regarding the overall development of the town, a subject which is treated more fully in Section 9 of this Master Plan.

5. The serious safety hazards on the present Rte. 142 between Rte. 10 and Mt. Hermon Station Rd. can be easily eliminated by simply re-routing to Mt. Hermon Station Rd. all the way to Rte. 10 (Map 5b II, #7). If adopted, this new routing would place the Rte. 10 intersection in the town of Bernardston, and a short section of the highway would be in the town of Gill. Such a routing change would require the approval and support of the Selectmen in these two towns. It is recommended that the re-routing procedure be initiated at the

earliest possible time and be conducted with exceptional thoroughness and attention to detail in procedure and documentation.

6. The decisions concerning Schell Bridge (Map 5b II, #8) are greater in scope than the resources available during the preparation of this Master Plan. However, in view of the importance to many residents of West Northfield and its contribution to economic activity in Northfield's commercial community, the Planning Board recommends that Schell Bridge be maintained if the repair and maintenance costs can be limited to less than one and one-half times the measurable costs, both private and municipal, resulting from its removal from use.

Railroads

Two major New England rail lines traverse the town of Northfield. The Boston & Maine Railroad enters West Northfield from Bernardston, leaving at the Vernon town line. The Central Vermont railway utilizes the same track at the Vernon line, crosses the road to Northfield Center, and continues south toward Millers Falls.

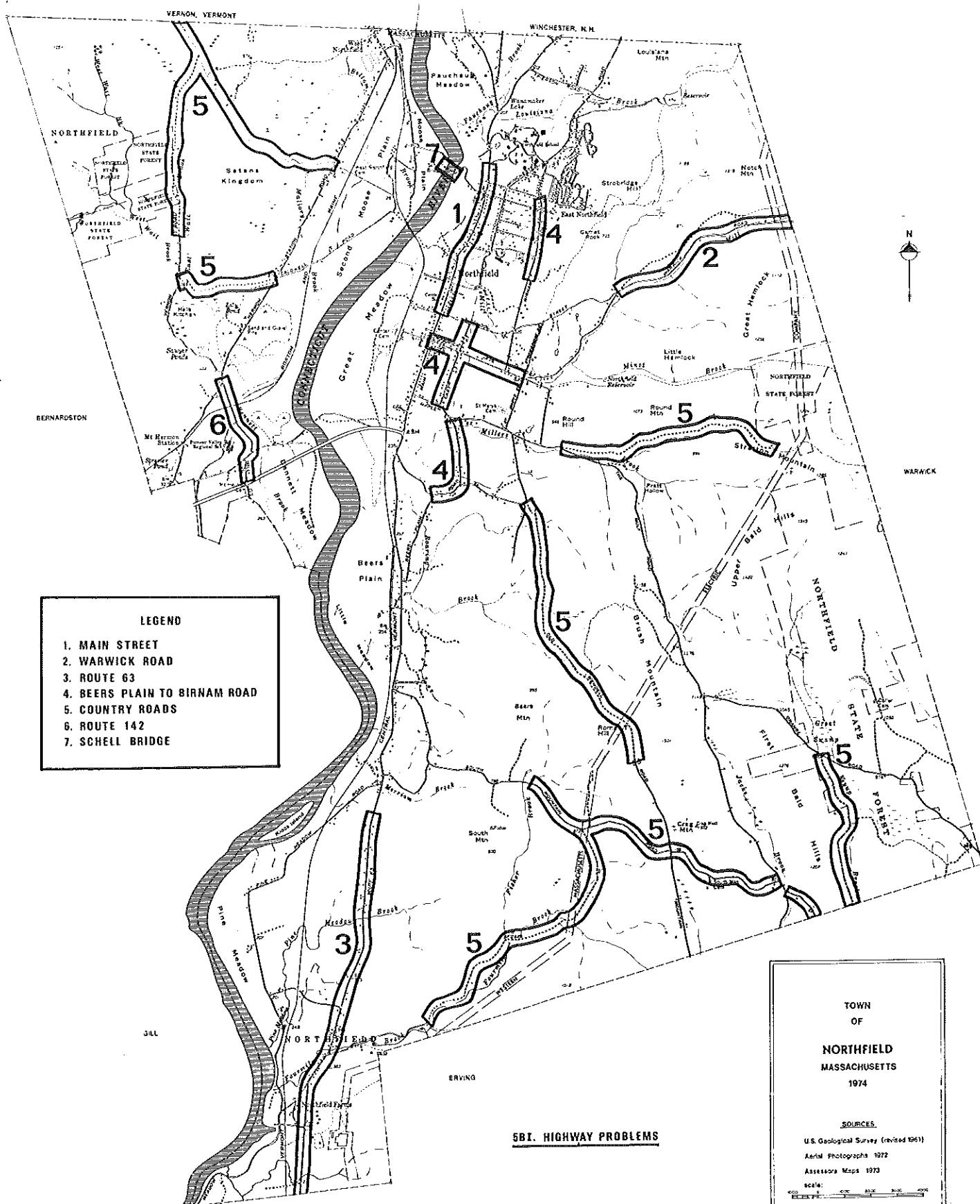
Recent national emphasis on improving rail service has provided funds for substantial upgrading of the Boston & Maine track. Recent investment of the company's own funds has brought the CV Railroad lines into excellent condition. These improvements indicate that both lines will remain in service for the foreseeable future, and thereby provide substantial development opportunity should economic activity create a demand for development in Northfield. The proposed industrial sites indicated elsewhere in this Master Plan are all located on or very near one of these rail lines. While in-town rail activity is admittedly extremely light, the potential stimulus of two well maintained rail lines can not be overlooked.

Recent publicity regarding vigorous development of the East Deerfield freight yard of the Boston & Maine Railroad points to future service more competitive with other modes of transportation. An integral part of this development is the cooperative use of the B & M line by both the B & M and the CVRR. This will probably result in a decline in daily traffic on the CV line through Northfield, but at this point there appears to be no indication that the line will be discontinued.

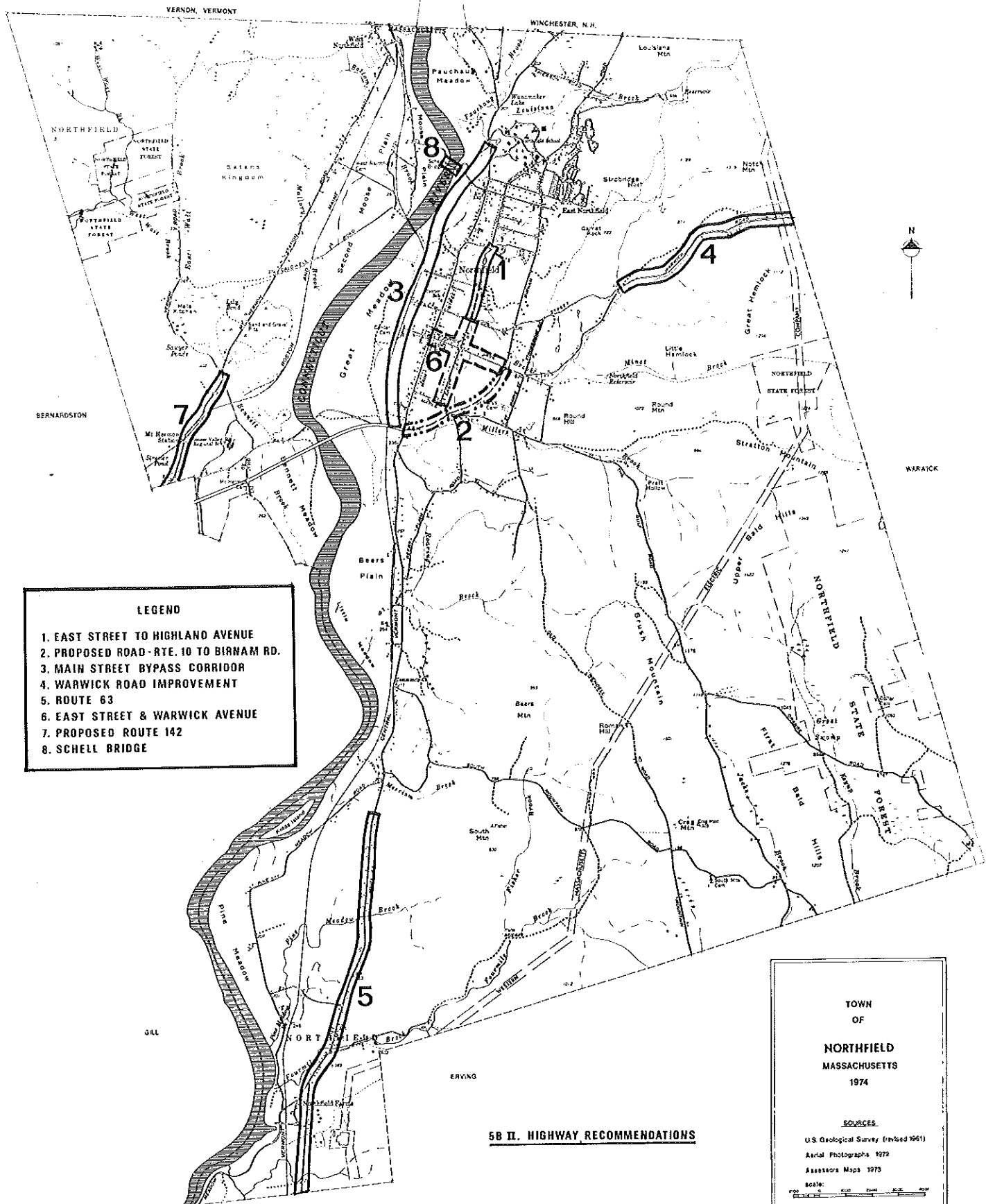
Conversations with top management officials of the B & M Railroad indicate that their extensive West Northfield property would be available for industrial development, especially if the new business were a rail customer. That property is within the proposed industrial zone, and lends additional viability to the site.

Scenic Roads

During the preparation of this Master Plan, many citizens indicated a desire for the maintenance of some town highways in a gravel surface condition, to perpetuate the esthetic qualities inherent in country roads of times past. Included in this expressed desire was the maintenance of a canopy of trees and the preservation of adjacent features such as stone walls, rail fences, and other visual reminders of Northfield's past. Three roads were specifically mentioned as worthy of maintenance in this state: Old Wendell Rd., Four Mile Brook Rd., and Pine Meadow Rd. These could possibly be protected from extensive reconstruction if included under the provisions of Ch. 40, Section 15C (Scenic Road Legislation) of the General Laws. It is not clear at this time whether maintenance of roads in the manner described here is in contravention of State road building standards or not. Since that possible conflict could lead to a loss of State reimbursement for reconstruction, the subject should be thoroughly investigated before action is taken.



5B1. HIGHWAY PROBLEMS



Section 6

Utilities

Introduction

Public utilities, usually in the form of water supply and waste disposal, are a logical means of solving common problems of people living in close proximity. As in most other towns, Northfield's utility systems have gradually appeared in the heaviest population centers over a long period of time, as public solutions to water supply and waste disposal problems have slowly become less expensive and more reliable than individual solutions.

In recent years, utility installations, especially sewers, have been promoted by State and national legislation mandating pollution control. Fortunately for Northfield, funding has been provided to assist in construction.

While the initial purpose of water and sewer services is to solve a specific problem, the presence of these utilities has major long term effects on land values, residential and commercial growth, municipal expense, and other issues of town concern. This area of secondary and subsequent influence has been of primary concern in this master plan.

Northfield Water Systems

In 1971, the commissioners of the Northfield Water District contracted for a feasibility and planning study of alternative water systems for the Northfield Water District. This study plus additional information regarding the East Northfield Water Company has formed the basic material for recommending future development of water utilities in Northfield. Since the above mentioned report is quite detailed and is available for further study, technical aspects of the water systems are deleted from the Master Plan in favor of policy recommendations and a systematic development plan.

Northfield Water District. Northfield Water District has been in existence for a relatively short span of time, the result of a decision by private interests to discontinue service, and a town vote that declined to take over water supply responsibilities. The water district has been operated since its inception on a financially sound but frugal management plan. Borrowing has been maintained at a minimum level, and service has been designed primarily for domestic use.

Physically, both the water mains and the layout are rather primitive in nature. The 1971 report indicates resistance to flow at over three times a new pipe condition. A basic "T" distribution system does not allow for alternative flow patterns that maintain pressure and supply at satisfactory levels. Storage capacity at the reservoir is minimal, and filtering and piping systems must be improved in the near future if water quality is to remain acceptable. Water main condition and reservoir capacity severely limit the system as a firefighting facility.

The limitations of the district restrict the use of this utility to a relatively small portion of the developed area of Northfield (Map 6 I, #1). With total supply adequate for few more than the present users, the water district has little ability to attract new development to areas where municipal costs for added services will be minimal.

On the positive side, the water district has methodically replaced critically deficient mains and new installations have been designed to deliver high level service far into the future. The commissioners can be commended for their careful management of the district as it exists and for a serious effort to plan ahead.

As Northfield becomes more aware of its ability to direct and design new development, the lack of a town owned water system becomes an increasingly limiting element. In effect, the water district as it exists represents a controlling influence on any new development within the district, and in a practical sense represents a veto power over new development in adjacent areas that lack sufficient natural water supplies.

East Northfield Water Company. The East Northfield Water Company (Map 6 I, #2), is owned by the Northfield-Mount Hermon Schools, and is a licensed public utility under Massachusetts law. Physically, the system has exceptional capability for a community of Northfield's size. Water mains are sufficient to provide both domestic water and considerable fire protection. A 28 million gallon reservoir is located nearly 400 feet above the service area, providing both adequate pressure and emergency supply in case of fire.

The management policies of the East Northfield Water Co. are conservative regarding additional users. Generally, new customers are not sought out, but domestic service is generally available in the service area. Conversations with management indicate that commercial or industrial customers would not be especially attractive. The drought period of the middle 1960's taxed the system and may be partially responsible for the present

conservative policies. A study of topographic maps shows the watershed area is not extensive at the present reservoir (Map 6 I, #3), and additional sources may be necessary if substantial future demand develops.

As in the case of the Northfield Water District, the East Northfield Water Co. management policies represent a controlling factor in future development, with service policies outside of local control. The water company inherently has an implicit veto power over any new development within its service area. The effective policies may or may not represent the best interests of the town as a whole.

West Northfield Water District. The drought period of the middle 1960's was primarily responsible for the development of a water district in West Northfield (Map 6 I, #5). The district exists only on paper, since residents could not reach consensus in constructing a distribution system. The only physical properties of the district are test wells. The lack of municipal water in the area is at present a controlling factor in additional development.

Future Water Supply Systems

1. Domestic Water Supply. For all practical purposes, any future development in East Northfield or the town center will depend to a large degree on the availability of water and sewer service. Natural water supplies (springs or dug wells) are severely limited in both these areas, and the cost of private drilled wells represents a nearly prohibitive element for single family homes. While natural supplies may be more available in some of the adjacent areas, the cost of drilled wells or other private systems is offset only partially by a lower cost for building lots.

2. Fire Protection. At present levels of pipe condition, storage capacity and total supply, the water system in the town center has little or no ability to affect fire insurance rates, according to the 1971 planning report. The present system does, however, provide some water for fire protection, a fact which should not be overlooked.

Any significant growth in the town center could be expected to result in added demand for fire protection capability. The 1971 report indicates insurance premium savings nearly equal to the cost for upgrading the system to that level. It can also be conjectured that any significant commercial development would necessitate fire protection capabilities, as sprinkler systems and other features are frequently required for insurance purposes.

3. Direct and Control Development. Up until the present time, the town of Northfield as a whole has not addressed the question of encouraging, discouraging, or otherwise controlling additional growth. If the town is to maintain control of municipal costs and preserve the living qualities desired by the residents, the use of water and sewer utilities may be critical. At present, all public water supply decisions in the area of development control are outside municipal influence.

Water System Recommendations

1. The first step in providing a higher level of water service to Northfield people and acquiring control of policy decisions that affect development is municipal ownership of the present Northfield Water District facilities. Acquiring ownership would provide a much greater economic base for upgrading and expanding supply facilities. (Bonding and borrowing capacities of the town are far greater than those of the water district, elements that could be critical in updating the water system.) An integral part of this recommendation is that rate schedules should be established that make the utility a self supporting unit.

Since growth or a lack of it affects every taxpayer whether water user or not, municipal ownership of the water system would give representation to all voters affected by public utilities. Along with more favorable insurance rates, it could be anticipated that State and federal funding programs would be more readily available under municipal ownership than under present district organization.

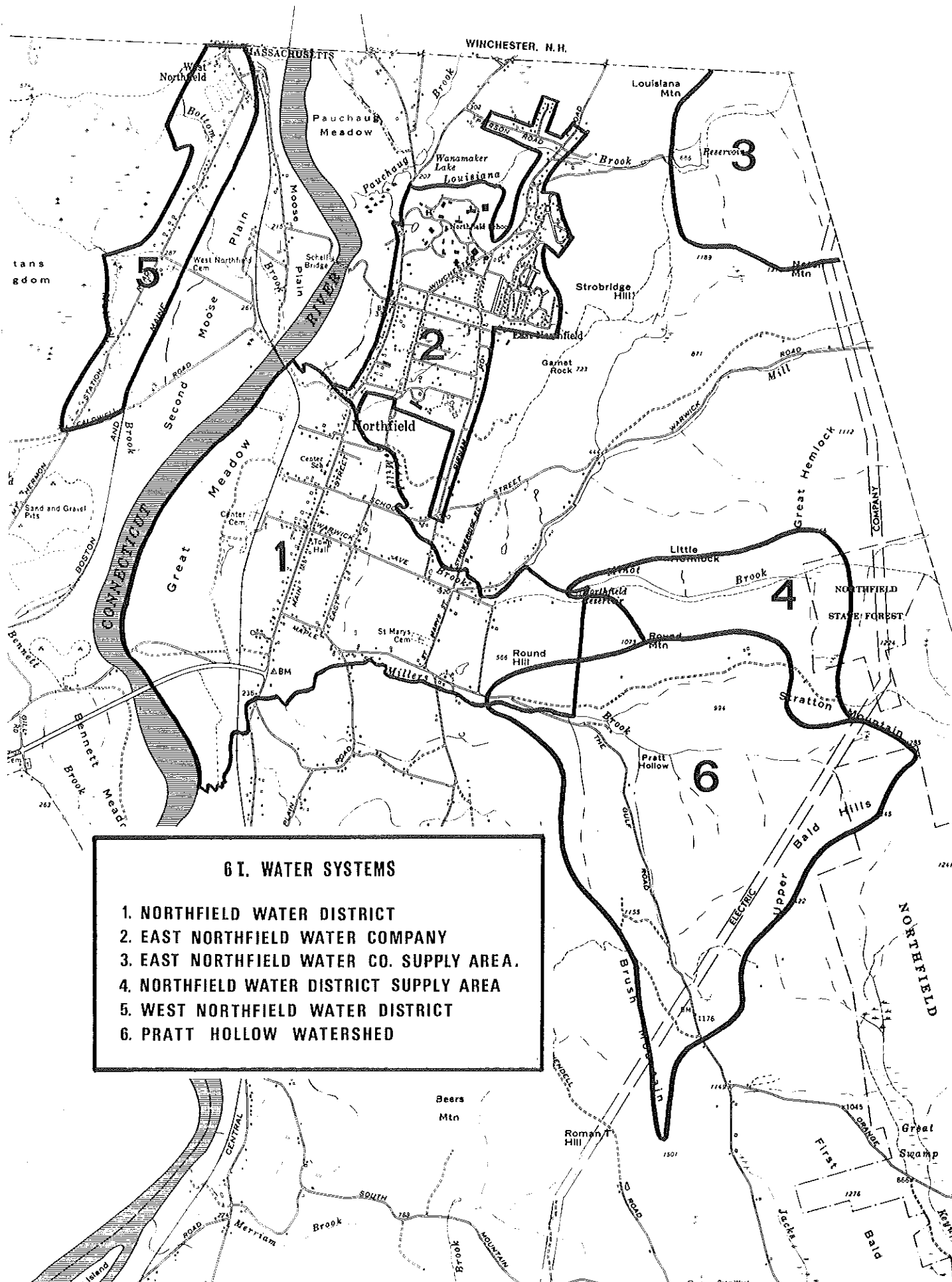
2. With the present water supplies no more than adequate, it is recommended that immediately following town ownership additional supplies should be investigated. At this point it appears that the Millers Brook watershed area, known better as Pratt Hollow, has the greatest potential for additional supplies (Map 6 I, #6). While lacking a natural reservoir site, it appears that a substantial gravel delta in the Gulf Rd. - Maple St. area would contain a substantial underground aquifer, where chances for highly productive wells are favorable. Development of the Pratt Hollow area necessitates protection from all sources of pollution if water quality is to remain high. This can be accomplished by outright purchase of the land, purchase of development easements, or by restrictive zoning.

3. With ownership of the present water district facilities accomplished and additional water supplies assured, the next step should be a determination of the total service area that could be adequately supplied. (See Section 9 for Preferred Residential Development Areas.) This determination should take

into account not only the density of users and the cost of extending service, but also the stimulation of growth and development that results from extension of mains to any area. Many elements of this planning have been included in the 1971 planning report to the water commissioners.

4. The final step in acquiring municipal direction of growth and development as well as providing service to residents is the acquisition of the East Northfield Water Co. facilities, and the complete integration of all water supply operations. Not only would this provide control of growth for the town as a whole, but the 28 million gallon reservoir could serve both pressure and storage functions for the complete system. Using that reservoir as a pressure facility would eliminate the need for building additional tanks or reservoirs. Also, the elevation of that reservoir is such that all areas considered developable in this Master Plan would have adequate pressure for both domestic supplies and fire protection. In an integrated system, the present Minot Brook reservoir would not serve as a pressure facility, and water from that source would have to be pumped into the system in the same manner that the present Strowbridge well and the proposed Pratt Hollow wells would be operated.

No definite time schedule is indicated at this time, since these recommendations cover very basic additions to municipal functions. However, municipal ownership of the present water district facilities should be initiated in the very near future. It is imperative that the Pratt Hollow area be kept free of development if it is to serve as a future water supply area. This also should be undertaken with expedience. Planning for the total service area and the final integration of all systems are very complex issues both technically and politically. These are not expected to occur within the next ten years.



Northfield Sewer System

Prior to 1972, Northfield's community sewer systems consisted of four lines leading to the Connecticut River, where raw sewage was deposited directly into the river. One line served the Northfield-Mount Hermon campus, another the Northfield Inn and adjacent properties, and two other lines serviced Parker Ave. and Meadow St. The Water Pollution Control Act of 1972 brought both a federal mandate to reduce pollution and high level funding to accomplish the major costs involved. The primary result in Northfield of the application of this act was the construction of a mechanical aeration sewage treatment plant and interceptor lines to service existing communal sewers (Map 6 II, #1). A review of town records shows the net cost of the facility to the town to be just under \$15,000. The sewer plant was designed to handle 275,000 gallons per day, equivalent to a population of 2,750 people. Based on population projections for the planned service area, this capacity was considered adequate until the year 2000.

Soon after operation began, it became evident that extensive water infiltration was occurring throughout the system. It is speculated the water comes from open joints in old lines, surface drains emptying into the sewer, and cellar drains that pump seepage into the sewer service line. Both surface and cellar drains leading to the sewer system are illegal; however, it is a tedious and time consuming project to identify the exact location of these infiltration sources. Infiltration through broken pipes and open joints is more easily identifiable in trunk and lateral lines, but is more expensive to repair due to the greater length and diameter of the pipes. Further federal funding of interceptor and trunk line construction is contingent upon solving the water infiltration problem. Funds have been appropriated for this, and the expected completion date for the sealing process is the middle of 1978.

While the original construction of a sewage treatment plant was mandated because of existing raw sewage disposal, sufficient capacity has been designed to allow service for all existing houses in the planned service area. An additional interceptor and trunk line to use this available capacity are scheduled for construction beginning in the spring of 1977 (Map 6 II, #3). Additional phased construction proposals are in the long-term planning stage and eventually will provide service to the entire area from Old Ferry Rd. on the south to Holton St. on the north, and as far east as Birnam Rd. and Old Turnpike Rd. (Map 6 II, #4-7). Service on Beers Plain Rd. will extend toward the intersection with New Plain Rd.

The site at the sewage treatment plant is large enough for a doubling of plant capacity without additional land, using the present method of treatment. Therefore, it is conceivable that areas beyond the present construction program may be serviced in the future at a reasonable cost.

Present funding systems through State and federal sources provide 90% reimbursement for interceptor lines and much lower levels, if any, for trunk and lateral lines. The net effect on total expansion is about a 50% reimbursement. Whether or not funding opportunities continue at higher or lower levels is impossible to predict.

A review of soils maps for the East Northfield and Northfield Center areas indicates a serious septic disposal problem. Not only is the soil incapable of absorbing large quantities of waste, but these areas also have the greatest concentration of housing and commercial activity in the town. These areas also coincide with the most favorable sites for additional development when municipal costs, appropriate use of land, and efficient delivery of municipal services are considered. Therefore, the planned expansion of sewer facilities coincides with the basic land use policies of this Master Plan.

Recommendations

The Northfield Sewer Commissioners are commended for the foresightedness of their planning and financing efforts. They are encouraged to continue with a definite, methodical construction program geared to the availability of favorable funding programs. It is further recommended that, should development occur in appropriate areas adjacent to the planned service area, allowances be designed into the system to provide additional service if costs can be held to reasonable levels. Likely areas for future development lie in the Maple St., Strawbridge Rd. and School St. Extension areas. (See Section 9.)

Surface Water Problems

Surface water problems associated primarily with highway construction and maintenance occur in several areas of Northfield. Spring thaws and heavy rains frequently cause road flooding on Mount Hermon Station Rd. Some areas with recent construction have newly installed culvert systems to remove surface water, but the dry well facilities in other areas are not adequate to solve the problem. A substantial area between Main St. and Birnam Rd., especially around East St., suffers from extensive surface water accumulation and the deterioration of open ditches that for many years served to adequately remove

the water. In anticipation of sewer construction in the area, investigations are under way to find the most appropriate method for solving the surface water problem. Enhancement of the area for additional development and reduced costs for highway maintenance are the major benefits expected from an adequate drainage system.

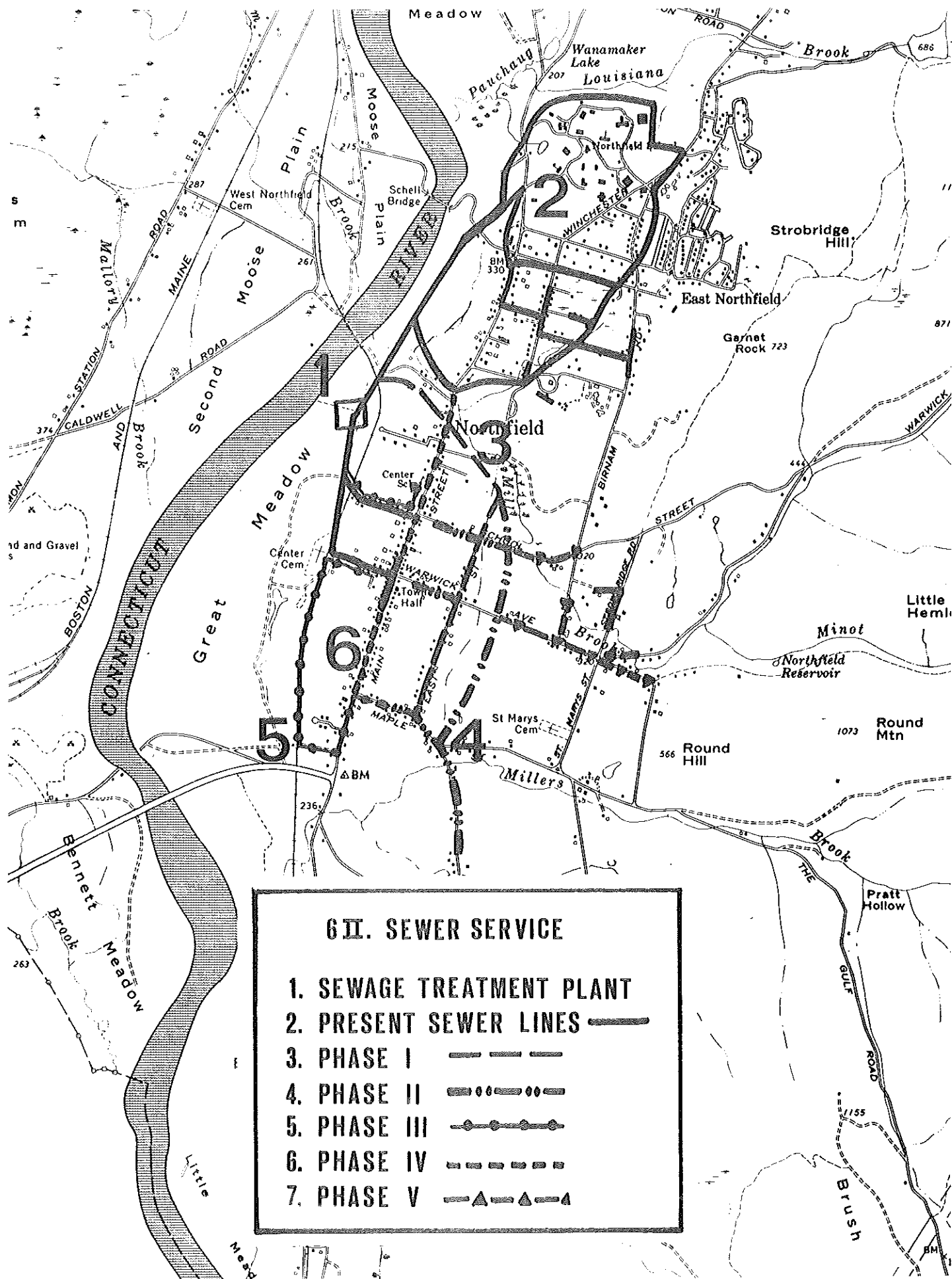
Many other areas in Northfield may occasionally suffer from surface water problems, usually in association with highway maintenance. However, no other specific areas have been identified as serious enough to warrant individual mention.

Recommendations

It is recommended that additional drains be installed on Mount Hermon Station Rd. to eliminate the obvious safety hazard. It is further recommended that planning proceed at once for the East Street area so that construction can be coordinated with the sewer project.

Street Light Program

Street lighting has received considerable attention in recent years, both as a public safety measure and as a tool for crime prevention. Prior to the recent drastic increase in energy costs, street lighting represented the consumption of otherwise wasted electrical power. In recent years, Northfield's street lighting programs have extended to Mount Hermon Station Rd. and the extremities of Main St., which could be considered rural in nature. The annual costs of this program have increased to something in excess of \$28,000. This represents a substantial operating cost to the town and should be critically reviewed to eliminate unnecessary expenditures. The Planning Board recommends that where public safety does indeed necessitate lighting, it be provided. However, additional lights in thinly populated areas should be discouraged.



Section 7

Finances

GENERAL COMMENTS

Prepared by Philip B. Herr & Associates
May 6, 1976

Town finance is concerned with keeping the costs of public services at a level residents can afford. In part Northfield's attractiveness depends on the quality of its schools, roads, utilities, and police and fire protection. Yet the town's desirability also is determined by the degree to which these services place a burden on those who must pay for them - the taxpayers. Ideally, a community tax base is sufficient for local government to provide adequate services, but also maintain a low tax rate.

This chapter of the master plan summarizes some of Northfield's recent fiscal trends and examines some of the major issues which may affect the town's financial situation in the future.

ORGANIZATION

There are a variety of town officials charged with handling various aspects of Northfield's finances. Historically, these responsibilities have been kept quite decentralized in most Massachusetts small towns.

The elected Board of Assessors is solely responsible for estimating the value of real and personal property for purposes of taxation. Officially, the Assessors set the tax rate. However, that is chiefly a mechanical determination based on decisions made by the town meeting and by other factors outside town control, using procedures dictated by state law.

The Tax Collector, also an elected position, is responsible for the collection of property taxes. The bills he sends are simply the products of the assessors-determined tax rate and assessment. The town clerk collects various permit and license fees.

The Finance Committee is appointed by the Moderator. It makes recommendations to Town Meeting on annual budget requests by municipal departments and on special appropriation proposals. In carrying out these functions it operates as a watchdog on the status of town finances before funds are committed. However, its only "power" is through influence, since its recommendations are only advisory.

The Treasurer is the municipal officer charged with the custody of Town funds. She receives money from collection officers such as the tax collector and town clerk, pays bills (subject to approval of the Selectmen), negotiates borrowing, and maintains financial documents such as insurance policies.

The Town Accountant, appointed by the Selectmen, keeps records showing appropriations, revenues and expenditures. The accountant maintains all contracts with the Town and verifies the amounts to be paid and the legality of payments.

TAX RATE

Tax rate is the basic measure of municipal financial burden. In order to compare towns with different assessment practices, one must use the "true" or full value tax rate. The full value rate is, in theory, the tax rate if all property were assessed at full market value. Table 1 shows Northfield's actual and full value tax rates over the past ten years. Beginning in fiscal year 1975, the State Tax Commission adopted a new equalization formula, therefore comparison of current full value rates with earlier years' rates may be somewhat misleading. Nevertheless, a review of both actual and full value trends over the previous decade indicates that, with the exception of one or two "bumps", Northfield's tax rate has been quite stable.

This year the town's full value tax rate is \$22.00 for every \$1,000 worth of real and personal property. This is about half the average rate for Massachusetts municipalities. The local tax rate has been well below the state average throughout the past ten years.

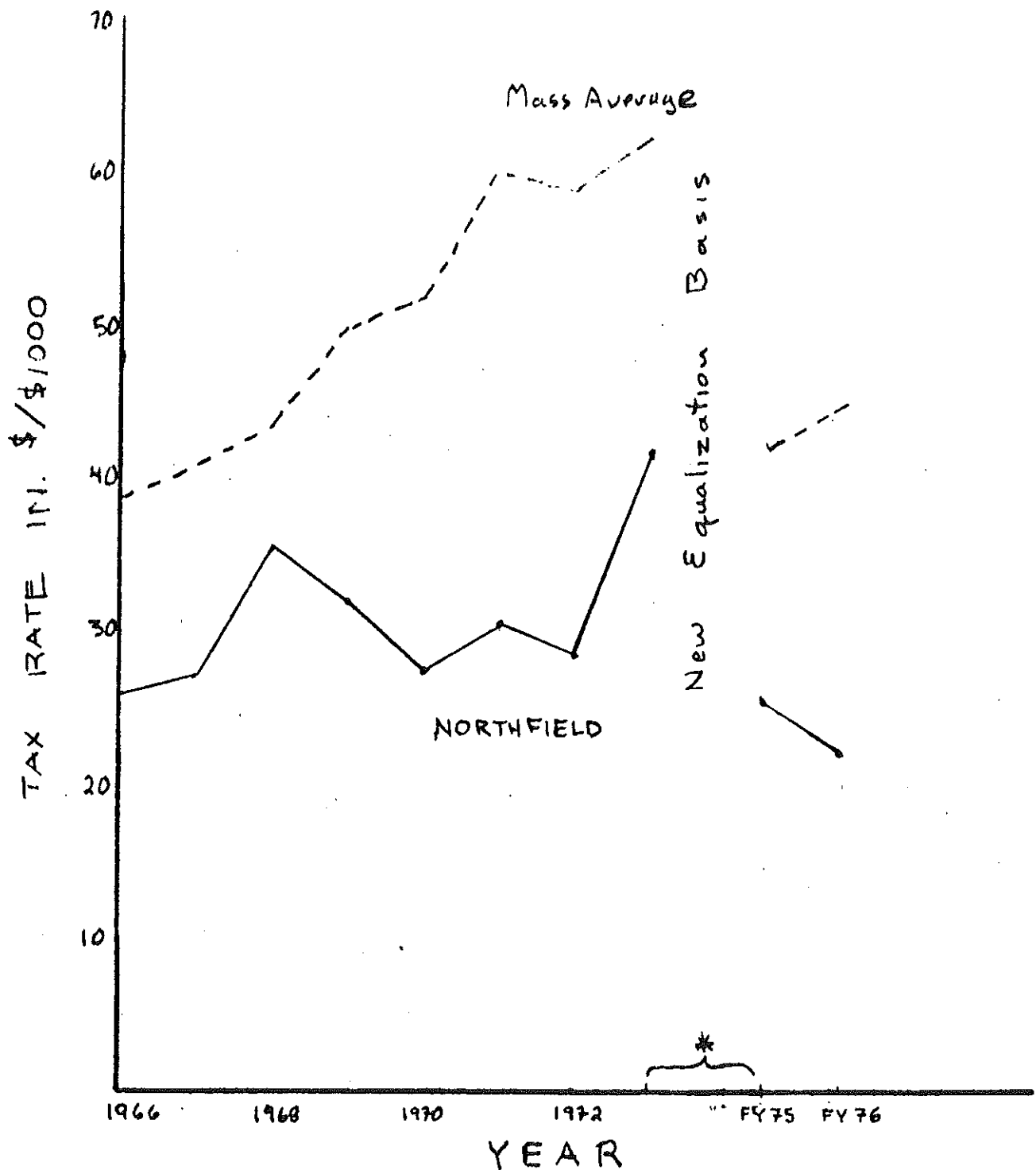
The tax rate is the product of many factors: increasing expenses (due to inflation, new development, and the demand for new or better services); changes in state and federal aid; and changes in the local tax base. An additional \$25,000 of locally-supported expenditures (i.e., not funded with state aid, etc.) adds \$1.00 to the tax rate, given current local tax levy and assessed valuation.

Table 1
NORTHFIELD TAX RATES (per \$1,000 worth of assessed valuation)

Year	Actual Rate	Full Value Tax Rate	
		Northfield	State Average
1966	\$33.00	\$25.90	\$38.54
1967	33.00	27.00	40.75
1968	36.00	35.30	43.00
1969	32.00	32.00	49.53
1970	28.00	27.40	51.50
1971	31.00	30.40	59.70
1972	30.00	28.50	58.56
1973-74*	42.00	41.60	61.90
FY75**	38.00	25.50	42.10
FY76	31.00	22.00	44.95

*18 month state fiscal cycle transitional period (1/1/73-6/30/74)
 **New equalization method used by State Tax Commission

FIG. 1 FULL VALUE TAX RATE



*18 month transitional period between calendar year and fiscal year accounting basis.

TOWN EXPENDITURES

The cost of local government in Northfield is now about \$1.2 million annually, or about \$500 per resident. As shown in Table 2, total expenditures have increased from about \$700,000 in 1967. Even after making allowance for the effects of inflation, total expenditures increased about eleven percent while population increased only about 2%.

SCHOOL COSTS AND FISCAL IMPACT

Operation of public schools is the heaviest financial obligation of local government. This year the school tax rate is \$22.87, or 74% of the overall rate. School expenditures have about doubled since 1970, while enrollment has remained about the same*. To make matters worse, the amount of state aid has dropped. When local assessed valuation grows faster than school age population, as has been the case in Northfield, the percentage of school costs which the state pays drops. Northfield now receives the minimum possible aid percentage (15%) under the state Chapter 70 school aid program.

School costs are of major importance when considering the fiscal impact of new residential development. We have estimated that the non-school costs per new dwelling unit are about \$90 annually in Northfield, whereas locally-supported school costs are roughly \$1,000 per pupil per year**. Therefore, the number of new pupils in a development will be the major determinant of its impact on the local tax rate. Enrollment can be fairly accurately predicted from the character of new development (generally, more bedrooms = more children). Table 3 summarizes the likely change in Northfield's tax rate due to construction of ten new dwelling units of different values and with different numbers of pupils. It indicates that new development at the scale and price that the town has been experiencing recently will not change the tax rate much, one way or another.

*Massachusetts Department of Education, Analysis of School Aid to Massachusetts Cities and Towns (Distribution Years 1970-71, 1975-76); and Enrollment Projections for Public Schools in Massachusetts 1975-1979, 1975.

**Determined by method outlined in Development Impact Guidebook (prepared by Philip B. Herr & Associates for the Massachusetts Department of Community Affairs, February, 1976).

Table 2
TOWN EXPENDITURES

	Total Expenditures	Per Capita Expenditures
1967	\$ 676,000	\$280
1972	1,140,000	460
FY76	1,234,000	500
% Change 1967-1976	+83%	+79%
% Change (1975\$)	+12%	+10%

Expenditures Source: 1967, 1972 - Massachusetts Association of Town Finance Committees, Town Expenditures, 1968, 1973; FY76 Massachusetts Taxpayers Foundation, Municipal Financial Data, 1976.

Population Source: Estimated from 1965 and 1975 Massachusetts Decennial Census

Table 3
CHANGE IN TAX RATE DUE TO 10 NEW DWELLING UNITS*

Assessed Valuation Per Unit	# Pupils Per Unit		
	0	1	2
\$10,000	-\$0.06	+\$0.31	+\$0.72
20,000	- 0.21	+ 0.19	+ 0.60
30,000	- 0.34	+ 0.06	+ 0.47
40,000	- 0.46	- 0.06	+ 0.34
50,000	- 0.58	- 0.18	+ 0.22
60,000	- 0.71	- 0.31	+ 0.09
70,000	- 0.83	- 0.43	- 0.03
Unit value required to "break even"	\$8,500	\$35,000	\$67,000

*Based on 1976 tax rate, school tax levy, general tax levy, and residential assessed valuation; school enrollment estimated based on 1973-74 enrollment.

SOURCES OF REVENUE

The largest source of town revenue is the property tax. Other principal sources are state aid (schools and highways receive the most support), federal revenue sharing, motor vehicle excise taxes, and miscellaneous permit fees and service charges.

Tax Levy

The local tax levy indicates how much Northfield itself must raise to pay for local government. This fiscal year's levy is just under \$760,000. These funds will pay for about 63% of Northfield's current annual costs. Table 4 shows that property tax levies have increased 134% over the past decade, or 41% when inflationary increases are considered. This rate of increase is about average for Massachusetts municipalities. Per capita property tax burden (slightly over \$300 this year) has consistently been below the state average.

Typically, municipal finance in Massachusetts has been characterized by decreasing reliance on local property taxes*. In Northfield, however, the relative importance of this revenue source has increased during the last decade. In part this may be due to substantial increases in assessed valuation and relatively slow growth which reduce the town's eligibility for other funding sources.

Federal and State Aid

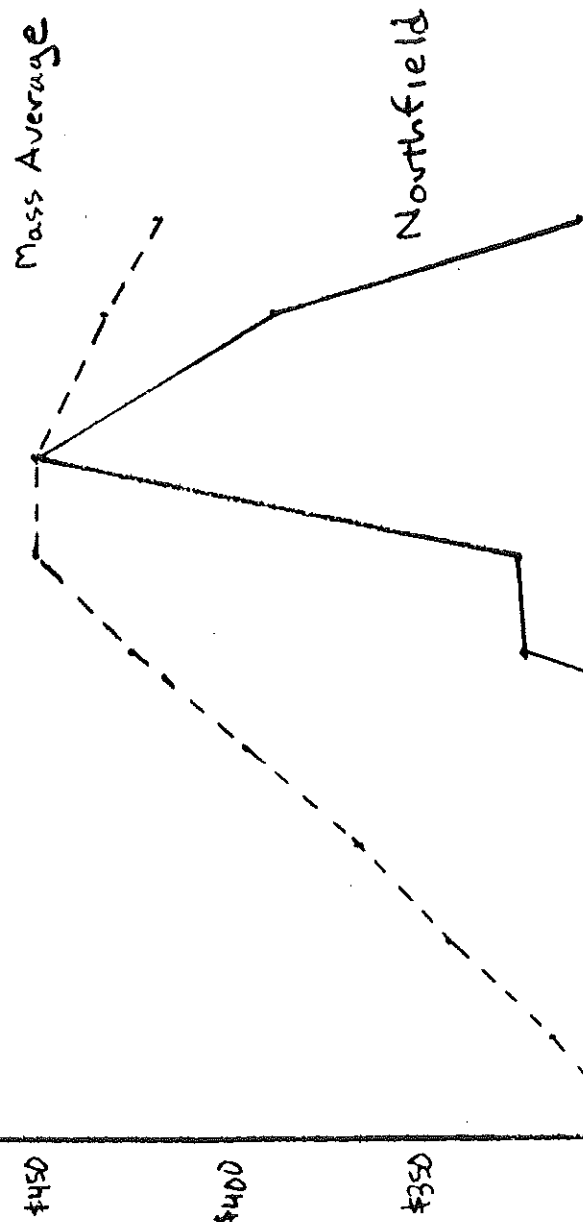
Federal revenue sharing was established to replace a variety of categorical grant programs, to quickly channel federal tax dollars back to municipalities and to return decisionmaking power to local government. This year Northfield will receive approximately \$45,000 in federal revenue sharing funds. The town may also compete for Community Development Block Grant money.

The largest non-local source of revenue is state aid. During fiscal year 76 the town receives about \$240,000 from the state, or 19% of all town revenues. Continuation of state government's fiscal problems could mean that state aid to municipalities will be less substantial in the future. Cherry sheet reimbursement will be 4% lower in FY 77 than this year. Furthermore, legislation making school aid cutbacks has been proposed. Even though Northfield has relied on state assistance less than many other communities, cutbacks such as these will be felt locally.

*Robert Eisenmenger and Joan Poskanzer, Options for Fiscal Structure Reform in Massachusetts, Federal Reserve Bank of Boston, Research Report 57, March, 1975, p. 41.

Table 4
TAX LEVY

Year	Tax Levy	Tax Levy Per Capita			
		1975 Constant Dollars			
		Northfield	Mass. Avg.	Northfield	Mass. Avg.
1966	\$316,536	\$131	\$178	\$217	\$295
1967	323,664	134	195	217	316
1968	393,084	162	220	253	343
1969	460,128	189	249	279	367
1970	439,208	180	285	250	396
1971	599,850	245	323	324	427
1972	625,500	255	354	325	451
1973- 6/30/74	911,862	371	375	446	451
FY75	876,850	356	398	388	434
FY76	758,877	307	422	307	422
% increase	140%	134%	137%	41%	43%



1966 1968 1970 1972 FY75 FY76

Fig 2 LOCAL TAX LEVY PER CAPITA (1975 dollars)

ASSESSED VALUATION

The town determines the tax rate by dividing the total tax levy by the assessed valuation of all property in the town.

Between 1966 and 1975 Northfield's assessed valuation increased by over 150% (see Table 6). This was slightly higher than the increase in tax levy, therefore the tax rate has dropped slightly over that period (as shown in the table below).

Table 5
% CHANGE IN VALUATIONS, LEVY AND TAX RATE (1966-1975)

	Northfield	Massachusetts
% Increase in Local Tax Levy	140%	137%
% Increase in Assessed Valuation	155%	117%
Resulting Change in Tax Rate	-6%	17%

In Massachusetts generally, however, assessed valuation has not grown as fast as tax levies and tax rates have increased.

Table 7 shows a breakdown of the January 1975 assessed valuation by type of land use. Single-family residences pay the largest share, followed by the industrial/utility category. Construction of the Northfield Mountain Project during the last decade is a major reason why the town's tax situation has remained fairly stable. Vacant land accounts for only 5% of the total assessed valuation.

PUBLIC DEBT

Northfield has enjoyed a recent history of low municipal debt. There has been very little borrowing to finance municipal projects over the past decade. In October, 1973, outstanding municipal debt was only \$3,000. Between 1966 and 1973, the highest outstanding municipal debt was only \$10 per capita.

One of the reasons Northfield's municipal debt is so low is that some services often provided by town government are provided by special districts. For example, public water is provided by the Northfield Water District, paid for by people within its area rather than by town residents generally. Secondary level educational services are provided by the Pioneer Valley School District. These costs are shared with three other towns. Current outstanding debts of these two districts is low.

Table 6
NORTHFIELD ASSESSED VALUATION

Year	Total	Assessment Ratio (%)	Equalized Valuation		
			Amount	Per Capita	State Per Capita
1966	\$ 9,591,784	79	\$12,141,500	\$ 5,021	\$4,613
1967	9,807,543	82	11,960,400	4,934	4,778
1968	10,919,286	98	11,142,100	4,585	5,118
1969	14,379,425	100	14,379,400	5,902	5,020
1970	15,686,205	98	16,006,300	6,555	5,595
1971	19,350,312	98	19,745,200	8,066	5,378
1972	20,850,073	95	21,947,400	8,944	6,047
1973	21,710,782	99	21,930,100	8,915	6,044
1974*	23,074,822	67	34,440,000	13,966	9,435
1975	24,476,727	71	34,600,000	13,997	9,390

*New State Tax Commission evaluation basis

Sources: 1966-73 - Boston Safe Deposit and Trust Company,
Financial Statistics of Massachusetts
FY75, FY76 - Local Assessment Bureau, Department of
Corporations and Taxation
Per Capita - Herr Associates estimates

Fig. 3 ASSESSED VALUATION PER CAPITA

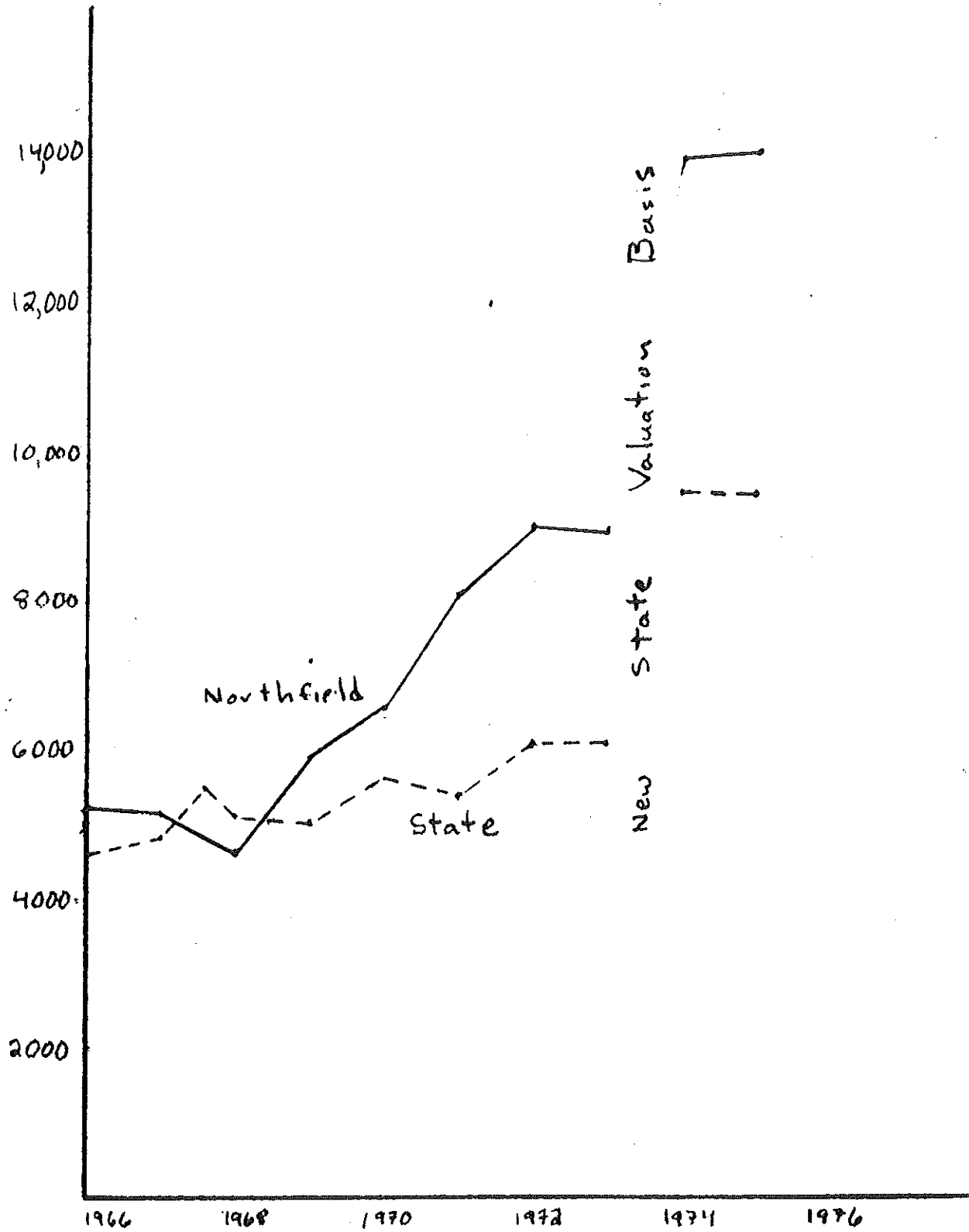


Table 7
 SOURCES OF PROPERTY TAX REVENUE BY LAND USE
 (January 1, 1975, Valuation)

Real Property	Assessed Valuation	% Share Total Assessed Valuation
Single-Family Residences	10,198,000	42.4
Two-Family Residences	599,000	2.4
Three+ Family Residences	179,000	0.7
Residential-Commercial	301,000	1.3
Commercial	814,000	3.4
Industrial/Utilities	7,936,000	33.0
Vacant Land (including agri- cultural land)	1,162,000	4.8
	21,189,000	88.1
Personal Property	2,861,000	11.9
Total	24,050,000	100

Source: Local Assessment Bureau, Department of Corporations and
 Taxation.

Northfield's largest outstanding public obligation at the present time is for the Franklin County Technical School. Each year Northfield and the other towns in the district are assessed a share of the operating and capital costs. Payment for Northfield's share of the district's outstanding debt amounts to about \$21,000 for FY 76.

Two useful guidelines for municipal borrowing are that net debt should be less than ten percent of equalized assessed valuation and that annual debt service should not exceed 15% of property tax levy. This means that, given Northfield's current fiscal situation, the town could safely borrow \$2-3 million to meet capital needs.

A Northfield Point of View

As indicated by Philip B. Herr & Associates in the preceding material, Northfield is fortunate to be in good financial condition, especially in relation to other towns. The only major debt is the town's share of the Franklin County Technical School facility, and it appears that additional school buildings are not categorized as essential at this time but rather optional.

The future financial management of the town should be viewed with caution, since many additional costs may be incurred and several sources of outside income show signs of future limitation. Requests for highway improvements in rural areas are increasing, and there is little likelihood that these improvements will result in tax income equal to the cost. The repair and maintenance of Schell Bridge is of substantial proportions and could necessitate either borrowing or a short-term jump in the tax rate. Additions to the sewer system would constitute a major financial burden if federal funding were not available. Even under present funding programs, collector lines beyond the main interceptors are largely a town responsibility.

Reduced reimbursement from State and federal sources holds immediate potential for a reduction in outside income. Several on-going programs, notably regarding highway improvements, have recently been reduced due to a State-wide financial condition.

Goals

For Northfield, three general goals should be kept in mind as future projects are undertaken. These are an even tax rate, a low debt load, and the lowest possible tax rate while

maintaining adequate municipal services. Relative to other towns in Massachusetts, these goals have been met with reasonable success over the last decade. This success indicates that the town can contemplate judicious capital expenditures without jeopardizing the town's fiscal integrity. The possible improvements that could be made are listed comprehensively in Section 5a. Briefly, they include improved office space and parking facilities at the town hall, modernizing the Dickinson Library, erection of a new highway garage, purchase of one fire truck and a new grader. There are numerous other possibilities, but these seem to be expenditures that will return greater service for dollars spent.

Several suggestions are in order to maintain the three established goals as previously mentioned. First is to design projects that can be paid for in a single fiscal year without seriously affecting the tax rate. Updating the heating and electrical systems in Dickinson Library would be an example of this kind of project. Secondly, restraint in design is suggested so that no more money is spent than necessary to produce the services actually needed. Where some projects of necessity require a large single investment over a short period, careful borrowing can even the impact of the project over several years. Finally, all present resources such as the highway department personnel and equipment, other town employees, and volunteer groups should be utilized to the maximum before expenditures are made for outside assistance. Many improvements in town properties such as parking areas, recreational facilities, and the like can be accomplished with these resources without additional expense.

Capital Expense Program

An essential tool for reaching the three established financial goals is a capital expense plan prepared for a period of five to ten years and requiring annual review and updating. All town departments should be involved in the preparation of this plan so that all equipment purchases, building additions or other major investments will be known to all concerned citizens well in advance of their appearance on a town warrant. Seldom does Town Meeting provide adequate time or information for reaching sound financial decisions by the voters as a whole.

Increasing the Tax Base

The tax rate in any given year is a function of two items. First is the total money appropriated at Town Meeting. Second is the assessed value of all taxable properties within the town. Looking ahead to the future, it appears that unless major changes occur, Northfield's development will be in the direction of additional single family homes. Generally, these

new properties, especially if there are children of school age in the new household, create greater municipal cost than the additional tax revenue. Continued development in that direction indicates future tax rate increases. Northfield's farms are constantly being modernized, but since their number is limited, the total investment will not likely result in a major impact in reducing the tax rate.

Commercial enterprises have not expanded appreciably for some time due to a wide range of circumstances. It appears there is considerable opportunity for additional enterprises if the town is willing to create favorable conditions. Commercial development can be expected to return more in taxes than it costs in services. The potential for industrial development is extremely uncertain, especially in view of a weak New England and Franklin County economy. However, the odds for a desirable industrial facility can only be increased by bylaw changes that would allow these enterprises in appropriate areas. In the last decade, public utility investments in Northfield have been of substantial proportions, and currently carry nearly 33% of Northfield's tax burden. It does not appear that similar investments are possible in the foreseeable future.

In summary, it appears that development resulting in substantial assessed valuation is not likely to occur in Northfield in the near future. In the longer run, an improved climate must be maintained if the tax base is to be expanded. This can be accomplished only through revision of town bylaws and the inclusion of opportunity for a wider variety of development than currently permissible.

A situation very unique to Northfield is the proportion of tax exempt property. The taxable land and buildings in the town total approximately 23 million dollars, while exempt property is listed at over 14 million. While in one sense this exempt property represents a substantial loss to the tax base and a corresponding increase in the tax rate, many of the normal municipal services to these properties are provided by the property owners themselves, and therefore in the final analysis do not represent the impact that might appear at first glance.

Section 8

Land Use and Conservation

Introduction

The basic purpose of most land use planning efforts is to derive the greatest total return from the limited land area available to any town or other municipal unit. Returns can be measured only partly in economic terms, since the qualities of a residential area are in large part esthetic in nature and affect the people living there in many subtle and unmeasurable ways. Likewise, open fields, growing crops, woodlands, wetlands, water bodies and many other natural features greatly affect many citizens who have no direct economic ties. The economic factors must be given full recognition, however, since many people derive their living directly from the land, through either actual production or through the specific assets of location, soil type, availability of utilities, and many other qualities.

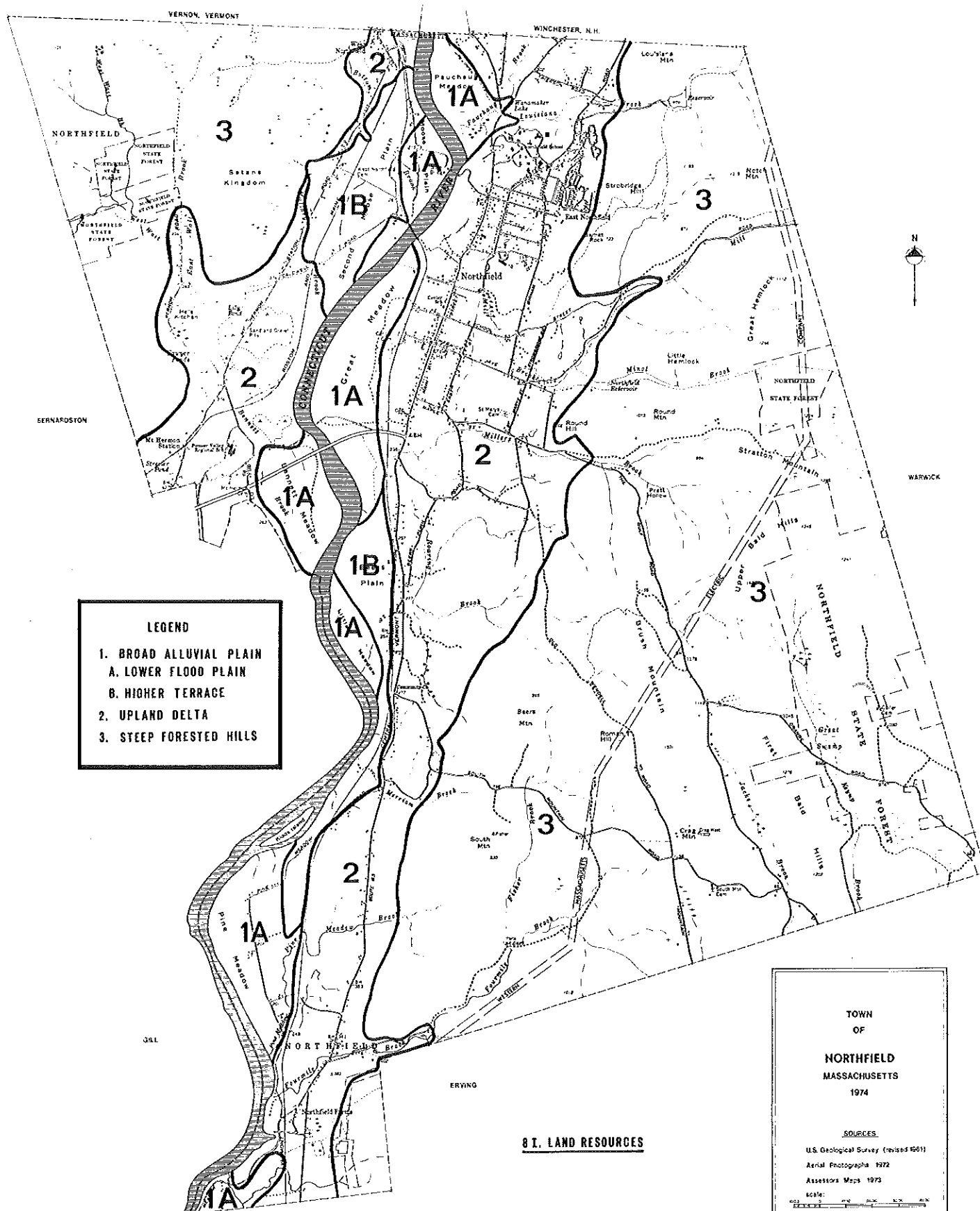
In order to establish a reasonable plan, several things are essential. First and probably most obvious is the list of goals that a community sets for itself. This list may include agricultural production, residential space, watershed maintenance, industrial activity, and many others. Second and usually less obvious to the untrained eye is the inherent capacity of any given piece of land to perform the functions required by the citizens. Simply said, this means that some land is suitable for a very few specific uses, while other land areas may be suitable for a wide variety of activities. A third factor is the alternative availability of land if the planned use of any area eliminates other uses which must be located at some other place. As an example of this, it can be pointed out that watershed areas of necessity must be shaped in such a manner that runoff from a large acreage is channeled to a single location where the water can be gathered and stored efficiently. Any development within the entire area that results in water pollution effectively eliminates the whole area from use for municipal water production. In Northfield, as is true of many towns, only a few areas fulfill this function adequately. Another example is prime farm land, which also can be used very readily for residential development, commerce, industry, recreation, and other functions. However, any of these functions dictates that food production cease and move to another area. In Northfield, there are no additional acres available. Therefore, to preempt prime farm land for other uses is to eliminate food production from the Northfield economy.

Northfield's Land Resources

Northfield's land falls generally into three major categories. Along the Connecticut River are broad alluvial plains, free of stones and currently heavily used in agriculture (Map 8 I, #1A and 1B). Some of these plains are subject to periodic flooding and therefore are generally free from development due to this hazard (Map 8 I, #1A). At higher elevations these plains are exceptionally suitable not only for agriculture but for a wide variety of other uses (Map 8 I, #1B). Generally, these higher plains are serviced by good roads, railroads, and some utilities. At the present time, these areas are intensely farmed with every available acre in production.

At a still higher level above the river are additional alluvial deposits which were formed thousands of years ago, not by the Connecticut River itself, but by the rushing tributaries that formed at the end of the ice age (Map 8 I, #2). These areas are highly variable, containing areas of sand, gravel, clay, hardpan, and some ledge outcroppings. Historically, these areas have been the site for the major population centers in Northfield, including East Northfield and Northfield Center. These soils are marginal in terms of modern agriculture since they do not allow efficient use of large machinery and frequently are not well drained enough for high potential crops. These areas are relatively desirable for many kinds of development, but usually in combination with utilities such as municipal water supply and/or municipal sewer service.

At the highest elevations in Northfield, the landscape is a result of massive glacial action with steep ledgy areas interspersed with varying deposits of glacial till (Map 8 I, #3). This land can be used for residential areas if great discretion is employed in choosing a site. Usually, it is impractical to run municipal sewer or water lines to these areas. Therefore, adequate soils of good drainage must be present to absorb domestic wastes, and water must be available at reasonable private cost to make the site practical for building. These areas are nearly 100% forested, and provide excellent recreational and wildlife production functions. These also are the areas that contain potential watersheds and fortunately, from a planning standpoint, are very lightly developed at the present time.



Determining How Land Is Used

There are three basic ways in which the use of land can be directed by municipal action:

1. All rights invested in the owner. Throughout the 1900's, private ownership of land developed a connotation that whoever owned land and fulfilled the responsibilities of ownership possessed all rights regarding its use, development, or non-use. This concept of land ownership has been especially strong in rural areas throughout the country and in many circles it is still considered to be the ideal method for determining land use. In an undeveloped frontier environment where neighbors are far apart and seldom influence one another, this system has many desirable qualities and certainly is attractive to those who possess the courage and initiative to buy and develop any extensive parcel of real estate. Many times we lose sight of the fact that land use in the early days of New England and Northfield was not of this nature but rather was a subject for community discussion and decision. Even a brief exposure to Northfield's early history indicates this.

As populations have grown more dense and neighbors have become close enough to be influenced by each other's actions, a renewed interest in community decisions for some aspects of land use has emerged. In Northfield, this interest in community decisions took form in the late 1960's when the first land use bylaw was passed.

2. Using municipal facilities to direct development. Any municipality has at its disposal the location and maintenance of several municipal services that can either encourage or discourage development of various types. Most obvious is the location and maintenance of highways under town control. Without a road, housing, industry or commerce are highly unlikely since all depend on vehicular transportation for existence. A seasonal road that is not plowed in winter dictates by definition that only seasonal business or residences are feasible. And in the same vein, a wide, hard surfaced, well maintained highway is an obvious encouragement to practically all development.

The provision of municipal water and sewer services is the most important factor in most kinds of development. This is especially true in the case of commerce, industrial growth, and concentrated forms of housing. These services take on an even greater importance if soil types in any given area do not allow the installation of functional septic systems. Experience has shown that most new businesses or industries will move to a new area only if these services are readily available. While of lesser importance, the provision for street lights and sidewalks is also a factor in development.

In Northfield, it appears that very little thought has been given to the effects of these municipal services on the growth rate. Plans and discussions in the various town departments or at Town Meeting seldom address this function but usually are limited to a discussion of expected costs of any project and the immediate problem facing the community. This situation probably in large measure is due to the fact that each of the utilities is under the direction and control of a different board or department, and little effort is made to coordinate the long-range goals of the various agencies. The net effect of Northfield's utility systems or lack of them seems to be to encourage housing development in areas far removed from the center of town. A review of building permits issued for new houses over the past several years is sound evidence that this is the case.

3. Land use control by direct regulation. A wide variety of regulatory procedures are available to any town to direct and design new growth within the municipal jurisdiction. Lot size requirements, frontage requirements, subdivision regulations, and limitations against specific uses for different areas of the town are but a few. This method of land use regulation, if adequately enforced, is the most effective and direct means for designing the future character of the town. By these regulations, the presence or absence of any land use group can be totally controlled. It should be noted, however, that this kind of regulation cannot create a demand for development of any particular type, since the demand for development is related directly to the level of economic activity rather than the availability of sites. In effect, land use regulations can either be permissive or exclusive.

Historically, Northfield people have been very reluctant to use strict land use regulations since this method has a great potential for substantial reductions in the value of some properties while others may increase substantially. It appears to be a basic premise of the town that the free enterprise system is the most desirable incentive for development since every individual is free to seek out the avenue for maximum profit. Unfortunately, in some cases the free enterprise system has resulted in property valuation reductions of neighbors or the unwise use of natural resources. This is one of the basic reasons why Northfield has adopted a minimal level of land use regulations.

Land Use Policy for Northfield

An analysis of Northfield's present policy and level of land use regulation points out an obvious contradiction. In an effort to keep bylaws as simple as possible and create little interference with the free enterprise system, Northfield's present bylaws allow two uses for all areas of the town, namely residential and agricultural use. While this has a very pleasant connotation, these regulations by omission drastically limit the

potential for the creation of jobs or economic activity through any form of commercial or industrial endeavor. As described and outlined in Section 3 of this Master Plan, Northfield is extremely vulnerable to the loss of jobs since a high proportion of in-town employment is in private education under the direction of a single organization. Alternative employment is available mostly in service oriented businesses that create no new wealth for the town economy. While agriculture's contribution is very substantial in dollar earnings of "new money," the number of families deriving their living from farms is only about forty. An additional detrimental quality of present regulations is that they encourage additional single-family home construction in areas that are very expensive to reach with municipal services, and the resulting tax revenue seldom covers the additional cost. The following land use policies recommended for Northfield are designed to rectify some of the shortcomings of our present bylaws:

Agricultural Land Use. In excess of 4,000 acres of Northfield's land is intensively used for agricultural production, resulting in a yearly gross to the town economy of over two million dollars of "new money." Nearly all of this source of wealth originates from other areas and comes to Northfield in return for milk, meat, and other farm products. At the present time, there are no land use regulations which hinder the use of land for farming purposes.

While it seems on the surface a desirable step to limit many of the most productive areas of Northfield to farming in an effort to perpetuate a source of income and the very pleasant visual qualities that farm operation provides, no regulations of this nature are recommended for the foreseeable future. In reality, limiting the use of agricultural land to that function alone greatly reduces the theoretical value of the real estate. This theoretical value in practice forms the basis for borrowing money to finance modern farm systems. Any reduction in land value results in a weaker financial position for the operating farmer. An additional factor is that the realities of the present farm economy dictate that frequently the land value is the only form of savings or equity available for a farmer's retirement, and to greatly reduce that equity effectively eliminates any hope of comfortable retirement for many farmers. Good intentions to the contrary, restrictive bylaws to agricultural land weaken rather than strengthen the town's agricultural industry.

Special situations which may reduce the need for farmland protection in the near future are these:

a. Chapter 61A of the Massachusetts General Laws provides for preferential assessment of farm land to the end that farmers need not pay development property tax levels on

land which is actively farmed. This is a mild but persistent incentive for land to remain in farming.

b. There is a distinct possibility that a State program for the purchase of development rights on agricultural land may be enacted in the near future. This type of program would protect farmers from loss of equity and would be a very strong incentive for land to remain in agriculture.

c. The demand in Northfield for non-agricultural uses is relatively light at the present time, not only because of depressed economic activity throughout the area, but also because alternative sites are available for other uses. At the same time, farmers have been willing to bid very competitively for prime land and little has been lost in recent years to non-productive uses.

d. The National Flood Insurance Program mandates that building codes and other forms of land use regulation be enacted for the areas deemed subject to flood hazard, if flood insurance is to be available in any municipality. These regulations, when formulated and enacted, will serve as a protective measure for the lower alluvial plains in Northfield, providing some level of protection against the encroachment of non-agricultural development.

It is impossible to predict the future economic strength of Northfield's agriculture and its resulting capacity to compete for prime land. While this plan recommends no restrictive zoning, constant awareness of changing pressures must be maintained in the event that the desired goals of the town come in jeopardy.

Within the past decade, Northfield agriculture has lost the use of a substantial portion of Pauchaug Meadow. This area was acquired by the State Department of Fisheries and Wildlife for use as a wildlife management area. As a direct result of this management program, approximately 50 acres of the meadow that were highly productive have been diverted to the production of wildlife cover and shooting areas. While it can be argued that recreational activities are legitimate land uses, the dollar loss in annual income in Pauchaug Meadow is easily in excess of \$50,000 per year. This is a significant negative factor since there is no way the production can be replaced, since all available acres have been in active production for some time. An additional proposal for State acquisition of Bennett Meadow is anticipated to result in a similar loss unless substantial changes are made in the proposed operation of the area. The Board of Selectmen and the Planning Board have initiated intervenor proceedings in the Bennett Meadow proposal before the Federal Power Commission. As of this writing, the issue has not been resolved.

Residential Land Use. This subject will be more fully treated in Section 9, but a brief description of priorities is warranted here. As an overall policy, it is recommended that residential development be directed first to areas served by municipal sewers, water, and adequate highways to the end that tax rates are held as low as possible (Map 8 II, #2). Secondly, residential development should be directed to areas that are not in heavy agricultural production to minimize any loss to the town economy (Map 8 II, #1). Third in a list of priorities are the uplands areas where housing can be provided with adequate water supplies and soils that can properly handle domestic wastes (Map 8 II, #3). These upland residential areas should also be on passable roads if at all possible. Residential uses are recommended to be restricted from two major watershed areas--namely the northeast corner of Northfield bounded generally on the west and south by the 400-500' elevation line (Map 8 II, #4), and the Pratt Hollow area including all lands with surface drainage leading to Millers Brook. Residential densities will be treated in other places in this Master Plan.

Commercial Land Use. Retail businesses and other commercial enterprises have shown very little growth for many years. It is frequently indicated that town regulations which allow no new enterprises except by variance or special permit are responsible for this. However, it appears far more likely that the absence of desirable sites, the lack of adequate water and sewerage facilities, and the scarcity of local ventured capital are far more important elements. A thorough examination of Northfield attitudes regarding commercial activity has shown that most people strongly feel that additional services are needed, and in the face of increasing transportation costs would welcome an opportunity to do their shopping closer to home. However, the goods and services would have to be available at a similar cost and variety relative to present shopping areas if Northfield people are to patronize any new businesses.

Present day shopping depends to a large degree on good highways leading to the area and adequate parking near the store entrance. Repeated surveys of the East Northfield and Town Center areas have failed to locate any land areas adequate in size for a modern store or shopping center, located near enough to the major roads to be practical. This situation leads to two possibilities: First is the consolidation of lots somewhere in the Main Street area and the demolition of some present buildings to provide space for a new enterprise. This alternative inherently endangers some of the buildings and sites that possess significant historical values. The other alternative is to create a new road located in an undeveloped area and adequately connecting all major highways and residential areas. If neither of these alternatives is developed, it appears likely that commercial activity will continue in the present locations and under the present constricting conditions.

Recommendations for improving commercial land use opportunities include the following steps:

a. Establishment of a Historic District for the Main Street area (Map 8 II, #5) to the end that commercial development can be intermingled with valuable historical and architectural properties while maintaining the visual attractiveness of the area. Under present bylaws, no commercial development is possible except by variance. The second part of this recommendation is that Main Street be rezoned for commercial use after the establishment of a Historic District.

b. A longer range recommendation is the establishment of a new street from the intersection of Rtes. 10 and 63 to the Beers Plain-Maple Street area and the accompanying zoning of that area for commercial development (Map 8 II, #6). In that location, a street would provide adequate acreage for new business ventures, no conflict with present housing, and close proximity to the most heavily traveled highways in Northfield. Under the provisions of Chapter 808 of the Massachusetts General Laws (revised zoning legislation), a special permit system may be devised that will allow commercial development in other areas of town under carefully specified conditions. It is recommended that a special permit system be devised to the end that small businesses that historically have been characteristic of Northfield may again be encouraged in town.

Industrial Land Use. Northfield's industrial community presently consists of three firms. They include a sand and gravel company and two machine shops located adjacent to the proprietor's home. All three of these enterprises are operated as continuing businesses which originated before land use regulations. In view of the serious lack of job opportunities in Northfield, the recent demise of the Northfield Inn, and the general weakness in industrial/economic activity in Franklin County, it would appear important that any acceptable means of stimulating economic activity be employed. While historically Northfield has developed an image of being anti-industry, extensive contacts with Northfield people indicate a need for increased business activity if it can be accomplished without serious environmental or visual damage. In an effort to find areas suitable for industrial use, certain characteristics for a site were listed: 1) removed from residential areas; 2) serviced by good highways and rail; 3) sufficient size to allow significant development; and 4) not on prime agricultural land. Using these guidelines, three areas were located and are recommended for zoning for industrial use. They are:

1. the area from the Northfield Mountain Project south to the Erving town line, including all area between Rte. 63 and the Central Vermont Railroad; (Map 8 II, #7A)

2. the area east of Rte. 63 from Jewett's Pond (so called) south to the old Number 3 School property; (This area is suggested for lighter industrial uses such as distribution centers, office buildings, small assembly plants, etc.) (Map 8 II, #7B)

3. on both sides of Rte. 142 bounded on the north by Caldwell Rd., on the east by the B & M Railroad, on the west by Lily Pond and the associated wetlands, and Rte. 142 from Sawyer Pond southward to the B & M Railroad bridge. (Map 8 II, #7C)

While many municipalities have become involved in the ownership and active development of industrial properties, it is recommended that Northfield's role be purely permissive in nature, which is to say that Northfield should not be responsible for providing water or sewer services to any potential industry. These functions as well as ownership or development of real estate are beyond the current scope of municipal capability, both managerially and financially. The town should also refrain from extensive road building to any industrial development.

Open Spaces. Open space, whether in the form of fields, woods, water, or whatever, is of great importance in providing an attractive environment for human habitation. Land areas of this nature have widely varied but intense significance to most people. To some it may mean the nearness of "natural" surroundings; to others it signifies a sense of privacy; to many, open spaces constitute beauty and rural charm. In a town such as Northfield where development pressures have been light, substantial areas are devoted to open space under private ownership and without specific regulation or encouragement by the town. In the face of heavy development pressure, many of the open spaces would be utilized for housing, industry or other purposes and the intrinsic social values would be lost. Many participants in the preparation of this Master Plan placed the maintenance of open spaces very high in the list of priorities. In view of that interest and in conjunction with other uses which necessitate little or no development, two major areas are suggested for continuation in their natural woodland setting. These have previously been identified as the northeast corner of the town and the Pratt Hollow area (Map 8 II, #4). Each of these areas contains well in excess of 1,000 acres and serves not only a spatial function but also can be utilized for forest production, wildlife production, and many forms of recreation. With a major portion of the Northfield State Forest located adjacent to the Pratt Hollow area, the total land area that would be free from development for the foreseeable future covers several square miles.

Unless development pressures increase markedly in the next few years, many other areas of Northfield will most likely

retain their open space capabilities for the foreseeable future. These include the Craig Mountain and South Mountain areas as well as the Pond Mountain area in West Northfield.

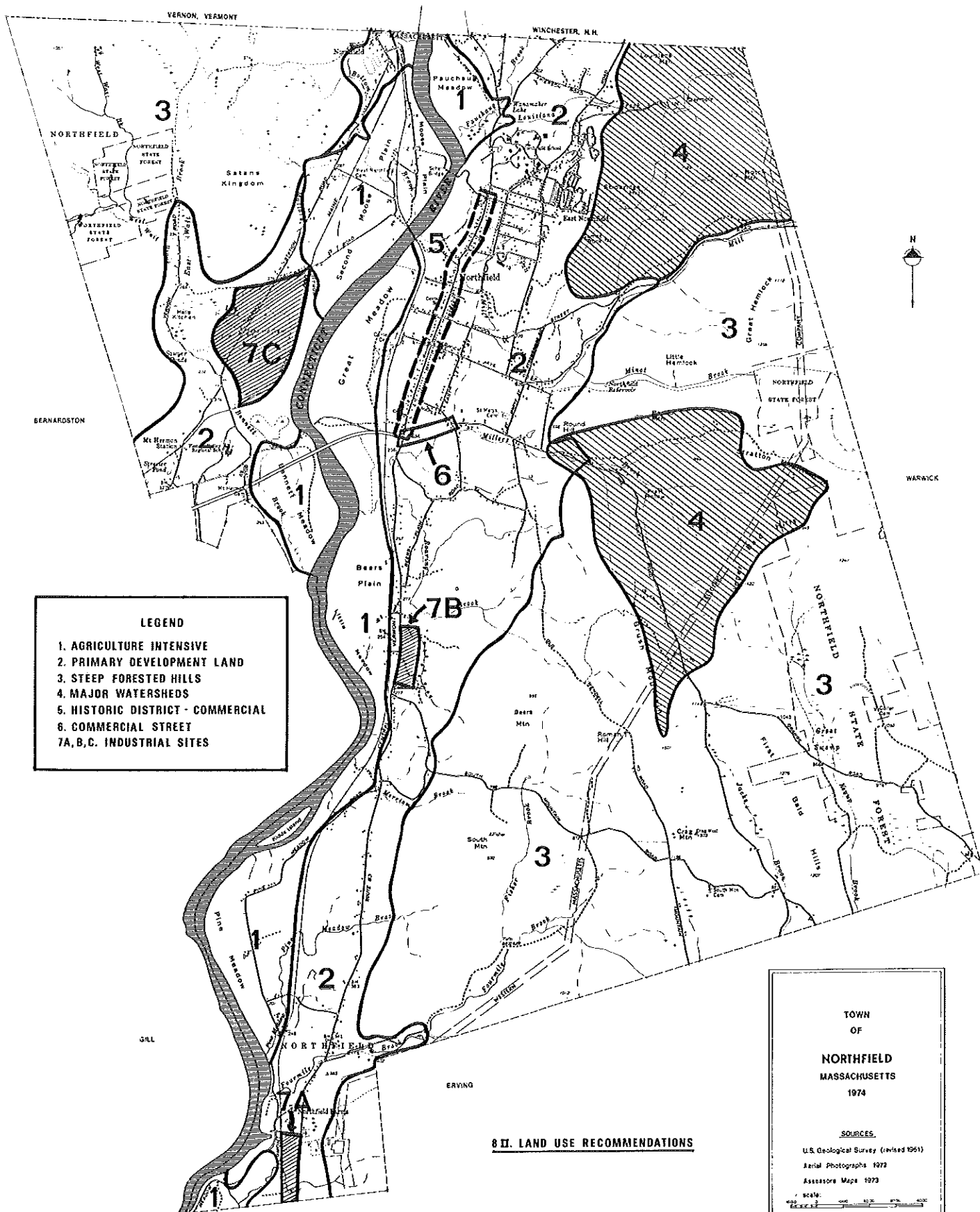
Special Land Use Issues

In recent months, several special issues involved in land use have emerged to warrant specific mention. The most noticeable of these is the problem of riverbank erosion that has occurred since the installation of the Northfield Mountain Pumped Storage Project. Wide fluctuations in the level of the Connecticut River have greatly accelerated a natural process of soil erosion on the riverbanks, resulting in the loss of tree cover and substantial amounts of soil. Northeast Utilities has recently undertaken extensive remedial steps in the form of tree cutting, a planned hydro-seeding program, and riprapping especially serious areas. Continued town interest and awareness will be necessary to ensure the correction of this very serious erosion problem.

Diversion of Connecticut River water to the Quabbin Reservoir through the Northfield Mountain Pumped Storage Project facilities has been seriously proposed as a way to alleviate water supply problems for the metropolitan Boston area. The effects of this step on the Connecticut River are very obscure. The legal questions regarding water rights to the Connecticut River are very nebulous. Northfield's town officials are encouraged to keep informed and take any action necessary to protect the town's interest.

It has been conjectured that river water pumped to the top of Northfield Mountain in the operation of the Pumped Storage Project could result in the pollution of both surface and sub-surface water supplies in the area. While there is no available evidence that damage has occurred, it is again suggested that proper officials maintain a position of awareness and readiness to act if necessary.

In recent years, wetland areas have received a great deal of national legislative attention. Their importance in water storage and wildlife producing functions has been widely recognized, and as a result these areas are protected by federal and State laws. Northfield's wetlands have been identified in this planning process, but in view of other protective measures no further regulation is suggested for town action.



Section 9

Housing and Growth

By far the greatest influence on current municipal affairs and a wide variety of social and economic conditions is the rate at which a town may increase population or economic activity. Any drastic change over a short period of time can tax the ability of building trades and other commercial enterprises for providing services directly associated with new construction, as well as the ability of the town departments to provide essential public services. In the long view, the rate of change can determine the degree to which the appearance of the town or the quality of life will change.

Northfield Goals

A primary endeavor of this Master Plan has been to identify the level of economic activity, type of housing, and overall appearance of the town that Northfield people want to have in the future. More specifically, this inquiry has concerned the degree of multiple housing activities that are desirable, the location of future residential development, the location of and magnitude of future commercial activity, and the degree to which Northfield people desire additional employment opportunities, especially in the area of industry or manufacturing.

Briefly, it has been found that Northfield people prefer a modest but continuous rate of growth, that provides housing opportunity for all segments of the population, and a concentration of development where streets, sewers and water systems are either present or easily provided (Map 9 I, #1). In the interest of preserving highly desirable natural beauty, active farmlands and the more visible mountain areas have been identified as undesirable for any extensive development (Map 9 I, #3 and 4). There has been a noticeable sentiment for discouraging development on rural roads not presently well maintained, and a reluctance to construct new roads into the areas presently free of development. As indicated in Section 8, the Pratt Hollow area and the Notch Mountain area are recommended to be maintained free from development to fulfill water supply and open space functions (Map 9 I, #5).

Influencing Development

Many methods for controlling or directing development are available to the town. Some are indirect and apply their influence in rather subtle ways. Citizen attitude toward new

construction or noticeable development is the most subtle of these, and obviously outside any organized municipal control. The quality of services such as highway maintenance, street lighting, police activity, and others are more visible and manageable tools for encouraging or discouraging development activity. The extension of sewer and water lines represents the next degree of control available to the town. Direct land use regulations (zoning bylaws) represent the most direct and the most effective element in development control. The only further measure commonly available is the outright purchase of land or easements by the town.

In all likelihood, the degree to which Northfield people want to control development will be a subject of extensive and sometimes heated discussion for the foreseeable future. However, it appears that the basic decision by the town to be active in controlling or directing future development has already been made. The choice of methods and the degree to which they infringe upon traditional property and equity rights will form the basis for future discussions.

Areas for Growth

As mentioned in Section 8 of this Master Plan, the primary expression of preference for new growth is in the broad upland plain between the alluvial soils of the Connecticut River and the steep, mountainous areas to the east and west (Map 9 I, #1 and 2). This coincides with present residential concentrations and includes all of the present commercial and industrial activity. Commercial activity appears desirable in a more limited area, essentially on heavily traveled highways and near the center of Northfield. Conversely, industrial activity should be relegated to more isolated areas where conflicts with housing or esthetic values are less likely to occur (See Section 8).

Due to severe drainage limitations in the Northfield Center and East Northfield areas, additional development, while desirable from many standpoints, is totally dependent upon installation of additional sewer and water facilities. Significant portions of the Beers Plain Road area and the Stowbridge Road, School Street, Birnam Road area have soils with adequate capacity for septic disposal systems and represent a substantial growth potential. From Beers Plain south, it appears highly impractical to extend sewer or water lines. Therefore, additional housing in that area will depend on on-site facilities. Limited areas at the higher elevations to the east are suitable for housing and, in fact, constitute the greatest growth area in Northfield at this time (Map 9 I, #4a). Apparently, the demand for large lots in quiet rural areas is very high. It seems noteworthy that all new housing in that area is owned or occupied by people

originating from outside Northfield. This development represents not only added economic activity and tax base contributions, but also an altering of the environment and a new municipal cost to the town.

Managing Growth

Residential Development. Traditionally, Northfield housing has been predominantly single-family units located on a public way. Some older buildings of sufficient size have been converted to apartments over a period of time, and now comprise a significant part of the total. Only recently have any new multi-family units been constructed, and these consist of a series of duplex homes.

Multiple Housing. Urban areas where growth is vigorous have experienced major development of large apartment or condominium complexes in recent years. The reasons for this phenomenon are cost oriented, both in construction and maintenance. Integration of multiple housing into Northfield's existing residential modes has been of primary concern in this plan.

Overwhelming opinion seems to indicate Northfield people would not welcome massive structures with many dwelling units. Rather, they would prefer smaller individual buildings with two to eight units per building, located on adequate lots so that the total effect is a harmonious integration with present housing and living space qualities. This approach is seen as a means of preventing the development of "apartment ghettos" or other sources of excessive demand for public services, while maintaining the desirable cost features that multiple housing offers.

It is recommended that the town adopt bylaws that allow multiple housing construction and conversion, while limiting the size of individual buildings, location in reference to the availability of sewers, dwelling unit density, and the number of dwelling units in any single structure.

Cluster Development. An alternative to traditional single family dwellings on a prescribed minimum sized lot on a public way is the construction of single-family or multiple dwellings in close proximity while retaining a common "open space" area near the development. This approach features some cost advantages during construction, less extensive utility costs, and less altering of the environment for a given number of dwelling units.

Cluster development usually involves a single developer and enough units to justify the "open space" investment. The complexity of meaningful bylaws to adequately manage this type of development is beyond the current Planning Board capabilities. However, it is recommended that this subject be investigated

comprehensively to the end that within a 5-10 year period this type of development could be incorporated into Northfield's growth pattern without undue stress.

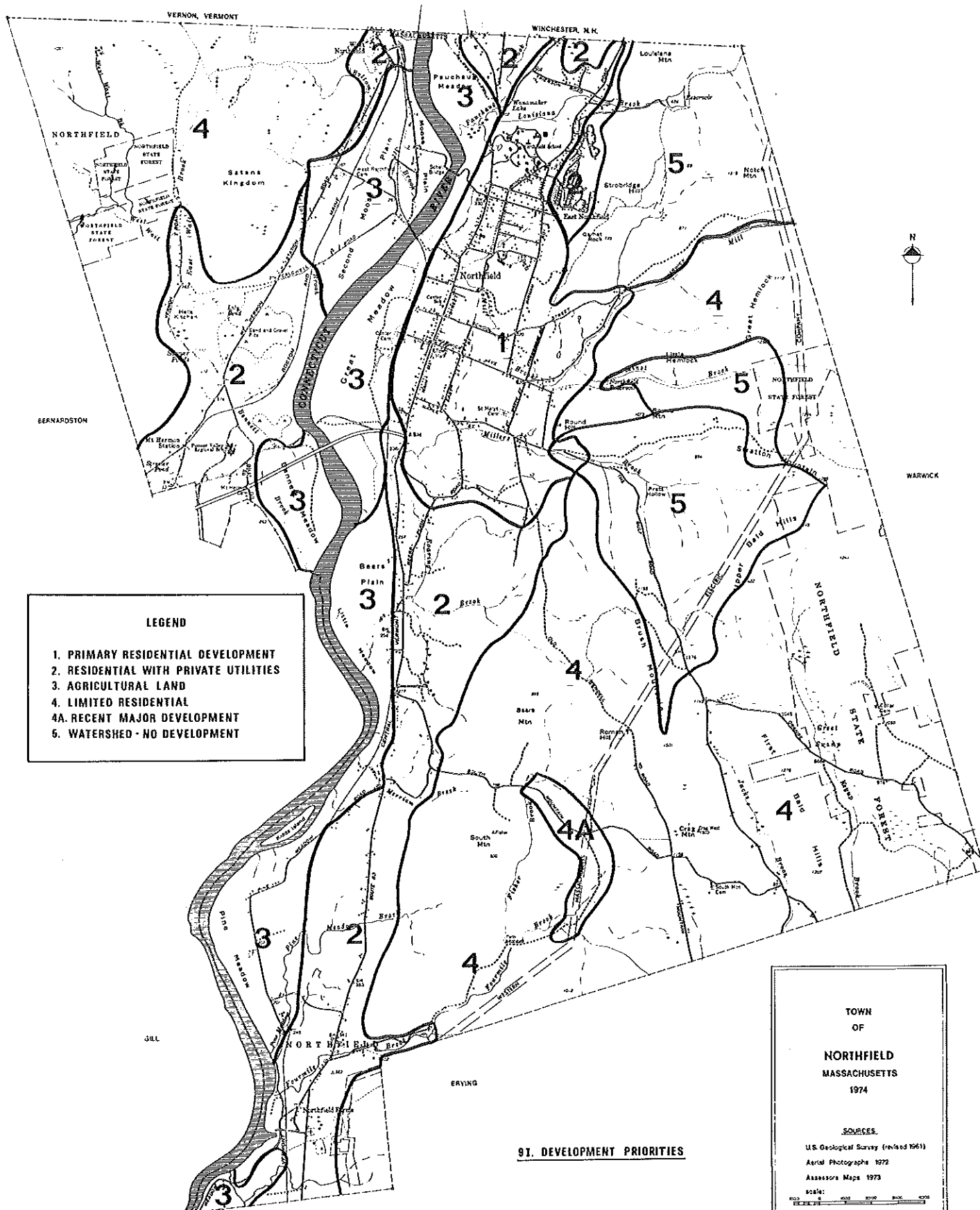
Commercial Growth. As indicated in Sections 8 and 5b, commercial activity will likely remain at the present level and in the Main Street area until local demand increases markedly or new sites become available on new roads that will attract trade from other areas. Therefore, there is little need for additional control devices at the present time. Should any of the changes indicated in those sections take place, a permit system developed in accordance with Chapter 808 of the General Laws (State zoning legislation) to promote desirable commercial growth would be a useful addition to town government. This step is recommended at the appropriate time.

Industrial Growth. Industrial activity holds both the promise of jobs and the spectre of environmental damage. The areas suggested for industrial use (Section 8) are designed to capitalize on the positive values of new activity and minimize the resulting intrusion on the natural environment. It is essential for adequate control that a special permit system as allowed by Chapter 808 (Mass. General Laws) be prepared for effective use at the same time industrial zoning is approved. This measure will allow the town to "fine tune" its industrial activity by encouraging specific types of businesses.

Summary. Northfield is widely recognized as a desirable place to live. Therefore, as overall economic conditions dictate, the town can expect residential growth pressures. Professional projections predict a slow growth rate, with population reaching 3000 by the year 2000 or later. This is not a "sure bet," and, therefore, the various control measures indicated throughout this plan are recommended to ensure acceptable forms of growth.

The several forms of housing available under these recommendations provide a wide range of housing costs, providing low cost apartment accommodations at one end of the spectrum, to the most elaborate single-family homes at the other.

Existing subdivision regulations provide protection from excessive demand on public services. The multiple housing moratorium which expires in May of 1977 has allowed time for development of a meaningful bylaw for Northfield. This will be presented for voter action at the 1977 town meeting.



Section 10

History

Historical and Architectural Heritage

Background

Northfield is highly unique, not only because it is one of the oldest towns on the Connecticut River and in Massachusetts, but also because much of the early architecture and layout of land is still visible and largely unchanged. This fact plays heavily in creating the rural charm and small town atmosphere that is held in such high regard by a majority of Northfield citizens. This visible heritage is not limited to the colonial settlement times, but includes a continuous display of changing style and manner of life over the entire three centuries of Northfield's history. It has been evident for many years that the preservation of this visual quality is of great importance to many Northfield people.

The Master Plan Task Force group studying this area presented a comprehensive and realistic plan for preserving Northfield's heritage while encouraging greater commercial activity and expanded residential opportunity. In the interest of brevity, only the major points of the Task Force report are covered in this document.

Areas for Concern

1. Historic District Designation. The most effective way to preserve the visual qualities of Northfield's historic areas is through designation as a Historic District. This designation is allowed by State statute and involves very specific procedures that allow the town to decide what changes can be made to the exterior of buildings within the district limits. This procedure also allows great discretion for commercial or other use that is not available to the town in other land use regulations.

Two main areas were considered by the Task Force group. These were Main Street and "the Ridge." Since their report was filed, other areas have been brought to attention for a variety of reasons. These are primarily in the East Northfield area.

The Planning Board has considered the several district possibilities and has found the Main Street area to be the most important area not only in terms of its heritage value, but also because this area serves as the primary commercial center of town and is greatly in need of a means for allowing expanded commercial opportunity. Under existing zoning bylaws, this opportunity is not available. It should be noted that should a Historic District be

formed, a zoning bylaw change to allow commercial development would be necessary. The present system of variances will not be in effect after July 1, 1978, when Ch. 808 of Massachusetts General Laws becomes fully effective.

2. National Register Designations. Some Northfield historic sites have national as well as local significance. Many of these, but not all, are related to the development of the Northfield-Mount Hermon Schools. Admittance to the National Register not only would bring greater recognition of their value and significance, but also could be an entree to a number of State or national grant programs. The effect of National Register listing is only to prevent unnecessary harm to a site due to State or federally funded projects.

3. Preservation and Research Facility. With many town records and other valuable artifacts exceeding 200 years in age, it is becoming increasingly important to provide safe storage areas that will prevent deterioration in any form. These records are important not only for the historical and cultural value but also as an essential guide to present day activities within the town. Microfilming of many town documents has been accomplished in recent years. This has greatly reduced the space needed to store essential documents, but this method is certainly insufficient for the preservation of the more important recorded events of Northfield's past. Also, microfilming is but a method of reducing size and the film itself must be safely stored or it, too, can be lost to future generations. A proposal was recently made through a federal funding program to obtain a facility of this type. While that particular effort did not bear fruit, the need remains.

4. Historic Sites. A number of geographic areas were identified as being worthy of preservation and greater public awareness. Most of these areas are readily accessible by a short walk. However, most townspeople are unaware of their location since they have never been identified to the traveling public. Placement of appropriate markers would be an inexpensive method of increasing the awareness of these areas and enhancing the total view of Northfield's heritage.

Since the first white settlement in 1673, many homes and businesses have been built and later lost. Many are marked by only a few stones or perhaps a slowly disappearing "cellar hole." As time has passed, these sites, while important in local history, have lost their identity, and thereby, their cultural and heritage value. If Northfield's history is to be even moderately complete, these sites must be researched, identified and inventoried. Especially significant is the Main Street area, where the earliest

houses and forts were built, but with no visible trace remaining. Enlightened concern for the recognition and evaluation of these fragile remains, well in advance of destructive earth-moving activities in their vicinities, is essential to the integrity of Northfield's historical record.

5. Highway Approaches. The highways leading to Northfield present a very attractive introduction to the town at the present time. Under present levels of commercial or industrial activity, they would be expected to change very little. However, if expanded business activity takes place, the Task Force suggested a special sign and building setback regulation for these main approaches, to the end that the visual quality of the town can be retained.

6. By-pass Highway. With all north-south traffic on the easterly side of the Connecticut River being funneled to Main Street, it is quite conceivable that at some future point traffic will increase to such a degree that Main Street's value as a residential and business area would be greatly diminished. Should that situation arise, an alternative route, especially for heavy trucking, may become essential. It is not too early to discuss alternatives and prepare for an event which may or may not occur.

7. Native Americans. Long before white man ever saw the Connecticut Valley, Native Americans that we commonly call Indians inhabited the Northfield area in great numbers. Not until the summer of 1976 was any scientific study undertaken. As this report is written, the results of the study are expected in the immediate future. Preliminary findings indicate a vast reservoir of archaeological data that should prove highly interesting to all enthusiasts of local history. As these studies are continued in 1977, the results should be included in further planning discussions for Northfield's development.

Recommendations

1. Historic District Designation. It is recommended that immediate steps be taken to determine the feasibility of establishing a Historic District on Main Street. This step is felt essential if commercial development is to increase in an acceptable manner in the most concentrated area of historical and architectural heritage. Should the Historic District be formed, it is further recommended that zoning bylaws be changed to allow commercial development.

2. National Register Designations. It is recommended that areas or buildings of apparent potential be investigated for admittance to the National Register.

3. Preservation and Research Facility. The Planning Board recommends that plans be made for establishing a research and preservation facility as an annex to the town hall but located at the Dickinson Library. This recommendation assumes the availability of additional land in the library area, not only for the structural facility but also for additional parking space and greatly improved traffic flow. This facility should include fireproofing, temperature control, humidity control, and tight security. Further, a research room where the materials can be safely studied should be provided, and optionally a display area to be used on appropriate occasions.

The financing of this facility has not been extensively investigated, but generally should be through funding programs other than local taxation. The planning of the facility should be undertaken in the very near future to the end that at any appropriate time the project can be submitted quickly and competently for any available funding opportunities. Planning should include the Board of Selectmen, Historical Commission, Dickinson Library Trustees, as well as other interested groups.

4. Historic Sites. The Planning Board approves in principle the placement of identifying signs at important historic sites. In the interests of economy, it is suggested that this project be undertaken by any one of a number of private organizations rather than by the town.

It is further recommended that the Historical Commission, in cooperation with all other available assistance, develop an inventory and map showing the location of important past houses, public buildings, and businesses, especially in areas subject to further development. This would afford an opportunity for meaningful research and study in advance of new construction or earth moving activities. A systematic review of building permit applications could be developed after the establishment of a credible inventory. The Historical Commission should cooperate with the Massachusetts Historical Commission and the State Archaeologist in the review procedures.

5. Highway Approaches. At the present time, no commercial development is allowable in Northfield. Therefore, the problem of signs and intruding commercial establishments is not in the near future. It is recommended that should this kind of development become permissible, appropriate sign regulations be developed.

6. By-pass Highway. As a long-term planning contingency, it is recommended that a corridor of sufficient width to accommodate a through street be maintained free from further development, west of Main Street and adjacent to the Central Vermont Railroad.

Where the Central Vermont Railroad crosses the Connecticut River the corridor should proceed northward at approximately the same elevation until it rejoins the present Routes 10 and 63 at the Northfield-Mount Hermon School Campus. The justification for this corridor is only partially in regard to cultural values. Its greater purpose over the long term may be in allowing the orderly expansion of business or other development within the town.

7. Archaeological Sites. Recent research has indicated that Northfield is rich in evidence of human habitation in pre-historic times. Much of this evidence and the knowledge it holds is of inestimable value and can be forever lost when any construction or earth moving occurs. To protect this heritage, it is recommended that the Historical Commission develop, in consultation with professionally qualified archaeologists, a "sensitivity map" that shows where archaeological evidence is likely to be found. Following the development of this tool, it is recommended that building or earth moving permits be referred to the Historical Commission for prompt review and a written comment pertaining to the chances of finding archaeological evidences at the proposed site. This does not imply any regulatory function for the Historical Commission, but only creates an opportunity for cooperative observation and study. The review procedure should be integrated with the procedures of the Massachusetts Historical Commission and the State Archaeologist, as appropriate.

Section 11

Recreation

In the recent past, the town of Northfield has taken on a growing responsibility for providing recreational facilities and programs for townspeople, especially children in the grade school and high school levels. The evolvement of this responsibility probably can be explained in two ways: 1. The affluence generated by a rapidly expanding economy in the 1960's and early '70's has resulted in much more leisure time being available to large segments of our population. The traditional unorganized modes of recreation have apparently been insufficient to fill the need. 2. Technical and social changes have eliminated a great many of the part-time jobs and summer employment opportunities for youngsters in their early teens. It follows that the inherent energy of this age group needs a constructive outlet, and various recreation programs have been developed to fill the need. Greatly expanded public communications have also created a greater awareness of the competitive sports world, stimulating further interest, especially in young people.

The Master Plan Task Force studying recreation surveyed both the apparent needs of Northfield people and the natural ability of the town to fill the demand. Their complete report is available for study. An even more detailed and comprehensive inventory of town recreational resources can be found in TAG I, published and distributed to Northfield people in 1973. In the interests of brevity, this portion of the Master Plan will deal with general areas of activity, a brief review of the facilities presently in use, and a few specific recommendations for further development.

The recreational activities receiving the most attention at the present time include swimming, tennis, snowmobiling, cross-country skiing, fishing, hunting, picnicking, and indoor activities such as basketball that are limited to the availability of a gymnasium. Lacking any substantial natural site, a swimming facility has received the greatest amount of public notice in recent years. Several attempts have been made to acquire property that would allow building a natural pool. To date, none of these efforts has been fruitful. Tennis has only recently become a popular activity. However, the interest seems to be holding at a high level, even in the face of very limited facilities which are currently available only at the Northfield-Mount Hermon Schools. Future availability of the courts for public use is highly questionable.

The outdoor sports of snowmobiling, fishing, hunting, and cross-country skiing are available to everyone, since nearly all Northfield property is not posted for trespassing. With over 2,000 acres of State Forest in the town, it appears likely that these extensive opportunities will remain for some time. The development of the Northfield Mountain Pumped Storage Project has greatly expanded the ski trails and has in fact established Northfield as a leading area in the country for both interest in the sport and the training of top amateur enthusiasts.

It should be noted that for many Northfield people of limited physical ability, simple picnicking or riding on country roads can be a major source and mode of recreational activity. If this is of real value, then the development of town highways should be undertaken in a manner that retains the natural beauty.

Horseback riding is another popular activity that seems a natural for a rural town such as Northfield. However, the paving of roads to a large degree eliminates this sport from the area. At several points during the preparation of the Master Plan, horse enthusiasts suggested that, when feasible, future road construction be designed in such a way that at least some country roads be maintained as gravel roads, and that unpaved interconnecting links be provided to avoid isolating any major section of town.

As seems to be traditional in Northfield, private groups or neighborhood organizations have filled a local need for facilities at various times. The Kiwanis Club maintains a very useful picnic facility on School Street which is available to the general public with prior arrangements (Map 11 I, #1). The West Northfield Playground Association has maintained for several years a ball field, picnic area and an associated shelter for use by neighborhood children and other groups (Map 11 I, #2). Major use is requested to be by prior arrangement. In general, the facility is well used and well maintained. In Northfield Farms, a swimming pool has been constructed for use by neighborhood children and adults (Map 11 I, #3). This pool is located on private land and was built partially with funds provided in the will of a local resident, with the balance of the effort being donated by neighborhood residents. This pool has served the neighborhood extremely well, but occasionally serious problems arise from overcrowding by users who come from other towns or even other areas of Northfield.

By far the greatest in size is the recreational facility developed by Northeast Utilities at Northfield Mountain Pumped Storage Project, as previously mentioned (Map 11 I, #4). Extensive cross-country ski trails have received heavy use and have

greatly stimulated the revival of this sport. Additionally, this facility provides lectures, films, and many other educational programs. Northeast Utilities also provides a regularly scheduled tour of the Connecticut River by boat, and a riverside camp site located at Munn's Ferry (Map 11 I, #5).

Areas for Direct Action

1. In reviewing the materials from the Task Force group and others, the Planning Board has concluded that the major recreational need of Northfield is a swimming facility. With natural sites for earthen pools either unavailable or nonexistent, it seems that the best alternative is to establish a long-range plan for building an artificial pool. Around that facility many other sports could be oriented, such as tennis, outdoor basketball courts, skating rink, and others. The Recreational Task Force listed several places as being desirable for development of this sort. They included the "Stevens Farm" on Lucky Clapp Road and Rte. 63, the Schell Pool area between Main Street and Mill Brook, and the Center School lot west of Main Street between the present athletic field and the Central Vermont Railroad. Several attempts to open negotiations for purchase of the first two sites have not been fruitful, and in view of that difficulty, the Planning Board recommends that the Center School lot be considered the prime site for a comprehensive recreational facility (Map 11 I, #6).

This recommendation should be considered on the basis of the land owned by the town as this is written; in the event additional areas of land become available, this recommendation might change. Additional argument for this site is that a recent proposal for federal funding resulted in preliminary plans or drawings being prepared for this site, and therefore some of the basic planning is already complete. No specific funding recommendations are made at this time. However, it is reasonable to assume that construction of any major facility would likely be dependent on a source of funds other than through taxation. A number of programs for partial funding are available, but allocations are frequently competitive and difficult to predict. In that situation, it seems advisable to develop the basic outlines of the facilities needed so that future funding applications can be made quickly and competently.

2. The most obvious natural resource for recreation in the town of Northfield is the Connecticut River. It has provided countless hours of boating, fishing and other water oriented sports for many years. Until recently, there was public access at four or more points along the river, and local residents were accustomed to launching boats or even docking them at the river's edge with little interference. During the development of the

Northfield Mountain Pumped Storage Project, all of the access sites were closed off or otherwise preempted by Northeast Utilities, including even Munn's Ferry Road, which is a public way and as such, not subject to gates or other obstacles to vehicular traffic. It was understood by townspeople that a boat launch facility would be built at Pauchaug Meadow, and in discussions with Northeast Utilities personnel, this responsibility now seems to rest with the Massachusetts Department of Natural Resources or its successors. Repeated requests from local sportsmen have been to no avail in getting this facility built. With the nearest access point to the Connecticut River for Northfield people located near the Turners Falls dam, the Planning Board recommends that all appropriate town departments or officials take all necessary action to ensure the maintenance of Munn's Ferry Road as a public way until such time as alternative access is provided by either Northeast Utilities or the appropriate State agency. The Planning Board further recommends that one access point be at Pauchaug Meadow and another at Bennett Meadow, south of and adjacent to the new Rte. 10 (Map 11 I, 7A and 7B).

3. The historically significant area known as King Philip's Hill has recently been acquired by the town (Map 11 I, #8). Its use is primarily for historic and esthetic enjoyment, but the area can also be utilized for hiking, nature study and horseback riding. A serious safety hazard exists in an unprotected area where the riverbank falls sharply from King Philip's Hill to the river's edge. It is recommended that before any effort is made to publicize the availability of King Philip's Hill for public access, a protective fence be erected to prevent children or others from tumbling into the river.

4. A number of interesting areas were identified by the Recreation Task Force, but were not indicated as requiring town ownership or development at this time. They are mentioned here to create an awareness of their historic significance and natural beauty so that future development might be guided to other places. Roaring Brook has on its course Salmon Falls, Sheep Falls and other notable waterfalls (Map 11 I, #9). It was considered to be an interesting possibility that a private group or other organization might develop a hiking trail along the course of Roaring Brook to provide additional recreational interest.

The "ice caves" located west of Gulf Road are another natural feature tied to folklore and legend (Map 11 I, #10). They also should be protected from development.

5. In many of the neighborhood study groups, rural roads were listed as having a special quality that contributes

to a mode of life not possible on high speed, heavily traveled highways. The specific roads mentioned were: Four Mile Brook Road, Old Wendell Road, and the remaining gravel portion of Pine Meadow Road from Pine Meadow Brook to the Erving town line. At this point the Planning Board has not voted to recommend that these roads be maintained with a gravel surface, but the interest and feeling of the residents is presented for use by appropriate town officials as these roads are treated in the regular course of development and maintenance.

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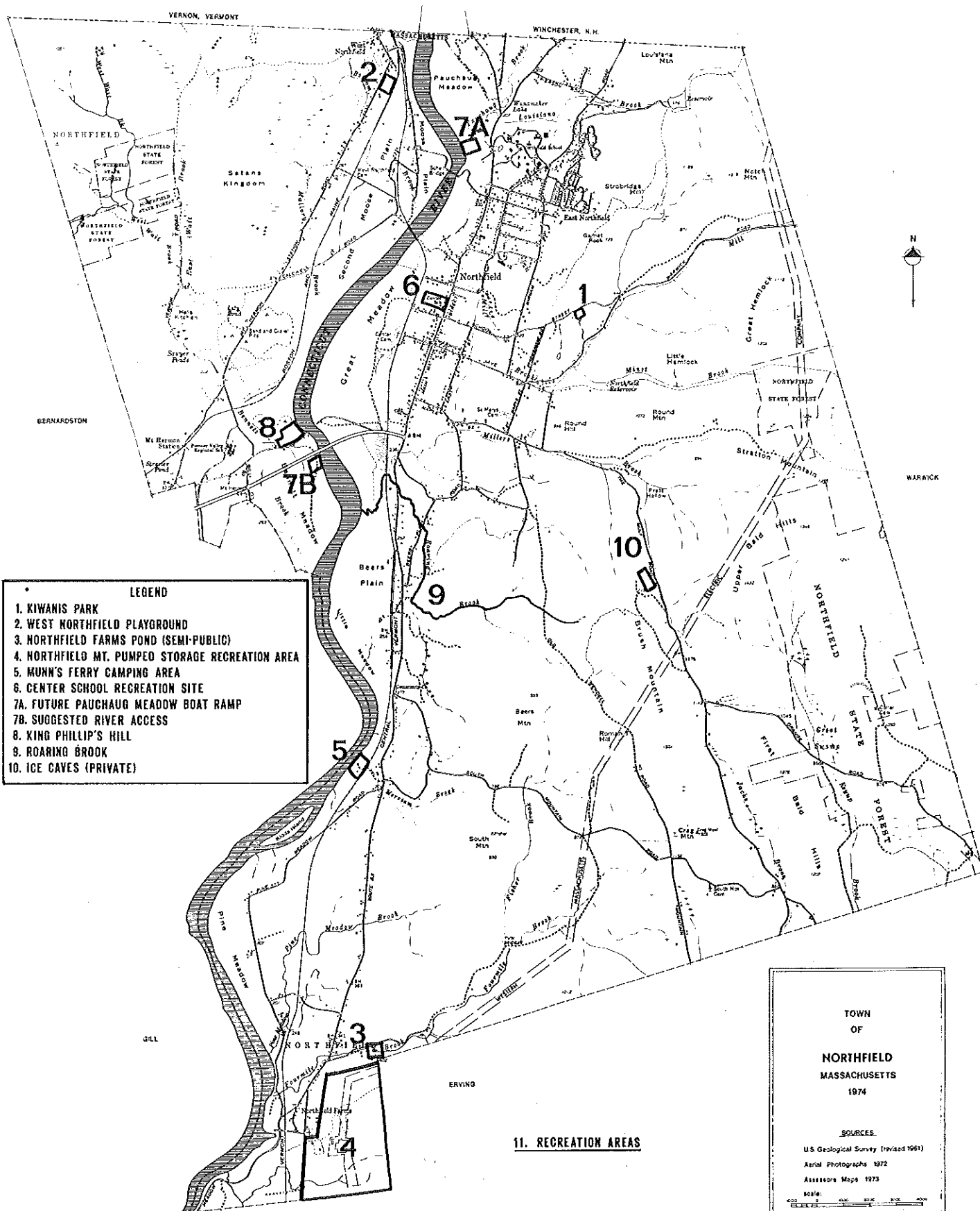
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Section 12

Summary of Recommendations

X - done

Section #		Time Frame for Action		
		1-3 yrs.	4-10 yrs.	10 yr. or more
4		Study Capital Planning		
		Study Administrative Position		
5a				
Highway Dept.		Replace Grader	Convert to Diesel Trucks	
Fire Dept.		Research Fire Insurance Rating	Coordinate All Major Purchases	
Landfill			Establish New Site	
Tree Program		Increase Plantings		
Cemeteries		Develop Up-dated Lot and Perpetual Care Charges	Locate & Purchase New Site in Northfield Center	
Civil Defense		Utilize Equipment Purchase Opportunities		
Town Hall		Remove Glate House	Move Scout House	
		Remove Nurse's Garage	Pave Additional Parking Area	
		Plan Total Office Requirements	Develop Office Space	
Highway Garage		Plan for & Design New Garage Bldg.	Complete Construction	
Dickinson Library		Install Heating & Wiring	Design & Construct Safety Features for 2nd Floor	Renovate 2nd Floor for Full Use
		Plan Total Building Use		
5b		Rebuild Warwick Rd.	Connect Highland Ave. & East St.	Build Commercial Street (Maple - Rtes. 10 & 63)
		Resurface East St.		
		Establish <u>Total Highway Plan With Priorities</u>	Resurface &/or Rebuild Warwick Av.	Preserve By-Pass Rte. w.of Main St.

Section	1-3 yrs.	4-10 yrs.	10 yr. or more
5b	Re-route #142		
6			
Water System	Purchase Nfld. Water District Assets	Plan Long-Term Water Supply & Service Area	Secure Watershed Areas & Integrate E. N. & Nfld. Systems
Sewer System	Continue Planned Sealing & Line Extension Projects	Develop Service Plan for All Appropriate Areas	Continue Line Installation As Needed
Surface Drains	Install East St. Drains in Conjunction w/ Sewers		
	Install Mt. Hermon Sta. Rd. Drains		
7	Establish a Sound Capital Expense Planning Program		
8	Develop Flood Plain Bylaws According to N.F.I.P.	Study Main St. for Historic District & Commercial Use	Add New Street for Commercial Use
	Resolve Bennett Meadow Issue	Establish Industrial Zones & Special Permit System	Secure Watershed & Open Space Areas
9	Adopt Multiple Housing Bylaw	Study Cluster Housing & Other Development Modes for Nfld. Applications	Coordinate Town Services With Preferred Development Areas
10	Study Historic Dist Possibilities	Build a Preservation, Research & Storage Facility for Records & Fragile Artifacts	Preserve Bypass Corridor West of Main St.
	Study National Register Program	Prepare Sensitivity Maps & Development Review Procedures	
11	Prepare Detailed Plans for Swimming Pool & Associated Facilities	Maintain Conn. R. Access at Munn's Ferry	Protect Important Natural Features from Development
		Install Safety Fence at King Philip's Hill	

Appendix B
Citizen Participation
Meetings and Reports 1975-76

March 6, 1975 - Kick-off Meeting at Town Hall

Neighborhood Study Groups	Neighborhood Round-up
Northfield Center (5 groups)	Northfield Center May 3
Northfield Farms (5 groups)	Northfield Farms May 1
West Northfield (3 groups)	West Northfield May 2
East Northfield (5 groups)	East Northfield May 2
	Reports May 19

May 19 - Town-wide meeting of all Neighborhood Groups and discussion of results. Start of Task Force Study Groups. (Report-Nov. 6, 1975)

<u>Task Force Groups</u>	<u>Date of Meetings</u>	<u>Date of Report</u>
Land Use	July 22	
Agricultural Group	Aug. 4, 12	Sept. 24, 1975
Industrial Group	Aug. 4, 12, 19, 26	Sept. 23, 1975
	Sept. 23	
Commercial Group	Aug. 4, 19, Sept. 2,	Nov. 7, 1975
	Sept. 9, 16	
Historical	Aug. 4, 12, 19, 26,	Nov. 4, 1975
	Sept. 2, 22, Oct. 29	
Housing & Growth	Aug. 14, 21, 28,	Nov. 28, 1975
	Sept. 18, 25, Oct. 2,	
	Oct. 16, 23	
Recreation	Sept. 18, 26, Oct. 9,	Undated
	16, 23, 30	
Environmental Protection	Sept. 18, Nov. 17, 23, Dec. 5, 1975	
	Dec. 1	

<u>Planning Board Meetings With:</u>	<u>Date of Report</u>
Selectmen - Jan. 5, 27, 1976	Jan. 27, 1976
Water District - Jan. 6	Jan. 6, 1976
Sewer Commission - Jan. 6	Jan. 6, 1976
Fire Department - Jan. 7	Jan. 7, 1976
Police Department - Jan. 7, 14	Jan. 14, 1976
Library Trustees - Jan. 8	Jan. 8, 1976
Board of Health - Jan. 12	Jan. 12, 1976
Finance Committee - Jan. 13	Jan. 13, 1976
Industrial & Commercial T.F. Groups - Nov. 23, 1975	Nov. 24, 1975
Recreation & Housing/Growth T.F. - Dec. 1, 1975	Dec. 1, 1975
Historical, Environmental Prot. T.F. - Dec. 8, 1975	Dec. 8, 1975
Historical Society - Dec. 4, 1975	Dec. 4, 1975

Open Meetings - Town Hall

Development Design - J. Jackson Walter, Development Attorney (Nov. 6, '75)

Review of Task Force Recommendations:

 Agriculture, Housing & Growth - Jan. 20, 1976

 Industrial, Commercial, Historical - Jan. 21, 1976

 Recreation, Environmental, Town Government - Jan. 22, 1976

Appendix C

RESULTS FROM THE NORTHFIELD PLANNING BOARD QUESTIONNAIRE

1. The questionnaire of February, 1974 was mailed to 845 addresses in Town. The number of responses was 353, about 41%.
2. The Computer Center at the University of Massachusetts tabulated the response to the 16 questions contained in the questionnaire, and made 36 additional cross-tabulations. The results in the 62 page computer printout are given in terms of count, row percentage, column percentage, percent of total, and row and column totals.
3. Attached is an extract of what appear to be the 22 most interesting tabulations. Anyone wishing to check the computer printout may do so at Town Hall.
4. The category of "No Response" in programming the computer was used to include both those cases where no actual response was made, and where a response was made in such a manner that it could not be included in the program easily. A high "No Response" figure can be taken as a negative response - for example see questions 18 through 22.
5. This questionnaire was sent out because the Planning Board needs guidance on the question of Town regulations. We are grateful to those who helped by giving us their views.

Northfield Planning Board
April, 1974

15. WHAT DO LOCAL BUSINESSMEN THINK OF TOWN REGULATIONS?

<u>No change needed</u>	<u>Should be strengthened</u>	<u>Too many rules now</u>	<u>Don't know - inform</u>	<u>No Response</u>	<u>Other</u>
12	27	5	6	0	0

16. WHAT DO LOCAL BUSINESSMEN THINK OF MORE BUSINESS AND SUBDIVISIONS ALONG MAIN STREET?

	<u>More Main Street Business</u>	<u>More Main St. Subdivisions</u>
YES - no control needed	9	3
YES - but regulate for appearance	19	12
NO - absolutely not	6	8
No Response	6	11
(other)	0	1
NO - but allow elsewhere	10	15

17. WHAT DO RETIRED PERSONS AND EMPLOYED PERSONS THINK OF MORE BUSINESS AND SUBDIVISION DEVELOPMENT ALONG MAIN STREET?

	<u>MORE BUSINESSES</u>		<u>MORE SUBDIVISIONS</u>	
	<u>Retired</u>	<u>Employed</u>	<u>Retired</u>	<u>Employed</u>
YES - no control needed	12	17	6	6
YES - but regulate for appearance	31	52	25	41
NO - absolutely not	19	12	22	51
NO - but allow elsewhere	17	20	34	65
No response	31	9	23	50
Other	0	0	0	1

18. WHAT DO PEOPLE FROM DIFFERENT PARTS OF TOWN THINK ABOUT LOCATING AN INDUSTRY?

WHERE TO LOCATE INDUSTRY

<u>WHERE DO YOU LIVE?</u>	<u>East Nfld.</u>	<u>Town Center</u>	<u>West Nfld.</u>	<u>Nfld. Farms</u>	<u>More than 1 place</u>	<u>No Response</u>
West Nfld.	0	0	7	11	9	12
East Nfld.	1	4	24	21	24	52
Nfld. Farms	2	2	3	7	12	21
Town Center	3	3	21	24	38	42
No Response	0	0	0	2	4	4
	<u>6</u>	<u>9</u>	<u>55</u>	<u>65</u>	<u>87</u>	<u>131</u>

19. WHAT DO PEOPLE FROM DIFFERENT PARTS OF TOWN THINK ABOUT LOCATING GENERAL BUSINESS?

WHERE TO LOCATE GENERAL BUSINESS

<u>WHERE DO YOU LIVE?</u>	<u>East Nfld.</u>	<u>Town Center</u>	<u>West Nfld.</u>	<u>Nfld. Farms</u>	<u>More than 1 place</u>	<u>No Response</u>
West Nfld.	0	16	0	4	5	14
East Nfld.	3	55	3	3	16	46
Nfld. Farms	0	12	0	2	13	20
Town Center	3	55	3	1	25	44
No Response	0	5	0	0	0	5
	<u>6</u>	<u>143</u>	<u>6</u>	<u>10</u>	<u>59</u>	<u>129</u>

20. WHAT DO PEOPLE FROM DIFFERENT PARTS OF TOWN THINK ABOUT LOCATING A SHOPPING AREA?

WHERE TO LOCATE SHOPPING AREA

<u>WHERE DO YOU LIVE?</u>	<u>East Nfld.</u>	<u>Town Center</u>	<u>West Nfld.</u>	<u>Nfld. Farms</u>	<u>More than 1 place</u>	<u>No Response</u>
West Nfld.	0	11	1	4	6	17
East Nfld.	1	48	6	12	12	47
Nfld. Farms	3	10	2	3	11	18
Town Center	6	34	7	12	22	50
No Response	0	2	0	0	2	6
	<u>10</u>	<u>105</u>	<u>16</u>	<u>31</u>	<u>53</u>	<u>138</u>

21. WHAT DO PEOPLE FROM DIFFERENT PARTS OF TOWN THINK ABOUT LOCATING MOBILE HOMES?

WHERE TO LOCATE MOBILE HOMES

<u>WHERE DO YOU LIVE?</u>	<u>East Nfld.</u>	<u>West Nfld.</u>	<u>Nfld. Farms</u>	<u>More than 1 place</u>	<u>No Response</u>
West Nfld.	1	1	6	7	24
East Nfld.	5	13	14	11	83
Nfld. Farms	1	5	3	5	33
Town Center	5	13	15	14	84
No Response	0	0	0	2	8
	<u>12</u>	<u>32</u>	<u>38</u>	<u>39</u>	<u>232</u>

22. WHAT DO PEOPLE FROM DIFFERENT PARTS OF TOWN THINK ABOUT LOCATING MULTIPLE HOUSING?

WHERE TO LOCATE MULTIPLE HOUSING

<u>WHERE DO YOU LIVE?</u>	<u>East Nfld.</u>	<u>Town Center</u>	<u>West Nfld.</u>	<u>Nfld. Farms</u>	<u>More than 1 place</u>	<u>No Response</u>
West Nfld.	8	1	0	3	6	21
East Nfld.	5	5	10	15	22	69
Nfld. Farms	4	1	1	3	8	30
Town Center	16	6	3	11	24	71
No Response	1	0	0	0	2	7
	<u>34</u>	<u>13</u>	<u>14</u>	<u>32</u>	<u>62</u>	<u>198</u>

Planning Board Questionnaire

News Release

The Northfield Planning Board announced the completion of its February, 1974 questionnaire survey of the Town. The questionnaire asked the opinion of residents on matters such as the adequacy of Town regulations, where the Town should locate industry, general business, a shopping area, mobile homes and multiple housing. The Planning Board is in the process of preparing proposals for changes in Town regulations, and felt it was important to obtain the opinion of as many residents as possible.

Of 845 questionnaires mailed out to Town residents, 353 were returned, for a response of about 41%. Residents were not asked their identity, but were asked what part of Town they lived in, how long they had been in Town, if they were employed, retired, owned homes, and if they ran a local business.

The tabulation of questionnaire answers was made by the Computer Center at the University of Massachusetts and resulted in a 62 page printout consisting of 16 questions contained in the questionnaire and 36 cross-tabulations. A copy of the computer printout is available at Northfield Town Hall for those residents who would like to examine it.

For Northfield residents who would like the results of the questionnaire without reading through the computer printout, the Planning Board has prepared a 5 page extract of 22 questions. Copies of this extract may be obtained at Northfield Town Hall. In addition to answers to the questionnaire, this extract contains cross-tabulations to show what homeowners, businessmen, retired persons and employed persons think of Town regulations, and the question of further business and subdivision development along Main Street. It also indicates where persons from different parts of Town think different sorts of activities should be placed.

The results of the Planning Board survey show in general that residents favored stronger Town regulations, and that if business expansion is permitted along Main Street it should be regulated to preserve the appearance of the Town. Subdivisions were considered less appropriate to Main Street than business. Opposition was indicated to mobile homes and multiple housing, with somewhat less opposition to industry, general business and a shopping area. The consensus of those favoring a specific location for general business and a shopping area was that it should be placed in the center of Town.

The Planning Board expressed its thanks to the Northfield residents who helped the Board by making their views known, as well as to Mr. H. Peter Wood of the Franklin County Extension Service for his advice, and for the assistance of his department in the distribution of the questionnaire, and arranging for computer tabulation of the results.

Appendix E

Unofficial List of Town Roads

Gulf Road	Lucky Clapp Road
Warwick Avenue	Branch Road
Warwick Road	Cross Road
Orange Road	Slate Road
Alexander Hill Road	Jewitt Road
Murdock Hill Road	Four Mile Brook Road
New Plain Road	South Mountain Road
Old Wendell Road	Fisher Road
Lyman Road	Commonwealth Avenue
School Street	Olde Turnpike Road
Strowbridge Road	Munn's Ferry Road
St. Mary's Street	Old Ferry Road
Pratt Meadow Road	
Maple Street	
East Street	
Birnam Road	
Winchester Road	
Moody Street	
Highland Avenue	
Holton Street	
Ashuelot Road	
Pierson Road	
Hamilton Drive	
Pine Street	
Howard Street	
Aldrich Street	
Glenwood Avenue	
Parker Avenue	
Linden Avenue	
Myrtle Street	
North Lane	
Holly Avenue	
Woodruff Road	
Dickinson Road	
Great Meadow Road	
Meadow Street	
Glenn Road	
Mill Street	
Pentecost Road	
Gill Road	
Bennett Brook Road	
Mount Hermon Station Road	
Vernon Road	
Caldwell Road	
East Northfield Road	
Gerrish Road	
Adams Road	
Beers Plain Road	
Pine Meadow Road	
Northfield Farms Road	

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School Street	Olde Turnpike Road
Strowbridge Road	Munn's Ferry Road
St. Mary's Street	Old Ferry Road
Pratt Meadow Road	
Maple Street	
East Street	
Birnam Road	
Winchester Road	
Moody Street	
Highland Avenue	
Holton Street	
Ashuelot Road	
Pierson Road	
Hamilton Drive	
Pine Street	
Howard Street	
Aldrich Street	
Glenwood Avenue	
Parker Avenue	
Linden Avenue	
Myrtle Street	
North Lane	
Holly Avenue	
Woodruff Road	
Dickinson Road	
Great Meadow Road	
Meadow Street	
Glenn Road	
Mill Street	
Pentecost Road	
Gill Road	
Bennett Brook Road	
Mount Hermon Station Road	
Vernon Road	
Caldwell Road	
East Northfield Road	
Gerrish Road	
Adams Road	
Beers Plain Road	
Pine Meadow Road	
Northfield Farms Road	

NORTHFIELD MASTER PLAN

MAP INVENTORY

(These maps were used throughout the Master Planning process.)

Air Photo Index (US-SCS, scale 1" = 1320')

General Soils Map (US-SCS, scale 1" = 1320')

Soil Limitations for Sanitary Landfill

Soil Limitations for Industrial & Commercial Development
with on-site Sewage Disposal

Soil Limitations for Industrial & Commercial Development
with Communal Sewage Disposal

Soil Limitations for Home Sites

Soil Limitations for Wetland Wildlife Sites

Soil Limitations for Sources of Sand & Gravel

Soil Limitations for Installation of Sewer & Water Lines

Relationship of Soils to Surface Runoff

Relationship of Soils to Seasonal High Water Table

Base Mylar for SCS Soils Maps

1974 Town Map (Prepared by Planning Board, scale 1" = 1000')

From 1961 USGS Topographical Map

From 1972 Aerial Photographs

From 1973 Assessors Maps

Work copies and Mylar (scale 1/2" = 1000')

National Flood Insurance Program

Designated flood hazard areas transposed to 1974 Northfield
Town Map

Mylar & copies

Natural Resources Inventory (USDA-SCS)

Topographical map (scale, 1:24,000 - 1" = 2000')

Development sites for specified uses on topographical
map (scale, 1:24,000)

Massachusetts Map Down (University of Mass.)

1971 Land Use and Vegetative Cover

Mapping: Northfield, Millers Falls & Bernardston Quadrangles

Franklin County Commissioners

Jan. 1, 1973 - Franklin County Highways

Appendix G

Historical References

The following works were actively used in the preparation of this Master Plan.

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Herbert Collins Parsons was editor and publisher of the Greenfield Recorder.

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A history of Northfield from 1923-1973, written by town citizens.

Temple, J.H. and Sheldon, George. History of the Town of Northfield, Mass. for 150 years with An Account of the Prior Occupation of the Territory by the Squakheags and with Family Genealogies. Albany, New York: Joel Munsell, 1875.

Town of Northfield, Mass. Annual Town Reports.

These works are recommended for additional reading on Northfield and the surrounding area.

Coyle, Thomas. The Story of Mount Hermon. Published by Mount Hermon Alumni Assn., Mount Hermon, Mass., 1906.

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Northfield's 300th Anniversary. Northfield, Mass.: 1973.
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manuscript).

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Stark, Stephen. Fifty Years of Mount Hermon. 1931.

250 Years of Northfield, 1673-1923.
Celebration of the town of Northfield, Mass., June 22-24, 1923.

Views of Northfield, Mass. Brattleboro: C.L. Howe & Sons.

