1957

Sequent occupance and changing land use patterns in greater Beverly.

Dooling, James Augustine
Boston University

http://hdl.handle.net/2144/11280

Boston University
Boston University
Graduate School

Thesis

Sequent Occupance and Changing Land Use Patterns
in Greater Beverly

by

James Augustine Dooling, III
(B.S. Ed., State Teachers College at Salem, Massachusetts, 1955)

Submitted in partial fulfilment of the requirements for the degree of Master of Arts 1957
Approved by

First Reader. George K. Lewis
Professor of Geography

Second Reader. Paul B. Cohen
Professor of Geography
# TOPICAL OUTLINE

## SEQUENT OCCUPANCE AND CHANGING LAND USE PATTERNS

### IN GREATER BEVERLY

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Purpose</strong></td>
<td>v.</td>
</tr>
<tr>
<td>I. Geographical Foundations</td>
<td></td>
</tr>
<tr>
<td>1. Location</td>
<td>2</td>
</tr>
<tr>
<td>2. Geology and Geomorphology</td>
<td></td>
</tr>
<tr>
<td>A. Description</td>
<td>12</td>
</tr>
<tr>
<td>B. Significance</td>
<td>17</td>
</tr>
<tr>
<td>3. Soils</td>
<td></td>
</tr>
<tr>
<td>A. Merrimac Fine Sandy Loam</td>
<td>22</td>
</tr>
<tr>
<td>B. Orono Silt Loam</td>
<td>23</td>
</tr>
<tr>
<td>C. The Gloucester Soils of Rial Side</td>
<td>29</td>
</tr>
<tr>
<td>D. The Rough Stony Land of Bev. Farms</td>
<td>31</td>
</tr>
<tr>
<td>4. Minor Geographic Factors</td>
<td></td>
</tr>
<tr>
<td>A. Hydrology</td>
<td>33</td>
</tr>
<tr>
<td>B. Climate</td>
<td>39</td>
</tr>
<tr>
<td>C. Virgin Flora and Fauna</td>
<td>41</td>
</tr>
<tr>
<td>D. Conclusion</td>
<td>43</td>
</tr>
<tr>
<td>II. Geographic Patterns Changing Through Time</td>
<td></td>
</tr>
<tr>
<td>1. The Colonial Period: Subsistence Agriculture and Commercial Fishing</td>
<td>48</td>
</tr>
<tr>
<td>2. Revolutionary Period: 1775-1815</td>
<td>71</td>
</tr>
<tr>
<td>3. Industrialization and Urbanization</td>
<td>64</td>
</tr>
<tr>
<td>III. Beverly at Mid Century</td>
<td></td>
</tr>
<tr>
<td>1. Population Growth and Industrialization</td>
<td>75</td>
</tr>
<tr>
<td>A. Factors Encouraging Immigration</td>
<td>75</td>
</tr>
<tr>
<td>(1) Minor Factors</td>
<td>76</td>
</tr>
<tr>
<td>(2) Major Factors</td>
<td>82</td>
</tr>
<tr>
<td>B. The Resulting Housing Problem</td>
<td>90</td>
</tr>
<tr>
<td>C. Factors Attracting Industry</td>
<td>97</td>
</tr>
<tr>
<td>D. The Industrial Park</td>
<td>100</td>
</tr>
<tr>
<td>E. The Major Industries of Bev.: 1957</td>
<td>104</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
</tr>
<tr>
<td>2. Modern Urban Problems</td>
<td></td>
</tr>
<tr>
<td>A. The School System</td>
<td>116</td>
</tr>
<tr>
<td>(1) A Brief History of the School Building Program 1900--1950</td>
<td>119</td>
</tr>
<tr>
<td>(2) The Present School Situation</td>
<td>121</td>
</tr>
<tr>
<td>B. Traffic Plans and Problems</td>
<td>123</td>
</tr>
<tr>
<td>C. Public Recreation</td>
<td>133</td>
</tr>
<tr>
<td>D. Fire Protection</td>
<td>145</td>
</tr>
<tr>
<td>E. The Water Supply</td>
<td>147</td>
</tr>
<tr>
<td>3. The Tax Rate</td>
<td>149</td>
</tr>
<tr>
<td>IV. Conclusions as to Future Growth</td>
<td>156</td>
</tr>
</tbody>
</table>

**Appendices**

| A. Recent Population Growth of North Shore Cities and Towns | 167 |
| B. Population from Earliest U. S. Census to 1950 | 168 |
| C. Foreign Born White Population | 169 |
| D. Composition of Population | 170 |
| E. Economic Characteristics of Beverly | 171 |
| F. A Sample Soil Analysis | 173 |
| G. City of Beverly Zoning Ordinance Booklet With Zoning Map | 175 |
| H. Map of New Industrial Site | 176 |
| I. Street Map of Beverly | 177 |
| J. Topographic Map of Beverly | 178 |

| Bibliography | 179 |
| Abstract of Thesis | 182 |
# LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>North Shore and Environs</td>
<td>4</td>
</tr>
<tr>
<td>2.</td>
<td>Political Subdivisions of Beverly</td>
<td>11</td>
</tr>
<tr>
<td>3.</td>
<td>Map of General Geomorphology</td>
<td>13</td>
</tr>
<tr>
<td>4.</td>
<td>Central Business District Pattern</td>
<td>16</td>
</tr>
<tr>
<td>5.</td>
<td>Soil Map of Beverly</td>
<td>23</td>
</tr>
<tr>
<td>6.</td>
<td>Seventeenth Century Beverly</td>
<td>51</td>
</tr>
<tr>
<td>7.</td>
<td>Table A: Agricultural Production in 1767</td>
<td>55</td>
</tr>
<tr>
<td>8.</td>
<td>Table B: Exports from the Port of Beverly in 1770</td>
<td>55</td>
</tr>
<tr>
<td>9.</td>
<td>Table C: Agricultural Production in 1840</td>
<td>66</td>
</tr>
<tr>
<td>10.</td>
<td>Dying Industries of Beverly</td>
<td>73</td>
</tr>
<tr>
<td>11.</td>
<td>Population Growth in Beverly Since 1790</td>
<td>77</td>
</tr>
<tr>
<td>12.</td>
<td>Rapid Growth of the Commercial Center</td>
<td>80</td>
</tr>
<tr>
<td>13.</td>
<td>More Bodies and Souls to Save</td>
<td>81</td>
</tr>
<tr>
<td>14.</td>
<td>Beverly's Sewer Facilities</td>
<td>83</td>
</tr>
<tr>
<td>15.</td>
<td>Beverly's Transportation Network</td>
<td>85</td>
</tr>
<tr>
<td>16.</td>
<td>Airport City for the North Shore</td>
<td>86</td>
</tr>
<tr>
<td>17.</td>
<td>Beverly's Waterfront</td>
<td>88</td>
</tr>
<tr>
<td>20.</td>
<td>Veteran Housing Centers</td>
<td>94</td>
</tr>
<tr>
<td>21.</td>
<td>New Home Construction Boom Continues in City</td>
<td>95</td>
</tr>
<tr>
<td>22.</td>
<td>Signs of the Times</td>
<td>96</td>
</tr>
<tr>
<td>23.</td>
<td>Occupation Groups of Beverly</td>
<td>98</td>
</tr>
<tr>
<td>25.</td>
<td>The Corporation That Built the City of Beverly</td>
<td>105</td>
</tr>
<tr>
<td>26.</td>
<td>Industries Along the Waterfront: Old and New</td>
<td>107</td>
</tr>
<tr>
<td>27.</td>
<td>Industrial Firms in Beverly's Center</td>
<td>108</td>
</tr>
<tr>
<td>28.</td>
<td>Rapid Industrial Expansion</td>
<td>111</td>
</tr>
<tr>
<td>29.</td>
<td>Value of Beverly's Industrial Products</td>
<td>112</td>
</tr>
<tr>
<td>30.</td>
<td>Number of Firms in Beverly</td>
<td>113</td>
</tr>
<tr>
<td>31.</td>
<td>Annual Payroll of Beverly's Industries</td>
<td>114</td>
</tr>
<tr>
<td>32.</td>
<td>Number of Employees in Beverly's Manufacturing Groups</td>
<td>115</td>
</tr>
<tr>
<td>33.</td>
<td>Table D: Date When Capacity Enrollment Reached in Beverly's Schools</td>
<td>121</td>
</tr>
<tr>
<td>34.</td>
<td>Educational System of Beverly</td>
<td>122</td>
</tr>
<tr>
<td>35.</td>
<td>Beverly's Greatest Problem</td>
<td>126</td>
</tr>
<tr>
<td>36.</td>
<td>The Pride and Shame of Beverly</td>
<td>130</td>
</tr>
<tr>
<td>37.</td>
<td>Projected Beverly School Enrollment</td>
<td>132</td>
</tr>
<tr>
<td>38.</td>
<td>Traffic Map of Beverly's Center</td>
<td>135</td>
</tr>
<tr>
<td>39.</td>
<td>From Traffic Speedway to Traffic Bottle-neck</td>
<td>137</td>
</tr>
<tr>
<td>40.</td>
<td>Public Recreational Facilities</td>
<td>138</td>
</tr>
<tr>
<td>41.</td>
<td>Forested Parks and Atlantic Beaches</td>
<td>142</td>
</tr>
<tr>
<td>42.</td>
<td>That Youth May Grow Strong and Happily</td>
<td>143</td>
</tr>
<tr>
<td>43.</td>
<td>Beverly's Most Beautiful Park</td>
<td>144</td>
</tr>
</tbody>
</table>
44. A Growing Municipal Problem: Adequate Fire Protection
45. Solving an Acute Water Shortage Problem
46. Tax Rate of Beverly Since 1932
47. Amount Raised by Taxes in Beverly: 1934--1954
48. Real Estate Valuation in Beverly since 1932
49. Table E: Chief Municipal Expenditures: 1950-1957
50. Among the Taxpayers: Multi-millionaires
51. Greater Beverly and Environs
52. Table F: Factors Encouraging Industrial Growth
53. Districts of Decay and Overpopulation
PURPOSE

The purpose of this thesis is a geographical analysis concerning the growth of Greater Beverly. Geographical factors underlying the town's transition from an agricultural-fishing village economy to commercial port to the industrial-residential community of today are discussed. Special emphasis is placed upon the city's development into a central place area serving many of the small Cape Ann towns.

The framework of this paper is based upon the criteria established by Dickinson for the geographical interpretation of the urban settlement. According to his plan, the four problems concerned with the study of the individual urban settlement are:

1. The physical and cultural conditions involved in the origin of the nucleus of settlement.
2. The reactions of this nucleus to historical events.
3. Life and organization of the contemporary settlement.
4. The interrelations between the settlement and the surrounding territory.

Chapter I. attempts to find reasons to answer the question: "Why did Beverly develop?"

Chapter II. deals with the sequent occupancy and changing land use—the historical geography of Greater Beverly. This attempts to answer the question: "How did Beverly develop?"

Chapter III. treats the Beverly of mid-twentieth century. This section considers in detail the several problems which have arisen as a result of the city's growth. The reasons behind the industrialization and urbanization of modern times are discussed. This seeks to answer the question: "What are the results of the town's sequential development?"

The concluding chapter considers the future growth of the city in terms of its central location in the North Shore area.
I

GEOGRAPHICAL FOUNDATIONS
I.

A knowledge of the fundamental geographical factors of site and situation is prerequisite to a clear understanding of the sequential development of Beverly. The purpose of this chapter is to discuss the influences of location, geology and geomorphology, soils, hydrology, climate, and the virgin flora and fauna. These elements, singly or in combination, have had a significant effect upon the growth of the urban core with respect to the location of the residential, commercial and industrial districts; the pattern of roads and streets; and the gradual transition of the economy of the town from agricultural to commercial port to manufacturing.

...  

1. LOCATION

The element of primary geographical importance is that of location. In common with most cities, Beverly developed as a result of the combination of the three city-building factors: transport, specialized function, and central place. Each of these varied as to degree of importance at different periods of time. Initially the break-of-bulk factor was significant considering the coastal location that offered both river and harbor facilities. Also the location of the town at a base angle
of the Cape Ann triangle caused an early development of nodality as several routes focused on the area (see map on page 4). Transportation was a factor in the development of the town in Revolutionary days when Beverly was a notable port of call for foreign commerce. A century later it became a coal and oil distribution point. A regular line of steamers transported the oil to Beverly from Port Arthur, Texas. The transport factor also stimulated Beverly's growth with the building of the railroad in the 19th century and the airport in the 20th.

Located on the southern extremity of the Cape Ann peninsula, Beverly is the main gateway (Routes 1A, 128) to that area from Metropolitan Boston.

The transport factor, although significant, has in recent decades become secondary to the specialized function of manufacturing which it had encouraged to develop. The shoe and shoe machinery industries have influenced the development of the town for almost a century. During recent years the industries of Beverly have become more diversified.

Finally as Beverly grew from town to city, it became increasingly a central place area performing services for

NORTH SHORE AND ENVIRONS

NOTE BEVERLY'S LOCATION AS:
1. Focal Point of the North Shore
2. Southern Gateway to Cape Ann

LEGEND
- North Shore in Yellow
- Cape Ann Municipalities Underlined
- Cities are Capitalized
- Routes Shown as Red Lines
such surrounding small towns as Wenham, Hamilton and Manchester. Although Beverly is overshadowed by the larger cities of Salem and Lynn to the south, the only community of comparative size on the Cape Ann peninsula is Gloucester. Thus Beverly's central business district, in recent years, has been increasingly utilized by the inhabitants of the Cape Ann towns.

Lying in coastal Northeastern Massachusetts, Beverly is locally bordered by Danvers on the west, and by the small towns of Wenham to the north and east, and Manchester to the east. To the south lie the waters of Massachusetts Bay; and the political line follows the channel of the Danvers River and Beverly Harbor, separating Beverly from the City of Salem (See map on page 4).

The greatest length of the city from the boundary towards Danvers on the west to Manchester on the east is about 6 2/3 miles; and the greatest width, from Tuck's Point, opposite Salem, on the south, to the Wenham line on the north, is approximately 3 1/2 miles. Thus the average length and width are respectively 5 2/3 miles and 2 2/3 miles.1 The city, with an area of 15.14 square miles,2 possesses an irregular, nine-mile-long coastline.

Beverly has a somewhat trapazoidal shape, with its irregular southern coastline as the major base. Except for the northeastern boundary towards Wenham center, the city does not share in the absurdly irregular political boundaries so common to Massachusetts towns, especially the older eastern settlements.

Since distance to certain points has played a role in the development of the town, the mileage to selected cities is listed:

1. Salem.................2 miles
2. Lynn....................7 miles
3. Boston...............18 miles
4. Newburyport........20 miles
5. Portland, Maine...88 miles

The above statistics would place Beverly about midway between Boston and the Massachusetts-New Hampshire border, and indicate the foundation for that perennial boast of the Chamber of Commerce (and the local airport) that Beverly lies "In the heart of Massachusetts' famous North Shore". An example showing this centrality is the channelizing of five converging routes (See map on page 85) into one Boston-bound route (1A). Such a network of roads naturally encouraged the city to grow.

1. "Beverly Municipal Airport" pamphlet, published by Beverly Airport Commission and Beverly Chamber of Commerce.
2. Routes lead to points north of Beverly: 127 from Gloucester, 22 from Essex, 1A from Newburyport, 62 from Middleton and 97 from Haverhill.
A coastal Massachusetts location gave Beverly, along with several others such as Boston and Salem, the advantage of early settlement. During the early Colonial Period, a seacoast locale offered the benefit of more reliable and rapid commerce with Great Britain. After failure at northern Cape Ann and disputes with a group of later settlers in "Naumkeag" (Salem), the Conant company1 arrived in Beverly within ten years of the Pilgrim's landing at Plymouth. During the 1640's and 1650's the settlement proved successful, so much so, that Beverly was granted its independence from the mother city of Salem and incorporated as a town in 1668.

The early settlement probably succeeded because the farmers could supplement their meagre earnings by fishing. Some of the first settlements of interior Massachusetts faced severer hardships because the pioneer was forced to depend entirely upon crops which too often did not thrive in the rocky, acid soil of doubtful fertility that New England offered.

It is difficult to decide whether Beverly was helped or hindered by its location opposite Salem. It is true

1. Roger Conant, one of the five "old planters" of Beverly, was the superintendent of the Dorchester company engaged in the fishery and agricultural pursuits. He is considered the founder of Beverly. His original farm was located in North Beverly not far from the head of Bass River.
that Conant and the other first settlers of Beverly
were emigrants from Salem. Yet there has been a constant
rivalry between the two ever since—all too often with Salem
getting the better of the bargain.

Its location near Salem did allow it to share in Salem's
days of maritime glory. During the early Colonial Period
the two ports were of approximately equal significance
as bases for privateers and fishing vessels, but after the
Revolutionary War Salem's world commerce increased so
rapidly that the larger port almost absorbed neighboring
Beverly. One can theorize a different possible turn of
events had Salem not possessed the better of the two harbors.
Beverly did have a harbor adequate for ships of the period
prior to about 1830 as its many wealthy merchants such as
Cabot and Lovett give proof. It would perhaps be unfair
to count Beverly as a mere satellite of Salem, when it is
remembered that Beverly was a leading port during the very
years that Salem reached its zenith. Nevertheless Beverly
did suffer from the "Big Sister Complex" when proud
Salemites would look down their noses at "Beggarly"\(^1\)
across the bridge! But if the physical geography of the
region had been somewhat different—if Salem Harbor had
been a tidal marshland—it is reasonable to believe that
the chief port of call in the days of the clipper ships
would have been two miles northward.

\(^{1}\) A derogatory nickname for Beverly during the Colonial
Period used in reference to its small size.
Thus Beverly's location was in part responsible for early successful colonial settlement and Revolutionary maritime prosperity. What part did it play in the years leading to the present? A central position on the shore route from Boston to New Hampshire and Maine guaranteed good rail and road development. The fortunate location became the junction of the main line of the Boston and Maine to the north with the branch line to Gloucester and other Cape Ann points. A highway network including routes 1A, 22, 62, 97, 127, and 128, is a direct result of its nodal location. In fact, its location with relation to the industries and business concerns of Lynn, Salem, Gloucester and other North Shore points and the proximity of routes 128 and 1 (Newburyport Turnpike) were prime considerations leading to the establishment of the Beverly Municipal Airport at John Mountain Field.

Proximity to Salem and Lynn (among other factors) spurred the industrial development of Beverly. As both these larger cities reached a near saturation point, further industrial expansion was stifled. It was natural that Beverly having large unused space, would entice new plants to establish there. Population decline and general appearance give the two larger cities an aspect of moderate degeneracy, whereas on the whole, Beverly appears as a city of general prosperity. Chief factors accounting for this
condition are its newer industries and the pleasant urban-rural environment that still remains. Beverly is one of those cities and towns lying in a fringe zone or semi-circle around the Boston Metropolitan District. To the south of Beverly lie Salem, Peabody, Lynn and Saugus—all unmistakably urban—an outer ring extending into Essex County of the more densely populated urban nucleus comprising Boston and its immediate neighbors. The contrast between the cities south of Beverly and the towns north of it is immediately apparent. Wenham, Hamilton, Essex, Middleton, Topsfield—all of these are as essentially rural as Lynn or Salem is urban. Beverly then, is located in that narrow transition zone of urban-rural mixture. Such a locale offers the advantages of urban shopping centers and industrial jobs together with pleasant residential neighborhoods.

Reference will be made in the succeeding pages to the various wards and precincts of Beverly as they are popularly known. The map on the next page shows the following political subdivisions:

1. Beverly Cove............Ward 4
2. Beverly Farms............Ward 6, Precinct 1
3. Centerville.............Ward 6, Precinct 2
4. Downtown Beverly.......Wards 2 and 3
5. North Beverly..........Ward 5
6. Rial Side..............Ward 1
2. GEOLOGY AND GEOMORPHOLOGY

Geology, and to a greater extent, geomorphology, have played a significant role in the development of the current urban pattern. The central business district has not formed a nucleus around a junction of major streets as in the usual concentric zone pattern of nearby cities. Instead it has evolved as a linear or a type of axial business district stretching along the crest of a hill from the original area near the waterfront to the present commercial encroachment into North Beverly. A secondary business district is aligned along a parallel path in a valley two blocks from the Bass River shoreline. This section attempts to note the effect of topography on the historical development of the urban core.

A. DESCRIPTION

The largest area of Beverly is occupied by irregular hummocky relief characterized by frequent bedrock outcrops. This topography is interrupted by areas of sand plains and gravel terraces, for example the narrow belt of land extending from Beverly Cove to Centerville. A few drumlins are found in the northwest section of the town. (See map page 13; see also the topographic sheets of the city in the appendix).

Cape Ann, from Beverly to Rockport, is an area of intense past glaciation and post-glacial erosion. The surfaces
MAP OF GENERAL GEOMORPHOLOGY

AFTER FUESS, 1935
of out-cropping ledges of hornblende granite and syenite have been rounded and smoothed with glacial erratic boulders strewn upon them. A good example of this is the several large boulders of granite, probably erratics from Wenham or Hamilton, that are found on Bald Hill.¹

A result of the last ice age is the shallow depth to the bedrock, which imperfectly buried in the soil cover, outcrops in numerous denuded ledges—giving scenic charm, especially to the headlands by the sea. Diorite lies in the western portion (Rial Side), but in the eastern half begins the granite structure that forms the hills of Cape Ann, reaching its climax in the headlands of Gloucester and Rockport. The basic geological structure, then, is granitic, with a few shore strips of the older crystalline rocks.²

In general the stone is of a rather coarse quality. Several quarries once furnished an abundance of the granite for cellars and sea walls and the old farm fences; but, owing to its hardness and darker color when hammered, it was less valued for buildings than the stone obtained at Rockport.

It is everywhere apparent that the coast is in a state of submergence. The numerous fringing islands such as Misery and Baker's, the drowned valleys of the Danvers River covered by water at high tide, the

tidal inlets of the Bass River, as well as the several peninsulas and points (Woodbury, Hospital, Curtis, etc.) all give ample evidence that the area has been sinking.

According to Fuess in his *Story of Essex County*:¹

"All the harbors of New England, Salem, Beverly, Gloucester, Lynn, and the rest, are each the drowned valley of a senile river, that once cut into the lowland plain after its uplift and reached the ocean some miles beyond their present-day mouths. The rock hills of the ancient country that were near the old coast now appear as off-shore islands, or as peninsulas and capes. Each harbor has the river that once made it, entering it in its shore side. The borders of each harbor tend to run out to the sea as a string of islands that were once valley sides."

Other material evidence of subsidence is found in the sheltered coves. On Beverly shore, between West Beach and Misery Island, are many stumps of forest trees which formerly could be easily seen at low tide, when the water was clear and still, at a depth of twelve to fourteen feet. A piece secured from one of those stumps was found to be white pine.² Furthermore, red cedar stumps have been found at Mingo beach, with but only the rotted heart-wood remaining. With these were many logs of spruce and hemlock decaying in the peat and muck of the beach. In this thick layer of peat have been found such forest remains as white pine cones, oak acorns,

² Sears, *op cit.*, p. 51
spruce cones, and roots, logs, and stumps of spruce, hemlock, pine and oak merged in common decay.¹

Among geomorphological features are several eskers which generally enter Beverly from the adjacent towns to the north. Another glacial formation is the ice-block hole or kettle now occupied by Beaver Pond. Sears states: "Beaver Pond in Beverly is without doubt an ice-block hole, as on the southeasterly side of the pond there is found a steep incline of morainic drift and kame gravel. Norwood's Pond was formed artificially by the construction of a dam between the Wenham-Beverly esker and a kame terrace at the east."²

To summarize, the entire coast line of the North Shore was quite different during Inter-Glacial times in outline from that of today. The Miseries, Baker's and the other harbor islands were once the outer edge of the mainland. The advancing glacier scoured the rocks underlying the Bass and Danvers Rivers and much of what is now Salem-Beverly Harbor out to sea. For thousands of years, waves have been constantly eroding the coastal landforms, chewing several coves into the mainland between the more resistant points and peninsulas. The whole of "Downtown" Beverly is located on the largest of these peninsulas.

¹. Sears, ibid., p. 52
². Ibid., p. 255
B. SIGNIFICANCE

The topography of Beverly has had a passive but nevertheless substantial influence upon the development of the present urban pattern. For example, the steeper slopes with ledge outcrops found in the northwest hilly section of Beverly discouraged early settlement. Even to this day the population near Kimball Hill is so sparse, that the adjoining airport site ideally fulfills the condition that airports should be to some extent isolated from dense populations. As a consequence of the terrain, the North Beverly community has confined itself to the terrace area between Cherry Hill to the west and Brimble Hill to the east. On the other hand, large portions of the other political subdivisions are characterized in general by a rolling to undulating topography, chiefly gravel terraces and plains (as noted in part A). This type of landform has been conducive to a more even spread or scattering of the population.

Beverly's first settlers occupied the Water-Front Street area near the coast. Gradually, the business district and center of population began to climb the gently rising hill on which Cabot Street is located. Today, the center of business activity lies near Ellis Square (the intersection of peak value) on the summit of the hill. The banking area
and the chief clothing and department stores are perched on the summit which is rather flat for about six blocks or so. The older business district, on the southern slope of the hill, has declined to a pool-room, liquor store, cheap apartment house type of area—a zone of discard. Some of the buildings date from the 1700's when this area was the commercial center of an essentially water-oriented community.

The new businesses advanced as far as Elliott Street, then abruptly stopped. The reason apparently is that beyond here is the steep northern slope of the hill. This area (between Elliott and Gloucester Crossing) in general, is an old but good residential area. New business establishments have skipped some seven blocks (the slope) and located at Gloucester Crossing and beyond towards North Beverly—the present zone of assimilation. The new A. & P. supermarket located at the junction of Rantoul and Cabot Streets at the base of the hill, and the new First National store located farther along Cabot on the level ground. It appears that this base area, near the junction of Cabot and Rantoul streets, already a secondary business district of note, will be the chief rival in the future to the well-established central business district on the summit.

The Ellis Square area, however, will remain the critical intersection for many years to come. An accumu-
lation of investments in buildings and land causes a reluctance on the part of businessmen to stray far from this intersection of maximum traffic. An example of this is the construction of the new Webber's department store on the corner of Broadway and Cabot three blocks south of Ellis Square. Nevertheless the general trend of the geographic center of the central business district toward North Beverly is indicated by the transition of the Gloucester Crossing area from a minor neighborhood shopping center to a commercial nucleus significant as a trading area for the city as a whole.

Thus we see that the main business district located on the top of a hill along a rather winding road, although a second major artery (Rantoul Street) follows the level area along the base of the lenticular hill, is much the straighter by comparison, and is the path of the main north-south route (1A) through the city. Considering these three factors, it would seem reasonable to assume that the Rantoul Street site offered a better opportunity for a main business district to develop.

Actually, much of Rantoul Street was filled in after the establishment of businesses on the hill. When Beverly began, Bass River was much wider than it appears now. Much of the land was filled in a century ago. As a matter of fact,
the area of the Bass River has been continually shrinking as small inlets here and there have been filled in over the years. At present, for example, the Knight Lumber Company is increasing its storage area by filling in a small cove adjoining the Rial Side Bridge. Nearby the utility works is also increasing its land area at the river’s expense.

Cabot Street got the advantage of an early start, therefore, because people preferred to trade on the hill, rather than along the swamplike, poorly drained area that was found near Rantoul Street long ago. Although Rantoul Street has the Post Office, schools, and several business blocks of note, it will continue to suffer in competition with Cabot Street. Much more than Cabot Street, it suffers from a land use jumbling. The shoe and leather shops of lower Rantoul are followed by an ill-assorted series of single-family houses, apartments, second-class hotels, elementary schools interspersed with dozens of stores of all the usual types. Several blocks of stores cater chiefly to the Italian district in the general vicinity. In the case of Rantoul Street versus Cabot Street, the advantages and disadvantages of site that existed in the nineteenth century were factors in the evolution of two entirely different land use patterns.
3. SOILS

Another geographic force significant in the growth of the various sections of the town is the soil. Beverly offers a case example in which soil, rather than one of the other factors of geography, was the chief influence in modifying the urban pattern. Notwithstanding the fact that manufacturing has supplanted agriculture as the chief industry of the area, or indeed, that Beverly even in its early days was the home of fishermen and sea captains, the soil has influenced the town to a substantial degree. It was the varying properties of the diverse and scattered soils that favored the development not only of the chief farmlands as they were, but even much of the street pattern and the population distribution that followed. The purpose of this section is to comment upon the role the soil environment played in the agricultural period of the town and consequently of the later development.

A. MERRIMAC FINE SANDY LOAM

Reference to the soil map (page 23) shows that Beverly contains approximately a dozen of the main soil series and types, not to mention six other miscellaneous classes of land. Among the predominant types are Merrimac fine
### TABLE I. SOIL SERIES OF BEVERLY

<table>
<thead>
<tr>
<th>Soil Series and Type</th>
<th>General Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Essex fine sandy loam</td>
<td>Slopes of hills: Cherry, Folly, Salem Reservoir, Bald. Central Beverly south of ponds.</td>
</tr>
<tr>
<td>2. Gloucester stony loamy sand</td>
<td>Hills of Rial Side overlooking Bass River; Woodbury and Curtis points, Goat Hill; part of C.B.D.</td>
</tr>
<tr>
<td>3. Gloucester stony fine sandy loam</td>
<td>Most of Rial Side</td>
</tr>
<tr>
<td>4. Gloucester very stony loam</td>
<td>Green Hill in Rial Side</td>
</tr>
<tr>
<td>5. Gloucester fine sandy loam</td>
<td>Base of Folly Hill towards Bass River Brook</td>
</tr>
<tr>
<td>6. Hinckley gravelly sandy loam</td>
<td>Minute portions of North Beverly toward Wenham line.</td>
</tr>
<tr>
<td>7. Hinsdale stony fine sandy loam</td>
<td>Minute portions near Norwood Pond</td>
</tr>
<tr>
<td>8. Merrimac loamy sand</td>
<td>Longitudinal stretch from Wenham Lake to Bass River.</td>
</tr>
<tr>
<td>9. Merrimac fine sandy loam</td>
<td>Several large portions of North Beverly, Centerville, Cove, Farms and Salters Point.</td>
</tr>
<tr>
<td>10. Orono silt loam</td>
<td>Rantoul, Park St. area on west side of Bass River.</td>
</tr>
<tr>
<td>11. Woodbridge fine sandy loam</td>
<td>Summits of several hills: Kimball, Cherry, Salem and Beverly Reservoirs, Lords.</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
</tr>
<tr>
<td>12. Muck</td>
<td>Isolated stretches in Centerville, Montserrat, Farms.</td>
</tr>
<tr>
<td>13. Peat</td>
<td>Large portions of Centerville--marsh area of Thissell Br.</td>
</tr>
<tr>
<td>14. Coastal beach</td>
<td>Small section of West Beach near Manchester line.</td>
</tr>
<tr>
<td>15. Meadow</td>
<td>Isolated sports in Rial Side; several along brooks as Cedar Stand, Thissell; those flowing to Miles River, Wenham Lake, Bass River.</td>
</tr>
<tr>
<td>17. Tidal marsh</td>
<td>Small sections of Rial Side along Danvers River, portions of West Beach and along Manchester line.</td>
</tr>
</tbody>
</table>
sandy loam, Gloucester stony sandy loam, peat, and rough stony land. With one notable exception, most of the several types vary only in the number of problems they offer the discouraged farmer. Fortunately, each of the six political subdivisions of Beverly with the exception of Rial Side, contain moderately large acreages of Merrimac fine sandy loam.

Let us briefly note some of the qualities of this soil series. Merrimac fine sandy loam is composed largely of granite debris deposited along the streams that emerged from the retreating glacier or in glacial lakes. Beverly has one of the largest areas of this soil in the county. The surface varies from level to gently undulating, and lies from 20 to 50 feet above stream level. Drainage is internal and well established. Owing to its freedom from stones and its mellowness, this is one of the easiest soils in the county to cultivate. It can be plowed at almost any time, as it drains readily after rains and comes into condition to work early in the spring. The soil is best for yields of market gardening, especially potatoes; but if fertilized, it will produce hay, corn, and small patches of oats, rye, and buckwheat. Although orchards and dairy farms can be found on this soil, it was undoubtedly used primarily for home vegetable gardens.

2. Ibid.
3. Ibid.
Conant, Balseh, and the other first planters early discovered the location of this soil that produces well. It is doubtful that a more auspicious situation could be found for the beginning of Beverly than the original thousand acres (See page 51) of the old planters. Other stretches of good soil existed in what was to become Centerville, Beverly Cove, etc., but none offered the ideal combination of high yielding soil and transportation on the Bass River estuary that was so essential in the 1600's. During these early years, the waterway aided the farmers in their exchange of foodstuffs for necessary supplies with Salem and other communities.

It can be assumed that at one time or other, a few farmers attempted to grow crops on the various Gloucester types and other poor soil series that today support only woodlands—as stonewalls lost in the midst of pine woods and brushland indicate. Those that remained on Merrimac fine sandy loam prospered and passed their farmlands onto their sons; those that farmed on the poorer soils failed, and the forest reclaimed its domain.

Just as Balch's original farm at the head of Bass River (now United Shoe Machinery Corporation pond) had been located on the Merrimac soil, so, with few exceptions, the more successful farms were established in other areas with this fertile soil in the succeeding years. As a matter
of fact, the eastern half of Beverly proper, including much of what is now the central business district and the expensive residential district of the Lothrop Street area, has its foundations upon Merrimac fine sandy loam. The earliest settlers thus had the opportunity to farm on good soil and go to sea when the growing season ended. It was advantageous indeed, to farm within a fraction of a mile from the harbor wharves. All but the youngest of boys and the oldest of men farmed by summer and fished by winter during the Colonial Period.

Considering the fact that Beverly proper was one of the two political subdivisions that had a large acreage of fertile soil (North Beverly was the other), soil was one of the geographic factors leading to the evolution of the urban core on the peninsula where it is rather than elsewhere. Since Beverly was an agricultural and sea trading community for two hundred years, then it is reasonable to expect the densest population to have occurred in that area that offered good soil and good harbor advantages. Had this area been Gloucester stony loamy sand (as in Rial Side, a peninsula of equal size) it is doubtful that the settlement during colonial times could have been very successful. Surely the population distribution and probably the center of business activity would have developed differently.
B. ORONO SILT LOAM

We have seen that one of the most extensive soils in Beverly, Merrimac fine sandy loam, influenced the arrangement of the urban area. On the other hand, a soil of small acreage, Orono silt loam, also played a significant role in Beverly's history. Generally only fair yields of vegetables could be produced, for this soil is difficult to handle; it remains wet and cold late in the spring, is quite acid and imperfectly drained. But while this soil, derived from glacial-outwash material laid down under the salt water of the once-greater Bass River, was poor for farming, it was excellent for the making of pottery. Associated with this soil at a depth of 24 to 26 inches is a subsurface heavy clay mottled with yellow, brown, greenish gray, and gray. In places these compact clay deposits range from 10 to 20 feet in thickness. A number of pits were opened in the Park-Federal-Rantoul-River St. area to obtain clay for brick and other ceramic industries. During the greater part of Beverly's history the making of brick and ceramic ware from the clay pits on the east side of the Bass River was a significant industry. As recent as 1915 pottery was being manufactured on Park Street.

Perhaps it is unwise to plead the cause of geographical

1. Latimer, op cit., p. 47.
2. Ibid.
3. Ibid.
4. Ibid.
determinism, but the indisputable truth is that approximately eighty per cent of Beverly's industry as well as a significant portion of her commercial buildings have their footings in Orono silt loam. It was natural that Beverly's first industry, pottery, established a river oriented manufacturing location and the subsequent industries were attracted to the same general area: Rantoul, Park, River and nearby streets.

... 

C. THE GLOUCESTER SOILS OF RYAL SIDE

It would be beyond the scope of this paper to describe the other fourteen or so soils in detail; it is sufficient to note that each shares one or more of the following disadvantages to some degree: too poorly drained or drainage excessive, too acid, too deficient in organic matter, too steep, too stony, too salty, etc. The Gloucester series, one of the most extensive of the poorer soil types, is mentioned as an example. It may be assumed that the peat and muck and other infertile soils had a similar effect on the distribution of population, only varying in degree.

During the agricultural period, the Gloucester soils were negative in their effect. Although farms existed in Ryal Side from early times, few generally speaking, were prosperous. Some eighty per cent or more of the
section is one of four types of Gloucester soil (principally stony sandy loam). Only through much difficult cultivation could patches of corn or vegetables be handled with fair success. It is significant that the first farmer in this area (after the woodsman, Royal) settled at Salter's Point, the one small fraction of land that happens to be Merrimac fine sandy loam.

As Beverly Proper began to become crowded, the tendency of the earlier farmers, in order to avoid the Gloucester soils, was to spread to the Cove, even to then distant Centerville. But when Beverly underwent a change to an industrial economy, Rial Side was favored as a residential area. Here was a large area of cheap land, much of it vacant due to its rocky surface. Most of the area lies only about a mile or so from the industrial district. Thus for the last few decades, Rial Side has offered a convenient location for the homes of the factory and other types of workers. Today, there are no farms, no factories, and only a dozen stores of the grocery or drug variety. It is a completely residential area.
D. THE ROUGH STONY LAND OF BEVERLY FARMS

Perhaps eighty per cent of Beverly Farms is a sprawling area of rough stony land. Long ago the poor farms were supplanted by numerous estates. Ledgy highlands by the sea make poor farms but provide beautiful scenery for the homes of the wealthy. A few old stone walls visible in the woods that has overgrown the abandoned farms contrast sharply with the intricate fences of estate after estate along Hale Street.

Beverly Farms is somewhat of a misnomer—larger areas of the better soils occur in North Beverly and Centerville. It is in Centerville, not Beverly Farms, that the last vestige of a rural environment remains. Here is the last significant patch of Merrimac fine sandy loam that has not been absorbed by the advancing margin of the dynamic residential outpush.

Even this poorest of soils found in Beverly Farms had an indirect but definite influence upon the urban pattern. During the later nineteenth century, Beverly Farms became one of the primary centers of the luxurious summer residences for the wealthy of Boston. For generations farmers had eked out a poor living by allowing their cows to graze on the land. Much of the land had been considered next to worthless. But during the 1880's a few bankers and lawyers, admiring the
scenery, built their homes on the ledgy hills overlooking the sea. In a matter of a few years the poor pastureland became very valuable property. Not a single farmer long resisted the prices that were offered for his boulder till, Hinsdale stony sandy loam and tidal marsh.

The impact of this change in the town's development (treated upon more fully in the second chapter) was substantial. For many years one hundred families paid 50% of the town's taxes. They served as a stimulus in the growth of the town. Roads were improved, new public buildings built, the school system reorganized, and in general the prosperity of the town was increased.
4. MINOR GEOGRAPHIC FACTORS

This final section dealing with the physical aspects of Beverly considers the minor impact of such geographical forces of hydrology, climate and the virgin flora and fauna. They are classified as minor for two reasons. In the first place, Beverly shares them, generally speaking, with all other North Shore communities and, indeed, with much of New England. The second reason is that their influence was much greater upon the 17th century inhabitants than upon those of the present society, which is protected from and less dependent upon the natural environment. The purpose of this section is to note certain significant details of the landscape that have effected the growth of the urban pattern.

A. HYDROLOGY

The springs and streams played a role in the settlement of the town, for a source of water power was needed for the gristmills and sawmills of the early settlers. Beverly, fortunately, is well watered by springs and brooks—though none is of considerable size.

The largest body of water, lying partly within the boundaries of Beverly is Wenham Lake—the greater portion (some 2/3) is included within the Town of Wenham. The
lake assured Beverly, until recent years, of a plentiful source of good water. The clearness of its ice gave rise to the Wenham Lake Ice Company. This ice was not only marketed throughout the North Shore area, but was shipped even to England.\(^1\) The proximity of the main line of the Boston and Maine Railroad afforded facilities for a rather profitable ice business during the winter months.

The surface of this sheet of water measures 320 acres. Situated 34 feet higher than the flow of the tide at the head of Bass River,\(^2\) the lake was constructed into a source of water for both the cities of Salem and Beverly.

The early colonists were not long in discovering this lake, for it was known in the early chronicles as the "Great Pond,"\(^3\) and figures conspicuously in deeds and grants of land. An early nucleus of settlement was Dodge's Row (now Route 1A, North Beverly) along the east shore of the lake.

The largest natural pond within the limits of Beverly, though of less significance, is Beaver Pond covering about twenty acres. It lies in a secluded area of pine woods between Centerville and North Beverly. According to old maps of Beverly, Beaver Pond was at an earlier period more than three

\(^1\) Stone, \textit{op cit.}, p. 8.
\(^3\) Hurd, \textit{op cit.}, p. 675
times its present size, occupying the greater part of the
depression between Brimble and Bald Hills. Several years
ago a dam was built between a nearby esker and a kame
terrace (See page 16 ) in order to create the artificial
Norwood Pond. The ponds are now parts of private estates.
The outlet of Beaver Pond, a small stream, winds
through the woods and connects with Norwood Pond, a sub-
merged meadow land of forty acres. The stream served
as a source of available water-power for the old Conant
Mill. Should the future need arise, these two ponds
together could supplement Wenham Lake as a source of water.
Wenham Lake has already been supplemented by Longham
Reservoir (located in Wenham near the Beverly line) and
Ipswich River water, together furnishing an abundant supply
of pure water.
To the combination of abundant supply of good water
and surface and subterranean drainage, Beverly owed much
for its healthfulness in Colonial times. The streams,
though neither large nor numerous, are well adapted for
carrying away of the surplus water. The only extensive
swampland occurs in parts of Centerville.
A region lying near the base of Brimble Hill, known
as Cat Swamp, and adjacent territory, is drained by a
brook called Cedar Stand (or Sallow's Brook). A meandering
stream, much forked and branched, it reaches the sea by Beverly Cove—and was a stream of sufficient flow to support a grist-mill at its mouth.

Farther eastward is Tissell Brook flowing in a long circuitous route finally to join Sawmill Brook near the Manchester border. One of the earliest settlers, Nicholas Woodbury, had a grist mill in this area. ²

A stream of current significance is Alewive Brook, the outlet of Beaver-Norwood ponds and their water-shed. The course of this stream carries the water into Miles River (Wenham), the outlet of Wenham Lake and a tributary of the Ipswich River. This general area near the Beverly-Wenham border forms a natural basin for the spring overflow. This depression which receives water from the three ponds by means of a network of streams was recently constructed into Longham Reservoir.

The last stream to be mentioned is Bass River Brook. Rising near the westerly side of Wenham Lake, it flows along the base of Cherry Hill to what is now the United Shoe Machinery Corporation Pond. Originally this was a mill pond of John Friend, a seventeenth century miller who constructed a dam at what is now the head of Bass River. All that remains now is the grinding stone on display near the parking

1. Nason, op cit., p. 72.
lot of the United Shoe Machinery Corporation.

As mentioned before, during the period of glacial advance, the last mile of the stream was carved and scoured to form the arm of the sea known as "Bass River" and its junction with the several streams flowing from Danvers, under the like process, became "Danvers River" and Beverly Harbor.

The impact of this body of water upon the development of the city can only be appreciated when one recalls that the original name for Beverly was "Bass-River-Side". It was by way of the Bass River estuary that Conant, Balch and the other first farmers entered and explored the area that was to become Beverly. This river offered them a means of transportation by which to trade with Salem and further points. Later, as we know, the farmers supplemented their earnings by fishing, many in this river. Still later, wharves were constructed not only along the harbor but also partly on the Bass River shore. From here 18th century ships sailed to European and West Indian ports, and here in this estuary they were protected from northeasters. Even today, a hundred and more craft can be seen in this cove when hurricane warnings are sounded.

Mention was made of pottery, Beverly's first industry,
that was made from the subsurface heavy mottled clays once deposited by a Greater Bass River. From the time of the building of the first crude mill by John Friend, to the establishment of the world's largest shoe machinery factory on exactly the same site, the hydrology of Beverly has influenced the growth of the town, passively but persistently.
B. CLIMATE

A coastal location favors Beverly with a maritime climate. The proximity of the city to the Atlantic renders temperatures, both summer and winter, less extreme than they are inland. An example showing the significant differences can be made by comparing meteorological statistics with Lawrence, twenty miles inland from Beverly:

<table>
<thead>
<tr>
<th></th>
<th>Average January Temp.</th>
<th>Average July Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverly</td>
<td>29.4</td>
<td>67.2</td>
</tr>
<tr>
<td>Lawrence</td>
<td>25.2</td>
<td>71.4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Minimum Temperature</th>
<th>Maximum Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beverly</td>
<td>-19</td>
<td>96</td>
</tr>
<tr>
<td>Lawrence</td>
<td>-25</td>
<td>106</td>
</tr>
</tbody>
</table>

Coolness in summer was one factor that attracted the summer colony to Beverly Farms. Hot July or August afternoons are frequently relieved by the easterly breeze flowing inland from the cool water surface to displace the warmer westerly winds.

In winter, on the other hand, the severity of cold waves is reduced by the adjacent relatively warm water. Under these conditions the last killing frost in spring varies between April 18 and 26; the first killing frost in the fall occurs in late October (18-30). The maritime influence is less in Lawrence; the growing season extends from May 1 to October 11.

In common with most of New England, no dry season, as such, exists. Beverly has an average annual precipitation exceeding forty inches, the average for each month approximating 3+ inches. Monthly precipitation varies from a high of 4.7 inches in January to a low of 2.7 inches in May. Occasionally a dry spell of noticeable length will occur in late summer but usually comes to an end with an August thunderstorm. Much of the rainfall from June to September comes from showers and thunderstorms. During the other three seasons, the low pressure systems which converge on New England produce precipitation on an average of roughly one day in three. That meteorological disturbance which brought an early end to the lives of several Beverly fishermen and sailors in her maritime days, the "nor'easter" is a coastal type storm that brings much rain or snow. The snow season in Beverly extends from November through March, with about three days of heavy snow (four inches or more) normally occurring during the winter season.

The periodical days of fog are a disadvantage of the coastal location. Heavy fog occurs on an average of fifteen days a year, generally dissipating during the early morning hours.

Prevailing wind direction switches from northwest during the months of November through April to south-
west during the remaining months. Winds of 32 m. p. h.
or higher may be expected on the average of one day each
month with severe gales common during winter.

In summary, Beverly’s climate is similar to most of
coastal New England. It shares in the changeable weather
pattern typical of this region tempered by the sea.

G. VIRGIN FLORA AND FAUNA

The biogeography of the Beverly area has undergone
radical change during the 330 years since the appearance of
the white men. The encroachment of the city upon the
natural countryside has been so great, the inexcusable
extinction of some species has been so nearly complete,
that it is difficult for one of the twentieth century to
recreate in his imagination the historical geography of
the early seventeenth century in the region that was to
become Beverly.

This was not a barren land in the time of the Agawam
Indians (See page 48). To Roger Conant, the superintendent
of the Dorchester company engaged in the fishery and agri-
cultural pursuits, Bass-River-Side appeared a land where
the prospect of gain was good. The soil appeared fertile,
the game supply plentiful, and the landforms not so inhos-
pitable as those of the Rockport area. This was the land he sought, after a year of suffering and tribulation on the inferior earth of Northern Cape Ann ended in dismal failure.

It would take pages merely to list the birds, flowering plants, berries, fruits, etc. that were once in abundance; but mention can be made of the principal native trees. Chief of these are the pines, intermixed with considerable oaks, walnuts, white maple, birch and hemlock. In lesser numbers, elm, butternut, ash, cherry, red and white cedar occur. The climax vegetation, much of it now destroyed, was a hardwood forest interspersed with pines and other conifers.

Meadow land occurred in small stretches, chiefly along the streams mentioned in the section on hydrology. Swamp vegetation was found in a few small areas where drainage was retarded as in a portion of Centerville.

The larger animals, such as the bear, deer, otter, and wolf, were destroyed during the first few decades of white settlement; but the locality known as Cat Swamp derived its name from the abundance of wild cats that persisted there for a longer period. (For evidence that the beaver once lived in these woods, only the traditional name of "Beaver Pond" remains). But the fox roamed the hills of the northern parts of the

1. Hurd, op cit., p. 676
town as recently as the 1890's before, he too, was exterminated. Only such animals as the rabbits and squirrels remain outside the margin of a spreading urban core.

During the first century of colonization, farmers moved from the original settlement area near the waterfront and penetrated most of the virgin forest in search of good farmland. Only in small areas of Centerville and Beverly Farms does the land remain much as it was in 1626.

D. CONCLUSION

Of the six geographical forces that have been discussed in this chapter, perhaps flora and fauna have had the least influence on the development of the city. But an attempt has been made at a panoramic view of the geographical combination: location, geology, geomorphology, soils, hydrology, climate, flora and fauna, for these are, to a great extent, interdependent, and collectively throw light upon the subsequent actions of the settlers themselves.

We have seen the factor of location offered opportunities of early settlement and successful fishing and shipping enterprises during the colonial era. Later the local situ-

1. Hurd, op cit., p. 677
ation favored industrialization. Among the factors which encouraged industrialization are the following:

1. Nearness to the related industries of Eastern Massachusetts.
2. A surrounding urbanized area for markets.
3. A plentiful supply of labor in Beverly and nearby cities.

Also its position at the base of the Cape Ann triangle caused a convergence of routes. Route 1A from Lynn and Salem diverges in Beverly into five routes radiating to the northeast, north and northwest. A transport network was one factor aiding the development of Beverly into a central place city with a trading area including most of the small Cape Ann towns.

One result of the geomorphology of the area was the narrow elongated shopping center. Because of its early agricultural economy, certain soils encouraged a road pattern that has persisted to the present time. Land that offered only meagre farming possibilities became a good site for estates because of the scenic combination of ledgy highland, virgin forest and harbor. One soil type was in part responsible for the location of the industrial district; another was in part responsible for a working-class residential district in Rial Side.

The community benefitted from an adequate water supply
and also its harbor. In comparison with the harbors of the large modern port cities, Beverly's harbor is small. Nevertheless it was a harbor of sufficient size to encourage the development of a port of note during the Revolutionary era when ships were smaller. Together with a vegetation and climate typical of Eastern Massachusetts, the geographical factors provided a site and situation conducive to the development of a prosperous middle-sized city.
II

GEOGRAPHIC PATTERNS CHANGING THROUGH TIME
II.

The first part of this paper has considered the various earth forces at work in the North Shore community. To complete this geographic study it is necessary to turn to the cultural aspect—the acts and accomplishments of man. We have seen that the physical environment of the region offered man opportunities of development, despite certain obstacles. Let us now consider how man has reacted to these opportunities.

This section should place some emphasis upon the various stages of economic development. Beginning as a minor farming and fishing village, Beverly's economy gradually changed to a thriving seaport during the last years of the British Colonial Government and the first few decades of the Republic. Beverly suffered a sharp economic decline when its port facilities proved inadequate. After slow development of nearly a century's duration, the industrial forces, once secondary, supplanted all else. Today the city is one of mixed residential and industrial land use.

While tracing these developments, certain achievements other than economic are discussed in order to give a total picture of the historical geography of the region.
1. THE COLONIAL PERIOD: SUBSISTENCE AGRICULTURE
AND COMMERCIAL FISHING

Originally, Beverly formed one of the outlying portions of the domain of Masconomo, the Sagamore of the Agawam. The core settlement of the Agawam tribe was situated near the mouth of the Ipswich River in the vicinity of present-day Ipswich and Hamilton. The possessions of this tribe\(^2\), however, extended from the Merrimac to the Naumkeag—the rivers forming defensible zones of separation from more powerful enemies. From the Atlantic shore, the tribe's territory penetrated inland to the vicinity of Andover—roughly, all of Essex County except the fringes.

The presence of Indian settlements in Beverly is based on evidence such as arrow and spear heads, stone hammers and other relics found in the vicinity of Wenham Lake and the larger brooks. The Indian encampments were usually near some stream adjoining the sea. At such sites drinking water was available as well as lobsters, clams, and the various fish for food.

At the time of the coming of the English, the Agawams were suffering from the ruthless raids of the Terrantines from Maine. Therefore, "Sagamore John" gladly

---

2. Now known as the Danvers River.
welcomed the colonists, to whom he looked for protection against his stronger enemy, and made them a free grant of ownership to the entire Naumkeag territory.

Due to religious antagonisms among the first settlers at Plymouth, a group under the leadership of Roger Conant moved from that town in 1625 to Cape Ann (Gloucester-Rockport area) where it attempted to establish a colony for trading, farming and fishing. After a year of hardship this site was abandoned. Roger Conant and his associates skirted the coasts of Manchester and Beverly, finally deciding upon settlement at the southwest side of Beverly Harbor. The location, a peninsula lying between Collins Cove and the North River, was well chosen. Within each of these harbors ships could anchor.

This area is, of course, a part of the present City of Salem, but to quote one Humphrey Woodbury:

"The same yeare or the next after wee come to Salem wee cutt hay for the cattell wee brought over that side of the ferry now caled Beverly; & have kept our possession there ever since by cutting hay or thatch or timber & boards & by laying out lotts for tillage."

The settlement at Naumkeag proved of greater success than the adventure at Northern Cape Ann, but two years later the "Abigail" with Governor Endicott and his colonists aboard arrived in the bay. Controversy between the Puritans and the Separatists soon developed. The disagreement was

---

1. Katherine P. Loring and Alice G. Lapham, Historic Beverly, printed at the request of Beverly Chamber of Commerce and Beverly Historical Society, 1937. Quotation of H. Woodbury is included on page 3.
settled by peaceful compromise: the new company would occupy the southern shore of the harbor, and the Conant company would move to the fertile meadow lands on the opposite coast. In memory of this early armistice the name of the place was changed from Naumkeag to Salem, City of Peace. Thus the river early served as a buffer between the two rival groups and not long after became the official boundary between Beverly and Salem.

In exchange for their settlement at Salem, the "Old Planters" received good meadow lands at the margin of Bass River. The first recorded grant of land in Beverly reads in part:

"On the 25th of the 11th month, 1635. Voted that Capn Trask, Jno. Woodbery, Mr Conant, Peter Palfrey & John Balch are to have 5 farrnes, viz: each 200 acres a piece, to form in all a thousand acres of Land, togeth'er lying, and being at the head of Bass River, 124 pole in breadth and soe runne northerly to the River by the great pond side, and soe in breadth making up the full quantitye of a thousand acres, These limits laid out and surveyed by vs.

John Woodbery,

John Balch."

Although tradition maintains that temporary dwellings were erected by fishermen-farmers (as that of William Woodbery in 1630?) at previous dates, the first recorded permanent settlement of Beverly was the great tract of land that extended from the head of Bass River to near Wenham

1. Hurd, on cit., p. 680.
2. Quotation appears in Mason, on cit., p. 70.
SEVENTEENTH
CENTURY
BEVERLY

Alford Farm
(Cherry Hill)

To IN

SALEM
TOWN

ROyal
SIDE

Beverly
town

Legend

C. = Collins Cove  N. = North River  B. = Bass River
C = Conant home  B = Balch home  W = Woodbery home (Old Planters
R = woodsman Royal  S = Saltworks of John Winthrop
DG = Dodge's gristmill  DS = Dodge's sawmill  x = early homes
### = Old Planters landing place at head of Bass River

Shaded area is the original thousand acres
of the grant of 1635.
Lake. One of these houses remains to this day, erected by John Balch before 1638. This is the oldest house in New England of which there is a written record. 1

Among the other of the earliest settlers of Beverly was William Royall, "A coop (cooper) and heaver of tym-ber." 2 In 1629, he was sent to work in the forest or the common lands. The name of the earliest inhabitant was corrupted in the succeeding years (through a series of eight or nine forms of spelling) to the present euphonious community name of "Rial Side".

The section known as Salters Point has a similar history. In 1638, the Town of Salem granted to John Winthrop, Jr. "Liberty to set a Salt house upon Ryalls side with wood for his occasion and land for two cows to pas-ture in." 3 The brick vats which were once filled with brine at high tide have long since been buried by sands, but the little projection at the mouth of Bass River still retains the name.

Other colonists, most from the Southern English Shires, some Huguenot refugees, joined the original settlers and formed little communities at Beverly Farms, Mackerell Cove (now Beverly Cove), Bass-River-Side, and Ryall Side. The houses of all these farming-fishing villages were erected along the coast. During this early period most the men were primarily

---

3. Ibid., p. 36.
fishermen; agriculture was carried on at a subsistence level. Trips were made to the banks by nearly all the male inhabitants. At first the fishing boats were away for long periods of time because the fish were dried before coming home. Later the fish were packed in the holds of the vessel and salted and brought home to be cured. During this period almost every available piece of land on the coast from Tuck's point to Paine's head was covered with the fish flakes for drying.

As the communities of "Mackerel Cove" and "Bass-River-Side" grew in population their differences and disputes with the people of Salem Village worsened, until at length in 1668, the General Court after several petitions, created the township of Beverly.

There is disagreement among authorities as to the true origin of the name. Some believe that it is named for Beverley, the home of John de Beverley, Archbishop of York, twelve hundred years ago. Two other sources state that the name was derived from "Beaver Lea" signifying beaver field or beaver meadow. This may be, since we have "Beaver Pond", and the remains of beaver dams were once found here.

Toward the end of the 17th century we find that the town, although of greater population, continued on much the

1. Loring, op cit., p. 11.
same economy as the early settlers. Most of the inhabitants were still farmers or fishermen. As mentioned before, the farms were tended by the women and younger children while the fathers and older sons were away fishing.

But with the coming of the 1700's the great transition to overseas trade began. Salt fish was not only an important article of food but also a chief medium of trade. The settlers kept the "middling" grade of codfish for themselves; the lowest grade they sent to the southern colonies, largely for the slave's consumption, and to the West Indies after trade developed with that area after 1717. The best quality of codfish, however, found a reliable market in Europe, and Beverly vessels soon were carrying the catch across the Atlantic. As early as 1683, Beverly became a lawful port of entry. These ships returned with such cargoes as "Cadiz salt, Madiera and Canary wine, Bilbao iron, Malaga grapes and Valencia oranges." Imports from the South included Virginia flour and Carolina rice. 1

Perhaps of greater importance, the increased commerce and fishing necessitated rope making and sail making here. Even before the turn of the century, in 1696, the town had become noted for ship building. 2 There was excellent oak in abundance (as mentioned in Part I.) for the hulls of vessels.

2. Mason, op cit., p. 75.
Some of the best trees were marked by the "Keeper of the King's Woods" to be reserved for the Royal Navy.
But even as the period of commercial importance was nearing its climax and manufacturing was making its first beginnings, agriculture continued as a significant factor in the economy as the following table indicates:

**TABLE A**

**AGRICULTURAL PRODUCTION IN 1767**

1. Number of horses........164
2. Number of oxen..........143
3. Number of cows.........741
4. Number of sheep......1,099
5. Tons of Eng. hay.........586
6. Tons of Meadow hay.....367
7. Bushels of grain......10,720
8. Barrels of cider.........321

The major occupations of the port town, however, were fishing and exporting.

**TABLE B**

**EXPORTS FROM THE PORT OF BEVERLY IN 1770**

1. Codfish:
   - 1517 tierces
   - 1564 quintal
   - 696 hogshead
   - 32 boxes
   - 68 barrels
2. Mackerel:..............112 barrels
3. Corn:....................700 bushels
4. Potatoes:..............116 barrels
5. Onions:.................8000 bunches
6. Cheese:................1000 pounds
7. Cranberries...........17 barrels

2. Ibid., p. 201.
3. A cask larger than a barrel but smaller than a hogshead.
4. A hundredweight.
Much of the fish cured in this town was shipped to Spain, Portugal, and Italy. During this period, others traded with the West Indies and South America. Approximately 75 vessels (ships, brigs, sloops and schooners) employing 500 men were engaged in fishing, freighting, and foreign trade.

As a summary of the Colonial Period, one could conclude that the settlement of the five old planters, as a result in part of several geographical advantages, had grown into a notable port for both foreign and domestic goods, as well as a successful agricultural town. Farms were now found in all sections of the town. Those located on Merrimac fine sandy loam, however, generally yielded best. Beverly Harbor was deep enough to accommodate the largest vessels of the period and the estuaries of the Bass and Danvers Rivers afforded protection to the craft during stormy weather. Timber was also available to be used in shipbuilding. These factors enabled Beverly to compete with the several other New England ports in the fishing grounds of the Grand and other banks.
2. REVOLUTIONARY PERIOD: 1775-1815

Much of the early agitation against British rule occurred in the seaport towns. British laws and regulations bore especially hard on the merchant and shipping classes. As could be expected then, the repeal of the odious Stamp Act (1765) was celebrated by great bonfires in Beverly, and the "Boston Tea Party" won popular approval.

On the eve of the Revolution, Beverly had increased its overseas commerce until its wealth was exceeded in Essex County by Salem and Newburyport only. Now dependent upon a commercial export economy, the citizens early realized that their well-being was being undermined by Parliament's laws. The mood of the community is expressed in their instructions (1769) to their representative, Col. Henry Herrick. By 1774, they were not so prudent.

2. A quotation from Nason, op cit., p. 78:
   "We apprehend that no power on earth can justly deprive us of our essential rights, and that no man can be safe, either as to his life, liberty, or property, if a contrary doctrine should prevail; therefore we recommend to you a firm but prudent opposition to all unconstitutional measures."
3. A quotation from Hurd, op cit., p. 700:
   "... yet, if the despotism and violence of our enemies should finally reduce us to the sad necessity, we, undaunted, are ready to appeal to the last resort of States; and will, in support of our rights, encounter even death, sensible that he can never die too soon who lays down his life in support of the laws and liberties of his country!"
When the Revolution broke out, most of the citizens of Beverly gave loyal support to the cause from the first battle to war's end. Although Beverly men participated in most of the significant land battles, Beverly, being a seaport, made its greatest contribution to the War of Independence on the sea.

The order of Washington that resulted in the sailing of the "Hannah" from Beverly, on September 5, 1775, constituted the official beginning of the American Navy. That schooner owned by Colonel (later General) John Glover was the first ship commissioned as a naval vessel by authority of the Continental Congress.

Among all-but-forgotten facts are these. Beverly

1. Reproductions of Washington's orders to Glover and Broughton and other pertinent correspondence may be found in: Henry E. Waite, Origin of the American Navy, The N. E. Historic Genealogical Society, Boston, 1890.

2. The following is an excerpt from A History of the U. S. Navy by Dudley W. Knox, Captain, U.S.N., in charge of the archives of the Navy Department as quoted by Loring, on cit., p. 15:

"When Washington took command of the Continental Army before Boston in July, 1775, the extreme shortage of ammunition prevented even 'making a suitable return'. In this acute dilemma he arranged to send a vessel of the Rhode Island Navy to Bermuda for powder and also himself began the fitting out of small armed vessels with the design to pick up some of their (British) storeships and transports near our coast. This so called 'Washington's Fleet' was the beginning of the Continental Navy. The first vessel commissioned was the schooner 'Hannah', Captain Nicholson Broughton, which sailed from Beverly on September 5th and brought in a prize two days later."
was the headquarters of the infant navy of the country. William Bartlett (for whom Bartlett St. is named) was the first Navy Agent, and into his charge were given many of the vessels and cargoes captured by the vessels employed by the Government.

Beverly was the home port for several successful privateers, among whom may be mentioned: Captains Eleazer Giles, Elias Smith, Hugh Hill, and Benjamin Lovett.

According to Stone, probably more captured vessels were brought into this port than into any other in New England.

In 1776, for example, Captain Giles sailed from the port of Beverly in a brig of ten guns, and soon after intercepted a fleet of merchantmen, laden with cargoes, bound from Jamaica to London, four of which he succeeded in capturing: the ship Lucia, 400 tons, brigs Alfred, Success, and another, of 300 tons each. Captain Smith, commander of the ship Mohawk, of 20 guns, captured a Guineaman of 16 guns in the West Indies area during 1781 which he sent to Beverly. But the greatest menace from the British point of view was "the notorious Hugh Hill." Captain Hill's principal area of action was near the coast of Ireland, where he captured many vessels, greatly harassing British commerce.

The rich rewards of privateering during the Revolutionary War so stimulated the commerce of the Cabots and

2. Stone, op cit., p. 72.
3. Ibid., p. 70.
the other merchants, that foreign trade achieved paramount economic importance. When one contemplates the small, little used harbor of today, the facts of the 1780's see extraordinary, almost an exaggeration. The several privateers, who dared to venture even to the harbors of the Irish and English coasts to capture British vessels, brought so many prizes back to port as to tax the accommodations of Beverly Harbor—sixty vessels at one time—it was necessary to construct new docks up the river. According to one source, "The value of the cargoes brought into port by privateers has been conservatively estimated at five million pounds!" Clothing, ammunition, military supplies, even gold, was furnished the Continental Army during its years of great need. Beverly became the principal port from which supplies could be brought to the Continental Force encamped at Somerville and Cambridge.

The combined harbors of Beverly, Salem and Marblehead at times swarmed with captured vessels. A puzzling question of military strategy might occur to one: Why did not the British launch an attack on this general area that was so annoying to both their commerce and military life line with the soldiers fighting in the colonies? Only once was there an incident.

In the Autumn of 1775, a privateer schooner sailing from Beverly was discovered by the British ship of war

1. Loring, op cit., p. 15.
2. Ibid.
"Nautilus", of twenty guns. In the confusion, the schooner became grounded on the flats, and the "Nautilus" in low water, opened fire on the town. Unfortunately for the British commander, the receding tide left his vessel aground, and he was caught in the crossfire between rifle men concealed among the rocks on the Beverly side and the cannon on Hospital Point, Salem. Perhaps as a consequence of this incident, a Continental army post was established at Beverly.

Although Beverly vessels continued the hazardous trade with Spain and the West Indies during the early years of war, the debts incurred through loss of vessels brought foreign commerce to almost a state of paralysis by war's end. The commercial depression caused some of the leading men of the day to turn to manufacturing.

The year, 1788, marked the beginning of important manufacturing. In 1788 the Cabots, Brown, Thorndike and others established the first cotton factory in America at the corner of Cabot and Dodge Streets, then as now an important crossroads in the town. (Slater's, at Pawtucket, commenced in 1790). Stone quotes a periodical of the day: 3

"... a complete set of machines for carding and spinning cotton. ... The spinning jenny spins sixty threads at a time, and with the carding machines forty pounds of cotton can be carded per day. The warping machines and the other tools and machinery are complete..."
This factory, however, was just an indication of the time to come, for the era of commercial dominance of the economy was not yet over. As profits through overseas trade rose on every voyage after 1789, the Cabots and the other merchants gradually lost interest in the North Beverly enterprise. The factory was neglected on an increasing scale, until it ceased to operate. The peak of commercial prosperity was reached during the years 1789-1807.

The Port of Beverly, however, in common with several other seaboard towns was brought to near ruin by the Embargo Act of 1807. Even the fishing fleet was tied up since there was no access to foreign markets. Possibly the severest depression ever experienced by the people of Beverly descended upon them in the succeeding years. It is stated that among the families of the seamen and ship merchants there was dire want; to avert starvation people dug clams and searched the woods for fruits and herbs. 1

The Non-intercourse Act allowed trade with South America, Russia, and the Far East, but all the merchant vessels were in constant danger of attack by both the French and the English. By 1813, Great Britain had dispatched such a powerful naval force to American waters that even the best armed schooners were foolish to venture to sea. The Embargo Act, the Non-intercourse Act, and the

1. Loring, op. cit., p. 23.
War of 1812 destroyed the commerce it had taken a hundred years of sacrifice to found and maintain.

It was during the Revolutionary period that the most effective use was made of Beverly's harbor facilities. The several docks and piers that were built to accommodate brigs and schooners have long since fallen into disrepair. The people of Beverly had, in fact, become over-dependent upon this small harbor. An unbalanced economy geared to foreign export brought excessive hardship to the community during the depression years 1807-1813.
3. **INDUSTRIALIZATION AND URBANIZATION**

The impossibility of importing needed articles from 1807 until 1815 compelled the people of Beverly, as in many other New England towns, to develop manufacturing. The fishermen forsook the idle wharves to become makers of shoes in tiny shacks or shops located in their backyards. From such beginnings, it was thus that the vital shoe manufacturing industry of modern Beverly commenced.

Other types of manufacturing either began or expanded. Rope making for ships remained important, and in 1808, a new industry was developed in Beverly. During this year, in a small silverware and pewter establishment at 160 Cabot Street, Israel and Oliver Trask began the manufacture of Britannia by using more antimony than the earlier pewter had contained.

Two significant occurrences toward the middle of the century were instrumental in changing the economic pattern of Beverly. The old North Shore ports were never quite successful in re-establishing their pre-Embargo foreign commerce, for a growing Boston, nearing metropolitan size, absorbed nearly all of it by 1850. And in 1837, the

1. Britannia metal is an alloy chiefly of tin, antimony, and copper, largely used for tableware such as teapots and spoons.
Eastern Railroad constructed its line from Boston to Portsmouth. The same railroad that aided Boston in swallowing all but Beverly's coastwise trade was also a substantial factor in changing Beverly's population pattern.

As soon as train service was reasonably comfortable (about 1845), there began a transformation of the "North Shore" through the advent of summer residents. The beautiful combination of seascape and landscape that the millionaires and the near-millionaires sought, they found at Beverly Farms and adjacent shore areas. At Montserrat (which received its name from a West Indian island where fishermen bought their salt) judges and bankers built palatial estates. On the rocky ledges of Prides Crossing and Beverly Farms, the Woodbury, Thissel, Ober, Loring, Dexter, and the Burgess families constructed homes with every architectural trimming of portico and tower that money could buy. By 1880 more than a hundred homes had been built along "millionaire row" (Hale Street) and others could be found in neighboring Manchester. Among the most distinguished residents of the area were Oliver Wendell Holmes, Justice of the Supreme Court; President Taft, who transformed the city into the "Summer Capital" during his administration; and at present Henry Cabot Lodge, Ambassador to the United Nations.

1. Interestingly, Beverly's modern U. S. Postoffice was constructed in 1912.
Almost worthless farmland of this southeast Beverly area became in a matter of years some of the most expensive acres in the Commonwealth. The influx of rich residents rejuvenated the town. For several years, about 100 families paid one half of the city's taxes. The development of the North Shore caused an immense increase in the valuation of the town, and enabled it to improve its schools, to establish (1855) one of the earliest libraries in the state, to introduce telegraph service soon after 1869, to make better roads, to build up-to-date police and fire departments, and improve the city a prosperous appearance.

Before the other major change due to improved transportation, i.e. industrialization, it seems proper to take note of the improved agricultural economy of the town that existed after the failure of commerce and before the dominance of manufacturing. A comparison with the agricultural table on page 55 will show that farming had made a strong comeback by 1840.

**TABLE C**

**AGRICULTURAL PRODUCTION IN 1840**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Number of horses</td>
<td>217</td>
</tr>
<tr>
<td>2. Number of oxen</td>
<td>440</td>
</tr>
<tr>
<td>3. Number of cows</td>
<td>512</td>
</tr>
<tr>
<td>4. Number of steers</td>
<td>21</td>
</tr>
<tr>
<td>5. Number of sheep</td>
<td>180</td>
</tr>
<tr>
<td>6. Number of swine</td>
<td>900</td>
</tr>
<tr>
<td>7. Bushels of potatoes</td>
<td>20,560</td>
</tr>
<tr>
<td>8. Bushels of corn</td>
<td>10,427</td>
</tr>
<tr>
<td>9. Bushels of barley</td>
<td>2,666</td>
</tr>
<tr>
<td>10. Bushels of oats</td>
<td>1,240</td>
</tr>
<tr>
<td>11. Bushels of rye</td>
<td>821</td>
</tr>
<tr>
<td>12. Bushels of wheat</td>
<td>100</td>
</tr>
<tr>
<td>13. Tons of hay</td>
<td>4,050</td>
</tr>
</tbody>
</table>

2. Stone, *op cit.*, p. 201
Manufacturing by the year 1840 had practically replaced foreign commerce as a source of income. Articles manufactured consisted of boots, shoes, cabinet ware and chairs, Britannia and tin ware, pottery, bricks, and other items. Harbor facilities still exercised some influence, in that many items of manufacture such as anchors, cables, rope and boats were connected with the sea. Also, in 1845, forty-six vessels were employed in the cod and mackerel fishing, the value of the catch in that year being over $67,000.¹

While all the industries listed above have contributed to the industrial growth of the city, there is one single industry with which Beverly has long been identified. Shoe manufacturing has long been vital to the town's economy, so much so, that it seems proper to trace its history at some length. With the growth of the shoe industry, there has been a corresponding growth of the city in population and value.

The evolution of the shoemaking industry in Essex County may be divided into six definite eras:
1. Period when shoes were imported from Europe.
2. Period when colonists made first crude footwear.
3. The establishment of the guild system.
4. The division of work—beginning of factory system.

¹ Nason, op cit., p. 78.
5. Coming of machinery—shoe factory organization.
6. The organization of shoe machinery into a monopoly.

In the days of Conant and Balch, colonists were so busy establishing themselves in the new land that they had to rely on European imports. Necessity, however, soon forced the settlers of Essex County to attempt to make their own crude shoes. Both farmers and fishermen had to endure an annual period of seasonal unemployment; therefore, hundreds of families added to their scanty incomes by becoming shoemakers every winter.

"Every member of the family found a place in this employment. The women sewed the different pieces of the upper; the children pierced the holes for the stitching and whittled pegs. Men lasted, bottomed and finished."

In time, making of shoes became so important a factor in the lives of many farmers that little buildings were erected in many yards complete with benches, pegging jacks and the simple tools of the period. These were the first of the little "ten-footers" of which there were so many in later years in Lynn, Beverly, Haverhill and other nearby places. A number of these old shacks are still in existence, some being used for garages. One of these relics of a bygone age still stands in my grandmother's yard.

The Yankee shoemakers soon discovered that their surplus could be sold at a profit. It may be of int-

2. Located at 32 Roundy Street, Beverly.
erest to note that the first shoe factory in the United States was located in the general vicinity of Beverly. Zerubbabel Porter, in the neighboring town of Danvers, became prosperous making brogans for the slaves of the South in the cheapest possible manner. Other small shops soon appeared in Essex towns in the early 1700's. During this century there was a gradual establishment of the guild system of master craftsman, journeyman and apprentice. Although men began to group together in what approached a "factory system", they were strongly resistant to the introduction of machinery for they feared the loss of their jobs. Men such as Samuel Preston of Danvers, who patented a pegging machine in 1833, met with failure. The first important machine successfully introduced—one used to sew shoe uppers—was invented by a Lynn mechanic, John Nichols, in 1851.

Gordon McKay gained control of this machine but met with bitter and hostile opposition until the advent of the Civil War. The shortage of hand labor caused by the war left the shoe shop owners no choice but to accept this new-fangled machine of McKay's.

"Mr. McKay was able to establish his claim for production and his machines took the place of the large number of Essex shoemakers who had laid aside their anvils and hammers to take up rifles in the defense of the Union." 2

McKay, however, was not able to introduce his mach-
inery until he had advanced a most unique method of securing payment for their use. Manufacturers were willing to concede that his machines would do the work, but being skeptical, they refused to buy them outright. McKay conceived a brilliant scheme: by a unique royalty system the manufacturer was responsible for keeping the machines in good working condition.

The cautious shop owners were not long in paying for what had been considered a good bargain. By buying almost every new invention concerned with shoe manufacturing, McKay transformed himself into a one-man monopoly.

But after years of industrial fights, it was Sidney Winslow who finally succeeded in bringing together the largest and most important shoe machinery manufacturers under one common management—and many feared the formation of so large and powerful a concentration of the tools of a major industry.

When the United Shoe Machinery Corporation was formed, it found itself in possession of three principal factories—one in Beverly, in which the machines that had been first under the control of Mr. Winslow were produced; one in Winchester, and
one in Boston. After a long series of investigations in which all the principal cities of Massachusetts eagerly sought the location of the contemplated new factory, it was finally decided to build in Beverly by a small pond. It seems likely that the existence of some 35 shoe factories during the 1890's and Beverly's heritage of shoe production dating back to the Posters, Roundys, and Lefavours—shoe suppliers for the Continental Army—were among the principal reasons for Winslow's decision to locate his huge plant in the town.

The factory, one of the largest in the nation, was completed in 1905. It is unique inasmuch as it places in the one City of Beverly the production of the greatest number of machines used in any one great industry, and is the base of supply for the great shoe and leather industry of the country.¹

The effect upon the city was almost revolutionary. Beverly, although a shoe manufacturing city of note, at the time still could have been considered almost a suburb of Salem. In the minds of the general public it was an area where "fashionable people" lived in beautiful summer residences by the shore. But with the opening of such a large plant a horde of Italian immigrants and sundry other workers descended upon the town. This one factory (more than any other single factor) changed the character of the town from a sleepy

¹ Municipal History of Essex County in Massachusetts, Vol. 2, p. 900.
suburb to a busy, growing city. While the change from
town government to city form antedates the establishment
of the United Shoe Machinery Corporation by nine years,
it can be argued that this was the factory that built
the City of Beverly.

It should not be assumed, however, that Beverly
prior to 1900 was a residential town devoid of industry.
Circa 1880, for example, good wharf facilities for lum-
ber and coal as well as for the fishing business could
be found in the harbor. Various significant industries
existed, but then as through most of Beverly's industrial
period all appeared minor in comparison to the dominating
industries of shoe and shoe machinery manufacture.

During the past twenty-five years, however, there has
been a gradual diversification of manufacturing in the city.
Beverly, by mid-century, had matured as an industrial city.
No longer is the economic prosperity of the city so dependent
upon the shoe industry as it was in the latter 19th century,
or the shoe machinery industry as it was in the early 20th
century. Gone forever are the days of the small farms and
the era of foreign maritime trade. The shoe-makers' "ten-
footers" have been replaced by a variety of industrial plants
whose products range from surface grinders through electronic
counters, metal hydrides, vinyl plastic, office storage cabin-
ets, shoes and women's slacks to silicon and germanium diodes.

1. See pages 97-115 for a discussion of the major diversified
industries of Beverly and the factors which attracted
them to the city.
Truck farming in Beverly such as Foster's Farm faces complete extinction in the near future due to a shortage of help, higher taxation and strong competition from outside sources. New housing developments are absorbing more and more agricultural land.

Once frequent coal barges navigated the Bass River and docked at Glover Wharf. After a twenty year decline caused by oil competition, the summer of 1955 saw the demolition of the large Girdler Coal Company plant.
III

BEVERLY AT MID CENTURY
The purpose of this section is to discuss two of the most significant characteristics of present-day Beverly: (1) A rapidly increasing population.

(2) Increasing diversification of industry.

A larger labor force tends to attract new industry; an expansion of industry, in turn, is an important factor in encouraging an immigration of people from other cities and towns. The availability of industrial jobs will be discussed together with the other major and minor factors causing the population increase. The larger than usual ten-year population rise has created a housing problem in recent years.

Secondly, the factors attracting industry are examined with emphasis placed upon the recently rezoned industrial district in North Beverly. A description of the largest manufacturing plants in the city concludes this section.

A. FACTORS ENCOURAGING IMMIGRATION

During most of its history as the home for families of farmers, fishermen, and small shop workers, Beverly experienced only a gradual population increase. It has
been during the 20th century that the city has had a rapidly increasing population (See graph on page 77). The first great surge of growth occurred when hundreds of Italian families migrated to Beverly soon after World War I. But the depression decade of the 1930’s interrupted the otherwise steady 50-year population growth. During that entire 10-year period, the population of Beverly increased by less than a thousand. The 1940’s resumed the established pattern of rapid increase, and the graph line representing 1950-1955 depicts a large increase in population in a relatively short period of time.

What reasons account for this population increase—in particular, the increase since 1940? It is difficult to judge the relative importance of the various factors which have tended to encourage a post-war movement of people into the city. Among those of greater importance, however, may be ranked location, transportation, and the availability of vacant residential land and industrial jobs. Minor but significant influences discussed are the following: general attractiveness, the school system, municipal recreation facilities, the commercial area, and others.

(1) MINOR FACTORS

No one of these factors, of and by itself, would encourage immigration to any significant extent. Acting in harmony, however, they provide a pleasant place in
POPULATION GROWTH IN BEVERLY SINCE 1790

Source: U.S. Census Bureau
which to live and work.

Those general conditions that would tend to cause individuals to choose to make their homes here are cited first. Beverly, like other nearby communities, enjoys a pleasant climate, cooled in summer and tempered in winter by the nine miles of coastline with the sea. A second advantage is the natural beauty and peacefulness of its wooded land, parks, ponds, and beaches well distributed through much of the city’s area. To a man or woman who has lived always among the dirt and noise of a metropolis such simple little things are powerful invitations.

Beverly fortunately has a good water supply—an advantage it has over communities only a few miles away. The pure water supply which could now adequately supply a much larger population (to be discussed in greater detail later) does not suffer from a chemical taste to which so many large communities must resort, nor has it the disagreeable well-water taste of such places as nearby as Essex.

The fact that Beverly has a fairly good commercial center is another advantage. Most of the needs of a people are cared for by the line of stores that runs for a dozen or more blocks along Rantoul and Cabot Streets. The affect of population growth on the modernization and
enlargement of the commercial center will be analyzed. Within the past three years some of the concerns that have constructed new buildings are the following:

A. & P. Supermarket, First National Supermarket, First National Bank, Beverly Co-operative Bank, Almy's Department Store, and Webber's Department Store. Several of the small businesses also have renovated their stores.

It might be naive to assume that graft and corruption are completely non-existent in any particular city. However, the fact that Beverly does have a good record in this respect might be a significant factor in encouraging business and residents. 1

Another factor people should take into consideration when moving to Beverly is the desirable school system. While it is readily admitted that the majority of the school plants are not as new or modern as they should be, educational standards are held high. During recent years Beverly has been rated by the State Department of Education as first in the State of Massachusetts in the number of high school pupils in proportion to the population of the city, and also first in the percentage of high school pupils in proportion to all pupils in school. 2

Most of those eligible finish high school. 3

Memorial Junior High, at a cost of $2,500,000, was recently constructed. The educational system also in-

1. A recent example: Beverly was the only Essex County city not linked with gambling rings by the Mass. State Crime Commission.
2. Crowley, on cit., p. 86.
3. The median number of school years completed is 12.1.
An indicator of anormal population growth is a rapid increase in number and enlargement of existing department store and banking facilities. Shown under construction are the new Beverly National Bank building (left) and the new Almy's department store.

The Webber's department store was constructed in 1935. This site was formerly occupied by Whitcome-Carter's which bore close resemblance to a 19th century hardware store.
One effect of the growing population is the creation of a new parish and construction of a new Catholic Church in North Beverly. This picture was taken on a Sunday. Services were being held while the carpenters sawed the boards.

A new five-story wing is being added to the Beverly Hospital as part of a $2,250,000 expansion and modernization project. Population pressure in the form of patients using corridors for rooms urged this expansion.
cludes two colleges, trade and two parochial schools. 1

(2) MAJOR FACTORS

An obvious factor that encourages immigration is the availability of land. Unlike such nearby cities as Salem or Lynn, Beverly still has a large area of land upon which to expand. The map showing density of population (page 83) indicates that the only saturated section of the city is Beverly Proper. Rial Side was also settled to a great extent in the early years of this century. The only other thickly populated district is that portion of Beverly Cove which lies toward the center of the city. As mentioned before, it has been just this past decade during which North Beverly has experienced a population boom. This leaves the entire eastern half of the city virtually vacant except for the farm estate settlement at Beverly Farms and the almost negligibly settled rural district called Centerville. Future expansion into the five outlying districts of Beverly can take place with a minimum of difficulty. Approximately 80% of the area of the city is zoned as single residence districts (See zoning map in appendix).

A second factor to consider is transportation. Although problems definitely do exist and will be discussed

1. The second parochial school is nearing completion.
AREAS HAVING SEWER FACILITIES

(Indirectly this map also shows the greater or lesser density of population of the various areas. Note the sparsity of population in Centerville and Beverly Farms and lack of sewerage in the former.)

KEY:
- Sewer facilities
- No sewers, mostly wooded area
- Ward lines
- Major roads

Map showing areas with sewer facilities, Centerville, Beverly Farms, Beverly Cove, North Beverly, Rial Side, Beverly Proper.
fully, nevertheless Beverly has in general a well-cared for road system. As the transportation map (page 85) shows, it is a focal point for such important routes as 1-A, 128, and 127. Others such as 22, 62, and 97 also lead to Beverly. Ninety miles of improved streets and highways provide a well-integrated network.\(^1\)

Railroad transportation is adequate to serve several industries. Railroad sidings accommodate thirteen industries and have a capacity for 135 cars.\(^2\) Beverly lies on the Boston and Maine Railroad line to Portland and the Gloucester Branch line over which sixty passenger trains to and from Boston pass each week-day.\(^3\) There are five railroad stations. The main station is on both the Portland Division and the Gloucester Branch. The other four: Montserrat, Prides Crossing and Beverly Farms are on the Gloucester Branch, while North Beverly is on the main line. An adequate local and suburban bus service also links Beverly with the nearby communities.

The Beverly Municipal Airport, owned, operated, and financed by the City, must share a responsible part for the city's progress. It has been a profitable venture for the city. For several years, Beverly has negotiated with Danvers in an attempt to buy the small strip of airport land that lies in that town. Danvers has so far refused to sell. Since the Defiance Engineering and Micro-

---

1. Crowley, \textit{op \ cit.}, p. 65.
2. Ibid.
3. Recent rising costs on commuter trains have caused a decline in the number of passengers. As of May, 1957, the number of trains to and from Boston has been reduced to 54.
The only airport in the North Shore area is located in Beverly.

**STATISTICS:**

Owned, operated, and financed by the City of Beverly.

Class S 5 Field  
**Elevation:** 108 ft. above sea level

**Location:**  
North Latitude: 42° 35' 00"  
West Longitude: 70° 55' 00"  
Approximately 3 miles northwest of the center of Beverly.  
Bearing 30° 30' 00" 17.5 miles north northeast of Boston.  
Just off Route 128 on Route 97.

**Runways:** 3 hard surfaced bituminous concrete runways.

**Servicing Facilities:** Two operators: Eastern Aviation, Inc.  
North Atlantic Airways, Inc.

**Headquarters:** Beverly Squadron, Civil Air Patrol
wave Corporation located there has recently expanded its plant and the Sylvania Corporation is currently building a new hangar, possibly the influence of the airport will become more important in the future.

Beverly's transportation network includes the remaining mode of travel—by sea. Beverly Harbor and the Danvers and Bass Rivers once shared in the China trade. They are still a stimuli for settlement in the form of recreation (boating, fishing, swimming). Several lobster and fishing concerns are located along the water front. The waterways are also used by oil and lumber boats.

To summarize briefly the influence the transportation system has had on Beverly's recent growth, it would be sufficient to say that Route 128 transformed North Beverly, not too long ago a residential district and farmland akin to Wenham or Hamilton, into the fastest growing section of the city population-wise and created a newly rezoned industrial district. (The Bomac Laboratories on Route 128 was the first plant to establish in this area.) The new route has carried Beverly's products more efficiently than the old Route 1-A that winds through some of the most congested areas of the State. Better transportation means more business. The next result is likely to be a growing population to produce the goods and a growing commercial center to supply the greater labor force with the necessities and luxuries of life.

1. A "Nike" missile installation costing $4,000,000 is now under construction beside the airport.
Areas depicted were responsible for Beverly's maritime importance during the period 1770-1815. Pleasure craft are the chief users of the Bass River now, but an occasional lumber boat from Nova Scotia docks by the lumber yards.

The waterfront has lost much of its former importance. Even a generation ago, barges with coal, oil, and lumber were frequently seen in Beverly Harbor. Now only an occasional oil boat docks by the Gulf Oil Corporation or passes on its way up the Danvers River to the White Fuel Corporation. The chief remaining industries are those using lobsters, fish, and crabs. Note lobster plant to the left of the picture.
A third important inducement to settlement in Beverly is the availability of industrial jobs. For the skilled worker it is a good place to live and work. More than 7,000 men are employed by manufacturers which range from the largest shoe machinery corporation in the world to a variety of smaller manufacturers. But industrialization has marred only a relatively small residential area. Almost all of the factories are concentrated in the down-town section.

To conclude this discussion accounting for Beverly's recent population growth, it would be well to point out that the very geographic site and situation of the city is probably the most important factor of all. Proceeding in a northerly direction from the densely packed heart of Boston along the Atlantic seacoast, one passes in turn through Chelsea and Revere, Lynn and Salem, each only slightly less densely populated than the preceding one. Crossing the bridge to Beverly, one still finds land that can be classified as urban. But the entire northern coast beyond Beverly is essentially rural. Only two towns of size (Gloucester and Newburyport) break up the otherwise rural village pattern of Wenham, Hamilton, Essex, Ipswich, Georgetown, Magnolia, Manchester, etc. Thus Beverly is located exactly on the transition zone between urban areas influenced by Metropolitan Boston and a series of country villages.
Thus it is among those Massachusetts cities having a true blend of rural-urban atmosphere in conjunction with a favorable sea coast location. It is natural therefore, for families tired of Metropolitan Boston to seek a more peaceful place to live but (and this is important) a place that also can supply them with the urban luxuries and facilities to which they have become accustomed.

B. THE RESULTING HOUSING PROBLEM

The trend of population growth has been towards the Rial Side area near the Danvers line, the Cove, especially near the seacoast, and scattered throughout North Beverly. This growing density—1,687 persons per square mile to 1,908 persons per square mile in a ten year period\(^1\) (see graph page 91) brings many attendant problems. Eisenhower Avenue is shown as an example of the widespread building activity. From a financial standpoint, the current new home construction is costly to the city because it is necessary to provide added utility services, roads, and sidewalks for each new home constructed. These costs are reflected in Beverly's sky-rocketing tax rate (graph page 150).

An example of the deficit to the city caused by the current home building program is the following:

A typical new house costing $15,000 is assessed at $7,500. At a tax rate of $68.00 per $1,000 valuation, the

---

\(^1\) Statistics of Massachusetts Cities and Towns by Regional Areas prepared by Massachusetts Department of Commerce, Division of Research.
POPULATION DENSITY OF BEVERLY
1900-1950

tax money received by the city is $510. Expenditures per pupil in Beverly are $261. Therefore a new family with two children moving into the city results in a net deficit of $12. Expenses incurred due to sewer installations, road surfacing, etc., increase the net deficit.

A number of veteran housing centers have been recently constructed by the Beverly Housing Authority. The city has attempted to solve the problem of the veteran with a large family by giving such persons first choice of the new structures. Most, like those on Schier Road and Balch Streets, are duplex structures of wood and brick conforming generally to a single modern design in each district. But solving one problem leads to another. Helping to house veteran’s large families means that a tremendous burden will be placed on the Brown and McKay schools when these children begin to attend schools built to accommodate a relatively thinly settled part of Beverly.

The housing growth problem leads directly to sewerage and other utility problems. An example of this is the discussion concerning the replacement of the sewer main on McKay Street for the 265-home project being built there. This project is located on the former old Raymond Farm, one of the last farm properties left in the city. To replace the sewer pipe will cost $7,000.1

A veteran housing center was recently constructed in the Schier Road area. Most of the duplex structures are a combination of wood and brick and conform to a single modern design in each district.

Another veteran housing center is located on Balch Street. The large number of children in these districts has necessitated the construction of a new North Beverly school to supplement the Brown and McKay schools.
An example of the current building boom is the Eisenhower Avenue area located in Beverly Cove. The building activity in Beverly for the first six months of 1955 showed an increase of $1,217,140 over the same period in 1954 according to the statistics of the Building Inspector.

Red Rock Lane depicts the housing construction activity in North Beverly. The total cost of building for which permits were issued in 1955 amounted to a $1,000,000 increase over the 1954 sum.
A sign of the times is Eisenhower Avenue which will serve the now-being-constructed housing project around the new Cove school.
New housing leads to problems in maintaining the older areas. Since the cost of providing paved streets, sidewalks, sewer and water pipes has placed such a burden on the city's finances, the older streets and sidewalks in need of repair can be cared for only a little each year under present high tax rate conditions.

G. FACTORS ATTRACTING INDUSTRY

The items discussed in part A such as good recreational facilities and the urban-rural environment have in general provided satisfactory living conditions for the workers. Most of the factors mentioned previously which encourage population growth also affect the development of industry because an important requirement of industry is a plentiful supply of skilled labor.

There is a fairly large supply of both skilled and unskilled labor found in Beverly and the adjacent cities and towns. Reference to the graph (page 98) shows that 2,206 operatives or 19.6% of the labor supply of Beverly are employed, chiefly in machinery and leather corporations. Much of this semi-skilled labor is provided by the large (20.1%, see graph page 99) number of Italian immigrants. A greater number of skilled persons (17.6% craftsmen and foremen plus 13.3% professional-technical) are employed. The majority of this group are of British or British-
OCCUPATION GROUPS OF BEVERLY

Not Reported: 1.3%

Pvt. Hshld. Workers: 319 (2.8%)

Laborers: 671 (6.0%)

Sales Workers: 831 (7.4%)

Service Workers: 861 (7.6%)

Mgrs & Proprietors: 1,021 (9.1%)

Prof, Tech, & Kindred: 1,494 (13.3%)

Clerical: 1,720 (15.3%)

Craftsmen & Foremen: 1,983 (17.6%)

Operatives: 2,206 (19.6%)

Source: U.S. Census 1950

Key:
No. = Number of Persons in Occupation Group
% = % of Total Beverly Civilian Labor Force
Percentage based on 3,774 foreign-born persons in Beverly, according to U.S. Census, 1950.
Canadian descent. (Total English-Irish-Scotch-British Canadian immigrants: 52.8%, see graph page 99).

Transportation by sea, air, rail, and road is a vital consideration to industry. Beverly's position at the junction of six routes plus its other transportation facilities is favorable to industrial development.

Location on the North Shore twenty miles from Boston accounts for two other favorable conditions:

A. A surrounding urbanized area for markets.

B. Nearness to related industries and research facilities.

The condition most indicative of favorable future prospects for manufacturing, however, is the availability of suitable land. Until recently, Beverly lacked, because of zoning regulations, a good site for industrial expansion. But in April, 1954, an area in North Beverly was rezoned into a planned industrial park.

D. THE INDUSTRIAL PARK

As mentioned before, Route 128 is likely to have a revolutionary affect on Beverly's industries. After years of bitter haggling between aldermen who represented established residential districts which feared the depreciation of their property; aldermen who represented established industries which feared new competition for
the labor supply or in sales; and aldermen who desired to see Beverly grow, a large portion of land in North Beverly was rezoned for industrial purposes in 1954. The two areas (see map page 176) totaling 352 acres extend from the B. & M. Rail Road between Beverly and Salem Reservoirs across Route 128 to Norwood's Pond. This location for industry offers a plentiful water supply, rail, and road facilities. Had such rezoning not taken place within a very few years such choice industrial land would have become a completely residential district (North Beverly has had a greater number of new streets built in the last ten years than any other section of Beverly). Whereas there are large areas of land good for residential use in the eastern half of Beverly, there is no other favorable site (junction of a main rail line with a major route) in Beverly for a planned industrial park. And it is apparent that expansion of the old industrial area would be both costly and detrimental to the surrounding commercial and residential areas. In contrast to the decaying, congested Rantoul and Park St. industrial district, Bomac Laboratories has many acres reserved for future expansion and has received a national award for the beautiful construction and landscaping of the plant.
Long ago the Planning Board recognized that the city must provide room for industrial expansion and modernization. One possible good site for industry in Beverly has been rendered less desirable by residential invasion. The old industrial area in the center of the city (the Park-Rantoul-Elliott-River St. section) suffers from the intermingling of commercial concerns and residences of all types. The difficulty of loading or unloading trucks on main streets, the traffic snarl in general, and the extremely high cost of expansion (buying and tearing down houses or stores) makes the industrial future of the lower city dark indeed.

Faced with the problem of spotty industrial development all over the city or the loss of industry, Beverly finally rezoned the North Beverly land. Not only will the future industries have access to good transportation (Routes 128, I-A, 97 and rail), but they will be near enough to the homes of employees so that their travelling expenses will be low. Flat land for single story buildings is available. The four utilities of water, sewer, gas and electricity extend along Cabot to Dodge Street, along Dodge to Wenham Lake, and along Colon and Essex to Brimbal Avenue. Also such plants would be far enough away from schools, homes, parks, and playgrounds.
Within the industrial site there is room for the construction of enough modern factories to employ several hundred workers. Plants ranging in size from 25 to 100 or more workers can be located with ample space for all their parking needs, for outdoor storage, and for future expansion without crowding other plants. A railroad siding will serve those industries large enough to require such service. Traffic will feed directly out to Route 128 and Colon Street, thus passing through no heavily built-up residential or commercial areas.  

It is anticipated that some of Beverly's existing industries will move to this new site for the expansion and modernization they are seeking. The existing Rantoul and Park Street district will have space to redevelop and improve itself in order to match the attractiveness and competition of the new site. Both districts will benefit.

E. THE MAJOR INDUSTRIES OF BEVERLY: 1957

The industrial pattern of today shows the United Shoe Machinery Corporation still giant among the industrial plants. The plant now includes more than 1½ million feet of floor space on a 91-acre factory site. Some 3,000 people are employed in the main manufacturing buildings, each of which is a quarter mile long. Nearly completely self-sufficient, the corporation has its own power plant, heat-treating, pattern and tool-making shops, foundry and forge, and a vast production machine shop which has at least one of every known type of machine tool. The machine shop, called by some the largest job shop in the United States, produces nearly three hundred different types of machines. A complex of research laboratories develops machinery for the U. S. Dept. of Defense as well as the shoe and other industries.

Other major factories, which antedate United’s plant by a few years, are Reid Brothers Company and its subsidiary, the Post Machinery Company. A factory of importance in the metal working industry, Reid Brothers manufactures machine tools such as "Reid Precision Surface Grinders" and "Reid Production Lathes". Some 12,000 grinders weighing over a ton
Two views are shown of the corporation that built the City of Beverly. One of the chief factors underlying Beverly’s development from a town to a city was the establishment of the United Shoe Machinery Corporation in 1905. This one factory towers over all the other industries like a giant. Growth of diversified industry in Beverly will cause the "Shoe’s" power to gradually decline, but a factory that employs more than 3,000 men will always exert a strong influence in city affairs.
apiece have been manufactured and are chiefly used in the making of dies for plastic products. The lathes were used in shell turning plants during World War II and the Korean conflict. Products of the Post plant include machines designed to fold and glue cartons for the packaging industry and "Post Electronic Counters" which accurately count a wide variety of products at high speed.

Another important industry, located on Congress Street on Beverly's waterfront, is Metal Hydrides, Inc. A leader in research of rare metals such as titanium, zirconium and uranium, this plant (established 1941) processed vital materials for the Signal Corps, including large quantities of pure uranium for the Manhattan Project. A million-dollar expansion program in 1953 increased its chemical hydrides laboratories on Congress Street, but Metal Hydrides has become the problem industry of Beverly. Even though it is one of the five or six biggest corporations in Beverly, in recent years there has been much public agitation against its further expansion, especially by explosion-conscious residents in the near vicinity of the plant. In 1954 the company sought to have a 63-acre plot of land beside Route 128 in North Beverly rezoned for construction of a huge new plant, but public pressure on the poli-
Lobstering is one of Beverly's traditional industries. Offering a good protective harbor during storms (Bass River was dredged last summer) and good docking facilities, Beverly has a thriving lobster center in her Water-Front St. district.

Metal Hydrides, Inc. is another industry along the waterfront, situated where rail, sea, and major routes converge. This is an example of an inherently excellent industrial location which becomes poor when industrial expansion is thwarted by an established residential district. Explosion-fearing taxpayers forced the concern to build its new million dollar plant in Danvers.
INDUSTRIAL FIRMS IN BEVERLY'S CENTER

KEY

- Machinery (Except Elec.)
- Food and Kindred
- Toys
- Electrical Machinery
- Clothing Manufacture
- Lumber and Housing
- Leather & Leather Prods.
- Printing & Publishing
- Petroleum Manufacture
- Fabricated Metal Prods.
- Utilities
- Pumice Manufacture
- Construction
- Auto Parts Manufacture
- Larger circles denote firms with greatest no. of employees

Scale: 1 inch = ¼ mile
<table>
<thead>
<tr>
<th></th>
<th>CHIEF MANUFACTURING FIRMS OF BEVERLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Aame Spring Mfg. Corp.</td>
</tr>
<tr>
<td>b.</td>
<td>Thomas Hayes Clothing Mfg.</td>
</tr>
<tr>
<td>c.</td>
<td>Superior Hat Leather Co.</td>
</tr>
<tr>
<td>d.</td>
<td>North Shore Press</td>
</tr>
<tr>
<td>e.</td>
<td>N. Collier &amp; Co.</td>
</tr>
<tr>
<td>g.</td>
<td>North Shore Bottling Co.</td>
</tr>
<tr>
<td>h.</td>
<td>Dynatial Corp.</td>
</tr>
<tr>
<td>i.</td>
<td>Essex Food Products Co. Inc.</td>
</tr>
<tr>
<td>j.</td>
<td>General Refinishing Co.</td>
</tr>
<tr>
<td>k.</td>
<td>Capitol Auto Parts &amp; Machinery</td>
</tr>
<tr>
<td>l.</td>
<td>William R. Rogers, Inc.</td>
</tr>
<tr>
<td>m.</td>
<td>Leader Last Co.</td>
</tr>
<tr>
<td>n.</td>
<td>Gar Manufacturing Corp.</td>
</tr>
<tr>
<td>o.</td>
<td>Kiever Lumber Corp.</td>
</tr>
<tr>
<td>p.</td>
<td>D. H. &amp; G. H. Bell Shoes</td>
</tr>
<tr>
<td>q.</td>
<td>Samuel Knight's Lumber Co.</td>
</tr>
<tr>
<td>r.</td>
<td>Saratoga Pop Corn Co.</td>
</tr>
<tr>
<td>t.</td>
<td>North Shore Gas Co.</td>
</tr>
<tr>
<td>u.</td>
<td>F. W. Stuart Co. Inc.</td>
</tr>
<tr>
<td>v.</td>
<td>Foot Delight Shoe Co.</td>
</tr>
<tr>
<td>w.</td>
<td>Essex County Electric Co.</td>
</tr>
<tr>
<td>x.</td>
<td>Esquire Slipper Mfg. Co.</td>
</tr>
<tr>
<td>y.</td>
<td>Moore Brothers Sportswear Inc.</td>
</tr>
<tr>
<td>z.</td>
<td>American Toy Products Co.</td>
</tr>
<tr>
<td>1.</td>
<td>Reid Brothers Co., Inc.</td>
</tr>
<tr>
<td>2.</td>
<td>Utility Metal Products, Inc.</td>
</tr>
<tr>
<td>3.</td>
<td>Del-West Inc.</td>
</tr>
<tr>
<td>4.</td>
<td>Post Machinery Co.</td>
</tr>
<tr>
<td>5.</td>
<td>North Shore Parts</td>
</tr>
<tr>
<td>7.</td>
<td>North Shore Machinery and Screw Co.</td>
</tr>
<tr>
<td>9.</td>
<td>Mae-Hal Press</td>
</tr>
<tr>
<td>10.</td>
<td>The Quality Press</td>
</tr>
<tr>
<td>11.</td>
<td>Comet Leather and Finishing Co.</td>
</tr>
<tr>
<td>12.</td>
<td>Pilgrim Plastic Leather Co Inc.</td>
</tr>
<tr>
<td>13.</td>
<td>Clementzke Construction Co. Inc.</td>
</tr>
<tr>
<td>15.</td>
<td>Aulson Tanning Machinery Co. Inc.</td>
</tr>
<tr>
<td>16.</td>
<td>Beverly Evening Times</td>
</tr>
<tr>
<td>17.</td>
<td>The Beverly Portable Units Corp.</td>
</tr>
<tr>
<td>18.</td>
<td>A. B. Machine Co.</td>
</tr>
<tr>
<td>19.</td>
<td>American Seltzer Co.</td>
</tr>
<tr>
<td>20.</td>
<td>Metal Hydrides, Inc.</td>
</tr>
</tbody>
</table>
ticians delayed rezoning so long that the company officials purchased a plot of land in Danvers instead. It is possible that Beverly may lose even the original plant in the next few years.

Probably the city's most rapidly growing industrial concern is the Bomac plant. Housed on the second floor of an old Park Street building in 1947, the concern now has a new North Beverly factory on route 128 with 75,000 square feet of floor space and employs over 800. The concern specializes in the making of some 300 different radar-type tubes. Technical devices manufactured include: silicon and germanium diodes, hydrogen thyratrons, broad band duplexer, magnetrons, modulators, gas switching tubes, etc.

Finally, it should be remembered that a series of old shoe factories still line lower Rantoul Street as they did 75 years ago. Along with the several shoe manufacturers that occupy these buildings (such as the Foot Delight Shoe Company) are many diversified industries. These firms (such as American Seltzer Co., Moore Brothers Sportswear, and Lion Leather and Plastic Co.) indicate that the skilled labor attracted and accumulated over the years by the shoe and shoe machinery industries was probably the chief factor encouraging the various new manufacturers to locate in the city.

Specific facts and figures concerning modern Beverly industries discussed in above four pages from interview and materials of the Beverly Chamber of Commerce. Also, such folder-type pamphlets as: Telephone Topics, Sept., 1954, published by N. E. Tel. & Tel.
Bomac Laboratories, Inc., manufacturer of tubes used in radar applications, was the first concern to build a new plant in the North Beverly industrial park.

The Utility Metal Products Company occupies a modern building in the old downtown industrial district. The company is equipped with its own railroad siding and inside truck loading docks.
BEVERLY INDUSTRIES PROVIDE 19,175,000 PAYROLL DOLLARS

Leather $1,397,000

Machinery & Electrical $16,286,000

Chemicals $600,000

Food $59,000

Printing $199,000

Stone, Clay & Glass Products $43,000

Wood Products $153,000

Metal Products $257,000

Textile Products $70,000

Miscellaneous $100,000

$80,000,000 WORTH OF PRODUCTS ARE MANUFACTURED IN THE INDUSTRIAL HEART OF BEVERLY ANNUALLY.
NUMBER OF FIRMS IN BEVERLY

Agriculture and Mining
Trans., Comm., & Utilities
Finance, Insurance and Real Estate
Manufacturing
Construction
Service Industries
Wholesale & Retail Trade

Source: Mass. Dept. of Commerce, 1953
ANNUAL PAYROLL OF BEVERLY'S INDUSTRIES

Agriculture and Mining: $36,000
Finance, Insurance and Real Estate: $383,000
Transportation, Communications, and Utilities: $493,000
Service Industries: $582,000
Construction: $1,357,000
Wholesale and Retail Trade: $2,587,000
Manufacturing: $20,067,000

Source: Mass. Dept. of Commerce, 1953
Number of Employees in Beverly's Manufacturing Groups

3,317

Percentage based on 4,790 workers employed in manufacturing firms

Source: Mass. Dept. of Commerce, 1953
2.

MODERN URBAN PROBLEMS

A population growth of over ten per cent since 1950 has created a series of problems concerning the principal municipal services. Whereas the school system, water supply, public recreation, etc., were in the main adequate for the population of the 1940's, the pressure of the present population has revealed certain deficiencies. Emphasis in this section is placed upon the school system, the most serious problem at present. Also discussed are the traffic, public recreation, fire protection, and water needs.

A. THE SCHOOL SYSTEM

Beverly's school problem is more acute than that of some cities because there has not been in the past, nor is there likely to be in the future, a system of parochial or private schools that educate more than a small fraction of the school population. In spite of the fact that the Catholic population of Beverly is estimated at 35%, there was until this year only one parochial school in the city. Sociological influences together with the factors of location and population distribution have contributed to this situation.
Solidarity among the various ethnic groups is not as great in Beverly as in some neighboring communities. In Salem, for example, the French, Polish, and Irish groups have tended to cluster into districts. Each group has retained its ethnic identity with separate churches, schools, and clubs.  

The French-Canadians and Irish in Beverly, on the other hand, have not settled and remained in any particular neighborhood of the city. If any one national group can be singled out as having remained in one district to a significant extent, that is the Italian group. The original Italian settlement was centered in Ward 3. In recent years, however, the second generation of that group has, in general, moved out of the run-down tenement district to many other areas of the city, particularly to North Beverly. This concentration in North Beverly has resulted in the building of the first new parochial school in a generation, St. John the Evangelist School.

As most of the Catholic population is evenly distributed throughout the city, there has never been the demand nor the need for a system of parochial schools. Neither the Irish, French-Canadians, nor the Italians (until recently) were concentrated enough in any particular area to warrant

1. For example, in Salem the St. John the Baptist School is attended in the main by children of Polish descent, the St. Ann by French, the St. James and the St. Mary by Irish, and the St. Thomas (near the Peabody border) by Portuguese.
the expense of building a school primarily for their group.

The fraction of the Catholic population which felt strongly motivated to send their children to a religious school had St. Mary's School available. This combination elementary school and high school for girls has been attended about equally by the three nationality groups; therefore, the curriculum has not been centered about anyone group. Others might have sent their children if the language and culture of their national group had been emphasized in the curriculum; for example, the teaching of the school subjects in the French language. At present, apparently, most Catholics in Beverly, can see no important advantage of sending their children to a parochial school instead of a nearby public school.

Only a small number of the children of Beverly attend private schools. Until this year, the only private elementary school in the city was the Country Day School, formerly the Winslow mansion. The wealthy families of Beverly Farms were not of sufficient numbers to warrant the building of more than one private school. In many cases, because of their economic status, they could afford to send their children to the many old established schools located in the New England region.

---

1. Some of the boys go to St. John's Preparatory School in Danvers; the rest of them attend Beverly High School.
2. A recent development in the Farms area, however, is the current remodelling of an estate into a private school.
To continue to provide a high educational standard for its children is definitely Beverly's most serious and acute problem. In order to understand the present condition of the public school system, a knowledge of the past school building program is necessary.

(1) A BRIEF HISTORY OF THE SCHOOL BUILDING PROGRAM: 1900--1950

At the turn of the century, the following buildings housed the entire school population:

1. South  
2. Hardie  
3. Farms  
4. Washington (old)  
5. Pleasant View  
6. Prospect  
7. Centerville  
8. Dodge's Row  
9. Ryal Side  
10. Cove  
11. Briscoe (High School)  
12. Bass River (Brown)

When the United Shoe Machinery Corporation came to town in 1905, it stimulated a business and population growth that was reflected in a need for more school facilities. The following large school buildings (for those days) were added:

- 1907: McKay (Winslow)
- 1910: Washington (new)
- 1913: Edwards

The aftermath of World War I, with its "baby boom", started the second wave of school building construction in the 1920's. The following were added:

- 1920: Brown (in place of Bass River)
- 1923: Senior High School
Meanwhile, several schools had outlived their usefulness, owing to their being in run-down condition, in the wrong location, or to their being small and scattered about the outskirts, making them uneconomical to operate and maintain. These included:

1. South
2. Pleasant View
3. Dodge's Row
4. Bass River
5. Washington (old)

A growing population and changing conditions in several neighborhoods necessitated not only abandonment of the above-mentioned buildings, but the enlargement of other existing buildings to meet the new needs. The following schools underwent such enlargement during the first half of the century:

1. Ryal Side (1st enlargement)
2. Centerville (1st enlargement)
3. Prospect
4. McKay
5. Briscoe
6. Ryal Side (2nd enlargement)
7. Centerville (2nd enlargement)

The second enlargements of the latter two were completed during the depression years. Now, as a result of the World War II "baby boom" and the "new family boom" with its housing projects, Beverly is forced to undertake a major school building program. It is necessary to abandon some old buildings, enlarge others where feasible,
and to construct several new buildings to meet the population surges in the development of new neighborhoods.

(2) THE PRESENT SCHOOL SITUATION

As a result of the rapid population increase, most of the schools of Beverly have a capacity enrollment. A table showing years when capacity enrollment was reached is found below. During the years that have elapsed since the saturation point was reached basements, corridors, auditoriums, etc. have been transformed into none-too-satisfactory classrooms.

TABLE D
DATE WHEN CAPACITY ENROLLMENT REACHED IN BEVERLY'S SCHOOLS

<table>
<thead>
<tr>
<th>SCHOOL</th>
<th>CAPACITY REACHED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brown</td>
<td>1951</td>
</tr>
<tr>
<td>Centerville</td>
<td>1952</td>
</tr>
<tr>
<td>Cove (old building)</td>
<td>1950</td>
</tr>
<tr>
<td>Hardie</td>
<td>1947</td>
</tr>
<tr>
<td>McKay</td>
<td>1950</td>
</tr>
<tr>
<td>Prospect</td>
<td>1951</td>
</tr>
<tr>
<td>Ryal Side</td>
<td>1951</td>
</tr>
<tr>
<td>Washington</td>
<td>1950</td>
</tr>
</tbody>
</table>

The table reveals how critical Beverly's school situation is. Eight schools became overcrowded during

EDUCATIONAL SYSTEM OF BEVERLY

KEY

- Colleges
- Senior High School
- Junior High Schools
- Elementary Schools
- Parochial School
- Elementary School Districts
- Beverly School for the Deaf
- Proposed Junior High School
- Elementary Schools under construction
- Parochial School under construction
- Elementary School to be abandoned

Legend:

[Map of Beverly Educational System with various locations and symbols indicating different types of schools and districts.]
a five year period. The only schools where normal conditions prevail are the Edwards (located in the old lower city where population remains stable), the Farms (located in the isolated rural area) and the recently constructed Cove-Montserrat School.

Beverly has tried to solve this problem by the erection of the new Cove (capacity 360 students) and a new North Beverly (capacity 360 students) school. Construction was begun on the latter within a few months of the completion of the former. It is expected that a third school will be begun on Green's Hill serving Rial Side as soon as the North Beverly School is finished. The Cove, North Beverly, and Rial Side areas (in that order) are the most critical, since the population growth in those three areas is the greatest.

The population pressure in the various school districts and its affect upon each of the school buildings is discussed on the following pages.

1. Abraham Edwards School

Built in 1913, this school must serve the lower section of Beverly for years to come. It has inadequate playground space (a characteristic of so many schools built in the early years of this century). The school has a capacity of 400, and since there is

little likelihood of substantial growth in the school population of this section, no problem common to much of the rest of the city exists, i. e. it is adequate in floor area to serve population needs but not in playground, parking, etc. The school is located in the old commercial-industrial area. Some of the area is a slum section and there is almost no space available for new housing construction.

2. Washington School

This was built in 1910 on a "pocket-handkerchief" plot of land with essentially no play space whatsoever. Recently the expedient was tried of blocking off one of the adjacent streets from traffic during recess time! Both the Washington and Edwards Schools were well constructed (old-style). Although they are both filled to capacity, they serve a relatively small area in the built-up section of the city where little growth is expected. No plans for new buildings in these areas are anticipated.

3. Hardie School

This school built in the last century serves the old part of town near the waterfront. It does have fair playing space since it lies next to the Common. The above three schools are located reasonably well so that no child has very far to walk. Now accommodating 1/3 of the total school population, the
down-town schools must serve for years to come.

4. **Prospect School**

Situated in a poor location on the summit of a hill, this is a school without a future. Because it is situated relatively near the Washington School, there is an overlapping of the school districts. Most of the children come from the area to the east of the Prospect School. It is anticipated that a school will be built in a more convenient location during this decade, and the old Prospect School with ledge outcroppings in its poor playground will be eliminated.

5. **McKay School**

This building was once believed to be located poorly in a relatively thinly populated area. But since the new housing boom took place in North Beverly, the McKay has been filled to capacity. It is in excellent condition and has a good playground.

6. **Cove School**

The old four-room wooden structure had been slated for demolition, but the present critical classroom shortage may yet force the city to use it temporarily for the retarded children. The long overdue new building designed to serve the Cove and Montserrat areas has recently been completed. The capacity of the old school is 120. Since the new building boom, the number of children in the area
The old Cove School, a four-room wooden structure, was scheduled to be demolished. It is being attended temporarily by the retarded children of the city.

The new $360,000 Cove-Montserrat building is shown when it was in the process of being constructed. The new one-story 12-room building completed in 1956 serves one of the three fastest growing sections of Beverly.
had swelled to 225. As a result, fifty children had to walk an extra-long distance to the Hardie School (which now is also filled to capacity). Also the sixth grade had to be transported to the Farms School which is four miles away. The Farms School is the only one without problems of overcrowding in the entire city. There are two reasons for this. Most of the children from the large estates go to the Country Day School or other private schools in various cities. Also the area has not experienced a housing boom. The high price of much of the land discourages many from building in the area.

7. Brown School

The Brown School was located on Conant Street in North Beverly equidistant from upper Cabot Street and Dodge Street. Whereas no side streets were constructed off upper Cabot Street in the general direction of the airport, more than twenty roads were made off Dodge Street in the Wenham Lake area. A result of the poor location was the need for bus transportation for several years.

This North Beverly district is especially critical due to the new housing developments. No better indication of the rapid growth of this section could be found than this fact: two elementary schools, one public, one parochial are being constructed concurrent-
ly in the same general area. The St. John School of modern brick and stone design will initially contain eight classrooms but provision is made for future expansion. This new parochial school on New Balch Street may tend to relieve some pressure on the schools in the central area of the town, but the new public school near Brimbal Avenue is too remote to alleviate any of the overcrowding in the other areas. At this writing, St. John's is nearing completion but the public school is only in the foundation-laying stage. The building of this school was delayed while the School Committee debated which district needed the next new elementary school the most: Rial Side or North Beverly.

2. Rial Side School

This, the largest elementary school in the city, is full to capacity, but does not lend itself to expansion. Any more growth in Rial Side will put real pressure on its facilities. At this writing, a number of houses are being constructed along Kernwood Avenue. It would be too much of a hardship to force children living in the vicinity of Livingstone Avenue to walk across Bass River Bridge to get to the next nearest school, the Edwards. A new building in the region of Bass River (see map page 122) is an imperative need forced by housing developments in the Beverly Hills Region.

2. Centerville School

An old wooden building with a capacity of 100 pupils and poorly located on a heavily traveled highway must be replaced. The school committee is considering a new location on Hale Street. Even little Centerville has been affected by the population boom.

The changing population finally forced Beverly to abandon the traditional educational system in favor of the more modern 6-3-3. To relieve the pressure on all the elementary schools at once, it was voted to shift the seventh graders to the junior highs. This shifting of seventh graders to old Briscoe and Memorial was a temporary solution. However, the Rial Side School, for instance, is overflowing again. The Junior High system postponed the problem two years, it did not solve it.

To make 400 of Beverly's children go to Briscoe while the rest go to Memorial is unfair for the minority. Briscoe was long ago condemned. Not only that, it was designed to be a senior high school in the best 19th century traditions. Because of the population pressure, Beverly is forced to use the very school it spent $2.5 million dollars to eliminate! Before the three new elementary schools are half paid for, Beverly will have to build a second junior high to replace Briscoe.
The new Memorial Junior High located on Cabot Street, North Beverly was constructed in 1954.

It is anticipated that Briscoe will be replaced within the next five years. It is attended by the approximately four hundred adolescents who live in the downtown section.
But this is not all. According to Superintendent King's statistics (see graph page 132) the number of children of junior high age by 1959 will require three junior highs. Finally, the same chart reveals that by 1959 the vanguard of the war-baby boom will fill the Senior High School to capacity. By 1962 the critical stage will arrive. If the population continues to increase at the present rate, Beverly will be forced to build one Senior High, three Junior Highs, and probably four elementary schools between 1954 and 1964. The rapid increase of the tax rate during the last few years is in part a reflection of the current school building program.

PROJECTED BEVERLY SCHOOL ENROLLMENT

- Grade One Enrollment
- Junior High Enrollment (Grades 7,8,9)
- Senior High Enrollment (Grades 10,11,12)

Estimated figures shown as dotted lines.

Capacity of schools reached:
- Using all available classrooms
- Using corridors, auditoriums, cafeterias, and basement areas as classrooms

Source: Superintendent of Schools, Starr M. King, 1953
Like so many old New England towns, Beverly's street pattern is terrain oriented. Cabot Street, for example, follows a winding path over a hill on the east side of Bass River and then passes through a valley between the hills of North Beverly to the west of Wenham Lake. Instead of a compact commercial center, stores of all kinds sprawl the entire length of Cabot and Rantoul Streets from Essex Bridge to Gloucester Crossing. Intermingled with these are manufacturing plants, tenement houses, and schools. A definite traffic hazard is caused by so many children and other pedestrians crossing the two main streets and by so many double-parked trucks making deliveries to industries. Such an intermingling of different types of land use also tends to stifle the whole from expansion, and deterioration results (this is evident in the lower end of both streets).

The traffic map of Beverly Center (page 135) is a reflection of changes that have been wrought by the population increase during the past few years. No less than fifteen one-way streets are shown where only three or four existed in 1949. Traffic lights are an entirely new phenomenon in Beverly—an indication of urbanization and traffic problems. Seven traffic lights have been installed on intersections in the heart of the city in much less that number of years.
An attempt, at least, has been made to solve the parking problem. Two three-acre parking lots have been placed in the center of the business district. This does not solve the problem entirely, however. At present there is agitation to convert a cemetery dating from Colonial times into a parking lot. This may eventually be done. Part of this cemetery located near the main business intersection was condemned when the Central Fire Station was constructed.

The cramped twisted streets with inadequate parking made dangerous by numerous intersections become almost intolerable by the surge of traffic from Salem along Route 1-A. Traffic from the south seeking routes 1-A, 127, 22, 97, or 62 must plow through the middle of the shopping district.

The plan to solve this traffic headache is shown on the map (page 133): The construction of Bass River Boulevard. Fortunately it is not necessary to bulldoze a highway through houses and factories. The new route, using existing streets on the west side of the railroad, could be established from Essex bridge to Route 128. This route would require some street additions and improvements, but no heavy demolition costs. This new parkway would keep through traffic out of the center of the city (Rantoul-Cabot). Suggested several years ago, the

1. The six acres provide space for 800 parked cars. Space must be found for at least 700 more cars. It will be necessary in the near future to demolish or move some of the old houses directly behind the Cabot Street stores, probably in the Wallis St. block.
TRAFFIC MAP OF BEVERLY'S CENTER

Traffic Lights

PLANNED NEW BEVERLY-SALEM BRIDGE TO BE CONSTRUCTED IN 1950'S

PLANNED NEW "BASS RIVER BOULEVARD" (THE FUTURE LOCATION OF ROUTE 1A)

AVENUES TO BE WIDENED

AVENUES TO BE CONSTRUCTED

AREAS OF SEVERE TRAFFIC JAMS

Scale: 1 inch = 1/4 mile
plan has yet to be implemented. One reason for the delay is the probable loss of sales by downtown merchants if the center of Beverly should be bypassed.

The plan for this route has traffic entering the city by the Essex Bridge, overpassing the Boston and Maine tracks near School Street, going down a widened River Street, and skirting the shore of Bass River from Bridge St. to the beginning of McKay Street. It would then go up McKay Street to Route 128 and continue on the existing 1-A into Wenham. This new 1-A would be a 4-lane dual highway for this entire distance. 1

The routing of 1-A has the advantage of having vacant land or water on at least one side for almost its entire length. It would therefore have only four intersections between the harbor and Elliott Street, contrasted with the eighteen intersections on the existing 1-A.

When complete Beverly would have a north-south bypass as well as an east-west (128) bypass.

Other plans include an expensive under-overpass system at the Gloucester Crossing bottleneck. The Gloucester Crossing Project would cost $965,000 to construct. 2 It calls for the lowering of the railroad from the Utility Metal Products siding to Montserrat depot and the construction of an overpass for Cabot Street. This intersection

A view of Route 128 that crosses the northern half of Beverly providing an east-west bypass through the city.

Automobiles flowing along Cabot, Rantoul, and Colon Streets become ensnarled at "Gloucester Crossing". Note railroad gates in background.
of Colon, Cabot, and Rantoul Streets plus the B. & M.
Railroad rates as one of the worst traffic intersections,
but other bad ones exist such as Ellis Square, the Cabot-
Rantoul entrance near Essex Bridge, and the River-Bridge
St. areas.

G. PUBLIC RECREATION

The one phase of municipal service which is ample
for today is that of public recreation. One of the most
praiseworthy of Beverly's acts has been its provision of
space for playgrounds and parks. The areas of the parks
and playgrounds in general are greater than those provided
by the large cities nearer Boston. But if the population
increases at the present high rate for many years, more
space will have to be set aside for recreation.

With the exception of Ward 3, every part of the
city supplies nearly enough space for parks and playgrounds--
for the time being.\(^1\) The total amount of land set aside is
good; the locations are not all well-chosen. In most cases
they are in the older residential areas and inadequately
serve some of the sections with the fastest growing population.
Playgrounds located more than half a mile from small
children's homes are less frequently used than they
ought to be. As was mentioned before, only small playground

\(^1\) Wakefield, op cit., p. 6.
Centerville is largely a forested area with the smallest
population of the political subdivisions. The United
Shoe Machinery Corporation's golf course, bowling green,
and tennis courts provide adult and teen-age recreation,
but the rapid increase in the number of small children
in the northern part of North Beverly requires more play-
areas are found next to most of Beverly's schools where the need is greatest.

The whole of Rial Side has two playgrounds,\textsuperscript{1} totaling almost five acres,\textsuperscript{2} but they are both on the east side of the ward. They overlap each other in the areas they serve and provide no recreation space for all the children between County Way and the Danvers line. More acreage is needed by the Ryal Side school for these youngsters to play in. (This is the same Beverly Hills section that has been referred to before). The majority of the Rial Side children, though, are fortunate to have Obear Park as one of their recreation areas. The well maintained park contains a beach, playground equipment, tennis courts, picnic-table areas, and also a large ice-skating area in the winter.

An attempt should be made in the near future to provide better facilities for the children of Ward 3. Juvenile delinquency is apt to flower among children who play in the shadows of leather factories and grocery stores rather than those who can still run in the woods and fields of the outlying sections.\textsuperscript{3} The dilemma is that little land is available in the commercial-industrial built-up district. One small playground is found in the rear of a rather dilapidated section not far from the railroad; another, better described as an open field than a playground, lies not far from the

\begin{enumerate}
\item Including playground at Obear Park.
\item Wakefield, \textit{op cit.}, p. 6.
\item The present slum or slum-like areas are in the parts of the city near the water front or the railroad track. A future possibility is the development of delinquency in the new housing projects of North Beverly and other parts of the city.
\end{enumerate}
rotting wharves of Bass River.

New recreation spaces must also be set aside for the rapidly growing Cove and North Beverly areas. Sally Milligan Park, once considered too out of the way for most people, now is becoming an excellent play area for the children living in the new houses being built in the vicinity.

The chief danger lies here: In a small city like Beverly, with a high tax rate and no extra funds, recreation gets pushed into the Public Works Department as a minor function. According to the mayor it has been necessary to curtail other services in order to compensate for the high increase in the school department budget.

Fortunately for Beverly, according to the terms of the will of the late David S. Lynch, the city will receive nearly $400,000 from the Lynch fund on October 14, 1958. This money must be used specifically for the improvement of the present and additional parks. A park commission is to be established as an independent body, and will take care of the park needs in the future. Additional parks are likely to be placed in the most needed areas: the downtown section and near the new housing developments of North Beverly.

---

1. A recent statement by Mayor Clarence S. Wilkinson.
2. The current expenses only of the school department budget increased 17% ($238,000.00) in 1956 over the 1955 amount.
Beverly is a sea-coast community rich in natural beauty. Dane Street Beach located on the south side of Downtown Beverly is probably the most used of all the recreation areas.

The changing population distribution has caused Sally Milligan Park to occupy an optimum location. An ice skating pond was recently constructed here, and it is anticipated that the present recreational facilities here will be improved to better serve the Cove area.
Good recreation facilities may contribute to Beverly's low juvenile delinquency rate. Last year a new football stadium was constructed near Cooney Athletic Field.

A "Little League" baseball diamond is located centrally near Gloucester Crossing.
The beautiful gardens and beaches of Lynch Park were donated to the City of Beverly by one of the rich and philanthropic families of the Prides-Cove section. The City has maintained the aesthetic recreational area in good condition. Its location, however, is definitely disadvantageous. Lying in the Cove section, it is too long a walk from Rial Side or most of Beverly proper. As a result, probably half the visitors to the park are out-of-town tourists. Of historical interest is the fact that nearby Burgess Point was the summer home of President Taft.
D. FIRE PROTECTION

Another item responsible in part for the currently high tax rate was the construction of the Central Fire Station. Constructed on old cemetery property, the fire station serves the commercial district of Beverly.

The next station that must be built in the Beverly Farms section will replace a relic of 1846. This building will cost $100,000. In relation to sleeping quarters, provisions have been made for additional firemen so that if the Farms-Prides area population grew to any great extent, more firemen could be assigned to the station without the creation of a housing problem. The new structure will also provide space for a police department.\(^1\)

Both the Rial Side and North Beverly sections have relatively modern fire stations, so that even though these areas are experiencing the greater growth, no new fire station in either will be needed for some years to come.

The slowest growing section will have the new station. But the Farms people have waited since 1846 for this building—the more populous sections received their new fire stations first.

\(^1\) Beverly Evening Times, October 7, 1955.
On October 1, 1955, the destruction of the 1846 Beverly Farms Fire Station was begun. A new $100,000 building has been constructed in its place.

The 1954 Central Fire Station was constructed on confiscated cemetery property. Apparently, it was the only space available in the thoroughly urbanized downtown section of the city.
E. THE WATER SUPPLY

Like so many other cities, Beverly has outgrown her water supply. The rather large Wenham Lake deceived the people into believing that they would not suffer a water shortage for years to come. But two factors: (1) the greatly increased population throughout the town, and (2) the housing developments on higher elevations in Beverly have found Wenham Lake inadequate. The Beverly Hills section of Rial Side developed in the past six or seven years received no water during some days of August, 1954, because the lower lake level lacked the pressure to force the water to such an elevation.1 The Sunset Drive neighborhood was especially vociferous in their demands for a new water supply.

Thus, in spite of an already disproportionate tax rate, work was begun on the new Putnamville reservoir. Water from the finished project in Danvers began to flow into Wenham Lake on August 3, 1955. On that one day five and one-half million gallons were pumped.2 The new reservoir in combination with Wenham Lake should be capable of supplying the water needs of any population increase in the foreseeable future.

1. Temporary connections had to be made with the Salem water system.
An acute water shortage problem was solved when the new Putnamville reservoir was completed. Before this project was finished, the water shortage on the most highly elevated points in Beverly was so critical that temporary connections were made with the Salem water system.
3. THE TAX RATE

As a direct result of the recent large expenditures by the school, fire, water, and public works departments necessitated by the rising population, the tax rate has climbed to a record high of $68.60 per $1,000 valuation. The following graphs (pages 150-152) provide the background for an analysis of the tax rate. Since 1932 the tax rate has been lowered only once. With that one exception, the tax rate has constantly risen higher and higher to the 1955 rate of $60.60 per $1,000 valuation or exactly double the tax rate of 1932. During the past few years Beverly has been neck and neck with the four or five cities of Massachusetts with the highest tax rates—once year (at least), being third. Only Boston and Chelsea exceeded the rate.

The distinction between the gradual influx of people during the late 1930's and early 1940's, and the population spurt of the last ten years contrasts clearly on the graph. The tax rate for the first period was a general rise from $33.00 to $38.00. The tax rate for the second period was a tremendous jump from $38.00 to $60.00.

The graph showing the amount raised by taxes is similar. The amount collected by the city has skyrocketed from $1,400,000 in 1934 to more than $2,800,000.

1. Beverly Evening Times, May 4, 1956, reported the 1956 tax rate as $68.60.
TAX RATE OF BEVERLY SINCE 1932

Source: City of Beverly Rules and Orders
AMOUNT RAISED BY TAXES IN BEVERLY 1934 - 1954

Source: City of Beverly Annual Report
REAL ESTATE VALUATION IN BEVERLY SINCE 1932

Millions of Dollars


Source: Beverly City Directory
The graph line follows the same pattern due to the population change, the almost vertical climb beginning in 1947.

But what of the assessed valuation of the city? This graph tells an opposite story. Beverly was worth $47,000,000 in 1932. Its value hit the bottom of the decline—$39,000,000—in 1945. Since then there has been a rapid increase until in 1954, Beverly was again assessed at more than $47,000,000.

And therein lies the reason for the tremendous tax rate. The assessed value now is no more than it was twenty years ago. But the amount of money raised by taxes in the same period has doubled. Therefore it is inevitable that the rate of taxation also be double.

Here in conclusion, might be listed a few items that have caused the tax rate jump. They are chiefly the ways by which the problems initiated by a growing population have been met by the citizens of Beverly:

1. Valuation was high back in the 1930’s because of the number of large estates along the shore which have since been broken up.
2. Valuation has increased rapidly because of the building of hundreds of new homes, several stores, and a few factories.
3. Beverly Evening Times, May 4, 1956, reported the 1956 valuation at $49,969,100—an all time high.
### TABLE E

**CHIEF MUNICIPAL EXPENDITURES: 1950--1957**

1. New Junior High School  
2. New Cove Elementary School  
3. New North Beverly Elementary School  
4. New Reservoir  
5. New Central Fire Station  
6. New Farms Fire Station  
7. Miles of new roads, sidewalks, utilities  
8. Installation of traffic lights  
9. Construction of public parking areas  
10. New stadium  
11. Veteran's housing projects  
12. Improvement of parks and playgrounds  
13. General increased government costs
Among the taxpayers are the owners of wealthy estates. Estates similar to that of Elenora Sears, millionaire horse-racing woman, formerly contributed a large percentage of the taxes when Beverly was the residential "Garden City." Many estates have been sold in recent years because of the high tax rate.

Viewed above is part of the new Gordon College, formerly the wealthy Prince estate. This site valued at $2,000,000 was offered to the United Nations in 1945, when the North Shore was under consideration for the U. N. headquarters.
IV

CONCLUSIONS AS TO FUTURE GROWTH
IV.

CONCLUSIONS AS TO FUTURE GROWTH

An event that occurred during December, 1956, in the North Shore area probably will have a significant effect upon the small businessmen whose stores are located in downtown Beverly. The North Shore Shopping Center now under construction in Peabody poses a definite threat to the central business district of Beverly. It is inevitable that the shopping center will draw some of the present trade away from Beverly stores. Both Beverly residents and customers from the Greater Beverly area (for example, Wenham) will have the opportunity to drive a few miles along Route 128 and shop in the large stores to be constructed at the center. It is the opinion of several Beverly merchants, however, that the sales loss in the long run will be considerably less than it would have been if the center had located a walking distance from Gloucester Crossing.

Ten years of debate, argument, and speculation came to an end when three major stores signed a $6,900,000 contract. The rival City of Peabody across the river is to be the location of a shopping center scheduled to surpass all others in New England. The center has been established strategically between Routes 114 and 128.

The important point is that for several years Jordan Marsh and its big business partners considered the intersection of Routes 128 and 1-A in North Beverly

1. Among those interviewed were proprietors of a clothing store, a shoe store, two restaurants, a hardware store, a drug store, and a grocery store.

2. The Salem Evening News, December 14, 1956. More than seventy stores are to be constructed at the shopping center.
GREATER BEVERLY
AND ENVIRONS

LEGEND

One index of the nodality of Beverly is the number and origin of North Shore patients treated at Beverly Hospital. Number in each town indicates patients for 1953.

Yellow area indicates Greater Beverly; green area indicates "rival cities".

= Central Business District of cities.
= Location of North Shore Shopping Center as it was planned for several years.
= Location of North Shore Shopping Center now under construction.
as the best of all possible locations for its North Shore center. The land was vacant, the intersection optimum, but popular opinion was divided. There was a general belief (probably well-founded) that the smaller concerns of Cabot and Rantoul Streets could not hope to compete with such a sudden invasion by million dollar corporations.¹ There was fear that the commercial heart of the city could not meet the challenge to its primary marketing territory, and a general decline and degradation of Beverly Proper would result.²

Its location in a neighboring city, on the other hand, may tend to stimulate local business to improve its establishments in order to hold the present trade.³

There were other reasons. The people of Beverly were well aware of the fact that in becoming the regional nucleus, they would be host city to hundreds of daily shoppers from

---

1. Jordan Marsh and Filene's will be the key stores. Others include J. J. Newberry Co., S. S. Kresge, and Stop & Shop, Inc., etc.
2. There are about a dozen large stores in Beverly (Almy's, Webber's, Woolworth's, food chain stores, etc.) and approximately 600 small businesses. If a shopping center anticipated to be one of the largest in the U. S., were located one mile north of Beverly's shopping center, it can be assumed that the sales and profits of the small businessmen would be cut to a considerable extent.
3. During the last few months there has been a noticeable improvement along Cabot Street. Several small businesses have added new store fronts and otherwise remodeled their shops.
Salem, Peabody, Danvers, and a dozen towns to the north, west, and south. The traffic congestion on Beverly's 17th century street pattern, the noise and inconveniences to homeowner and automobile owner alike was enough to cancel the possible advantages of a lower tax rate or a wider variety of available commercial goods.

But now that the die has been cast will Beverly regret its negative decision? Local businessmen are preparing themselves for an almost certain financial loss during the first few months after the opening of the center—at least until the novelty wears off. A geographical factor that may help to offset a possible dark commercial future is the relative location of Beverly and Peabody. Peabody does not border Beverly but is separated at its nearest point by the Danvers River. Beverly shoppers must, therefore, either go to the center by way of either Salem or Danvers. Fortunately for Beverly both are round-about, circuitous routes. A potential Beverly shopper must go via Bridge and Main Streets through the central business districts of both Salem and Peabody or else by way of Elliott Street through Rial Side and across the center of Danvers. The location thus does not lend itself to convenient intracity accessibility from Beverly.

It is more probable that the center will cut conveniently adjacent Salem's $66,500,000 sales volume. Beverly

---
1. While some of this traffic would use Route 128, it can be assumed that many from Salem, Lynn, Marblehead, and Swampscott would add to the already congested Rantoul-Cabot St. route.
stores will probably suffer the loss of much of their present customers from Salem, Peabody, Danvers and the areas west of Route 128, but the number of these people has been rather small. The presence of urban rivals to the south has for many decades forced Beverly to rely on its tributary area to the north and east for its out-of-town market. It is less likely, for example, that Beverly's subordinate area of Manchester will be captured to the same extent as Danvers' tributary area of Middleton, considering the factors of distance and accessibility.

Greater Beverly has been defined as including Manchester, Hamilton, Wenham, Essex, and to a lesser extent, Ipswich. There are so many urban communities of greater or lesser degree to the south (Lynn, Salem, Peabody, Saugus, Danvers) that there is much overlapping of the spheres of influence. It would be difficult to establish the true hinterland of Salem, for example, crowded as she is between the urban cores of Lynn, Peabody and Beverly. It has been, though, the several relations of interplay between the neighboring cities that has fostered their mutual growth.

The new center would seem to be the final factor in bringing to an end any possible extension of Beverly's influence to the south; in the future, as in the past,

1. Whereas the towns to the north have local shopping centers consisting of only a few stores, Salem, Peabody and Danvers each have moderate sized central business districts. Peabody (and to a lesser extent Danvers) because of its location is oriented more toward the larger business district of Salem.

2. "Greater Beverly" as defined by the The Credit Bureau of Greater Beverly, Inc. and The Beverly Evening Times.
she must be satisfied to serve as the central market for the small towns of most of Cape Ann.

We have seen that Beverly followed the typical formative pattern of many cities. In Colonial and Revolutionary days it was a water oriented settlement with its business houses located near the water front. With the coming of the railroad in 1837, there was a redistribution of the business activities of the town. Warehouses and businesses no longer had to cluster by the docks along Water and Front Streets. During the 19th century many located in the Park Street area to take advantage of the rail facilities. Each new form of transportation, like the river and the railroad, has in its turn stimulated the growth of the town, until at length as a city, its sphere of influence spread to the bordering towns.

Beverly has now reached that stage of growth, called by Ebenezer Howard the ideal size. (It is coincidental that Beverly's nickname has long been the "Garden City.") Now, on the threshold of 32,000, it fulfills Howard's description of the "garden city" in respect to size of population. As Hallenbeck states:

"Population must be large enough to require all of the desirable services and to pay for them, but it must be small enough so that these services can be provided with simple organization and minimum personnel. A town should enjoy adequate transportation, stable employment, and technologically advanced factories."

1. Latest available figures from Massachusetts Department of Commerce place the 1955 population at 31,432.
2. William C. Hallenbeck, American Urban Communities, Harper and Brothers, New York, 1951, p. 594. Based on his observations and study, Howard was convinced that a population of 32,000 was the optimum for good living and efficient operation.
3. Ibid., pp. 591-592.
the maximum returns for taxes a city must be below this crucial point of size."

Beverly, located on the urban-rural fringe, can now provide an enjoyable place to live throughout most of its area, at the same time exhibiting a well-balanced economic base of diversified industry.

Will this pleasant situation remain? Will the urban problems of parking, housing, education be solved in the near future, or will a rapid influx of population during the next generation cause Beverly to grow even larger than Salem with a 43,000 population.

The advantages that Beverly offers for industrial growth, may, in time, force the city to grow beyond the "garden city" size:

**TABLE F**

**FACTORS ENCOURAGING INDUSTRIAL GROWTH**

1. A surrounding urbanized area for markets.
2. A plentiful supply of skilled labor.
3. Good transportation by sea, air, rail, road.
4. Vacant land.
5. Nearness to the related industries of Eastern Massachusetts.
7. Ample water and power.
8. Nearby research facilities of Boston and North Shore areas.
9. Good educational and recreational facilities for workers' families.
10. In general, satisfactory living conditions for workers.
11. Land zoned for industry.
Two or three large plants or a continued residential outsurge from Boston could transform the pleasant city of today into an overgrown, overcrowded municipality. It is not pleasant to note that Salem, with a similar geographical situation, exceeded the 40,000 limit only to have 20% of the city recently condemned as slums. While an increase in total slum area of a town is not an invariable consequence of an increase in population, there is the likelihood of such a development in old cities if measures are not taken to ward off the danger.

Since 1930, Beverly has increased its population by a greater amount than any rival city or any surrounding or subsidiary town on the North Shore with the single exception of Marblehead (See Appendix A). The population increased more than 3,000 between 1930 and 1950. Another 3,000 have been added since 1950. Some efforts have been made to resist this rapid growth. There was, for example, agitation against the location of a large shopping center in the town and agitation against the expansion of the Metal Hydrides factory. Nevertheless indications are that the population will continue to rise at a rapid rate. The several geographical factors discussed above encourage the immigration of people and the expansion of industry. The nick-name of "Garden City" may soon become an anachronism.

1. Salem Sunday Express, August 19, 1956. A group of Harvard education experts who came to survey the school system summed up their general observations by declaring that 20% of the city's dwellings constituted slum areas.

In comparison with Salem, Beverly has only a few neighborhoods with dilapidated houses and tenement buildings. This would include the water front area, the industrial-railroad area of Ward 3, and the tenement district near the United Shoe factory.
Beverly has few slum sections. One area of dilapidation is the Water-Front St. waterfront district where Beverly's first settlers made their homes.

An area of overpopulation is the tenement district which lies on Simon St. This section includes Gage, Mill, Grant, Rope, Beckford, and Charles Streets. Most of these 3-decker and duplex houses date from the 1910 era. They were built to house the workers of the United Shoe Machinery Corporation which looms in the distance. Families with six to eleven children are the rule here. The street in the picture is their playground.
APPENDICES

Appendix A. Recent Population Growth of North Shore Cities and Towns

Appendix B. Population From Earliest U. S. Census to 1950

Appendix C. Foreign Born White Population

Appendix D. Composition of Population

Appendix E. Economic Characteristics of Beverly

Appendix F. A Sample Soil Analysis

Appendix G. City of Beverly Zoning Ordinance Booklet with Zoning Map

Appendix H. Map of New Industrial Site

Appendix I. Street Map of Beverly

Appendix J. Topographic Map of Beverly
APPENDIX A

RECENT POPULATION GROWTH OF NORTH SHORE CITIES AND TOWNS

<table>
<thead>
<tr>
<th></th>
<th>1930</th>
<th>1940</th>
<th>1950</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEVERLY</td>
<td>25,086</td>
<td>25,537</td>
<td>28,884</td>
</tr>
<tr>
<td>GREATER BEVERLY</td>
<td>37,949</td>
<td>38,998</td>
<td>44,849</td>
</tr>
<tr>
<td>1. Essex</td>
<td>1,465</td>
<td>1,384</td>
<td>1,794</td>
</tr>
<tr>
<td>2. Ipswich</td>
<td>5,599</td>
<td>6,348</td>
<td>6,895</td>
</tr>
<tr>
<td>3. Hamilton</td>
<td>2,044</td>
<td>2,037</td>
<td>2,764</td>
</tr>
<tr>
<td>4. Manchester</td>
<td>2,636</td>
<td>2,472</td>
<td>2,868</td>
</tr>
<tr>
<td>5. Wenham</td>
<td>1,119</td>
<td>1,220</td>
<td>1,644</td>
</tr>
<tr>
<td>RIVAL CITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. SALEM</td>
<td>43,353</td>
<td>41,213</td>
<td>41,880</td>
</tr>
<tr>
<td>2. PEABODY</td>
<td>21,345</td>
<td>21,711</td>
<td>22,645</td>
</tr>
<tr>
<td>3. LYNN</td>
<td>102,320</td>
<td>98,123</td>
<td>99,738</td>
</tr>
<tr>
<td>4. GLOUCESTER</td>
<td>24,204</td>
<td>24,046</td>
<td>25,167</td>
</tr>
<tr>
<td>SURROUNDING TOWNS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Danvers</td>
<td>12,957</td>
<td>14,179</td>
<td>15,720</td>
</tr>
<tr>
<td>2. Marblehead</td>
<td>8,668</td>
<td>10,856</td>
<td>13,765</td>
</tr>
<tr>
<td>3. Middleton</td>
<td>1,712</td>
<td>2,346</td>
<td>2,916</td>
</tr>
<tr>
<td>4. Topsfield</td>
<td>986</td>
<td>1,150</td>
<td>1,412</td>
</tr>
<tr>
<td>5. Boxford</td>
<td>652</td>
<td>778</td>
<td>926</td>
</tr>
</tbody>
</table>

1. Population statistics from U.S. Census of Population, 1950, Volume II, Table 6, p. 21-10

2. "Greater Beverly" as defined by The Credit Bureau of Greater Beverly, Inc. and Beverly Evening Times

3. In two decades, Beverly increased its population by a greater amount than any rival city or any surrounding or subsidiary town with the single exception of Marblehead.
## APPENDIX B

### NUMBER OF INHABITANTS

**Population From Earliest U.S. Census to 1950**

<table>
<thead>
<tr>
<th>Year</th>
<th>City of Beverly Population</th>
<th>Increase over Preceding census</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>28,884</td>
<td>3,347</td>
</tr>
<tr>
<td>1940</td>
<td>25,537</td>
<td>451</td>
</tr>
<tr>
<td>1930</td>
<td>25,086</td>
<td>2,525</td>
</tr>
<tr>
<td>1920</td>
<td>22,561</td>
<td>3,911</td>
</tr>
<tr>
<td>1910</td>
<td>18,650</td>
<td>4,766</td>
</tr>
<tr>
<td>1900</td>
<td>13,884</td>
<td>3,063</td>
</tr>
<tr>
<td>Town of Beverly</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1890</td>
<td>10,821</td>
<td>2,365</td>
</tr>
<tr>
<td>1880</td>
<td>8,456</td>
<td>1,949</td>
</tr>
<tr>
<td>1870</td>
<td>6,507</td>
<td>353</td>
</tr>
<tr>
<td>1860</td>
<td>6,154</td>
<td>778</td>
</tr>
<tr>
<td>1850</td>
<td>5,376</td>
<td>687</td>
</tr>
<tr>
<td>1840</td>
<td>4,669</td>
<td>616</td>
</tr>
<tr>
<td>1830</td>
<td>4,073</td>
<td>-210</td>
</tr>
<tr>
<td>1820</td>
<td>4,283</td>
<td>-325</td>
</tr>
<tr>
<td>1810</td>
<td>4,608</td>
<td>727</td>
</tr>
<tr>
<td>1800</td>
<td>3,881</td>
<td>591</td>
</tr>
<tr>
<td>1790</td>
<td>3,290</td>
<td>...</td>
</tr>
</tbody>
</table>

---

## APPENDIX G

### FOREIGN BORN WHITE POPULATION

**TOTAL:** 3,774

<table>
<thead>
<tr>
<th>COUNTRY OF BIRTH</th>
<th>NUMBER</th>
<th>COUNTRY OF BIRTH</th>
<th>NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada-Other</td>
<td>933</td>
<td>Norway</td>
<td>27</td>
</tr>
<tr>
<td>Italy</td>
<td>785</td>
<td>France</td>
<td>25</td>
</tr>
<tr>
<td>England &amp; Wales</td>
<td>417</td>
<td>Asia</td>
<td>21</td>
</tr>
<tr>
<td>Ireland (Eire)</td>
<td>409</td>
<td>Denmark</td>
<td>20</td>
</tr>
<tr>
<td>Canada-French</td>
<td>310</td>
<td>Austria</td>
<td>14</td>
</tr>
<tr>
<td>Scotland</td>
<td>222</td>
<td>N. Ireland</td>
<td>7</td>
</tr>
<tr>
<td>U.S.S.R.</td>
<td>166</td>
<td>Netherlands</td>
<td>4</td>
</tr>
<tr>
<td>Sweden</td>
<td>116</td>
<td>Mexico</td>
<td>2</td>
</tr>
<tr>
<td>Greece</td>
<td>53</td>
<td>Hungary</td>
<td>1</td>
</tr>
<tr>
<td>Germany</td>
<td>51</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>45</td>
<td>Other Europe</td>
<td>42</td>
</tr>
<tr>
<td>Finland</td>
<td>32</td>
<td>Other America</td>
<td>13</td>
</tr>
<tr>
<td>Lithuania</td>
<td>27</td>
<td>Not reported</td>
<td>29</td>
</tr>
</tbody>
</table>

### APPENDIX D

#### COMPOSITION OF POPULATION

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>1940</th>
<th>1950</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TOTAL</td>
<td>MALE</td>
</tr>
<tr>
<td>Under 5</td>
<td>1,652</td>
<td>872</td>
</tr>
<tr>
<td>5 - 9</td>
<td>1,823</td>
<td>914</td>
</tr>
<tr>
<td>10 - 14</td>
<td>2,007</td>
<td>1,019</td>
</tr>
<tr>
<td>15 - 19</td>
<td>2,172</td>
<td>1,142</td>
</tr>
<tr>
<td>20 - 24</td>
<td>2,088</td>
<td>979</td>
</tr>
<tr>
<td>25 - 29</td>
<td>2,127</td>
<td>1,022</td>
</tr>
<tr>
<td>30 - 34</td>
<td>1,923</td>
<td>923</td>
</tr>
<tr>
<td>35 - 39</td>
<td>1,739</td>
<td>834</td>
</tr>
<tr>
<td>40 - 44</td>
<td>1,734</td>
<td>833</td>
</tr>
<tr>
<td>45 - 49</td>
<td>1,718</td>
<td>812</td>
</tr>
<tr>
<td>50 - 54</td>
<td>1,642</td>
<td>772</td>
</tr>
<tr>
<td>55 - 59</td>
<td>1,345</td>
<td>667</td>
</tr>
<tr>
<td>60 - 64</td>
<td>1,148</td>
<td>523</td>
</tr>
<tr>
<td>65 - 69</td>
<td>967</td>
<td>452</td>
</tr>
<tr>
<td>70 - 74</td>
<td>707</td>
<td>325</td>
</tr>
<tr>
<td>75 yrs. &amp; over</td>
<td>745</td>
<td>303</td>
</tr>
<tr>
<td>21 yrs. &amp; over</td>
<td>17,478</td>
<td>8,251</td>
</tr>
</tbody>
</table>

2. U.S. Census, Characteristics of the Population, 1950, Table 33, p. 21-58
### Table 1
**Major Occupation Groups**

<table>
<thead>
<tr>
<th>Occupation Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional, technical, &amp; kindred workers</td>
<td>930</td>
<td>564</td>
</tr>
<tr>
<td>Farmers and farm managers</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>Managers, officials, and props.</td>
<td>871</td>
<td>130</td>
</tr>
<tr>
<td>Clerical and kindred workers</td>
<td>584</td>
<td>1,136</td>
</tr>
<tr>
<td>Sales workers</td>
<td>541</td>
<td>260</td>
</tr>
<tr>
<td>Craftsmen, foremen, and kindred workers</td>
<td>1,844</td>
<td>39</td>
</tr>
<tr>
<td>Operatives and kindred workers</td>
<td>1,520</td>
<td>686</td>
</tr>
<tr>
<td>Private household workers</td>
<td>33</td>
<td>284</td>
</tr>
<tr>
<td>Service workers, except private household</td>
<td>493</td>
<td>368</td>
</tr>
<tr>
<td>Farm laborers, unpaid family workers</td>
<td>93</td>
<td>3</td>
</tr>
<tr>
<td>Farm laborers, exc. unpaid, &amp; farm foremen</td>
<td>93</td>
<td>17</td>
</tr>
<tr>
<td>Laborers, except farm and mine</td>
<td>503</td>
<td>17</td>
</tr>
<tr>
<td>Occupation not reported</td>
<td>88</td>
<td>61</td>
</tr>
<tr>
<td><strong>TOTAL POPULATION EMPLOYED</strong></td>
<td>7,631</td>
<td>3,570</td>
</tr>
</tbody>
</table>

### Table 2
**Industrial Employment**

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>148</td>
<td>8</td>
</tr>
<tr>
<td>Forestry and fisheries</td>
<td>27</td>
<td>...</td>
</tr>
<tr>
<td>Mining</td>
<td>3</td>
<td>...</td>
</tr>
<tr>
<td>Construction</td>
<td>700</td>
<td>24</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Furniture, lumber &amp; wood products</td>
<td>44</td>
<td>8</td>
</tr>
<tr>
<td>Primary metal industries</td>
<td>24</td>
<td>3</td>
</tr>
<tr>
<td>Fabricated metal industries</td>
<td>82</td>
<td>35</td>
</tr>
<tr>
<td>Machinery, except electrical</td>
<td>1,718</td>
<td>231</td>
</tr>
<tr>
<td>Electrical machinery, equip., &amp; sup.</td>
<td>441</td>
<td>279</td>
</tr>
<tr>
<td>Motor vehicles and equipment</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Transportation equipment</td>
<td>63</td>
<td>6</td>
</tr>
</tbody>
</table>
Table 2 (cont.)

<table>
<thead>
<tr>
<th>Category</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing (cont.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other durable goods</td>
<td>83</td>
<td>28</td>
</tr>
<tr>
<td>Food and kindred products</td>
<td>63</td>
<td>26</td>
</tr>
<tr>
<td>Textile mill products</td>
<td>53</td>
<td>35</td>
</tr>
<tr>
<td>Apparel</td>
<td>27</td>
<td>33</td>
</tr>
<tr>
<td>Printing, publishing</td>
<td>110</td>
<td>25</td>
</tr>
<tr>
<td>Chemicals</td>
<td>62</td>
<td>26</td>
</tr>
<tr>
<td>Other nondurable goods</td>
<td>505</td>
<td>337</td>
</tr>
<tr>
<td>Railroads &amp; railway express service</td>
<td>84</td>
<td>12</td>
</tr>
<tr>
<td>Trucking service and warehousing</td>
<td>71</td>
<td>2</td>
</tr>
<tr>
<td>Other transportation</td>
<td>102</td>
<td>10</td>
</tr>
<tr>
<td>Telecommunications</td>
<td>61</td>
<td>179</td>
</tr>
<tr>
<td>Utilities and sanitary services</td>
<td>156</td>
<td>31</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>258</td>
<td>44</td>
</tr>
<tr>
<td>Food and dairy prod. stores</td>
<td>267</td>
<td>80</td>
</tr>
<tr>
<td>Eating and drinking places</td>
<td>102</td>
<td>133</td>
</tr>
<tr>
<td>Other retail trade</td>
<td>700</td>
<td>364</td>
</tr>
<tr>
<td>Finance, insurance, real estate</td>
<td>232</td>
<td>182</td>
</tr>
<tr>
<td>Business services</td>
<td>56</td>
<td>20</td>
</tr>
<tr>
<td>Repair services</td>
<td>134</td>
<td>11</td>
</tr>
<tr>
<td>Private households</td>
<td>155</td>
<td>330</td>
</tr>
<tr>
<td>Hotels and lodging places</td>
<td>18</td>
<td>21</td>
</tr>
<tr>
<td>Other personal services</td>
<td>131</td>
<td>102</td>
</tr>
<tr>
<td>Entertainment and recreation services</td>
<td>76</td>
<td>18</td>
</tr>
<tr>
<td>Medical and other health services</td>
<td>133</td>
<td>356</td>
</tr>
<tr>
<td>Educational services, government</td>
<td>94</td>
<td>206</td>
</tr>
<tr>
<td>Educational services, private</td>
<td>60</td>
<td>139</td>
</tr>
<tr>
<td>Other professional and related service</td>
<td>135</td>
<td>86</td>
</tr>
<tr>
<td>Public administration</td>
<td>354</td>
<td>99</td>
</tr>
<tr>
<td>Industry not reported</td>
<td>82</td>
<td>98</td>
</tr>
</tbody>
</table>

TOTAL LABOR FORCE                                      | 8,054  | 3,710   |
UNEMPLOYED                                             | 394    | 137     |

APPENDIX E

A SAMPLE SOIL ANALYSIS

Location: Near Salters Point, Rial Side, Beverly.

Depth:
- Organic layer: approx. 1 inch
- "A" Horizon: 7 1/4 inches
- "B" Horizon: 15 inches to indefinite depth.

Vegetation Cover: grass

Texture:
- "A" Horizon: Sandy loam
- "B" Horizon: Clay loam

Topography: Level to gently rolling.

Color:
- "A" Horizon: Medium brown
- "B" Horizon: Light brown

Soil Reaction:
- "A" Horizon: pH test................. 6
- "B" Horizon: Nitrogen............... 2%
-................. Phosphorus.......... 20%
-................. Potash............... 4%

6 4%

28%

2%

Present acidity (slightly acid) is fair to good for a large number of common crops generally speaking. Liming is not necessary unless some particular crop not listed below was desired.

Preferred crops for soil type:

1. Apples
2. Beans
3. Blackberries
4. Buckwheat
5. Clover
6. Gooseberries
7. Millet
8. Oats
9. Peppers
10. Rye
11. Squash
12. Tomatoes
13. Turnips
14. Others

Tests for plant food deficiency:

1. Nitrogen: present soil is not deficient in nitrogen; it contains the minimum nitrogen required. It is recommended that fertilizer contain 2% nitrogen.
SOIL ANALYSIS (CONTINUED)

2. **Phosphorus**: present soil is most deficient in phosphorous.
   It is recommended that fertilizer should contain 20% phosphorous.

3. **Potash**: present soil is deficient in potash.
   It is recommended that fertilizer should contain 4% potash.

**Probable Inherent Fertility:**
Fair, with mild deficiency in potash; definite deficiency in phosphorous.

**Fertilizer Recommended:**
Circa 2-20-4
APPENDIX G

CITY OF BEVERLY ZONING ORDINANCE BOOKLET

with

ZONING MAP
APPENDIX I

STREET MAP OF BEVERLY

YOUR NEW BEVERLY STREET MAP

PRICE 50 CENTS
BIBLIOGRAPHY


Beverly City Directory, Crowley and Lunt, 1950.


Beverly Evening Times
August 3, 1955
August 30, 1955
October 4, 1955
October 7, 1955
May 4, 1956


Dow, Mary Larcom, Old Days at Beverly Farms, North Shore Printin, Beverly, 1921.


"Monograph of City of Beverly, Mass.", Massachusetts Dept. of Commerce, Division of Research, Boston, 1954.

Morgan, Wallace E., *Shoes and Shoemaking*, Kehew and Odell, Beverly, 1897.


Perley, Sidney, *The Indian Land Titles of Essex County, Massachusetts*, Essex Book and Print Club, Salem, 1912.


"Report of the Superintendent of Schools", Beverly City
Documents, 1951.


Salem Sunday Express, August 19, 1956.

Sears, John H., The Physical Geography, Geology, Mineralogy,
and Paleontology of Essex County, Massachusetts,
Essex Institute, Salem, 1905.

"Statistics of Massachusetts Cities and Towns by Regional
Areas", Massachusetts Department of Commerce, Division
of Research.

Stone, Edwin M., History of Beverly, Civil and Ecclesiastical,
From Its Settlement in 1630 to 1842, James Munroe and
Company, Boston, 1843.

"Telephone Topics", New England Telephone and Telegraph
Company, September, 1954.

Waite, Henry E., Origin of the American Navy, The New
England Historic Genealogical Society, Boston, 1890.

Wakefield, Richard P. and Roger L. Creighton, A Master
Plan for the City of Beverly, printed by Beverly
Chamber of Commerce in conjunction with Department
of City Planning at Harvard University, March, 1950.

U. S. Census of Population, Characteristics of Population
1940, U. S. Department of Commerce, Bureau of the
1952.

U. S. Census of Population, Characteristics of Population
1950, U. S. Department of Commerce, Bureau of the
1952.
SEQUENT OCCUPANCE AND CHANGING LAND USE PATTERNS
IN GREATER BEVERLY

ABSTRACT OF THESIS

by

JAMES AUGUSTINE DOOLING, III
ABSTRACT OF THESIS

Beverly occupies a central position on Massachusetts' North Shore at the gateway to Cape Ann. A coastal Massachusetts location gave the town the advantage of early settlement (1626) and early incorporation (1668). The early settlement probably succeeded because the farmers could supplement their meagre earnings with fish from the nearby sea. The location was in part responsible for Revolutionary maritime prosperity and a spur to industrial development.

The general geomorphology of Beverly consists of a group of northwesterly drumlins fronted by a series of lower hills gradually descending in rolling sand-plains and gravel terraces to the sea. Interestingly, the business district is perched on the summit of a hill, but the chief rival in the future to the well-established central business district may be the secondary business district at the northern base of the hill.

The early settlers had the opportunity to farm on good soil and go to sea when the growing season ended. It was advantageous indeed, to farm within a fraction of a mile from the harbor wharves. Much of the main road network as well as the several nuclei of settlement occur on Merrimac fine sandy loam.

To the combination of abundant supply of good water
and its excellent surface and subterranean drainage, Beverly owed much for its healthfulness during Colonial days. From the time of the building of the first crude mill by John Friend, to the establishment of the world's largest shoe machinery factory on exactly the same site, the hydrology of Beverly has persistently influenced the growth of the town.

It is justifiable to say that wise conservation was little practiced by the 18th and 19th century inhabitants of Beverly; yet perhaps it was an inevitable sacrifice to pay as the urbanization urge covered the streams and slashed and burned the forests in its wake. The only survivors of the onslaught of a spreading urban core are such species as rabbits and squirrels.

Originally, Beverly formed one of the outlying portions of the domain of Masconomo, the Sagamore of the Agawam. Because the Agawams were suffering from the ruthless raids of the Tarrantines, "Sagamore John" gladly welcomed the colonists to whom he looked for protection and made them a free grant of the entire Naumkeag territory.

A controversy between the Puritans and Separatists at Naumkeag was settled by peaceful compromise, whereby the Conant company was granted one thousand acres of land at the head of Bass River in 1635.

Some sources believe that the name of the town was derived from the ancient town of Beverley in England, others,
that the name signifies "beaver field".

With the coming of the 1700's the great transition to overseas trade began. As early as 1683, Beverly became a lawful port of entry. But even as the period of commercial importance was nearing its climax and manufacturing was making its first beginnings, agriculture continued as a major factor in the economy.

The order of Washington that resulted in the sailing of the "Hannah" from Beverly, on September 5, 1775 constituted the official beginning of the American Navy. The rich rewards of privateering during the Revolutionary War so stimulated the commerce of the Cabots and the other merchants, that it achieved paramount economic importance.

Although during the early years of the war, Beverly vessels continued the hazardous trade with Spain and the West Indies, the debts incurred brought foreign commerce to almost a state of paralysis by war's end. The commercial depression caused some of the leading men of the day to turn to manufacturing.

The peak of commercial prosperity was reached during the years 1789-1807. But the Embargo Act, the Non-intercourse Act, and the War of 1812 destroyed the commerce it had taken a hundred years of sacrifice to found and maintain.

The post war years were a time of transition from a commercial port economy to a manufacturing economy. The impossibility of importing needed articles from 1807 until
1815 compelled the people of Beverly to develop manufacturing.

As soon as train service was reasonably comfortable (about 1845), there began a transformation of the "North Shore" through the advent of summer residents. The influx of rich residents rejuvenated the town. Before discussing the other major change due to improved transportation—industrialization—it seems proper to note the improved agricultural economy that existed after the failure of commerce and before the dominance of manufacturing.

Shoe manufacturing has long been vital to the town's economy. Shoemaking had its first beginnings in little "ten-footers", working buildings erected in the farmer's yards. By the 1890's there were some thirty-five shoe factories in the city; and in 1905, the building of the factory "upon which practically the whole world depends for shoe machinery" effected almost a revolution in the character of the city. This one factory, more than any one other factor, changed the town from a residential suburb to a busy, growing city.

By mid-century Beverly had matured as an industrial city. No longer is the economic prosperity of the city so dependent upon the shoe industry as it was in the latter 19th century, or the shoe machinery industry as it was in the early 20th century. Gone forever were the days of the small farms and the era of foreign maritime trade.
At present a city of 32,000, Beverly is challenged by several urban problems. The recent population influx has caused the present acute educational situation. If the population rise continues at the present rate, Beverly will be forced to build perhaps eight schools between 1954 and 1964, according to the superintendent's statistics.

Another problem concerns traffic, for like so many old New England towns, Beverly's street pattern is not adequate to serve modern transportation. Traffic congestion occurs at certain intersections and more parking space is needed.

Several problems of a more minor nature are connected with the housing situation. A number of veteran housing centers have been recently constructed by the Beverly Housing Authority.

The one phase of municipal service which is nearly ample for today is that of playgrounds, parks and beach facilities. One of the most praiseworthy of Beverly's acts has been its provision of space for playgrounds and parks.

Like so many other cities, Beverly has outgrown her water supply. This in combination with the other modern urban problems has resulted in a tax rate that ranks among the highest in the state.

Beverly has grown until now its influence has spread to several adjoining towns. Greater Beverly has been defined as including Manchester, Hamilton, Wenham, Essex, and
Ipswich. It has now reached that stage of growth called by Ebenezer Howard as the ideal "garden city" size.

It is questionable as to whether this pleasant situation will long remain. Two or three large plants or a continued residential outsurge from Boston could transform the pleasant city of today into an overgrown, overcrowded municipality.

Since 1930 Beverly has increased its population by a greater amount than any rival city or any surrounding or subsidiary town on the North Shore with the single exception of Marblehead. The population increased more than 3,000 between 1930 and 1950. Another 3,000 have been added since 1950. Some efforts have been made to resist this rapid growth. There was, for example, agitation against the location of a large shopping center in the town and agitation against the expansion of the Metal Hydrides factory. Nevertheless indications are that the population will continue to rise at a rapid rate. The several geographical factors discussed encourage the immigration of people and the expansion of industry. The nickname of "Garden City" may soon become an anachronism.
Restrict residential-industrial district

Beverly, Mass.

Scale 1" = 800'

April 1954

Commissioner of Public Works

Available land for industry = 352 acres