PLANNING BOARD
TOWN OF WILBRAHAM

THE MASTER PLAN

WILBRAHAM

MASSACHUSETTS

DECEMBER 1963

TPA

WILBRAHAM, MASSACHUSETTS

THE MASTER PLAN

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TECHNICAL PLANNING ASSOCIATES,
Incorporated
New Haven, Connecticut
Consultants

Prepared for
The Wilbraham Planning Board
and
The Massachusetts Department of Commerce

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INTRODUCTION

This report covers the comprehensive planning program which has been carried on for the last 15 months by the Wilbraham Planning Board. The actual planning work has been prepared by Technical Planning Associates, Inc., Consultants, through a contract with the Massachusetts Department of Commerce, under the federal "701" planning assistance program.

The Planning Board is charged, by law, with preparing a Master Plan containing its recommendations, to serve as a guide for the future development of the Town. The Master Plan is based on studies of regional and local factors which influence the community's growth and potential. The Master Plan is an overall guide rather than a blue print. It should be a framework within which public and private development may take place in an orderly and integrated manner.

The factual data used are from federal, state and local sources, records, and statistics. Projections are based on past and present statistics and the trends indicated. Much of the basic data, particularly on growth, should be reviewed periodically, and should be compared with state and federal data at each censal period. In this way the projections can be revised as necessary to reflect actual growth, as to type, location, and extent.

The basic data covered in the early chapters form the background for the Master Plan. This Plan covers essentially:

> The Land Use Plan - which covers proposed future uses of land for residential, commercial, and industrial land and other uses;
>
> The Circulation Plan - which proposes a logical network of thoroughfares and collector streets to permit the efficient movement of traffic through and within the Town;
>
> The Plan for Public Facilities - to guide the acquisition of educational, recreational, administrative, and other facilities the Town will need;
>
> The Plan for Public Utilities - to guide the extension of the Town's public water supply and sewage systems.

The Master Plan itself is a guide for future public and private actions. Much of the future development will be done by private interests for private use. As it is today, this development is regulated by the Zoning By-law and map, and by the Regulations controlling the subdivision of land. Modifications in these controls are proposed to implement the Master Plan.

The elements dealing with public facilities will, as in the past, be implemented by the Town through town meeting action, on the recommendation of the town board or boards having jurisdiction. The Master Plan in this case provides a background and a long range view of needs beyond the immediate future to act as a guide for present decisions.

CHAPTER 1

THE RELATION OF WILBRAHAM TO THE METROPOLITAN AREA

Location

Wilbraham is the next town east of Springfield, and is a part of the Springfield-Chicopee-Holyoke metropolitan region. This region is near the northerly end of the urbanized area extending almost uninterruptedly along the Connecticut River Valley to New Haven. This area in turn is part of the urban northeast, a section of the country that is expanding rapidly into one vast complex of continuous development.

Regional Transportation

The Springfield region is about halfway between Boston and Albany on the east-west Massachusetts turnpike, Interstate route 90. The principal north-south route, Interstate route 91, is already in use between Hartford and Springfield, and other links are in planning or construction to connect New Haven with the Vermont section which will continue into Canada.

Wilbraham has no direct or satisfactory connections with these principal arteries as they are built or being planned. To reach the north-south route it is necessary to travel almost the length of the city of Springfield, from North Wilbraham along Route 20, or from the center on Route 21, through local streets with mixed residential and business uses.

To reach the Massachusetts turnpike, eastbound traffic has to cross two-thirds of the town of Palmer on Route 20 to reach the interchange at Route 32. Westbound traffic uses Route 20, and then passes over an inadequate railroad crossing on Old Boston Road on local residential streets into Ludlow to the Route 21 interchange. South Main Street gives reasonable local service to Hampden, but its use for any substantial volume of traffic is questionable. Monson Road goes easterly over the mountain, it has substantial grades, and is suitable primarily as a local or inter-town highway. Except for Route 20 roads to Springfield on the west and to East Longmeadow on the south are primarily residential and rural roads, suitable for local inter-town traffic. The local of easy access to the major highway network is a regional aspect that will bear on proposals for future land uses, and will have a definite effect on the potential development of Wilbraham.

Transportation and circulation are parts of regional as well as local planning. A regional planning agency is now in the formative stage. Springfield and several adjoining towns have formally signified their interest and desire to participate in a regional planning district. Local plans can be much better and more realistically formulated with due consideration to regional planning needs. It therefore seems most desirable for Wilbraham to consider participating in the formulation of these regional plans.

Population

For the purposes of this study, the term "Area of Influence" is used to indicate the group of communities whose development is most closely related to that of Wilbraham. For convenience, the entire area which the U. S. Census designates as the "Springfield-Chicopee-Holyoke Standard Metropolitan Statistical Area" has been included, as well as the towns of Hampden and Monson, and Enfield and Somers in Connecticut.

The City of Springfield gained over 12,000 residents in the last ten-year period, and in 1960 reached a population of 174,463. This was the only city of more than 100,000 population in Massachusetts to experience an actual growth. The principal reason for Springfield's recent increase in population has been the considerable amount of open land suitable for residential development, especially in its eastern portion. By contrast, other large cities of New England are largely built up, and have been losing population.

The population growth factor which influences the development of suburban towns like Wilbraham much more than the increase or decrease in central city residents is the increase in the regional population. Table 1.1 gives recent trends in population of the Springfield-Chicopee-Holyoke S.M.S.A. and, for comparison, the trends of other similar areas. Among the larger S.M.S.A.'s of Massachusetts, the Springfield area had the highest rate of growth in the 1950-60 period, and its rate was only exceeded in the state by a small area delineated about Brockton.

The Springfield area is in a strategic place for further growth because of its location at the northern end of the Connecticut Valley urban complex. The area also has the advantage of being at the crossing of two of the most important highways of Western New England. It also has ample land suitable for all kinds of development.

The Wilbraham "Area of Influence" includes, in addition to the S.M.S.A., the towns of Hampden and Monson, plus Enfield and Somers in Connecticut. While the S.M.S.A. grew by over 100% between 1950-60, growth in the added towns was - Hampden 77.4%, Monson 9.6%, Enfield 103.5%, and Somers 40.7%. The first line of Table 1.1 gives figures for the whole "Area of Influence". Inclusion of the four increases the rates of growth given for the S.M.S.A., as well as for the portion outside the three central cities.

Recent growth of the communities of the "Area of Influence" is shown by Table 1.2. The town showing the most rapid growth between 1950 and 1960 is East Longmeadow. The community which had the greatest actual growth is Enfield, followed by Chicopee and Springfield. Wilbraham, with an increase of 84.6% in the last decade, shows the third largest percentage increase. Part of the growth of a community is due to natural increase, the excess of births over deaths, and part is due to net in-migration. Table 1.2 shows that most of the towns with the largest percentage of growth also had a high proportion of newcomers moving in. Wilbraham's change due to migration was also third highest, at 67.3%. On the other hand,

Springfield had a total growth in excess of 12,000, but the excess of births over deaths in the 10 year period amounted to approximately 21,500. This indicates that about 9,500 people moved out, over and above the number who may have moved in.

In the past decade Wilbraham's births exceeded deaths by 691. The total growth was 3,384 persons, hence net in-migration was 2,693. If birth and death rates remain the same, natural increase based on the 1960 population would be about 1240 in 1970. If the same number of people move in as in the past decade, in-migration would approximate 2,700, for a total increase of some 3,930 people and a possible population in 1970 of about 11,300 people. Based on the same assumptions, the 1980 population of Wilbraham may reach 16,000 people.

If the Wilbraham "Area of Influence" should increase by as many residents in each of the next two decades as it did between 1950 and 1960, it would have more than 600,000 residents in 1970 and 680,000 by 1980. Excluding the Connecticut towns, the Springfield-Chicopee-Holyoke S.M.S.A. would similarly have a population of approximately 545,000 in 1970 and 610,000 in 1980.

Assuming this same continued growth and numerical increase as in the 1950-1960 decade, the towns in the "Area of Influence" outside the central cities would have a population in 1970 of some 300,000 people, and in 1980 about 360,000. If Wilbraham should increase at a slower rate than in the past decade, but in the same proportion as the aggregate of the towns outside the central cities in the Area, population in Wilbraham would approximate 9,000 in 1970 and 10,500 in 1980. While this is possible, there are presently no strong reasons to anticipate changes in the past trends.

From 1940 to 1960 Wilbraham's population increased by over 140%. If this same rate of increase holds for the next twenty years, the population in 1980 may reach some 18,000 people. The rate of increase from 1950 to 1960, 84.6%, if maintained over the next twenty years, would increase the population in 1980 to over 25,000 people. The figures in Table 1.2 would indicate that, generally, as the population in a community increases, the rate of growth declines. There are no apparent reasons why this generality should not hold true for Wilbraham, where a gradual decline in the rate of growth may be anticipated.

Another method of projection is to study the trends in a town in relation to the "Area of Influence", as a part of the state population. Table 1.3 summarizes this study. From 1950 to 1960, 61% of the increase in the state's population occurred outside the Boston Standard Metropolitan Statistical Area. The Springfield-Chicopee-Holyoke S.M.S.A. accounted for 14.2% of the entire state's population increase in 1950-1960; its 1950 population was 8.8% of the state's total, and its 1960 population was 9.35% of the state's total. If its proportion of the state's population continues to rise in the next two decades, it may have about 9.8% of the state's total in 1970, and some 10.3% in 1980.

Table 1.3 shows that, aside from the numerical growth, the Springfield Area

population is increasing as a proportion of the state total. Also shown as a trend in the last three decades is the greater percentage of people in the towns outside the central cities. This trend should continue to increase as land in the central cities becomes completely developed. Wilbraham's population, as a percentage of the Area towns outside the central cities, shows an increase from 1950 to 1960. The decline in percentage between 1940 and 1950 appears to indicate only a late start in growth in relation to the Area towns as a total, rather than an indicative trend.

The various projections described above are summarized as follows:

	1970	1980
Same birth-deathrate & migration	11,300	16,000
" 1940-1960 rate of growth	12,500	18,000
" 1950-1960 " " "	13,600	25,000
" relation (increasing) to S.M.S.A. & state	12,500	18,400

This summary shows that Wilbraham will probably grow to at least 11,000 by 1970 and possibly to 14,000. By 1980, the townspeople could increase to between 18,000 and 25,000 people. For the purposes of the present planning program, it would appear realistic for Wilbraham to plan for a population of 25,000. This figure can be used as the basis for projecting the amounts of land needed for residential, business, public and other uses, and for the facilities and utilities needed to serve these people.

The data on school enrollment, described in Chapter 8, would indicate that from 1960 to 1963 the town's growth has maintained the rapid rate of the past decade. While it is possible that this rate of growth will continue, it is likely that between 1970 and 1980 the rate may decline. Therefore, the 25,000 population for planning purposes may be expected to be reached between 1980 and 1985.

Table 1.1

Population Trends, 1950-1960
Springfield-Chicopee-Holyoke and Comparable Standard Metropolitan Statistical Areas

S.M.S.A.	Population *		Percent of Increase		
	1950	1960	In Central Cities -	Outside Central Cities	Total
Wilbraham Area of Influence (Springfield-Chicopee-Holyoke S.M.S.A. Plus Hampden & onson Enfield & Somers, Conn.)	435,766	521,242	8.4	37.2	19.6
Boston	2,410,572	2,589,301	- 13.0	17.6	7.4
Hartford	406,534	525,207	- 8.6	58.4	29.2
Springfield-Chicopee-Holyoke	413,494	478,592	8.4	28.0	15.7
The State	4,690,514	5,148,578			9.8
Worcester	303,037	323,306	- 8.3	37.3	6.7

* U.S. Census
\- Cities named in first column

Table 1.2

Wilbraham Area of Influence
Population Trends of Communities, 1950-1960

	1950	1960	Change Numerical	Change Percent	Change due to Migration Number	Change due to Migration Percent
Wilbraham	4,003	7,387	3,384	84.6%	2,693	67.3%
Agawam	10,166	15,718	5,552	54.6	3,574	35.1
Chicopee	49,211	61,553	12,342	25.0	2,565	5.2
Easthampton	10,694	12,326	1,632	15.2	164	1.5
East Longmeadow	4,881	10,294	5,413	110.9	4,253	86.9
Enfield, Conn.	15,464	31,464	16,000	103.5	11,757	73.4
Hadley	2,639	3,099	460	17.4	55	2.1
Hampden	1,322	2,345	1,023	77.4	786	59.5
Holyoke	54,661	52,689	- 1,972	- 3.6	- 7,243	- 13.2
Longmeadow	6,508	10,565	4,057	62.4	3,564	54.8
Ludlow	8,660	13,805	5,145	59.4	3,402	39.2
Monson	6,125	6,712	587	9.6	44	0.7
Northampton	29,063	30,058	995	3.4	- 1,366	- 4.7
Palmer	9,533	10,358	825	8.7	- 426	- 4.4
Somers, Conn.	2,631	3,702	1,071	40.7		
South Hadley	10,145	14,956	4,811	47.4	2,777	27.4
Southwick	2,855	5,139	2,289	80.0	1,331	46.7
Springfield	162,399	174,463	12,064	7.4	- 9,571	- 5.9
Warren	3,406	3,383	- 23	- 0.7	- 263	- 7.7
Westfield	20,962	26,302	5,340	25.5	2,490	11.9
West Springfield	20,438	24,924	4,486	21.9	1,253	6.1
Total	435,766	521,242	85,476	19.5%	22,111	5.1%

Table 1.3

Population Projections as Percentages of Larger Areas*

	1940	1950	1960	1970	1980
State	4,316,721	4,690,514	5,115,295	5,600,000	6,000,000
Springfield-Chicopee-Holyoke S.M.S.A.	371,972	413,494	478,592	550,000	620,000
As % of state	8.62%	8.81%	9.35%	9.8%	10.3%
S.M.S.A. outside 3 Central Cities	127,004	196,434	251,440	322,000	390,000
As % of S.M.S.A.	34.1%	47.5%	52.5%	58.5%	63.0%
Wilbraham	3,041	4,003	7,387	12,500	18,400
As % of S.M.S.A. Outside Central Cities	2.42%	2.02%	2.94%	3.86%	4.78%

*Compiled from U.S. Census to 1960
T.P.A. Estimates, 1970-1980

Recent Residential Construction

An indication of the growth of the communities of the area may be obtained from the records of residential construction in recent years.

In the table below, Wilbraham's growth in dwelling units is compared with similar growth in neighboring towns for approximately the same time period. Wilbraham dwelling unit data and 1950 data are from the federal census. Building permits are based on Massachusetts Department of Commerce and Connecticut Public Works Department data. Population data are from the 1950 and 1960 census.

Table 1.4

Growth of Residential Units & Construction

	Dwelling Units		Percentage Increases	
	1950	1960	Dwelling Units	Population
Wilbraham	1264	2297	88.7%	84.6%
East Longmeadow	1511	* 3003	98.7%	110.9%
Longmeadow	2029	* 3266	60.9%	62.4%
Ludlow	2425	* 3869	59.5%	59.4%
Somers, Conn.	840	* 1082	28.8%	40.7%

* 1950 Dwelling units plus building permits for 10 years.

Employment in the Area

A measure of business and industrial development in the communities of the area is given by the statistics of employment in enterprises covered by unemployment insurance. Statistics from the Division of Employment Security are given in Table 1.5.

The total numbers in all covered employment are given, along with those in actual manufacturing. These are average figures for 1960, the year of the latest U. S. Census.

The employment in each community is also related to the population as a percentage of the latter. The employment figures indicate the number employed in each community, irrespective of their place of residence. If the ratio of employment in a place is low, it means that it is essentially a bedroom community, with most of its people going elsewhere to work. A high percentage figure indicates a center of employment.

Approximately 28 percent of the total population of the Area of Influence are employed in covered positions. It may be assumed that approximately this proportion of the people in each community are thus employed. Places, such as Springfield, West Springfield and Holyoke, appear from Table 1.5 clearly as employment centers, attracting many people from outside. Chicopee has a high proportion of government personnel in its population, who are not included in the covered employment figures. Otherwise that city would have a higher ratio of employment to population, comparable to the other centers.

Two small places, Palmer and Warren, show up as employment centers. These are small manufacturing towns which have existed for some time. Another group of communities appears from Table 1.5 as having substantial employment within their borders, but insufficient to support their entire population. This group includes Wilbraham and places like Westfield, Agawam and East Longmeadow. In these the percentage of the population in covered employment varies from about 10 to 25. This means that many people in Wilbraham go outside to work. Of course, many persons come into the Town for employment, but there is a net excess of Wilbraham residents employed elsewhere over the total available covered employment in the Town.

The third group of communities which appear from the Table are those with relatively little employment. Places like Southwick, the Hadleys, Ludlow, Longmeadow and Somers have ratios of covered employment to population of less than 10 percent. The percentage in manufacturing is especially low in those places. Obviously they are primarily residential communities.

Table 1.5 also gives the numbers in manufacturing activities. Wilbraham occupies a middle position in this respect.

By contrast with the figures for covered employment, the 1960 Census gives the number of residents of Wilbraham and nearby towns who are gainfully employed or "in the labor force". Of course, the Census figures include all persons, whereas the covered employment figures exclude certain classes of work.

However, from this comparison, it appears that only part of the residents who wish to work could find jobs in Town, even if no outsiders came in to work. Since a number do come from other towns to work in Wilbraham, it is probable that less than half of Wilbraham workers are employed in the Town and the rest go to other towns for employment. Table 1.6 gives the comparison of the 1960 Census data on employed residents of Wilbraham and nearby communities and the percentage of population which this represents. The total number of employed persons in the state at the time of the 1960 Census was equivalent to 38.8 percent of the population.

Table 1.5

Wilbraham Area of Influence
Relation of Covered Employment to Population

	Population 1960	Total Covered Employment 1960 Numbers	Total Covered Employment 1960 Percent of Population	Covered Employment in Manufacturing, 1960 Numbers	Covered Employment in Manufacturing, 1960 Percent of Population
Wilbraham	7,387	1,305	17.7%	1,049	14.2%
Agawam	15,718	2,891	18.4%	1,254	8.0%
Chicopee	61,553	16,783	27.3%	13,535	22.0%
Easthampton	12,326	3,551	28.8	2,810	22.8
East Longmeadow	10,294	1,846	17.9	1,108	10.8
Enfield, Conn.	31,464	3,351	10.7	1,378	4.4
Hadley	3,099	257	8.3	31	1.0
Hampden	2,345	110	4.7	0	0
Holyoke	52,689	20,318	38.6	12,321	23.4
Longmeadow	10,565	336	3.2	14	0.1
Ludlow	13,805	868	6.3	404	2.9
Monson	6,712	800	11.9	559	8.3
Northampton	30,058	6,499	21.6	3,006	10.0
Palmer	10,358	3,817	36.8	2,929	28.3
Somers, Conn.	3,702	460	12.4	368	9.7
South Hadley	14,956	760	5.1	320	2.1
Southwick	5,139	296	5.8	99	1.9
Springfield	174,463	61,899	35.5	24,281	13.9
Warren	3,383	1,391	41.1	1,280	37.8
Westfield	26,302	6,221	23.6	3,467	13.2
West Springfield	24,294	9,151	37.7	3,700	15.2

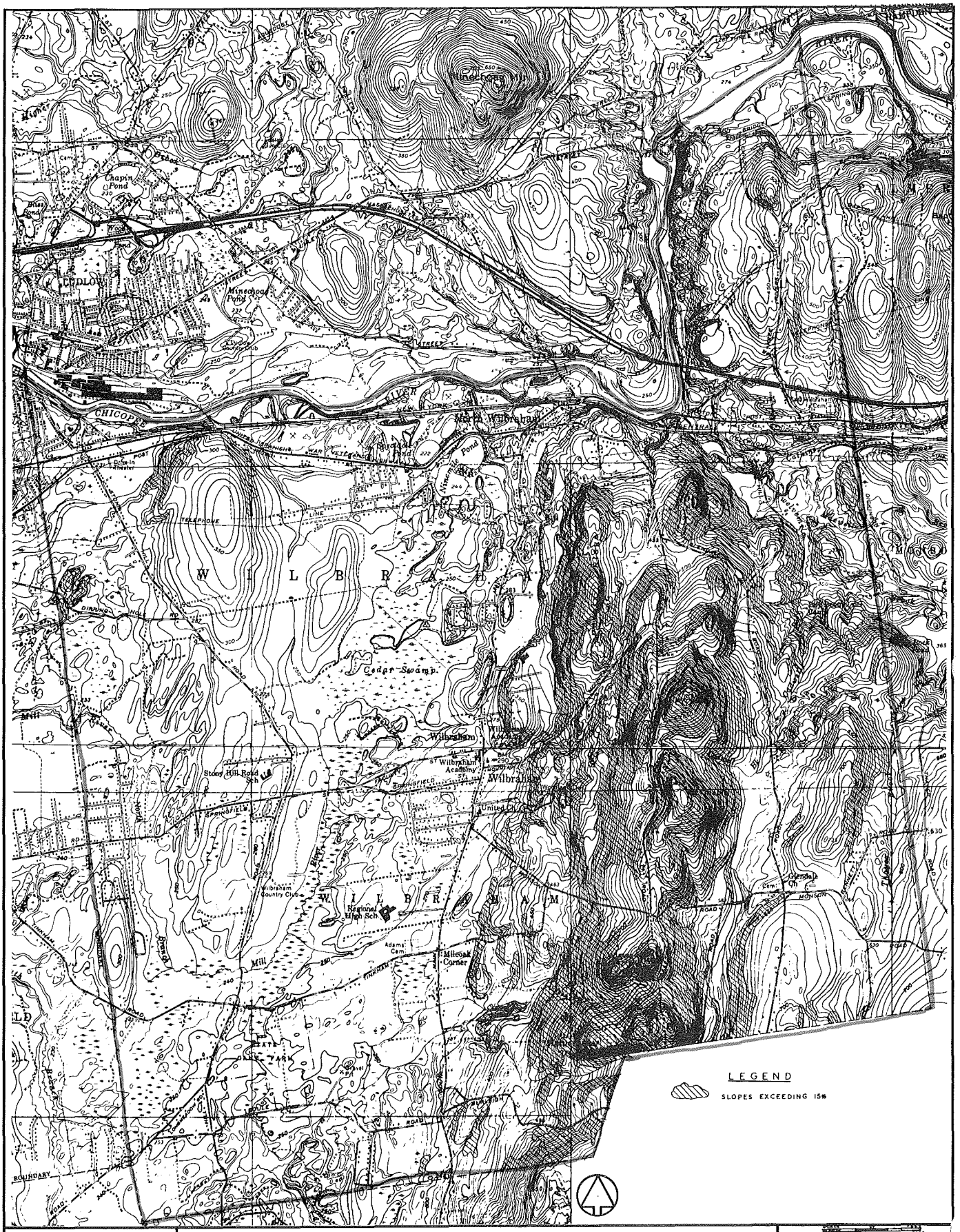
Source: Mass. Division of Employment Security
Conn. Development Commission

Table 1.6

Employment of Residents: Wilbraham and Comparative Communities

	Employed 1960	Percent of 1960 Population
Wilbraham	2,837	38.4%
Easthampton	4,881	39.6%
East Longmeadow	3,673	35.7%
Longmeadow	3,737	35.4%
Ludlow	5,193	37.6%
South Hadley	5,205	34.8%

Source: 1960 U. S. Census



WILBRAHAM
MASSACHUSETTS

TOPOGRAPHY AND STEEP SLOPES

MAP #1

DECEMBER 1963

TECHNICAL PLANNING ASSOCIATES
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NEW HAVEN CONNECTICUT

CHAPTER 2

NATURAL FEATURES

Topography

There are three basic types of land in Wilbraham. Adjoining Springfield, most of the western half of the town is relatively flat, with a considerable swampy area running north/south along the north branch of the Mill River. The exceptions to this river valley topography are the two hills east of Stony Hill Road which are mostly gentle slopes.

This Mill River-Cedar Swamp area is a natural feature tending to separate most of the eastern part of the town, setting off Wilbraham Center between the river valley and the ridge.

Sunset Ridge, with some quite steep slopes, is in large part a mountainous type of land running south through the town from the bend in the Chicopee River, which forms the town's northern boundary. Topographically, which also is to say visually, this ridge tends to divide the town into eastern and western parts, although east-west access is adequate by way of Boston, Glendale, and Monson Roads.

East of the ridge, the land becomes somewhat less steep, and more the type with rolling hills and gentle slopes.

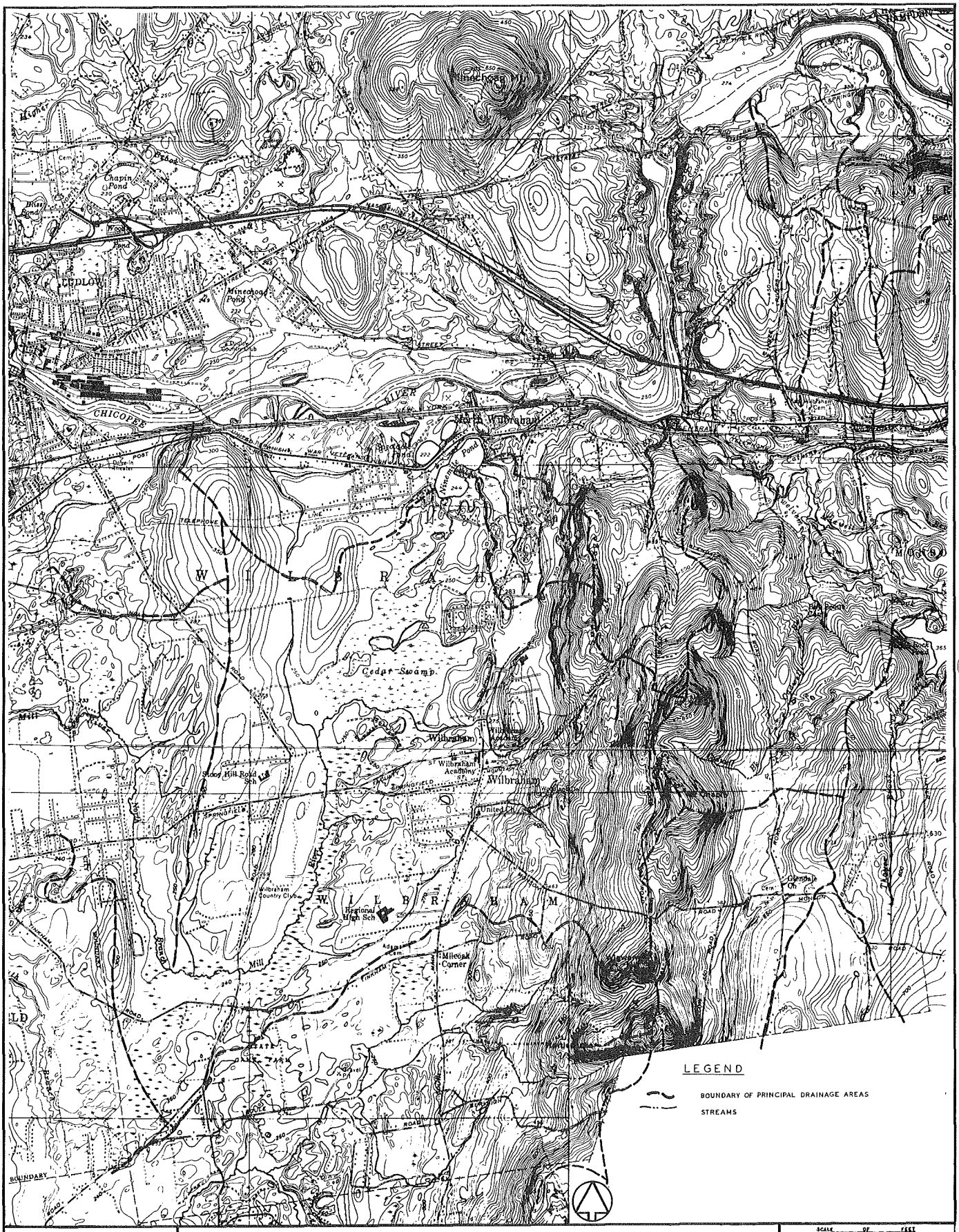
Map #1 shows these basic types, the low areas in the river valley, the steeply sloping land areas on the ridge, and in the eastern part of town the rolling nature of the land with few low or steep areas. The land north of the turnpike is rolling countryside, and is steep only along the Chicopee River, and on parts of the hill east of Chilson Road. There are few swampy areas in this part of town.

Past records do not indicate that the Chicopee River poses any substantial threat of flooding in Wilbraham. Past experience has shown that some of the minor streams in town have been subject to flooding, particularly where the flow is impeded by inadequate structures at road crossings. As more development takes place upstream, run-off into the town's streams will increase, and will add substantially to the hazards of flooding that have occurred in the past.

Drainage

Map #2 shows the principal watercourses and drainage basins. Most of East Wilbraham north of the railroad drains into the Chicopee River. A small area of The Pines section north of the school, and a relatively small section in The Plains and the Machonis Road area also drain north.

The largest basin draining through Wilbraham into the Chicopee River includes the eastern slope of the ridge in Wilbraham, but also contains over 10 square miles of land in Palmer, Monson, and Hampden. This is the Twelve Mile Brook basin, to



WILBRAHAM

MASSACHUSETTS

DRAINAGE BASINS AND STREAMS

MAP #2

DECEMBER 1963

SCALE OF FEET 1000 0 1000 2000

TECHNICAL PLANNING ASSOCIATES
INCORPORATED

NEW HAVEN CONNECTICUT

which Caulkins, Maxwell, and Cadwell Brooks are tributary. Future development of the substantial areas of suitable land in this basin can drastically increase storm run-off and add materially to the potential flooding of land in Wilbraham.

A small area north of Dipping Hole Road drains westerly into Springfield, and south of Mile Oak Corner the land drains into Hampden and the south branch of the Mill River.

By far the largest land area in town, the western ridge slopes and the central Plain are drained by the north branch of the Mill River. From Ninemile Pond the river flows south some three miles, then bends westerly and northerly for another two miles until it enters Springfield.

There is very little drop in the upper reaches of the river. From the water level of Ninemile Pond to Springfield Street, a distance of almost two miles, the river drops only about four feet. During periods of heavy run-off Cedar Swamp acts as a substantial retention basin, and any major reduction in this ponding area will have serious effects downstream.

Soils

The characteristics of the soils of the town and data are based on the "Soils Survey of Hampden and Hampshire Counties, Bureau of Chemistry of Soils, U. S. Dept. of Agriculture Service, 1928". From this survey the soils types have been grouped into six general classifications, based on their drainage capabilities, for the purpose of determining their relative suitability for various uses. The lines dividing the soils classes are general; they do not indicate the exact limits of one or another type, but they do define the general areas of the different types, and thereby general drainage characteristics.

Class I soils consist of Merrimac fine sandy loam and Chicopee soils, they retain a fair amount of moisture and are generally well drained. They are considered generally good for agriculture and for building development.

Class II soils consist of coarse sandy Chicopee, gravelly Hinckley, Merrimac loamy sand, and Manchester gravelly fine sandy loam. They are well drained to droughty soils that do not retain moisture. They are considered good for building development, but poor for agriculture.

Class III soils contain the largest group of soils, and include Brookfield loam, Cheshire sandy and fine sandy loam, Enfield fine sandy loam, Essex loam, Gloucester fine sandy loam and loam, Merrimac coarse sandy loam, and Wethersfield fine sandy loam and loam. These soils are considered good to fair for agriculture, and fair for medium density and good for low density residential use.

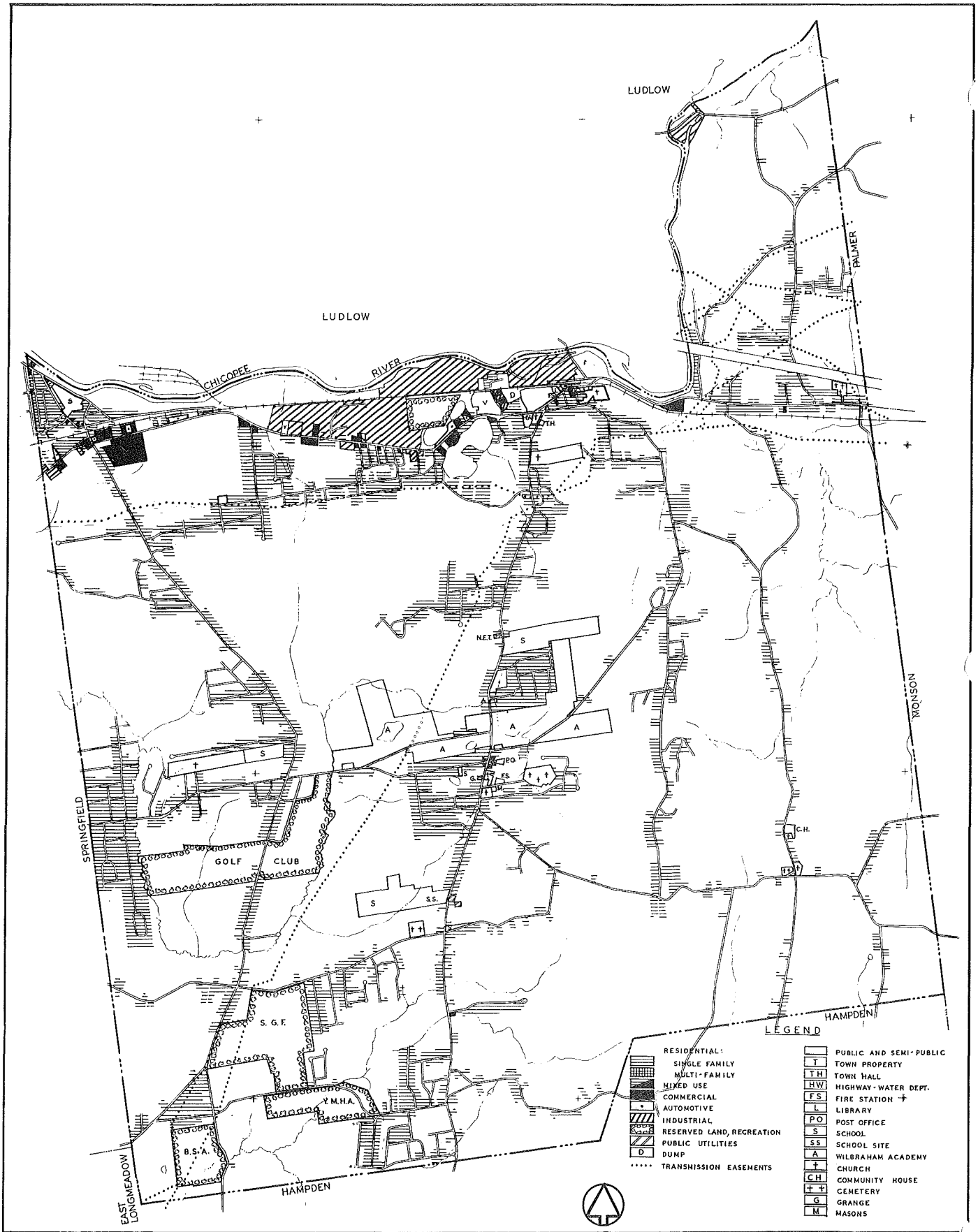
Class IV soils are alluvial, in Wilbraham Ondawa fine sandy loam, along streams, and while good for agriculture are poor for development because of the flood prone characteristics of the land areas.

Class V soils are the muck soils - Meadow, Muck, Peat and Whitman stony loam.

They are unsuitable for any building development and generally should remain open for conservation or open land uses.

All Class I, II, and III soils are considered suitable for building development, and are so computed in the later tables. Class IV and V soils are considered unsuitable for building development, and have been computed in the generally open type land uses.

Class VI soils in Wilbraham are generally the stony phases of Essex loam and Gloucester fine sandy loam. As is the case in much of the mountainous land in Wilbraham, these land types are usually underlaid with bed rock, which shows in considerable areas of rock outcrop. In pockets of suitable soils, low density or vacation residence use may be practical, but many areas are unsuitable for building development.



WILBRAHAM
MASSACHUSETTS

EXISTING LAND USE

MAP #3

DECEMBER 1962

SCALE OF FEET
1000 0 1000 2000

TECHNICAL PLANNING ASSOCIATES
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NEW HAVEN CONNECTICUT

CHAPTER 3

PRESENT LAND USES

Map #3 shows how the land in Wilbraham is used. Also shown are the larger areas of land not intensively used, but, apparently, reserved for future expansion of existing uses.

Table 3.1 gives a summary of the amounts of land occupied for the several general categories of land uses. The total area of the town, according to the Wilbraham Monograph published by the Massachusetts Department of Commerce, is 22.22 square miles, or 14,220 acres.

Table 3.1 shows that only about 20.25% of the town area is developed. Residential uses are some 72.2% of the developed area, but only 14.63% of the town area. Business and commercial uses, the productive elements of the town's economy, occupy together only 2.23% of the town land area. If the utility properties are included in this category, the total is still only 4.03% of the town land.

Public schools, parks and playgrounds amount to 1.15% and other public and semi-public property, including Wilbraham Academy, churches and cemeteries, and clubs, contain an additional 2.24%. Private lands, used primarily for recreation including the golf course, YMHA, and Boy Scout property amount to 2.2%.

The land use map, Map #3, shows the concentration of industrial and business land in the northern part of town along the Boston Road. Less than three acres of land are used for shopping in Wilbraham Center, and there is almost nothing in the way of shopping available in the central and southern sections of town. This is in comparison with the residential concentrations that are beginning to develop in the southern parts of town.

In the south and southeastern parts of town, several properties are being farmed - fruit, poultry, and dairy products being the principal products. While some of these farms are of good size, their combined acreage is a small part of the town's area. Not all of the farm acreages are intensively used, and some of the land adjoining open fields and orchards is attractive and in other towns is increasingly sold off for residential use. Since the use of land for farming is declining in metropolitan areas, no separate category is included for this use.

The last item in the table, vacant land, is land not built up, developed, reserved, or in roads, and includes land farmed. All this land may be developed for some form of use in the future. Some of this land, by location, accessibility, type, or proximity to established existing uses in the neighborhood, is more suitable for one use than another. Some is unsuitable in its present condition for building development because of topographic or other physical conditions.

TABLE 3.1

Wilbraham, Massachusetts

Summary of Present Land Uses, Approx. Acreage

Built-up and developed:			
Residential	2081	Acres	14.63%
Commercial	97	"	0.68%
Industrial	221	"	1.55%
Public Schools	110	"	0.77%
Parks, Playgrounds	54	"	0.38%
Other public and semi-public	319	"	2.24%
Reserved land:			
State Game Farm	145	Acres	1.02%
Utilities	256	"	1.8%
Recreation	313	"	2.2%
	3,596		25.27%
Roads (not in developed area) and vacant land	10,624		
Total Land Area	14,220		

WILBRAHAM
MASSACHUSETTS

MOST SUITABLE LAND AND CONDITIONS AFFECTING BUILDABILITY

MAP #4

DEC. 1963

SCALE OF FEET
1000 0 1000 2000

TECHNICAL PLANNING ASSOCIATES
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CHAPTER 4

SUITABILITY OF LAND FOR DEVELOPMENT

In comparison with many towns, a substantial proportion of Wilbraham's vacant land presents problems for building development. Much of the land on the ridge, some 2360 acres, exceeds 15% slopes and the land is stony with bedrock outcropping. To provide roads with safe grades and intersections, the conventional street patterns will be difficult to follow, and to assure permanent underground sewage disposal will undoubtedly require much larger, and more selective, leaching areas, which will probably mean larger lots. Another reason for considering larger lots is to assure low density for private wells at the higher elevations where public water supply appears to be in the distant future.

Part of the central plain is poorly drained swampy land, and even though this land can be drained, at considerable expense, soils data indicate that the predominant soil types in swamps are peat and muck, very soft unstable soils for building purposes. Even if the soft soils might be filled and stabilized at a price, channel improvement would still be required to carry the increased storm run-off. The problem here would appear to be to concentrate development on the stable, well-drained soils, and incorporate the poorly drained land as open space into subdivision and neighborhood development patterns.

Built-up and developed land generally includes all the land in the separate parcels. However, where a building and its improved land occupy a portion of a large plot, the land which has a potential for future development is classed as vacant land. The land shown on Map #4 as reserved for special purposes, such as the State Game Farm and private recreational lands, is not included as suitable for future development since it appears unlikely that any appreciable amount of this land will become available for private development in the foreseeable future.

The land area occupied by roads is considered used land in the developed sections, which covers the greater part of the roads in town. The relatively small sections of roads in undeveloped areas are included with vacant land, and the density factors used in computing potential residential and other development allow for land areas needed to provide access to developed lots. The balance of the land not otherwise designated is considered suitable for development. This amounts to approximately 6520 acres.

Table 4.1 lists the acreages in the various categories of land. As this table shows, sizable areas of vacant land have steep slopes or are low areas with wet unstable soils. These conditions present serious problems to developing under normal procedures and with patterns that have been used in the past on land more suitable for development. Proper development of this land will result in an average low density occupancy. One means of making the best use of land is to cluster houses on somewhat smaller lots on the better land, and leave the land that is difficult to develop in its present natural state. This will be more fully discussed under a later chapter.

Development of the balance of the vacant land should be conditioned on availability of utilities. Public water with adequate fire protection capacity,

and assurance of potable water under all circumstances, will permit relatively higher densities on land with good absorptive characteristics, and public sewers and public water will permit the highest residential densities and business and industrial uses. Land that, in the foreseeable future, must provide for individual wells and septic tanks should have an area sufficient to assure domestic water supply and also adequate long term disposal of sewage. A few houses in a rural area usually present no problems in this respect, but today's typical development patterns result in concentrations too great for some land types to support. Table 4.1 is computed on the basis of the several areas of town that are separated for planning purposes, and to facilitate the studies for future land uses and public facilities. These neighborhoods will be more fully discussed in later chapters.

TABLE 4.1

Computation of Land Areas by Categories - Approx. Acreage

Neighborhood	Steep Slopes over 15%	Water Swamps Poor Soils	Reserved Lands	Built-up Areas	Suitable Land	Total Acreage
1	16	40	28	129	100	313
2	17	167	--	87	332	603
3	--	87	--	190	152	429
4	25	28	6	366	193	618
5	--	145	182	221	429	977
6	1	228	279	127	467	1102
7	32	57	5	348	179	621
8	--	105	--	---	266	371
9	104	255	10	330	250	949
10	132	208	10	599	907	1856
11	293	45	--	131	605	1074
12	885	77	8	172	636	1778
13	203	98	180	114	655	1250
14	648	210	6	68	1347	2279
Totals	2356	1750	714	2882	6518	14220

CHAPTER 5

ECONOMIC BACKGROUND FOR WILBRAHAM'S DEVELOPMENT

As part of the middle Connecticut River valley area, Wilbraham's economic progress will be determined chiefly by regional factors. The area around Springfield is part of the urban northeastern United States, which extends in an unbroken belt along the Atlantic Seaboard roughly from Boston to Norfolk, Virginia. Compared to the nation as a whole, this seaboard metropolitan belt is an area of high population density and heavy reliance on manufacturing, although fortunately the manufacturing is of a highly diversified nature. Its residents have high average incomes, and it has shown a sustained population growth.

However, although the whole seaboard belt grew at a rate of 17.5 percent from 1950 to 1960, it fell somewhat below the rate of the entire United States in that period, 18.5 percent. It is not growing as fast as some of the western and southern regions.

The Springfield area forms part of the "Southern New England" sub-region, which also includes the areas around Worcester, Hartford-New Britain, and New Haven-Waterbury. The sub-region has had a population increase in the 1950-60 decade of 19.6 percent, higher than the Atlantic Seaboard region of which it is a part and higher than the United States as a whole. Its rate of increase has been higher than that of the Boston area to the east, which grew at the rate of 9.3 percent, and of the New York City sub-region to the west, whose growth rate in the same period was 15.6 percent.

Within the "Southern New England" sub-region, the Springfield Standard Metropolitan Statistical Area had a slower growth from 1950 to 1960 than the Hartford SMSA to the south, 15.7 percent compared with 29.2 percent. It equalled approximately the growth of the New Haven SMSA, 15.6 percent, and exceeded that of the corresponding Worcester area, 6.7 percent. The growth of the Springfield area seems likely to be influenced more by that of the Hartford area and the Connecticut Valley than by the rest of Massachusetts.

It appears reasonably certain that, for the foreseeable period, the process of decentralization, both of population and of industry, will continue. In spite of the efforts which cities are making to regain some of their losses in population, it does not appear likely that the trend will be reversed or even seriously changed in the near future. Therefore, the towns near the central cities may expect continuing growth.

There are two elements in the economic base of Wilbraham. The employment and occupational opportunities of the townspeople will be in direct relation to the Springfield region, and Wilbraham can contribute only its own share to the regional economy. Within the town, however, Wilbraham can, to a large extent by its own determinations and actions, provide for a proper balance in land uses, for productive and other purposes, to support a sound tax base that will meet the future needs of the town.

Table 1.5 in Chapter 1 gives the relation of covered employment to total population for communities in the area. In Wilbraham, according to a September 1960 survey of "Commuting Patterns of Covered Manufacturing Employees", 17.7% of the population, some 1300 people, were employed in firms covered by the Massachusetts Division of Employment Security. Those employed in manufacturing were 14% of the population, indicating that only about 250 people were in covered employment in commercial, service, and other trades. This is probably not entirely accurate because of the number of small firms and enterprises not covered by employment security. It does point up the fact, however, that in the primarily residential suburban town of Wilbraham there are relatively few employees or enterprises serving the townspeople.

The data in Table 5.1 below, taken from the "Commuting Patterns" survey, show additional information on where Wilbraham residents work and where Wilbraham workers live. As the number of people involved indicates, the survey is a sample, and not conclusive, but it is considered indicative of the general pattern of employment.

Table 5.1

Commuting Patterns of Covered Manufacturing Employees

Number of Wilbraham residents working in		Number of workers in Wilbraham live in
6	Agawam	
	Brimfield	1
22	Chicopee	
20	E. Longmeadow	
5	Holyoke	2
9	Ludlow	13
	Monson	8
16	Palmer	24
372	Springfield	64
	Wales	1
4	Warren	
3	Westfield	
12	West Springfield	
21	Wilbraham	21
490	Total in survey	134

Although the figures in Table 5.1 are a sample, certain basic facts are assumed. In Wilbraham there is local employment for only one person in every five working residents. Wilbraham residents now, and probably in the future, are and will be dependent on the regional economy for 80% of their employment activities.

The 1960 U. S. Census lists the occupations of Wilbraham residents, the percentage of each group to the total employed, and a like percentage of the same occupational groups for the Springfield, Chicopee, Holyoke Metropolitan Area.

Table 5.2

Occupations of Residents

Group	Number	Percentage of total in Wilbraham	Percentage of total in S-C-H MA
Professional, technical, & kindred	473	16.7%	11.3%
Managers, officers, proprietors	412	14.5%	7.8%
Clerical, and kindred	413	14.6%	15.9%
Sales	239	8.4%	7.4%
Craftsmen, and foremen	465	16.4%	14.6%
Operatives	386	13.6%	23.4%
Private household workers	34	1.2%	1.1%
Service workers	181	6.4%	8.7%
Laborers	86	3.0%	4.0%
Not reported	148	5.2%	5.8%
	2837	100.0%	100.0%

These figures show that almost 40% of the total population in 1960 was in the civilian labor force. Of these 70% were males and 30% females. Only 2.7% were unemployed compared to 5.2% in the Metropolitan Area. Another fact apparent from Table 5.2 is that higher percentages of Wilbraham's people are employed in jobs requiring higher technical knowledge and skills than is the case in the Metropolitan Area. Conversely, in the occupations requiring less skill there is a lower percentage of Wilbraham's people than in the Metropolitan Area.

It may be concluded that expansion of employment opportunities in Wilbraham will best serve the greatest number of its residents if expansion is generally in enterprises requiring higher than average skills. With few exceptions, this type of enterprise does not require a large land area, but does require a reasonable open space in a good environment.

The 1960 Census also lists the major occupational groups of Wilbraham's employed, some of which are listed below.

Table 5.3

Major Occupational Groups

Kind of activity	No. employed
Construction	147
Manufacturing	1089
Transportation, communications, utilities	98
Wholesale trade	117
Retail trade, eating and drinking	385
Educational	190
Public administration	66
Other and not reported	745
	2837

These figures show that almost 40% of the employed in Wilbraham are oriented toward manufacturing. Combining the data in Table 5.2 and 5.3, it appears reasonable to conclude that expansion of manufacturing enterprises requiring the higher skills is desirable for Wilbraham and its residents.

Table 3.1 summarizes the amounts of land now used for various purposes. Business uses occupied some 90 acres of land or 6/10th percent of the town's area. Almost all of the business land lies along Route #20, and the remaining open business land is relatively small in area.

Industrial land amounts to about 220 acres, or 1.5% of the town's area, but some parts of this land are not intensively used and will allow for greater expansion and development of new industries.

Expansion and more intensive use of areas for industrial and business establishments will increase the potential for employment within the town and improve the economic background of the community. It is in this area that the town by its own actions and decisions can directly influence the second element in the town's economy.

The second factor affecting the economic base of Wilbraham is land use, present and potential, as it affects the tax base of the town. The following assessed values are taken from assessors' records:

Table 5.4

List of January 1962 ($000 omitted)

	Commercial	Industrial	Utilities
Land	$ 569.2	$ 642.7	$ 113.4
Buildings	1,317.1	1,703.0	416.3
Personal Property	48.0	84.3	1,293.8
Stock in trade	118.8	---	----
	$ 2,053.1	$ 2,430.0	$ 1,823.5
Total:			$6,306.6

The grand list in 1962 totalled $47,624,600. Of this total, commercial property amounted to 4.3%, industrial property 5.1% and utilities 3.8%, a total of 13.2%. These figures mean that about 86.8 percent of the tax money raised locally to meet town government expenses comes from homeowners and landowners.

The total 1963 lists show an increase of $2,964,785 over 1962. The gains and losses in the commercial, industrial and utility lists balance and are about equal to the 1962 list. This means that the homeowners and landowners share of

this year's taxes will have increased as the non-residential share decreased. Increasing population needs and demands more goods and services, regardless of where they may be obtained.

It would seem to be good sense as well as good planning to provide for these facilities in Wilbraham, where they will serve the townspeople most efficiently and conveniently. By so doing it should be possible to maintain and gradually improve the balance between the commercial and industrial land uses in relation to residential and public uses. This is vitally necessary for the economic well-being of the town, for if this is not accomplished, the townspeople will pay a constantly increasing share of town operating costs.

CHAPTER 6

THE PLAN FOR COMMERCIAL AND INDUSTRIAL LAND

Commercial Areas

Retail and commercial enterprises in Wilbraham are relatively limited, and over 90% of the land zoned for business is located along Route #20. There are no real groupings of stores offering the variety of goods and services at one location that are commonly associated with, and situated in relation to, areas of residential populations they serve.

There will be a continuing need for the types of commercial enterprise now on Route #20, and there is vacant land that is or can be made suitable for expansion of these uses. However, it is questionable if the Boston Road area is the best, the safest, or the most convenient location for new shopping areas primarily intended to serve the people of Wilbraham and its immediate neighbors.

In regions, such as the Springfield region, it has been found that one acre of land devoted to business is serving each 100 people in the region. Although the core cities have a heavier concentration than the peripheral towns, Wilbraham has a substantial concentration along the Boston Road, and can be expected to approximate the regional averages. If past experience is used as a guide, when Wilbraham reaches a population of 25,000, between 1980 and 1985, some 250 acres of commercial land will be needed. This future need may be met, as follows:

Land now zoned and used for business	97 acres
Land in business zones used for residences	26 "
Vacant land zoned for business	55 "
New business land needed	72 "
Total	250

The data above presupposes conditions which are not completely valid. All of the residential owners may not want to sell. Many separate lots, while adequate for present uses, are too small to individually meet the lot area requirements of modern commercial enterprises. To put together one or two acres of land means assembling several adjoining properties, not always possible or economically feasible. There is no reasonable choice of properties available to prospective commercial users. For these reasons, it seems desirable to plan for more than the bare minimum needs, particularly in the Boston Road area.

Between Forest Street and the proposed location of the Western Massachusetts Electric Company's new transmission line, there are some 40 acres of flat, open, developable land. The Oxford-Mohawk Street neighborhood is on higher ground and some 300 feet west of this low land. The Forest Street and Machonis Road houses can be protected with adequate landscaped buffers. The mixed residential, business, and industrial uses along Boston Road will not be affected. This land is most

suited for commercial use and it is proposed to increase the depth of the present business zone in this area to provide land for further commercial expansion.

In the future it may be anticipated that, between Forest and Grove Streets, the residential properties south of Boston Road will become less desirable for residential, but more useful for commercial uses. At this time it may be possible to consolidate smaller parcels, and possibly eliminate some of the street that allow only shallow lot depths. Under these circumstances more and more useful, commercial land may be made available.

Additional commercial uses on Boston Road will be a part of the continuous three mile business strip, accessible to the bulk of the Town only by Stony Hill Road or Main Street with Crane Hill Road giving access from the Glendale section. Under these conditions it will be difficult to create a new shopping and business center conveniently accessible to much of the town area.

The Boston Road area is geographically convenient to the 6% of the town area lying to the north of the road, and to the Glenn Drive-Machonis Road area to the south. Much of the traffic is through-traffic that presents problems of safety and control at such traffic generators as shopping centers. However, much of the new residential potential is there and in the Glendale section east of the mountain.

Business and Shopping

Centers to serve Wilbraham residents should be located in relation to where present and future population will live, and with consideration to the roads people will use to reach this center. Springfield Street is roughly the north-south center of present homes and the future residential potential. While Main Street is now toward the easterly end of the newer developments, the long range potential in the Glendale section would put Main Street very close to the center of population as the town approaches full development.

Community Shopping and Business Center

As Wilbraham grows in population there will be an increasing need for a centrally located area where the townspeople can shop and conduct their business. Convenient access from the principal residential areas of the town is essential for the people using this center. Enough space for future expansion to include the number of offices, stores, and facilities needed by the larger town population, is essential. It is equally essential for the protection of the neighborhood to establish limits controlling the eventual expansion of shopping centers. Finally, and particularly in a town like Wilbraham, it would be most desirable to keep the size and scale of the buildings, and the general environment of the center, compatible with the suburban residential character of the town, and not to permit a congested city-type development.

The vacant land behind the Post Office opposite Springfield Street appears to meet the above criteria. It is about equidistant on Main Street from Boston Road and the Hampden line. Expansion of neighborhood shopping in this area is more fully described in the Plan for the Town Center, in Chapter 8.

Present Industrial Areas

The bulk of the land now used for industrial and manufacturing purposes in Wilbraham lies between the Chicopee River and the Boston Road, and is along much of the northern border of the town. It is in an area of town where further expansion of industrial and manufacturing will have a minimum impact on residential neighborhoods. There are relatively few dwellings in the industrial area that would inhibit industrial growth along modern lines.

An area that has a potential for small research and development type enterprises, and storage facilities, is the north side of Boston Road between Lebel Avenue and Bradlind Road. The rolling land in this area requires minimum grading to level sites for small buildings.

A major problem in the present industrial zone is the rough topography of the land. While some areas have been and are being graded, the filled land will take some time to stabilize for building construction. Further grading should be done as early as possible to allow filled land to settle.

Public water is available to substantially all of the Boston Road industrial land. When the present sewer system is changed over to a new treatment plant, sewers may become available to the eastern part of the industrial zone. The location and capacity of a treatment plant should consider the requirements for serving all of the industrial areas. While sewers alone are not a major requirement of many industries, their availability adds to the desirability of industrial land.

A main line of the Boston & Albany railroad runs through the industrial zone, and future development should make freight service available to the greatest number of potential users.

Two public recreation areas are surrounded by the industrial land: Spectacle Pond, and the ball field at the north end of Main Street. Maintenance of these open areas in their natural condition can enhance the industrial environment, and the permanent open spaces should attract the better types of industrial development that are looking for suburban locations.

Criteria for Industrial Land

There are many factors that contribute to the desirability of land for industrial use besides the condition of the land and the location; the following are among those required by almost all enterprises:

Good highway connections
Water supply and sewage disposal
Good drainage
Zoning protection from adverse uses
Good community services and a receptive community attitude.

The present industrial area appears to meet the conditions of highway connections, water supply, drainage, and good community services. Sewage should be planned as a part of utility expansion in the town. Regrading of the rough land to useable levels will advance the day when the land is more suitable for use.

Another area that may concern industrial users as well as the townspeople is the present industrial zoning. While it appears to protect the town from objectionable uses, there are no standards or clear criteria for the potential user to judge the acceptability of his operation. Also, many industrialists prefer zone districts where residential and similar uses are not permitted, in order to reduce to a minimum possible conflicts of interest and use.

To meet the town's best interests and to preserve the character of the community, heavy types of industry would not appear essential. Most of Wilbraham's employed are in semi-skilled to highly skilled types of work. It would therefore seem proper to limit at least the greater part of the industrial district to industrial types using the higher skills. Also, to maintain the character of the town, more open space should be required around the buildings, to prevent a congested city-type development.

In the light of these objectives, new zoning regulations are proposed to cover the industrial zone, and are reproduced in the appendix - proposed Zoning By-law.

As the town approaches 25,000 population, growth will undoubtedly have begun to spread into the Glendale and East Wilbraham sections, and there will be a greater concentration in the Stony Hill - Soule Road area. By this time, or perhaps before then, there will be a need and a demand for neighborhood type shopping facilities in one or more of these areas.

There is today little indication of a definite growth pattern in East Wilbraham. If commercial facilities are expanded in the future along Boston Road east of the railroad overpass, this area could well serve the neighborhood to the north and maintain its present open residential character.

The Glendale area has a potential for some 2000 people. It is close to developable land in Hampden and Monson. It is reasonable to anticipate an ultimate need in this area for commercial facilities to serve the neighborhood. The general area of Monson and Glendale Roads is well suited for such facilities.

In the southwestern section of town is another area that can be expected eventually to need neighborhood commercial facilities. There is open land at the corner of Stony Hill and Soule Roads, is bordered on two sides by the State Game Farm and on a third side by open land. The road pattern makes this general area accessible to areas of Hampden and East Longmeadow.

The Master Plan proposes, for the long range, neighborhood type commercial facilities in the general areas of Glendale and Monson Roads and Stony Hill and Soule Roads.

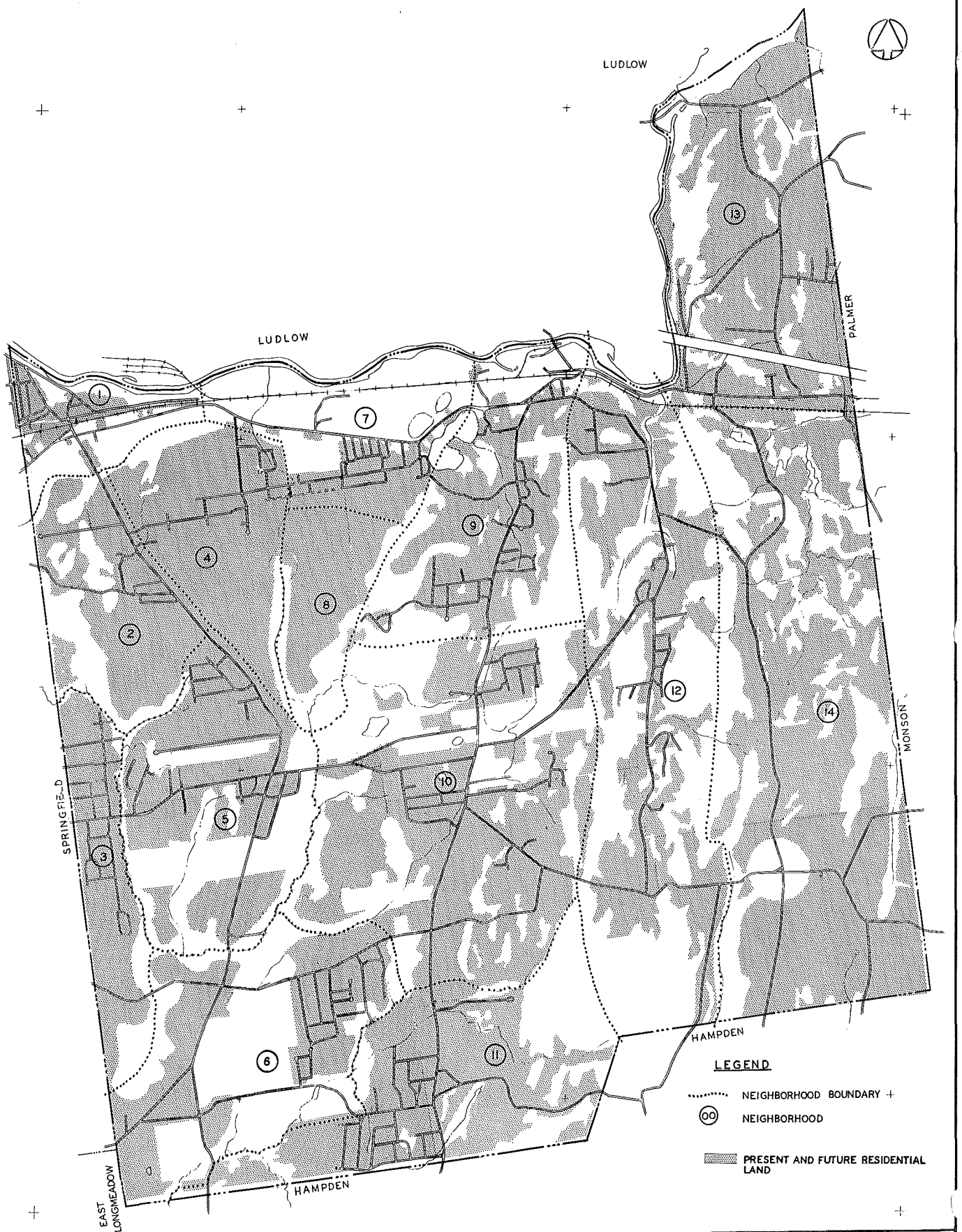
Summary - Commercial Land

The previous analysis shows that about 70 acres of land for new business will be needed by or around 1980. The Master Plan proposes expansion of the Boston Road area to provide about 40 acres, and the Center Plan to provide about 20 acres, for the near future. The Plan also proposes two neighborhood areas -- to contain about 20 acres each. This leaves about 40 acres needed for the long range, which can be appropriately provided along the eastern end of Boston Road.

Summary - Industrial Land

The previous analysis in this chapter and in chapter 5 indicates the desirability of increasing industrial development in Wilbraham. The most suitable area in town is along the Boston Road, where some 300 acres are now zoned for this purpose. Much of the land classified as used is not intensively developed or is used for bulk storage. With improvement of the land for building purposes, and a more intensive use of the land now zoned, the industrial potential would appear to meet the needs of a residential town of Wilbraham's character. And in the Boston Road area Wilbraham would appear to have many of the advantages sought by industrial enterprises wanting to locate outside metropolitan areas.

Occasionally a desirable and compatible enterprise may seek a site with large acreage in a rural setting. If there is good highway access and minimum effect on the residential neighborhoods, this type of use can be advantageous to both the town and to the enterprise.



WILBRAHAM
MASSACHUSETTS

MAP #5

RESIDENTIAL NEIGHBORHOODS

DECEMBER 1963

SCALE OF FEET
1000 0 1000 2000

TECHNICAL PLANNING ASSOCIATES
INCORPORATED
NEW HAVEN CONNECTICUT

CHAPTER 7

THE PLAN FOR RESIDENTIAL NEIGHBORHOODS

Wilbraham as a Residential Community

While the previous chapter has emphasized the potential of Wilbraham for industrial and commercial development, the community exists essentially for the benefit of its residents. It has attracted people in considerable numbers because of the desirable characteristics which the town has for a place of residence.

Much of the area of the town has a rural quality which is favorable to development at relatively low density. Wilbraham has plenty of room to accommodate the population which it is likely to reach in the foreseeable future. In Chapter 1, the town's population is shown as likely to increase in 1970 to between 11,000 and 14,000 people, and in 1980 to between 18,000 and 25,000 people.

Wilbraham traditionally has contained several distinct neighborhoods, such as North Wilbraham, the Center, East Wilbraham, Glendale, and The Pines. New neighborhoods are being formed in the Stony Hill area, and in the south central part of town. The Master Plan should recognize the characteristics of the older as well as the newly forming neighborhoods, and recognize the present and future needs of these areas for town facilities. In this way each neighborhood may continue to develop and preserve its own individual character and environment, and thus prevent the monotonous continuation of city-like spread of buildings in an unbroken expanse.

Neighborhood Areas

Map #1 across page, shows the town divided, for planning purposes, into neighborhoods. Boundary lines in many cases are based on natural features, such as steeply sloping land, or swamps. They cannot and are not firmly fixed, nor do they tend to seal off one area from another. Rather, they are natural neighborhoods that may be served by an elementary school and recreational facilities, they may be considered as small units making up the town total, and the number of people and school population can be related to the different parts of town. Some natural neighborhoods are small, and one school will serve two or more of these areas, while the larger neighborhoods at full development will have more school children than can be accommodated in one school.

Other factors, beside their present state of development, that control neighborhood population are the character of the soil and availability of utilities. It has been noted in Chapters 2 and 4 that some areas of town have poor soils not well suited to long range use of septic tank disposal. Chapter 9 discusses the problems of water supply in the mountain and Glendale neighborhoods.

The type and extent of present development in the various neighborhoods must be considered. The Pines, for example, which comprises a large part of area 1, has a relatively high density, numerous mixed business and residential uses, and a

substantial number of dwellings with two or more families. A local program of conservation and rehabilitation, with ultimate removal of the worst conditions of overcrowding, can help to stop further deterioration in this area. The eventual discontinuance of many of the business uses in the area will also help to maintain the residential character of the neighborhood.

In North Wilbraham, the northern part of area 9, most of the businesses and mixed uses are confined to the Boston Road frontage. Dwellings are larger, and appear in good condition. Maintenance of this area in single family houses, and continued freedom from the detrimental effects of mixed uses, except along Boston Road, will tend to conserve this area, and protect the entire neighborhood.

Area 7, between Boston Road and Machonis Road, is an older section with the old type street layout and small lots. Mixed residential, business, and industrial uses along Boston Road have had a detrimental effect on the houses to the rear. Fortunately, most houses are on more than one lot, so overcrowding is not a problem. The narrow streets are poorly improved, and in many cases improvements are lacking. There is evidence of deterioration that can grow to serious blight, particularly in the areas nearer Boston Road. This will eventually affect the new construction nearer Machonis Road, which is of much higher quality. The Master Plan should consider the eventual change of the area nearer Boston Road to commercial use, with proper buffers separating the Machonis Road dwellings.

Wilbraham Center, in the vicinity of Main and Springfield Streets and the Academy, is still typical of the older New England town center. The older houses are well maintained, and it is still predominantly a choice single family neighborhood. Inadequate land for shopping expansion and parking have created problems. With expansion in the rear of the Main Street frontage for shopping, as discussed in Chapter 6, and extension of Crane Park to provide for a new civic center, described in Chapter 8, the character of the present center can be preserved indefinitely, while at the same time the interior land is expanded to provide for a real town center for the growing community.

As a part of the center development, off-street parking for the present business establishments on the west side of Main Street should be provided for. In this way, the center will be able to be developed as the needs arise, all within the limits fixed by the long range plan.

East Wilbraham and Glendale, areas 13 and 14, are still predominantly rural, and parts of these areas are extensively or intensively used for agricultural purposes. Some of the mountain area, #12, is also farmed, but much of this area is ledge and steeply sloping land. Parts of these areas are suited to low density residential use, and are so designated on the Land Use Plan.

Present Densities

Present zoning in Wilbraham has established different lot size requirements in the several zone districts, which has resulted in different densities of development. Thus, in the B zone, a lot area of 11,250 sq. ft. is required, resulting in an average of about 2½ dwellings per acre of gross land area. It is proposed to

leave in this small lot zone only those areas that are now laid out in streets and lots. Present town ordinances require adequate lot area and soils capacity for septic tank installations, so one major problem of the small lot is reduced.

In the present A and A1 zone districts there have been problems with sewage disposal in some areas, due to soil conditions. In these, and a new rural district, it is proposed to base the lot sizes on the drainage capacity of the soil. It is proposed to increase the required lot areas in A districts from 20,000 sq. ft. to 26,000 sq. ft., and in A1 districts from 30,000 sq. ft. to 34,000 sq. ft. In a proposed rural district 40,000 sq. ft. of lot area would be required. These new lot areas, and the town locations where they are proposed, are considered to meet the needs of all but the poorest soils that are unsuited for septic tank use.

The generalized soils maps of the town, together with local experience in septic tank installations, show that there are well drained soils in some areas. It is, therefore, proposed to tie in residential densities and soils types with a relatively new method of subdividing land, cluster development.

Cluster Development

The need for preservation of brooks and streams for storm run-off has been previously noted. Soils along streams are often soft, swampy, often flood prone, and the suitability of the land for development using septic tanks is questionable. Often adjacent land is of good quality and well drained. Cluster development is designed to make more intensive use of the good land and thereby reserve the unsuitable land as open space. It is also possible, where all the land is good, to use the cluster principle to develop the same number of houses, and also provide a sizeable park or useable recreation area for the use of the residents./ No greater number of houses may be built on a given parcel of land than is prescribed. For conventional development, however, the same number of houses may occupy smaller lots where soil conditions are best, provided the balance of the land in the tract not in house lots and streets is preserved as open space.

Specific proposals for the Zoning By-law are proposed to cover cluster zoning and are reproduced in the appendix - proposed Zoning By-law.

Residential Densities

Present residential land used was computed, and the number of families occupying this land was determined. Densities, that is the number of families per acre, are shown in the following table. To determine the potential on vacant land, the areas of all recent subdivisions were compared with the number of single house lots to compute densities under the present regulations. These are shown in table 7.1 below. In order to assure sufficient land areas for septic tank use, and in many areas for private wells also, it is proposed to increase all lot area requirements. In most of the Glendale section, where public water and sewers are not in the foreseeable future, and where poor soils predominate, a new zone district requiring 40,000 sq. ft. per family is proposed. The "R" zones in table 7.1 are those proposed in the Master Plan, others are the present districts. As noted above, cluster zoning when used will not change the densities in any way.

Table 7.1

Present and Proposed Residential Densities

	Densities			
	Present	Proposed	Lot Area	Lot Frontage
B District	2.5		11,250 feet	75 feet
R-15 District		2.2	15,000 "	100 "
A District	1.5		20,000 "	100 "
R-26 District		1.4	26,000 "	130 "
A-1 District	1.3		30,000 "	
R-34 District		1.1	34,000	170 "
R-40 "		0.8	40,000	200 "

The proposed residential densities in the several areas in town are shown by the zone districts on the proposed Zoning Map, map #9.

Future Population

Discussion of Wilbraham's population in Chapter 1 indicated a "planning population" of 25,000 people about 1980 to 1985. Chapter 4 discusses land characteristics, and their suitability. After built-up land and land for future non-residential uses are deducted, there remains some 6172 acres of land proposed for future residential use. Table 4.1 shows the total vacant land broken down by neighborhoods. Table 7.2 below shows the proposed residential land by neighborhoods, separated into the four proposed densities.

Table 7.2

Summary of Proposed Residential Land by Neighborhoods in Acres

Neighborhood	Total	R-15	R-26	R-34	R-40
1	15	15			
2	332	7	36	289	
3	152		64	88	
4	175	3	29	143	
5	429		81	348	
6	427		146	281	
7	81	23	18	40	
8	266			266	
9	246	15	138	93	
10	894		139	691	64
11	605		38	503	64
12	633		60		573
13	622		78	544	
14	1295				1295
Total	6172	63	827	3286	1996

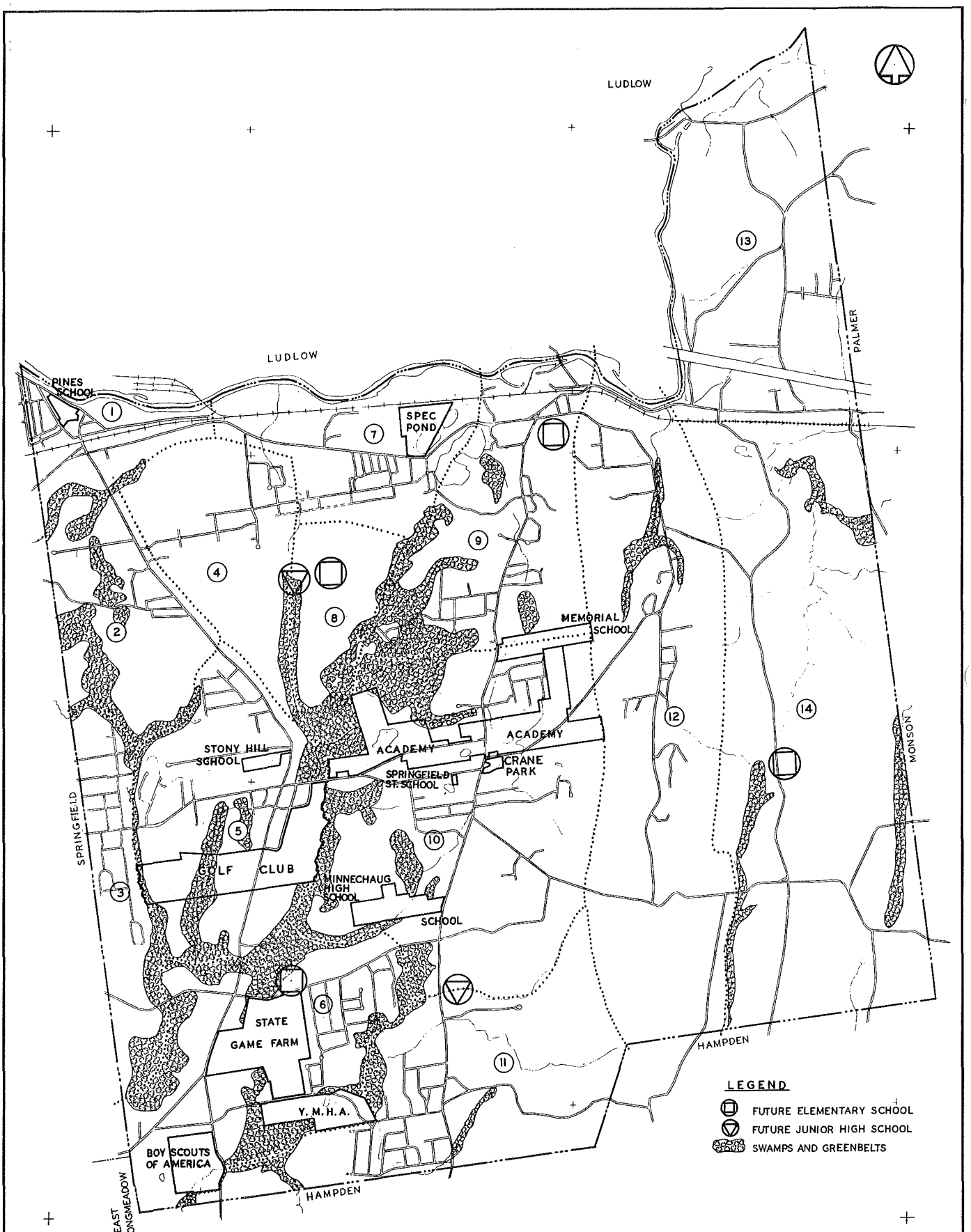
Neighborhood Populations

Present population has been estimated on the basis of 1960 census date plus field checks of houses built since 1960. New future population has been estimated by multiplying the suitable acreage in each neighborhood by the density factor for the respective zone district or districts, and the resultant number of families was multiplied by 3.75 persons per family to arrive at the new population potential. Present and new potential result in the theoretical capacity populations shown in the following table. Growth to the target date of 25,000 people in 1985 has been estimated on the basis of existing trends in some areas, and a general evaluation of the relative rates of growth in the several areas.

Table 7.3

Approximate present and future population by Neighborhoods

Neighborhood	1962	1970	1985	Capacity
1	470	650	870	940
2	470	800	1530	1750
3	1020	1240	1740	1680
4	760	1020	1530	1410
5	840	1240	2040	2560
6	910	1090	1600	2560
7	360	580	800	870
8			730	1010
9	1090	1530	2110	2290
10	1270	2040	3340	4850
11	800	1460	2840	2960
12	510	870	1460	2420
13	440	1020	2470	2830
14	290	800	1960	3840
Totals	9,230	14,340	25,020	31,970



WILBRAHAM
MASSACHUSETTS

PRESENT AND PROPOSED
SCHOOLS AND RECREATION FACILITIES

MAP #6

DECEMBER 1963

SCALE OF FEET
1000 0 1000 2000

TECHNICAL PLANNING ASSOCIATES
INCORPORATED
NEW HAVEN CONNECTICUT

CHAPTER 8
PLAN FOR PUBLIC FACILITIES - SCHOOLS

Relation of School Children to Population

Comparison of past data from the federal census and from school enumeration figures show the trends of school population in relation to the town population. Selected data are shown below. A.D.M. is average daily membership in school.

Table 8.1
Relation of School Children to Population

	1949-50	1954-55	1959-60	Oct. 1, 1963
Town population	4003	5600	7378	10,000 *
Public school ADM	549	1131	1459	2,138 **
Public school - % town pop.	13.7%	20.2%	19.7%	21.4%
Attend non-local or non-public schools	108	124	158	358
Attend non-local or non-public schools-% town pop.	2.7%	2.2%	2.1%	3.6%
Total attending schools	657	1255	1617	2,496
Total as % town pop.	16.4%	22.4%	21.8%	25.0%
Aged 6 - 17 (1960 census)			1694	
Aged 6 - 17 as % town pop.			23.0%	

* Estimate by T.P.A. - percentage may not be as accurate as those based on census counts.
** Enrollment.

Between 1950 and 1960, local children in local public schools as a percentage of town population increased from 13.7% to 19.7%, and in October 1963 were estimated to be 21.4% of the town population. In the same periods, local children in non-public and non-local schools declined from 2.7% of the population to 2.1% in 10 years, and in 1963 advanced to 3.6% of the town population.

There is an apparent trend in the relation of local ADM to population - an average increase of 0.59% per year over the 13 year period. The 10 year censal period shows this average, and the 1963 estimates extend the same rate. While the table shows a faster increase between 1950 and 1955 than between 1955 and 1960, the average of the longer period would seem more valid to consider in long range projections. If this rate of increase were to continue, in 1980 some 32% of the town's population would be in public schools. A comparison of the increase in number of children attending all schools shows a 13 year average increase of 0.86% per year, with considerable variation in the different periods. If this increase were to continue, in 1980 over 38% of the town's population would be in all the schools.

These projections are unlikely in the light of experience in other more fully developed communities, and in the light of population projections by age groups in other areas. Analysis of other suburban communities,

some of which are approaching saturation development, have yet to show a town with over 30% of its population in local public schools in grades 1 - 12. While this is based on past experience, it is considered a reasonable guide for use in these projections.

Population projections of age groups made in other planning areas, some extending to 1980 and to the year 2000, do not anticipate more than 26% of the total population will be in the age group 6 - 17. Figures for larger areas, including the older urban centers, may be expected to have a lower percentage of school age children than a suburban community like Wilbraham. Although school enumeration and census data are taken at different calendar dates, and there are some children in school over and under the 6 - 17 year age group, the data are considered generally comparable.

Another factor in the projections is the extent to which Wilbraham children will continue to attend non-public and non-local schools. As the total number of pupils increases, it is reasonable to assume that a greater percentage of school children will attend local public schools, due to limitations of expansion of the non-public schools. In October 1963 over 120 children were attending non-public kindergarten, in addition to those in other grades attending public schools out of town. These children, added to those now in local public schools, indicate some 95% of the school age children would attend the local public schools.

Projections of school enrollment

One purpose of this report is to determine the probable maximum land required for future schools, based on the estimated local public school population. The foregoing data are given as a basis for relating school population to the future town population.

In 1960 the school age population was 23% of the town population. It is estimated that Wilbraham children aged 6 - 17 will be 26% of the town population in 1980, and 28% at capacity development. In 1960, total school attendance, 21.8% of the population, was about 5% less than the 6 - 17 age group, 23%. Assuming that this difference continues, in 1980 school attendance should be 95% of the school age population, or 24.7% of town population, and about the year 2000, 26.6%. In the light of experience in other communities, these projections appear low, despite the number of children who may in the future be in non-public and non-local schools. Therefore, the figures following will be based on 25% of the town's population in local public schools in 1980, and 27% at capacity development.

Projections by grade groups

School enumeration data are used in the table below, and include only local children in local public schools.

Table 8.2
Grade Group Distribution

	1949-50		1959-60		1962-63	
	Pupils	% of pop.	Pupils	% of pop.	Pupils	% of pop.
Elementary (1-6)	367	67%	786	54%	1241	58%
Jr. High School (7-9)	89	16%	305*	21%	481	23%
Sr. High School (10-12)	93	17%	368*	25%	398	19%
School population	549	100%	1459		2120	

*8th grade in Sr. High

Non-public kindergarten, 122 children in 1963, is about 1/2 percent of the adjusted total. In the other grades, slightly more in proportion are in grades 7 - 12 than in the same grades in local public schools. These figures do not, however, materially affect the trend evident in the table above.

One trend is apparent - the changing relationship between the elementary and the upper grades. There is no change common to all groups, except the 13 year decline in the elementary grades and the increase in the secondary groups. There is no reasonable way to project these figures. However, reference can be made to the age group projections made by others for larger planning areas, and to the experience of other communities more fully developed. These data would indicate that the changes in age group composition will probably level off at about 55% of the children in elementary grades, 23% in grades 7 - 9, and 22% in grades 10 - 12. Unquestionably these figures will vary from year to year, as past experience indicates, but for a long range estimate they are considered valid. School population, by grade groups and by neighborhoods, will be projected on this basis.

Projected school population

The estimated population of 25,000 for planning purposes, described in Chapter 1, may be expected between 1980 and 1985. For school purposes, projections by neighborhoods will be based on reaching this planning "target" date in 1985. On this basis, the school population in 1985 (25% of 25,000) would be 6250 pupils, about 3440 (55%) in elementary grades, which might include kindergarten, 1440 (23%) in junior high grades 7-9, and 1370 (22%) in senior high grades 10-12.

The maximum capacity of the town based on the Master plan proposals is around 32,000 people. With this population, 27% in school would indicate a school population of some 8,650 pupils, about 4,750 in elementary, 2,000 in Junior High, and 1,900 in Senior High. The figures used for grades 7-12 represent Wilbraham pupils only and are given to indicate the eventual magnitude of the junior-senior high school problem.

These estimates anticipate higher enrollments than are given in the Marshall report. The estimates herein are based on enrollment as a percentage of the Town's population rather than as a projection of enrollment trends. As long range estimates they are considered valid, although the time when these enrollments may be reached may vary from the 1980-85 estimate.

Present School Facilities

In 1963 the Wilbraham elementary school system consisted of the following:

The Pines School - built in 1920 - capacity 510 pupils

Memorial School - built in 1950 - capacity 600 pupils. Although this school now serves 7th and 8th grades, its ultimate use has been considered more appropriate and economical as an elementary school.

Stony Hill School - built 1953 - capacity 600

South Main St. School - built 1962 - capacity 360

These schools are considered to be in excellent condition, and suitable as to educational facilities and location for inclusion in the long range elementary school system.

The Springfield St. School has three classrooms, and is an old frame building on a very small site. It has been considered inadequate as to facilities, condition of structure and site. Although useful at times, its inclusion in the long range school system is very questionable.

Minnechaug Regional High School - Present rated capacity, containing grades 9-12, is now 675 pupils. In October 1963 there were some 800 enrolled from Wilbraham and Hampden. The new addition will increase capacity to about 1100 pupils - again to serve both Wilbraham and Hampden. It is rather clear, in the light of recent town and school growth, that the high school is going to reach its planned capacity in the foreseeable future.

Policy and Cooperation Decisions

A firm long range plan for all Wilbraham public school children will depend on regional considerations and decisions that, on the basis of the projected enrollments, will probably affect grades 7 to 12. While a final decision is not required immediately, the educational aspects, as well as the economics, will take some time to resolve. It does not appear too early to begin such a study.

The short and long range projections herein should provide a view of

school needs at progressive stages in the town's growth. The magnitude of the ultimate number of pupils, and the questions of whether regional solutions will be worked out, call for certain assumptions at this point. It will be assumed that in the foreseeable future the present Regional High School will only serve grades 10 - 12. On this basis, Wilbraham's number of pupils in grades 7 - 9 could be solved on a regional or on a local basis. These assumptions lead to considering, in this plan, the elementary grades limited to grades 1 to 6. In the long range, it may be desirable to include kindergarten also in the elementary system.

Projected school population by Neighborhoods

In Chapter 7 population has been estimated for 1963, 1970, 1985, and at capacity based on Master Plan proposals. In the tables following, neighborhood populations have been further broken down to public school children, by grade groups. These tables are not offered as a forecast, but are considered useful for the general purpose of allocating pupils to the several neighborhoods of town.

Table 8.3
Estimated Local Public School Enrollment by Neighborhoods

Elementary - 1/16	1963	1970	1985	Capacity
Area 1	65	90	120	140
2	65	110	210	260
3	140	170	240	250
4	105	140	210	210
5	115	170	280	380
6	125	150	220	380
7	50	80	110	130
8			100	150
9	150	210	290	340
10	175	280	460	720
11	110	200	390	440
12	70	120	200	360
13	60	140	340	420
14	40	110	270	570
Totals	1270	1970	3440	4750

Table 8.3
Estimated Local Public School Enrollment by Neighborhoods

Junior High 7 - 9	1963	1970	1985	Capacity
Area 1	45	50	55	60
2	24	40	90	110
3	52	70	105	100
4	28	60	90	90
5	43	70	115	160
6	33	65	95	160
7	20	30	50	60
8	0	0	45	60
9	62	90	120	140
10	76	115	190	300
11	27	85	150	190
12	28	50	90	150
13	26	60	125	180
14	17	45	120	240
Totals	481	830	1440	2000

Elementary School Needs

Present capacity for grades 1-8 is for 2070 pupils. In 1965, grades 1-6 are estimated at 1620 pupils, and grades 7-8 at 390 pupils. The total is within 60 pupils of present capacity. The 1970 estimates are for 1970 pupils in grades 1-6, and 560 in grades 7-8, or 830 in grades 7-9.

The Marshall report noted the educational problems of continuing Memorial School in use for the upper grades. There is costly work required to remodel or add to Memorial School for over 500 junior high pupils. Memorial School today seems well suited for the elementary grades without further expense, and, with the other three schools, should meet elementary needs to about 1970. By 1971, estimated elementary enrollment grades 1-6 should reach school capacity of 2070 pupils. At that time an addition to the South Main Street School should keep pace with enrollment until about 1973. About 1973, elementary enrollment, about 2250 pupils, should almost reach the expanded capacity of 2310 (2070 plus 240). Shortly after this time, the next elementary school should be ready for occupancy.

The present system of building, first a small expandable school, and a few years later an addition, is more costly than building a 20 room school at one time. Consideration should be given to a cooperative arrangement between Wilbraham and Hampden, on a regional or other basis, and building a complete school at a time, sharing temporarily with the other towns the surplus classrooms.

Between 1975 and about 1985, Wilbraham will need space for over 1100 more elementary pupils, not quite two 20 room schools. The longer range, however, shows a need for two additional schools for another 1300 pupils.

Junior High School Needs

In 1963 there were 328 pupils in grades 7 and 8, and another 143 Wilbraham pupils in 9th grade in the Regional High School. Estimates in 1965 are for 390 in grades 7 and 8 and 190 in Regional. As previously noted, Wilbraham's capacity of 2070 should, in 1965, handle grades 1-8, with 9th grade attending Regional. In 1970, however, even if the estimated 270 pupils in 9th grade are still in Regional High, some 560 pupils will be in grades 7-8, with no facilities. By using the three rooms in the Springfield Street School temporarily, and with more 7th and 8th graders at Memorial, a junior high school may be delayed until 1968, but the whole system and the Regional School will undoubtedly be crowded.

By or before 1985, grades 7 and 8 should have 960 Wilbraham pupils, or a total of 1440 in grades 7-9. At the town's capacity development, grades 7-9 should total some 2000 Wilbraham pupils, or two junior high schools if school size is to remain reasonable.

Elementary Needs by Neighborhoods

By 1973, new elementary classrooms will probably be needed. Elementary capacity, with the South Main Street School at 600, will total 2310; before 1985 two schools should be built to serve the additional 1130 pupils. In 1985, the Neighborhood Area enrollments show:

> the Pines School capacity is some 25 pupils less than anticipated enrollment in Areas 1, 2, and 4;
>
> the Stony Hill School capacity is about 65 pupils more than enrollment in Areas 3 and 5, assuming the 25 pupils from Areas 1, 2, and 4 in this school;
>
> Memorial School, grades 1-6 only, and the South Main Street School expanded with combined capacity of 1200, are 370 short of anticipated enrollment in Areas 6, 7, 8, 9, 10, and 11. Stony Hill School can take 65, leaving a net shortage of about 300, so, at least 10 rooms will be needed in the central area of town by 1985.
>
> In the Glendale and East Wilbraham areas, 12, 13, and 14, there would then be another 810 pupils, or a deficit of 27 rooms. Sixteen classrooms in the Glendale area will serve areas 12 and 14 in 1985. The 11 rooms needed for East Wilbraham, area 13, combined with the 10 rooms needed in the central section, would meet the balance of the 1985 need.

Thus, in 1985, the enrollment projections show the pupils in the western part of the town can be served by the Pines and Stony Hill Schools. There should be a shortage in the central area, and probably a sizeable need in the eastern part of town. It appears to be the policy to develop fewer maximum sized schools rather than to operate a greater number of smaller

neighborhood schools. On this basis, a 20 room school at the northern end of Main Street will relieve the central area, will be closest to East Wilbraham, and will also serve the northern part of Glendale. Also, a maximum size school will be needed eventually in Glendale, so a smaller first unit of such a school would be the first step in the ultimate program.

In the longer range, at theoretical maximum town development, two more schools may be needed. Since the greatest concentration of population is, and is planned to continue to be, in the central and western areas, sites in the Brainard Hill area, and in the vicinity of the State Game Farm, are considered appropriate for the central and western areas.

Junior High Schools by Neighborhoods

As previously noted, regional decisions will be needed to reach ultimate decisions. Wilbraham, however, should be prepared shortly after 1965 to house its own 7th and 8th grade pupils on the basis of some long range plan. Two schools for grades 7-9 will be eventually needed. One location in the Brainard Hill area would serve best half the Wilbraham pupils, but could serve pupils also from the western part of Hampden. A second location in the south central or southeastern sections could serve the other half of Wilbraham and Hampden about equally well.

Long range school site recommendations

One purpose of a school plan is to project the need and general location of future school sites well before the land is bought or developed for other purposes. Locations indicated in the Public Facilities Plan for Schools are general. They are based on the locations of the school population and road patterns, both present and future.

Land for elementary schools should be not less than 15 acres - large enough for 20 classroom schools. Junior high school sites should be not less than 30 acres, and the size should be contingent on regional divisions and the ultimate capacity of the schools to be planned.

In the Brainard Hill area, if the right land is available, consideration might be given to acquisition of a single site large enough for both an elementary and a junior high school.

Land Acquisition

The acquisition of land, at least in the southern part of Wilbraham, is to some extent dependent upon regional decisions. However, land with enough area suitable for school purposes is limited. It is also the type of land equally suited for residential development. In order to secure suitable land in the best locations, it is highly desirable to begin a program of land acquisition at an early date.

When future school locations are established, street patterns on adjacent land can be planned in an orderly manner to provide safe and proper access to the schools. It should also be more economical for the town to purchase land somewhat in advance of the new developments. Land subject to immediate subdivision is usually more valuable, and so more costly, than acreage.

Short Range Alternate

The major policy decisions involved in the long range solution will require much time and study. In the meantime, by 1966 or 1967, more room will be needed for grades 1-8, and, by 1970, grades 1-8 may exceed 2300 pupils. This is some 270 pupils above the present capacity of 2070.

The long range plan includes the expansion of the South Main Street school to a capacity of the 600 elementary pupils for which the school was ultimately planned. This expansion is approximately the size required to provide the space needed in 1969-1970 for grades 1-8. This schoolsite is already improved with some facilities that would be needed to be built for a new school on a new site, and therefore may present some economic advantages.

The long range plan proposes the South Main Street School for elementary use for grades 1-6. If grades 7 and 8 are to be housed in this school some modifications in the allocation and development of space may be desirable to reasonably meet the educational objectives for the upper grades. However, the projections of school population by neighborhoods indicate that in the not too distant future this school can and probably should be used entirely for grades 1-6.

Another advantage of this alternate may be in the extension of the time limit for making the major decisions on the short and long range solutions to the junior high school question, which probably involves discussions on a regional basis.

CHAPTER 8

THE PLAN FOR PUBLIC FACILITIES - RECREATION

Types of Facilities Required

Several different types of recreational facilities will be needed in the future as Wilbraham grows toward full development. Some of these are now provided by the Town for the use and enjoyment of its residents. Additional facilities will be required to serve the increasing population. In other cases, private clubs and organizations will provide certain recreational facilities on a commercial or membership basis for limited numbers of people.

In areas of high residential development there is a need for small park-like areas to provide some open green space for the enjoyment and outdoor use of residents who have no appreciable land of their own. While this is required as a part of the development of future high density areas, some sections presently developed would benefit from small well developed open areas.

A substantially sized park for the entire town would appear to be a necessity to adequately serve the needs of Wilbraham as it reaches full development. Facilities for golf, tennis, and swimming, if not provided by others, are needed to round out a full program of recreational opportunities within the Town.

Facilities for indoor community recreation, and for assembly for cultural, social, and community purposes, are now and will be increasingly needed. Some now are and in the future may be provided by private or philanthropic organizations. It should be recognized that such facilities provide the focal points for many community activities, and they are indispensable for many civic activities. There is a trend in many towns to use school buildings for many community activities. Continued use after school hours or school terms does make the fullest use of costly town buildings, and where possible multiple use is obviously the most economical use of town funds. Map #6 shows the locations of present and proposed park and public recreation facilities. It also shows the principal recreation facilities that are privately owned.

Neighborhood Playgrounds

The National Recreation Association has recommended that there should be $2\frac{1}{2}$ acres of playground space for each 1000 residents. For Wilbraham in the future this would mean 80 acres. A reasonable sized playground of 4 to 5 acres will permit economical care, although in some residential neighborhoods smaller areas for specific uses could be smaller. They are most often used when within easy walking distance in the residential neighborhood. Their size should be based on the number of people served, and larger in concentrations of population. In areas of large lots there is less need because of the space around and between individual homes.

Playgrounds in connection with schools are generally provided for use during school sessions. It would seem most efficient if these play areas could be used the greatest number of hours each day and during the year when the available facilities are usable. Such supervision as may be needed after school hours, and the division of responsibility and costs of operation, are matters that might properly be worked out between the school and recreation groups. Full time use of these playground facilities seems highly desirable in the light of getting the greatest benefit from the town funds that provide these playgrounds.

In the past both the Memorial and Pines School playground facilities have been used for summer programs. All but one of the top programs desired by parents, as expressed in the Playground Commission's "Recreation Program Study, 1962" have been offered at these summer programs. This would indicate the desirability of continuing the use of school facilities to the greatest extent possible. Continuing town growth around the present and future schools will tend to centralize the facilities in relation to neighborhood populations, and bring them within easy walking distance.

The Master Plan proposes that at least 4 to 5 acres be available at each elementary school for playground use, to be developed as the need and the demand arise, and for operation as much of the day and year as feasible.

In areas of town where a large scale subdivision is planned at some distance from school or other playgrounds, the subdivision should reserve playground area for its own residents. A standard of one acre of playground for each 40 families is proposed, although the type and pattern of the development should indicate the exact requirements.

Playfields

For older children and adults, larger facilities are needed for large scale games with considerable numbers of spectators to the informal "sand-lot" ball games, and such specialized sports as tennis. Spec Pond, Memorial Field, Grassy Hollow, and some school facilities meet these needs. In addition, Spec Pond has fine facilities for water sports, an activity that is gaining widespread popularity. In answers to the Playground Commission's "Study", the largest number of requests for expansion of any program were for the water safety program. Expansion of the water program to include use by the town-sponsored playground recreation program, and its constant use during the past summer, indicate the need for this program. It is also a fine example of cooperation between the town body and the Wilbraham Lions Club which supervises and substantially supports the Spec Pond area and program.

The National Recreation Association recommends that total playfield areas should equal $2\frac{1}{2}$ acres per 1000 population, and for the ultimate population of Wilbraham this would mean approximately 80 acres.

Playfield areas at the high school and at the proposed junior high schools should be included to meet this need. Spec Pond, Grassy Hollow and Memorial Fields, should be further developed to their full potential for both water and playfield activities.

Parks

Crane Park, a small town park, is located near the center of town at the intersection of Springfield and Main Streets. A later section of this chapter describes the proposed town center, and the potential expansion of this park area.

The town now has no substantial area or areas for park purposes. As the town population grows, and more land is developed, large blocks of natural open land will disappear, except for the rugged hillsides that afford visual pleasure but little prospect of physical use. Unless the town can acquire one substantial block of land, the townspeople in the future will have lost one of the desirable adjuncts of modern living that will afford so much enjoyment to so many people of all ages.

With the increasing restrictions on hunting in the towns in the Metropolitan area, the long range usefulness of the State Game Farm in its present location in Wilbraham may be questioned. The Farm contains just under 150 acres, but is sufficient for eventual development into a small park. It is contiguous to the Mill River, and the proposed greenbelt areas along the stream could be gradually incorporated into a linear park area running through the center of town from almost the Hampden town line to Nine Mile Pond.

It is recommended that the town consider the ways and means of acquiring the State Game Farm at such time in the future as its present use is discontinued.

There is some very sightly land in East Wilbraham along the Chicopee River above the dam. The use of small boats along and on the Connecticut River has increased at a rapid rate in recent years. A park area along the river could offer a completely different environment from a park in the central area, and could, when properly developed, offer a more active type of park use.

Private Recreation

The Chicopee River area of East Wilbraham also offers considerable potential for private or semi-public club type recreation. The natural features of the area lend themselves to developments of this type that will make the best use of the water, topography and views, with little effect on the neighborhood as a whole.

In the area of Nine Mile Pond limited recreation facilities are available. The relatively small size of the area, and its proximity to the built-up residential areas, restrict expansion here to any extent.

The golf club is considered a vital part of the Master Plan. Although private, the use is semi-public in nature, and serves an important recreational function in the community. As the town grows, there will be an unquestionable need for expansion of the facilities. Preservation and continuance of these facilities is considered essential to carry out the purposes of the Master Plan.

Other clubs and organizations, including the Boy Scouts of America and the YMHA, operate recreation facilities for limited purposes. If at any time these properties come on the market for sale, the Planning Board should study each individual case to determine the town's possible interest in or need for such property to carry out the purposes of the Master Plan.

CONSERVATION

Relation to Development

The compact urban development of large areas is bound to change enormously the natural characteristics of the land. Replacing natural soil with paved streets, drives, buildings, and other impervious construction, obviously speeds up tremendously the run-off from any rain storm and raises problems of drainage. In many other ways the balance of nature is disturbed.

Conservation is the term applied here to the community's activities which are intended especially to promote the best use of its natural land resources for its future development. The Master Plan is based on the premises that Wilbraham will remain primarily a suburban community, as it now is, and that its neighborhood areas should remain as pleasant communities in which to live. The purpose of planning as well as conservation is to guide development so as to keep away from unnecessary crowding or the spread of unbroken city-like growth.

Chapter 1 has discussed Wilbraham's population in relation to that of the region, with a target or planning population in 1980 to 1985 of some 25,000 people. Chapter 2 has discussed the land and soil conditions, and in Chapter 4 the amount of land suitable for building development was tabulated. From these tables there appears more than adequate land area for the 1985 population, and the capacity population of 32,000 people can be accommodated without overcrowding, or using land that is too steep or swampy for use without excessive disturbance of the natural surface.

Preservation of Open Space

The Master Plan shows an extensive system of greenbelts which should be preserved as open space. These cover most of the swampy areas within the Town, and enough land along the principal watercourses for their protection and as much of the flood prone land as possible. These greenbelt areas are shown somewhat schematically on the Master Plan to indicate their purpose and general extent, rather than exact limits.

These are the areas which should be preserved permanently as open space for conservation purposes in maintaining natural conditions where these are most critical, for preservation of the attractive characteristics of the Town, and for provision of a reserve of park space for the future and for prevention of unbroken urban development over too large an expanse.

No greenbelt areas are shown along the mountain slopes. The steep grades will prevent any mass developments, and the larger lot sizes proposed for this area will reduce density and allow more land to remain in its natural state. It will at the same time permit limited private development of some very choice land.

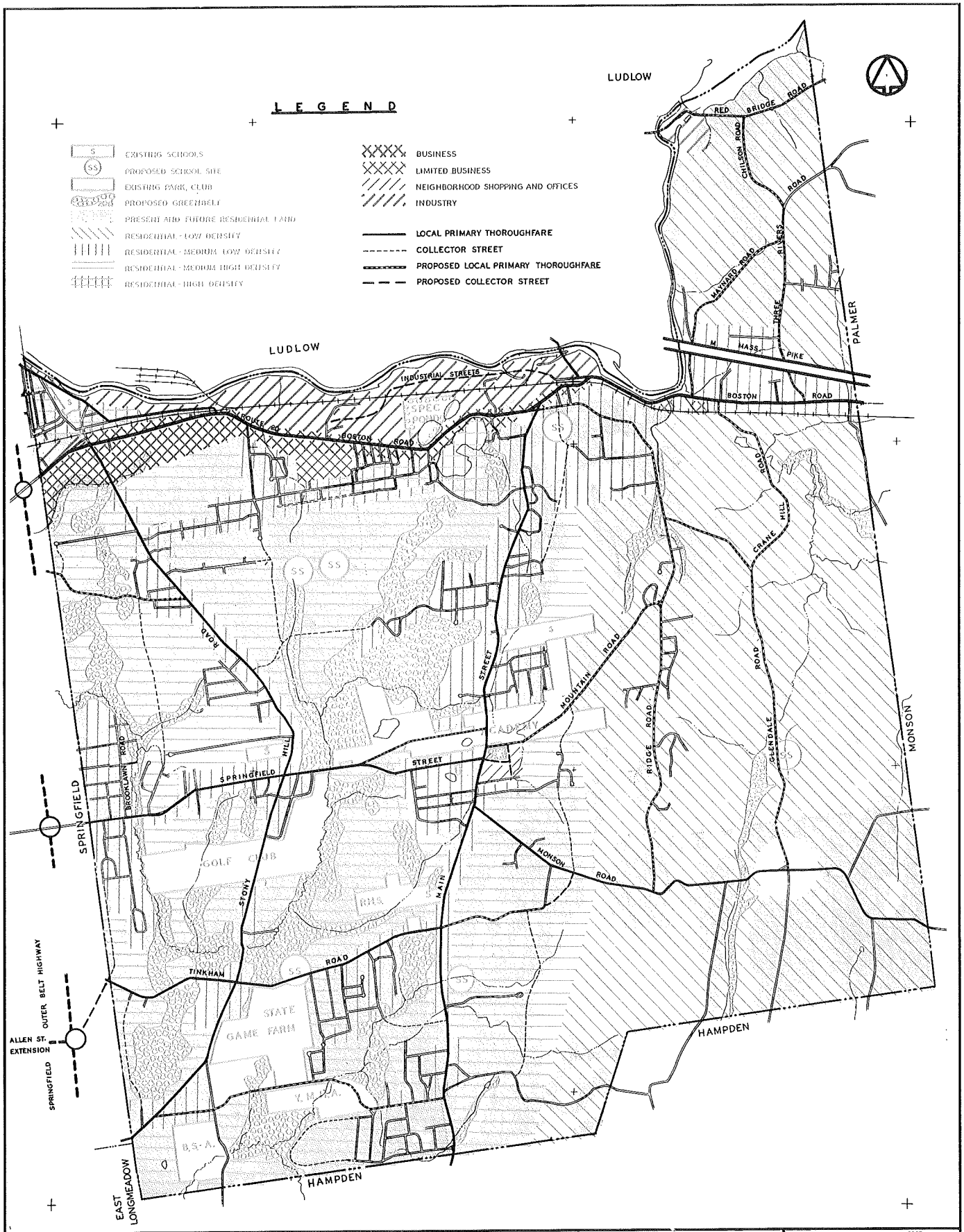
Greenbelts and Storm Drainage

One of the most serious problems in connection with subdivision and land development is the disposal of storm water. Where roads and buildings are built, storm water can no longer be absorbed in the ground. When swamps or other low areas are filled for development they can no longer act as sponges to absorb flood waters and slow down the run-off. It is therefore most efficient to preserve stream valleys and wetlands so that they may function as parts of the whole drainage system of the Town. In the Master Plan, the greenbelt areas include strips along the important watercourses.

Conservation Commission

Wilbraham has a Conservation Commission established under the state enabling law. The law provides that this Commission may make detailed studies of conservation matters, and may acquire and administer land in connection with its program. It is desirable for some greenbelt land to be town owned. Land that is privately owned by an individual, club, or association may, however, serve the purposes of conservation and implement the purposes of the Master Plan so long as such land is maintained in an open natural state. The Conservation Commission is the town body to carry out the conservation program.

It is recommended that the Town give to the Conservation Commission the backing and financial assistance needed to carry out this very important program.



WILBRAHAM
MASSACHUSETTS

MASTER PLAN

MAP #10

SCALE OF FEET
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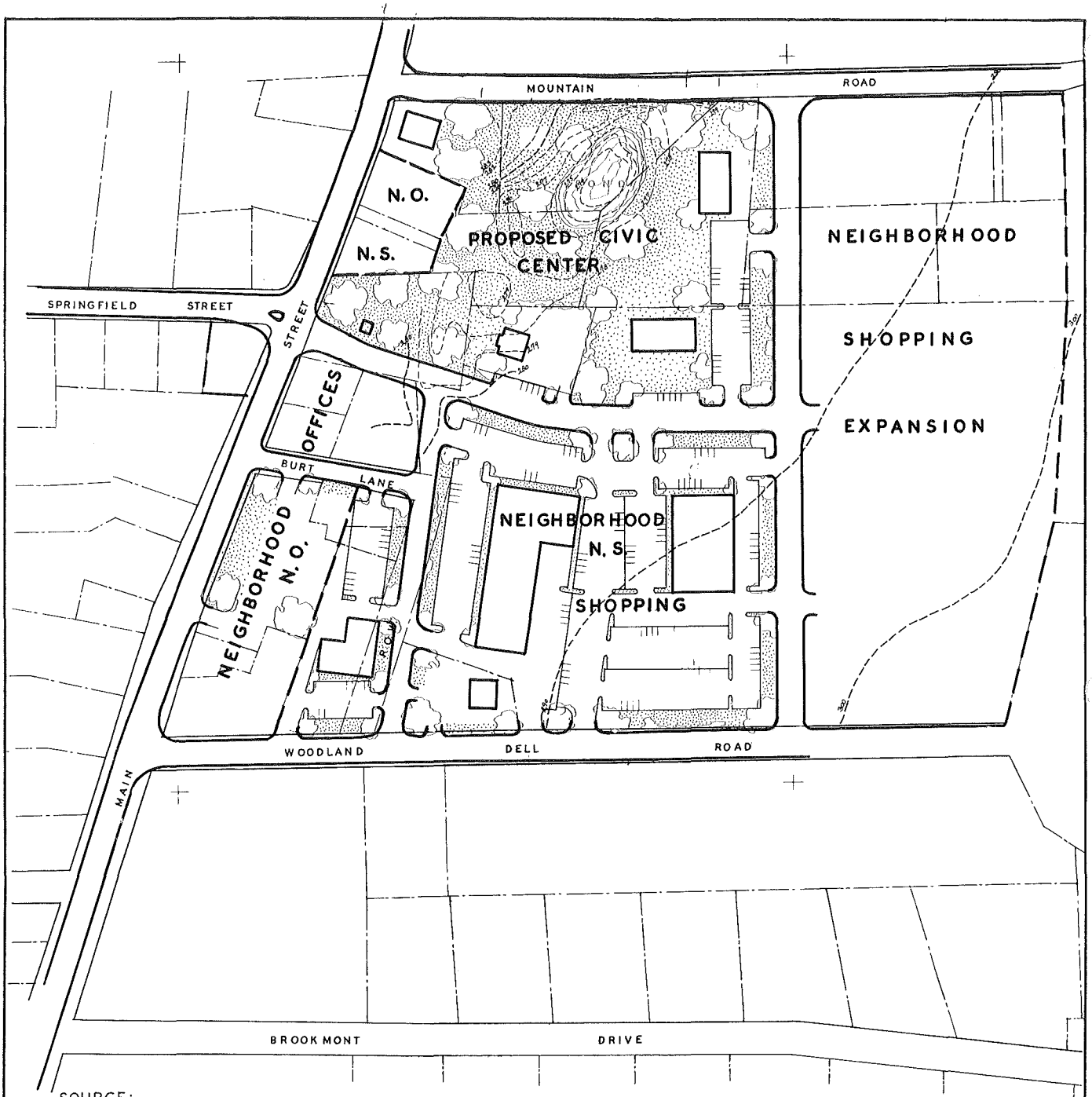
NEW HAVEN CONNECTICUT



WILBRAHAM
MASSACHUSETTS

TOWN CENTER PLAN

ILLUSTRATED PLAN OF DEVELOPMENT

MAP #7

DEC. 1963

TECHNICAL PLANNING ASSOCIATES
INCORPORATED
NEW HAVEN CONNECTICUT

THE TOWN CENTER

Administrative Facilities

The town office is now becoming crowded, and in the foreseeable future present space will be inadequate for the proper conduct of the town's business. Present population growth trends show that the present offices are becoming progressively further removed from the center of population.

Like many towns, Wilbraham today consists of several recognizable neighborhoods such as The Pines, Stony Hill, North and East Wilbraham, and Glendale. There is no real center with which the people from all the different neighborhoods can identify. Establishing governmental and business facilities of interest to all townspeople in a new location, related to and easily accessible from, the several residential neighborhoods can provide a new town center in character with a town that will grow to a population of 25,000 to 30,000 people.

Location of The Town Center

A new center for Wilbraham should be located in relation to the residential land areas it is to serve, and to the major streets people will use to reach the center. Springfield Street is about centrally located in relation to the north and south town lines, and, with Mountain Road and Monson Road, covers most of the town area from east to west. Since traffic will come from north and south to Springfield Street, a new center should be located in relation to north-south streets.

The land west of Stony Hill Road is substantially developed. On the southeast corner there is about 10 acres of open land, extending to the golf club property. On the northeast corner there is adequate land, but the soils maps indicate wet swampy soils of generally unstable character. Development of a center here would be on both sides of Springfield Street. There is no natural boundary to prevent future extension northerly along the east side of Stony Hill Road. Considering the future population potential, particularly in the Glendale section, the Stony Hill area is considerably west of the population center.

The Springfield Street-Main Street area is close to the future population center of the Town. The present road pattern gives good access to this area from the residential neighborhoods. There appears to be sufficient suitable land for building construction. It is presently a small center and Crane Park, the Post Office, Academy, and the Old Meeting House form a nucleus around which a new center may be planned. The Academy on the north, the cemetery and steeply sloping land on the east, the church and Woodland Dell Road on the south, and Main Street form existing natural boundaries that limit further expansion. In view of these criteria, the Town Center Plan has been developed for this area.

Park and Town Buildings

Map #7 on the facing page is an illustrative plan of the Town Center. The proposed civic center is a long range plan, and it is probable that it will be many years before all of the land would be needed or could be readily acquired. The Post Office is in this block, and there is land area for at least a new town office and library without disturbing property now occupied. The enlargement of Crane Park is desirable, particularly as some park land will be lost in the extension of Springfield Street. In the long range, by using all of the open land the town buildings could be built in a greatly expanded Crane Park. An existing swamp could readily be cleared to make a small lake, helping in flood control and adding considerably to the environment. If the time comes when the old meeting house or other Main Street property can be acquired by the Town, they can be readily integrated into the overall plan, as part of the park or for other uses.

Neighborhood Shopping

A part of the proposed Town Center is an enlarged shopping area. Land fronting on the east side of Main Street would be limited to present uses, offices and banks, while the interior open land is proposed for one story rental stores and parking, with landscaped yards along the streets and at the buildings.

The proposed amendments to the Zoning By-law describe the regulations controlling location of buildings, street entrances, parking access, and landscaping and authorization of a special permit by the Board of Appeals after a report with recommendations from the Planning Board. Landscaped buffer strips are required to be planted and maintained between the neighborhood shopping area and the adjoining residential zone districts.

Accomplishing the Center Plan

To provide for the proper development of the interior land, Map #7 shows an overall street pattern to assure safe and convenient traffic movement. The layout of Springfield Street extended as far as the Post Office crosses town land and would seem to be a function of the Town. Construction should await, and be timed with, development of the interior land.

The further extension of Springfield Street, and the other proposed streets, open up new land for development. The precise design and construction of these streets would follow the overall street plan in accordance with present procedures for the development of land for building construction. These streets would be constructed as the need for access to more land arises. At some point, development will reach a point where all of the streets will be required to assure proper traffic movement.

In the early planning stages, consideration should be given to the long range improvements needed on Springfield Street, Mountain Road, and Woodland Dell Road. Pavement widening is needed and the ultimate storm drainage needs should be determined.

Appreciable widening of the southwest corner of Main and Springfield Streets is essential in the long run. This will reduce the size of an already small commercial property. On the west side of Main Street no changes are proposed in this report, and no changes in use are included in the proposed By-Law amendments. It would appear, however, that a reasonable increase in land area on this corner for the present use would improve a congested intersection, and would make it easier to accomplish the improvements needed in the future.

The Town Center Plan, like any long range plan, can only be accomplished slowly, step by step, and as specific needs become critical and have to be met. The Plan is flexible as to the timing of development of its several parts. Each part will contribute its share to the attractiveness, service, and utility of the whole. It offers an overall framework as a guide for future public, as well as private decisions and actions. It should be an important part of the Master Plan.

CHAPTER 9

WATER SUPPLY AND SANITARY SEWERAGE

Source of Supply

Wilbraham public water supply comes from the Quabbin Aqueduct on Belchertown Road in Ludlow, and it enters the town in North Wilbraham. The capacity of the supply at Quabbin Reservoir would appear adequate for the long range needs of Wilbraham. There is presently no in-town storage which is necessary to counteract the head loss pressure in the long transmission line, resulting at times in low pressures in several areas of the town now using public water.

Distribution System

The distribution mains within the town, and the provision of water, are the responsibility of the Water Department of the Town. Appropriations are made by Town meetings, and receipts are deposited in the general funds of the Town.

The major loop in Town - Main Street, Boston Road, Stony Hill Road, Springfield - Faculty Streets - is 8" or larger, and is considered adequate to serve the northern and northwest sections, including the major business and industrial area along Boston Road.

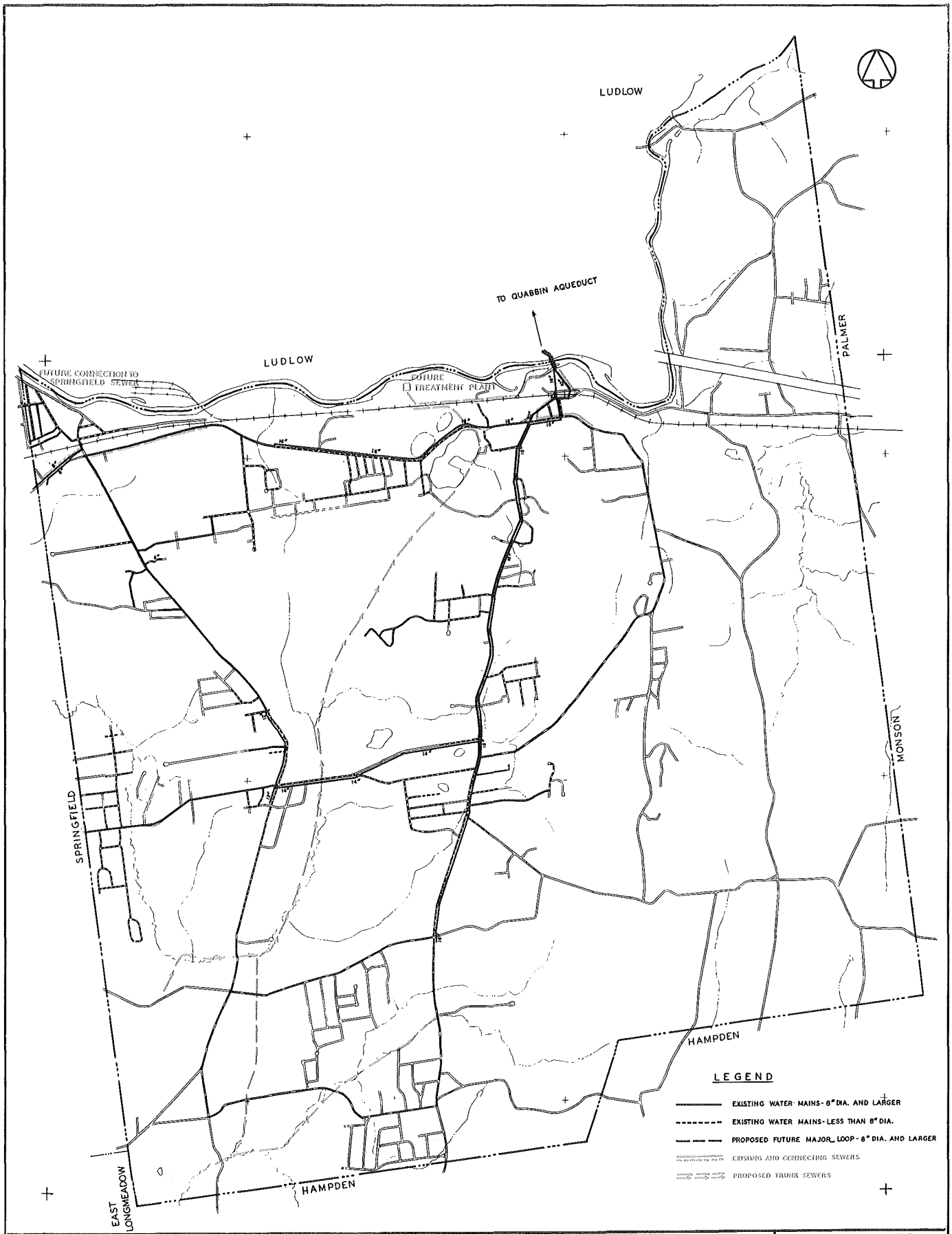
Future Connections

In conjunction with the future subdivision of land for residential purposes, additional cross connections should be provided between the legs of the major loop. The Brainard Drive - Machonis Road connection, and the extension of the Decorie Drive system to Stony Hill Road, are examples.

Eventual extension of the major loop system will be required to provide water service in the southern sections of town. Extension of the Stony Hill line to Soule Road and the South Main Street line to Oakland Street, with cross connections first at Tinkham Road and then at Soule Road, will provide this service. With these extensions, the areas of town capable of holding the bulk of the population proposed in the Master Plan will be served with public water.

Future Supply

The "Report on Water Supply and Distribution System" by Tighe and Bond, Engineers, made in December 1961, describes in detail several proposals for extending service and supply in Wilbraham. This report notes that in the future there may be the need for additional public water supply over and above that now available from the Metropolitan System (Quabbin). Sources of ground water appear available in the valley of the north branch of Mill River. Developing this source may help to solve the pressure losses in the long transmission line and thus delay construction of other storage facilities. Also, this source will be available for auxiliary and emergency use.



WILBRAHAM
MASSACHUSETTS

WATER SUPPLY AND SEWERAGE

MAP #8

DECEMBER 1963

SCALE OF FEET
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The East Wilbraham and Glendale sections are proposed for low density residential use in the Master Plan. This should result in a lower eventual population in these areas, and so reduce somewhat the problems of water supply and distribution at the higher elevations. The problems of installing water in some parts of these areas of town should be recognized. The many outcrops of ledge rock indicate the probability of rock immediately below the surface at depths that would require a great deal of blasting. This will require greater cost of installation. Also, to provide adequate pressure at the higher elevations, a separate system will be required in order to keep pressures in the lower central plan at a reasonably low figure.

A first step in the improvement of water supply has been recommended. It is described in the Tighe and Bond report noted above, and is quoted, as follows:

> Plan #1 Under this Plan, a 1,000,000 gallon standpipe would be constructed just off of the east side of Mountain Road North, northerly of Sunset Rock Road, and connected to the existing feeder main by a 16-inch water main laid along Mountain Road North from the Chapel Street intersection.
>
> This standpipe, "floating" on the system, so-called, would be set at an elevation so that at night when there would be no large demand on the system, water would fill the tank. During the day, when the demands on the system would be largest, stored water would flow from the tank into the system and maintain the hydraulic grade line. This in turn should supply the distribution system with water at about present-day pressure in time of high rates of usage.
>
> In addition, a standpipe and supply main constructed as previously decribed would give some service to the homes on Mountain Road and provide an opportunity for limited water service in the Bartlett Avenue-Bartlett Court area. Also from the line to the standpipe, a pipeline could be laid along Spear Brook to Boston Road, thence easterly on Boston Road to give limited service to those homes in the East Wilbraham area lying below the hydraulic grade. Limited service would be poor pressurewise and require individual household booster pumps and pressure tank systems.

The cost of this system is estimated at approximately $170,000, and is included in the Capital Budget Program noted in Chapter 13 and printed separately as Addendum B.

SANITARY SEWERAGE

Present Systems

At the present time there are two small sewer systems in Wilbraham. In the northwest section of town, a small system now serves the Pines area and a little of Boston Road, and outfalls into the Chicopee River without treatment. It is planned this year to connect this system into the Springfield system.

The second area sewered is in North Wilbraham, and this system also outfalls without treatment into the Chicopee River. This area also, in the foreseeable future, will have to stop discharge of raw sewage into the river.

Future System

The firm of Tighe and Bond, Consulting Engineers, have in the past made general and detailed studies of the sewerage and disposal of the Town. A report made in 1945 covered a general study of the central and western areas of town.

A general recommendation made in this report indicates the main treatment plant on the Chicopee River, about centrally located between North Wilbraham and the Pines. The main trunk line would be a series of force mains lying in the Mill River bed extending north through Cedar swamp past Nine Mile Pond to the treatment plant. The greenbelts in the Master Plan contemplate the eventual need of the sanitary trunk in this general area.

Previous reports do not discuss the possibilities of sewering the southern areas of town, south of Tinkham Road, where there has been a substantial increase in population. Growth in this area is anticipated to continue; the maximum capacity proposed in the Master Plan is some 3,800 people south of Tinkham Road and east of the mountain. It would seem desirable, in the light of present conditions and development in Wilbraham, to incorporate all of the central and western areas of town into an overall study and plan. However, the system of greenbelts proposed in the Master Plan proposes open space along the Mill River and its tributaries, where future trunk sewers may be advantageously located.

Low Density Areas

The Master Plan proposals for lower residential densities in the Glendale area are dictated in part by topography, soils characteristics, and the road pattern. Available information indicates substantial areas of ledge rock, that would make the installation of sewers very costly. Topography indicates a serious problem in locating ultimate treatment and disposal facilities. With proper control of the installation and maintenance of septic tanks, and the proposed low density of land use and non-use of poorly drained land, the need of sewers in the Glendale area can be minimized for an indefinite period.

Land in the East Wilbraham section is similar to Glendale. While the presence of ledge is evident, and will tend to increase sewer construction costs, in almost all this area a gravity system appears possible.

Septic Tank Controls

In 1963 the Wilbraham Board of Health adopted new regulations governing the installation, inspection, and maintenance of septic tanks within the Town. Strict conformance with these regulations is essential to the feasibility of continuing sub-surface sewage disposal in Wilbraham. If existing as well as new private facilities are not installed and operated properly, and hazards to public health are created, public sewers in the more built-up areas of town will be required at a much earlier date. It would appear that the proper care of private facilities could postpone indefinitely the town-wide need for public sewers. Provision has been made in the Master Plan, however, for the main trunk sewers that will eventually be needed.

CHAPTER 10

THE PLAN FOR CIRCULATION

Regional Traffic

U. S. Route #20, Boston Road, is the principal thoroughfare carrying traffic into, out of, and through Wilbraham. Traffic at the Springfield line is somewhat greater than at the Palmer line. With completion of the Massachusetts Pike, it is probable that Boston Road will be adequate for an indefinite period to carry the reduced volume of local traffic.

An outer belt highway around Springfield is in the discussion and planning stages. Allen Street extended would intersect with this highway southwest of Tinkham Road at the town line. A connection between this interchange and Tinkham Road will afford good access to the southern part of town. Interchanges at Springfield Street and Boston Road will give Wilbraham access to the north-south leg of the outer belt highway. This highway will improve access to the Massachusetts Pike interchange with North Street in Ludlow. Extended eventually to the south and west through Longmeadow and East Longmeadow to a connection with Interstate 91 in Enfield, Wilbraham will then have greatly improved access to the expressway system.

Principal Local Thoroughfares

The existing town streets form the framework of a local arterial system that, with proper improvements, should afford good vehicular circulation between and through the several sections of town. Main Street and Stony Hill Road are, and probably will remain, the principal north-south thoroughfares. Ridge Road near the top of the ridge, and Glendale and Crane Hill Roads east of the ridge will serve fewer people, but should be classed as secondary thoroughfares.

Together with Boston Road, the principal east-west thoroughfares are and should remain Springfield Street and Tinkham Road, at least as far as Main Street. Mountain Road and Tinkham Road east of Main Street are considered secondary thoroughfares, as is Monson Road.

River Road and the westerly portion of Stony Hill road carry considerable Wilbraham traffic headed for North Street and the Massachusetts Turnpike. The bridge over the railroad is narrow, and should be improved to better serve the industrial section along Boston Road. The Cottage Street bridge connects North Wilbraham with Chapin Street in Ludlow, a direct route from North Wilbraham and the east to the Massachusetts Pike interchange. The intersection at the railroad underpass needs improvement for access from the west to Cottage Street and to the potential industrial land along the river.

The Master Plan does not propose such intensive uses in East Wilbraham that principal thoroughfares will be required. Three Rivers Road and Chilson Road, together with Maynard Road, will probably have more through traffic than

a collector street, and so are proposed as secondary thoroughfares. Red Bridge Road east of Chilson Road is not anticipated to serve as more than a collector street.

Industrial Streets

In order to properly develop land proposed for industrial uses, new streets will be needed. In Wilbraham these streets will not have a volume of traffic to justify a thoroughfare classification, but they will carry the heaviest types of traffic. The Master Plan proposes that roads serving industrial areas be improved to secondary thoroughfare standards.

Collector Streets

In most of the larger subdivisions of land for residential use, and in the case of several adjoining small subdivisions, one or more of the residential streets act as collectors, to carry traffic from the minor streets to the thoroughfares. An example is Brooklawn Road which carries traffic from several side streets to Springfield Street. Volumes of traffic on collector streets are usually not high, and are limited generally to residential and service types. However, collector streets are essential to the orderly extension of streets, as well as for development of an eventually complete system of town streets.

The collector streets shown on the Plan of Circulation are intended to be diagrammatic rather than in precise locations, to afford reasonable freedom in developing property. They do indicate, however, possible locations for this type of road. Under almost all circumstances, collector streets will be built under Planning Board regulations as a part of the subdivision of land.

Residential (Access) Streets

Ideally, everyone would like to live on a quiet residential street with no through traffic. Most streets in new subdivisions can be and should be laid out to minimize traffic; consequently the street width and construction can be less than is required for heavily travelled ways. Traffic-wise, many of the collector streets are in the access street category, although occasionally a collector street will require wider pavement and width of right-of-way.

Standards for Highway Improvement

Existing streets which are indicated on the Master Plan to be classified as thoroughfares should gradually be improved to meet as closely as practicable the following standards. In many cases it may not be feasible to acquire as wide a right-of-way for existing streets, as called for below. This should be done, however, as nearly as possible.

Where new thoroughfares are indicated on the Master Plan, they should have rights-of-way and design standards as established here. It is particularly important to see that provisions for all proposed thoroughfares are made when any subdivision plan is submitted for land through which they pass.

Proposed standards for thoroughfares, collector streets and access streets are as follows:

Classification	Right-of-Way Width	Maximum Grade	Paved Width	Minimum Radius of Curvature at centerline
Principal Thoroughfare	80' to 100'	5%		500' to 1,000'
Secondary Thoroughfare	60' to 70'	7%		300'
Collector Street	50' to 60'	10%	30'-40'	100' to 250'
Residential (Access)St.	50'	10%	30'	60'

Parking

Most of the business and industrial uses in Wilbraham that generate a parking demand appear fairly well to adequately served in this respect. Along substantially all of Boston Road, commercial uses have developed off-street parking areas to meet their needs. The more recent construction has been planned from the beginning with adequate off-street parking facilities.

Parking at the center, Main Street and Springfield Street has been a problem. Several stores covering a large percentage of their lot areas have had inadequate space left for off-street parking. This resulted in considerable congestion on Main Street. Recently, a sizable parcel of land on the west side of Main Street was re-zoned to permit off-street parking, and the area is sufficient to provide reasonably adequate space for the present commercial uses. One disadvantage remains, that a retail store and a bank are across Main Street from the parking area.

Proposed revisions to the Zoning By-law include a new section on off-street parking and loading. In general, the By-law requires that all types of land use shall have adequate parking for the cars of occupants of and visitors to the premises. Practically every dwelling has a driveway that meets the minimum requirements for residential use. A schedule in the By-law lists the number of car spaces required for offices, retail stores, motels, and other commercial and industrial uses. These requirements are fully described in section 7.5 of the proposed Zoning By-law, appendix A of the Master Plan.

The Town Center

The Town Center Plan is designed in part to eliminate traffic congestion at the Center and to provide adequate off-street parking. Extension of Springfield Street and improvement of the Main Street intersection are necessary for safe controlled access to the interior land. Eventual widening and improvement of Mountain Road and Woodland Dell Road will be necessary as the center becomes fully developed. Improvement of the Springfield Street corner and pavement widening on Main Street, should be a part of a shorter range program.

CHAPTER 11

ZONING

Present By-law Residential Districts

Wilbraham's zoning By-law was last amended in a substantial way in 1954, although minor amendments have been adopted by the Town Meeting since. Changes in development practices, and ways of living and working, have changed materially since that time.

The present By-law provides for three classes of residential districts, varying principally in land area, and lot frontage requirements. The minimum lot area required is 11,250 sq. ft. with 75 feet frontage. The intermediate size is 20,000 sq. ft. with 100 feet frontage, and the largest lot required is 30,000 sq. ft. with 150 feet frontage.

All zone districts are limited to single family use, with provision for a limited professional office use operated by the resident of the premises. No provisions are made for construction of dwellings for more than one family.

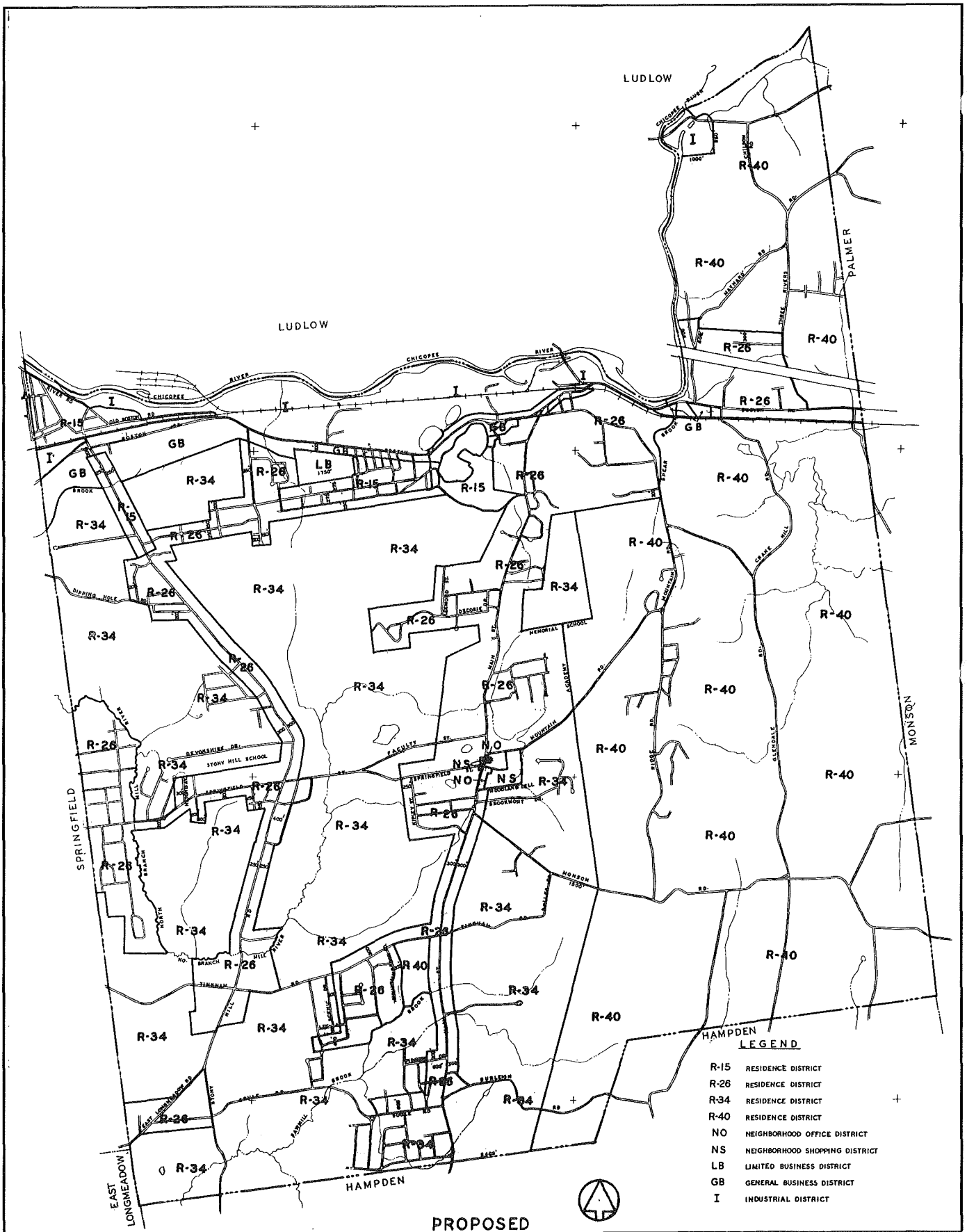
Zoning, Sewage Disposal, and Water Supply

Chapter 4 describes the suitability of land for development. In some areas of town, as described in Chapter 2 on Natural Features and soils, the capability of the land to absorb sewage for a long period of years is questionable. Chapter 9 discusses the long range problems of water supply at the higher elevations in Glendale and East Wilbraham, and also the problems of constructing sewers in these areas.

When these conditions are considered together, it is clear that in many areas of town each lot will have to provide its own water supply and sewage disposal for a period of a few to many years. In the case of the single dwelling, or a small group of houses surrounded by vacant land, present lot sizes may be adequate. Present development in Wilbraham, however, is creating large clusters of houses, either in one development, or by extension or conglomeration of smaller developments. Under these circumstances, a reasonable increase in lot area requirements is discussed in Chapter 7 - Proposed Residential Densities. The requirements proposed for lot areas and frontages are more fully set forth in the proposed Zoning By-law, in Appendix A of this report.

Cluster Zoning

Cluster zoning is described in Chapter 7, and the provisions for development under this principle are included in the proposed Zoning By-law in Appendix A.



PROPOSED

WILBRAHAM
MASSACHUSETTS

BUILDING ZONE MAP OF THE TOWN OF WILBRAHAM

MASSACHUSETTS

MAP # 9

DEC. 1963

SCALE OF FEET 1000 0 1000 2000

TECHNICAL PLANNING ASSOCIATES
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NEW HAVEN CONNECTICUT

Multiple Family Dwellings

Analysis of the local and the regional population indicates an increasing percentage of the population is in the older age group brackets. Many of these people, and also young newly married couples without children, prefer for many different reasons to live in smaller rental quarters than are available in a town like Wilbraham. Such a concentration of population is usually not feasible unless public sewers are available. When the present sewers are planned to be extended, suitable areas in the proper locations can be designated. However, the future need for apartments may be anticipated, and to give the town a set of basic regulations to control and guide this type of development, the proposed Zoning By-law, in Appendix A, includes a section covering a Multi-Family Use District, that may be used by the Planning Board and Town Meeting at such time as this type of use is considered in Wilbraham.

Commercial Districts

Wilbraham now has two types of business districts. The Neighborhood Shopping District, covering a small area in Wilbraham center, is highly restrictive. The major business district along Boston Road has little control and no criteria for use except the usual general clauses prohibiting the nuisance type uses (noise, vibrations, etc.). Also, the limits on mechanical power would seem out of line with some of to-day's equipment that is used in the highest types of commercial buildings.

One requirement in the present Business Districts appears, if literally enforced, to severely limit development. The By-law permits "Any structure .....for sale at retail.....or to furnish a service for residents of the locality". It appears to imply that an establishment on Boston Road, large enough to serve Springfield, Ludlow, Palmer, and other regional residents, might not be permitted. This seems to unduly restrict the size of business development here, with no attendant benefits to Wilbraham.

A proposed new Neighborhood Shopping District is described in Chapter 8 under The Plan for the Town Center, and the requirements in this district, a Neighborhood office district, and two business districts are detailed in the proposed Zoning By-law in Appendix A.

The proposed By-law includes two types of business use districts. The limited district precludes retail sales, but provides for wholesale and storage type uses, and research and developmental operations. The general district permits many recognized commercial uses not now permitted in Wilbraham.

Industrial Districts

Deficiencies in the existing zoning By-law for industrial zones is discussed in Chapter 6. A new set of regulations is proposed in the Zoning By-law covering performance standards and listing types of permitted uses in the Industrial Districts. The standards should assure the neighborhood and the town the kind of industry that will maintain the character of Wilbraham. They offer measurable

criteria for performance and enforcement, and they also offer an industrialist the means of predetermining his operations conformance to the By-law.

Zoning By-law

In cooperation with the Planning Board and the Town Counsel, a draft of a new Zoning By-law has been prepared for consideration of the Town. The proposed By-law includes zoning provisions to implement proposals contained in the Master Plan. As noted above, a number of clarifications are proposed; permitted uses are more comprehensive. Sections not dealing directly with Master Plan proposals have been revised, and up-dated to conform to the General Laws. The proposed By-law is printed separately as Appendix A.

Parking Regulations

A new section of the By-law contains proposed requirements for off-street parking that apply to all types of land uses.

Sand and Gravel

A new section of the By-law contains proposed requirements governing the removal of earth materials. Operations in all zoning districts are covered, in the interest of public safety and the future usefulness of the land.

System of Numbering

The proposed By-law is written in a simplified form many communities have found more satisfactory to work with. Every few years, and sometimes more often, amendments are necessary to meet new conditions. The numerical system leaves room, in each section, for inclusion of additions at the proper places. For example, all residential land uses are now included in the same section - #4 - together with lot areas, yards, and other residential requirements. If some day a new district is added, it can be included in numerical order, in the proper place, without disrupting the numbering of other sections. The proposed form of the By-law is considered to be more useable, and therefore a more satisfactory form.

CHAPTER 12

SUBDIVISION CONTROL

Most of the growth of a town like Wilbraham takes place through the subdivision of land to create building lots. The Subdivision Control Law of the state gives powers over this type of development to the Planning Board. Unfortunately the effectiveness of subdivision control is limited by the application of this legislation and the powers which it grants to the local boards.

The law excludes from the definition of a subdivision those cases where all lots will have frontage on an accepted or approved street or a private street or way which existed when the Subdivision Control Law became effective in the Town, provided that the street, in the opinion of the Planning Board, has "sufficient width, suitable grade, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed use of land abutting thereon or served thereby". This definition encourages developers to use land fronting on existing streets in a "string" type of Subdivision, in order to avoid the controls and formalities involved in compliance with the subdivision regulations of the Planning Board.

The law specifically limits the powers of the Planning Board in regulating subdivisions. The Board's power does cover in very general terms the safeguarding of public health and welfare, by satisfying itself that the land proposed for human habitation is suitable for that purpose. More specific authority is given only for the regulation of the proposed street layout and drainage. One of the purposes of control which is definitely stated in the law is "for securing adequate provision for water, sewerage, drainage and other requirements where necessary in a subdivision; and for coordinating the ways in a subdivision with each other and with the public ways in the city or town in which it is located and with the ways of neighboring subdivisions". This should give the Planning Board sufficient authority to insist on a suitable street and drainage layout and to require that it conform to the Master Plan.

Based on this clause, and in order to coordinate local regulations with the Massachusetts Sanitary Code, the Board of Selectmen has adopted new "Rules governing minimum requirements for disposal of sanitary sewage in unsewered areas". These "Rules" require submission to the Board of Selectmen of data on the feasibility of subsurface sewage disposal on proposed subdivisions at the same time a Preliminary Plan of Subdivision is submitted to the Planning Board.

To relate these new "Rules" on sanitary disposal with the subdivision control Rules and Regulations, it is proposed that the Rules and Regulations for the Subdivision of land be amended as follows:

Section 1 Article 4 - Amend second sentence to read: "within sixty days of submission----". Since the Board of Health reports in 45 days, the Planning Board could have the benefit of the sewerage report before having to give its approval (in 30 days - as now written).

Section 2 Article 1 - Add: "where subsurface sewage disposal is to be used, a subdivider shall file two copies of a Preliminary Plan, containing the

information required by the Board of Health to determine the general feasibility of subsurface disposal on the subdivision".

Since a number of town maps show such basic data, as contours, swamps, slopes, and circulation, a small map to overlay town maps would show the proposed subdivision in relation to its surroundings. It is proposed to add:

Section 2 Article 1, a.1 - A key map at a scale of 1" = 1000 feet, showing the general boundaries and area of the entire parcel, the proposed subdivision and streets, and the existing street giving access, extended to the nearest existing intersecting street.

Surface and storm drainage are serious problems in several areas of town. The present rules may leave some doubt as to the extent of the information required. It is recommended that the following paragraph be substituted:

Section 2 Article 1.h- "Proposals for the disposal of storm drainage within and through the subdivision and locations of the nearest storm sewer or open outfall, including computations indicating total run-off".

In view of the Master Plan proposals for Cluster Zoning and the possibility of proposals for public or park area and open space, it is recommended that a more positive statement be included.

Section 2 Article 1.i - Amend to read: "Proposals for public or park areas or open spaces, suggested uses and ultimate ownership".

Topography is required to prepare final road profile maps for the Definitive Plan. General contours on the Preliminary Plan will help to make the whole proposal more understandable, and will facilitate analysis by the Planning Board. Therefore, the following are recommended:

Section 2 Article 1.j - Amend to read "Contours in sufficient detail to make the proposals clear".

Section 2 Article 1.k - Amend to read "Preliminary data on road profiles when required by the Planning Board".

Section 3 Article 2 - Delete and add: "Street Design. Streets shall be designed to carry the anticipated traffic. Any street which is shown on the Master Plan adopted by the Board as a principal or secondary thoroughfare shall have a minimum width of right-of-way, width of paving, and radius of curvature and a maximum grade as indicated in the following table. Any proposed street shown on the subdivision plan, other than a principal or secondary thoroughfare, the function of which proposed street is to connect areas served by access streets with one another and to the system of principal and secondary thoroughfares shall be designated as a collector street. Any such proposed street which is or which may be expected in the future to be more than 2,000 feet in length shall be deemed to be a collector street, unless otherwise determined by the Board. Any other proposed street,

whose purpose is primarily to provide access to abutting properties and which carries, and may in the future be expected to carry, predominantly traffic to or from such abutting properties, may be designated by the Board to be an access street. All collector and access streets shall have a minimum width of right of way, width of paving and radius of curvature and a maximum grade as indicated in the following table. All changes in grade shall be connected by standard vertical curves."

Classification	Minimum Width of Right-of-Way	Minimum Width of Paving	Minimum Radius of Curvature at Centerline	Maximum Grade
Principal Thoroughfare	80 ft.	44 ft.	500 ft.	6%
Secondary Thoroughfare	70 ft.	40 ft.	300 ft.	6%
Collector Street	50 ft.	36 ft.	150 ft.	10%
Access Streets	50 ft.	30 ft.	60 ft.	12%

The Board may, in its discretion, require greater widths of right-of-way, if it determines that anticpated traffic volumes may so require. In the case of thoroughfares, the Board may approve a reduction in minimum paved width to 36 feet, provided that all grading and all installation of drainage or other highway structures are done so as to facilitate future widening to the standards herein established.

Section 3 Articles 5 and 7 delete.

CHAPTER 13

CAPITAL BUDGET PROGRAM

Purpose

The purpose of a Capital Budget Program is to provide an overall schedule of capital expenditures projected over a period of years, related to projected town income and to projected operating expenditures. Necessary decisions on substantial expenditures can be based on a longer range view of projected as well as present needs. The five year Capital Budget Program is intended to provide a more orderly means of determining and financing community expenditures necessary to provide for its physical and other capital improvements.

Capital improvements include buildings and improvements, street and land improvements, and land acquisition for all town purposes, as well as new major items of town equipment. Future needs have been projected on the basis of the Master Plan, which is a guide to growth rather than a blueprint. The timing and even the extent and kind of future needs will depend on the actual growth of the town, and future trends or needs that are not now apparent. As the Capital Improvement Program is reviewed each year during preparation of the annual budget, past growth and trends may indicate desirable changes in priority of some projected needs. As the current year's budget is prepared and becomes operative, a new year's projected budget for the fifth following year is added to the Capital Budget Program. Also, as projected improvements enter the actual planning stages, more accurate costs may be determined than are possible in the scope of this budget.

The Capital Budget Program is a part of the Master Plan. The full report with basic data and projections is included as a separate section - Appendix B.

CHAPTER 14

THE MASTER PLAN

As noted in the Introduction, the term "Master Plan" comprises the plans for the use of land, for public facilities and for circulation, all of which have been discussed in the preceding chapters. The Master Plan must be based on a careful study of existing conditions and on the various social and economic trends which influence the community's development. Therefore this whole report may be considered as Wilbraham's Master Plan.

The map on the inside back cover shows the elements of the Land Use Plan, Facilities Plan, and Circulation Plan on one map. All are fully described in the preceding chapters. The Plan is based on a theoretical capacity population of some 32,000, with a population of 25,000 between 1980 and 1985. The latter estimate is based on continued growth of the whole region with most of this growth occurring in the suburban towns, like Wilbraham.

Wilbraham is primarily a residential community. There are strong indications that the townspeople want it to remain so. The natural and physical features of the town lend themselves to residential use. The Master Plan recognizes these factors, and is designed to maintain and improve the residential character of the community.

Only such neighborhood shopping areas are proposed as will be required to meet the future needs of the townspeople. General business and industrial areas are proposed to be expanded, but only in their present general locations along and in the vicinity of Boston Road.

To maintain as much as possible the open character of the residential neighborhoods, present and future, proposals are made for provision of open space in connection with future subdivisions. Properly located and planted, these open lands will prevent the continuous development of the uninterrupted street and house patterns, so typical of most city type developments.

The analysis of suitable land shows that, under the Master Plan proposals, there is adequate land for the anticipated future population. Due to the densities proposed, most of the development should take place in the central plain, closest to present and future public facilities and utilities that will serve the residents.

The relation of the school program to population growth and neighborhood development is discussed in Chapter 8. The Master Plan provides a proposed expansion of some of the existing school facilities and suggests general locations for new sites. The program for the next 25 years indicates the need for regional discussions on the junior and senior high school levels. Such discussion may lead to regional consideration of the elementary grades as well.

The Master Plan also shows proposed areas which should be reserved as greenbelts, principally along the valleys of streams. These can form a park and open space system. Their preservation has an important relation to drainage, trunk sewer lines and conservation. Also shown on the Plan are the traffic facilities proposed in the Plan for Circulation and more specifically described in Chapter 10.

The Master Plan includes a Capital Improvement Program to serve as a guide in Town fiscal matters. This program relates the anticipated future needs for money for operation - and for capital expenditures with the estimated town revenues.

Private development is guided and regulated by two means:

> Zoning, which is adopted by the Town to regulate the use of land and buildings along the general lines established by the Master Plan;
>
> Subdivision Control, for which rules and regulations are adopted by the Town Planning Board to secure the orderly development of new areas, and the provision of the necessary public improvements to sustain the new development.

As the voters are called upon to authorize expenditures for public improvements and facilities, the Master Plan is a guide to sound decisions as to the nature and location and extent of such improvements.