

# MHC Reconnaissance Survey Town Report

## NORTH ANDOVER

Report Date: 1985

**Reconnaissance Survey Town Reports**, produced for MHC's Statewide Reconnaissance Survey between 1979 and 1987, introduce the historical development of each of the Commonwealth's municipalities. Each report begins with an historic overview, a description of topography, and political boundaries. For the purposes of the survey, the historic period has been subdivided into seven periods: Contact (1500–1620), Plantation (1620–1675), Colonial (1675–1775), Federal (1775–1830), Early Industrial (1830–1870), Late Industrial (1870–1915), and Early Modern (1915–1940/55). Each report concludes with survey observations that evaluate the town's existing historic properties inventory and highlight significant historic buildings, settlement patterns, and present threats to these resources. A bibliography lists key secondary resources.

Town reports are designed for use together with a series of town maps that demarcate settlement patterns, transportation corridors and industrial sites for each historic period. These maps are in the form of color-coded, polyester overlays to the USGS topographic base map for each town on file and available for consultation at MHC. For further information on the organization and preparation of town reports, readers should contact MHC.

Users should keep in mind that these reports are now two decades or more old. The information they contain, including assessments of existing knowledge, planning recommendations, understanding of local development, and bibliographic references all date to the time they were written. In some cases, information on certain topics was not completed. No attempt has been made to update this information.

Electronic text was not available for digital capture, and as a result most of the reports have been scanned as PDF files. While all have been processed with optical character recognition, there will inevitably be some character recognition errors.

The activity that is the subject of the MHC Reconnaissance Survey Town Report has been financed in part with Federal funds from the National Park Service, U.S. Department of the Interior. However, the contents and opinions do not necessarily reflect the views or policies of the Department of the Interior. This program receives Federal financial assistance for identification and protection of historic properties. Under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, and the Age Discrimination Act of 1975, as amended, the U.S. Department of the Interior prohibits discrimination on the basis of race, color, national origin, disability or age in its federally assisted programs. If you believe you have been discriminated against in any program, activity or facility as described above, or if you desire further information please write to: Office of Equal Opportunity, National Park Service, 1849 C Street, N.W., Washington, D.C., 20240.



### MASSACHUSETTS HISTORICAL COMMISSION

William Francis Galvin, Secretary of the Commonwealth

Chair, Massachusetts Historical Commission

220 Morrissey Blvd.

Boston, MA 02125

[www.sec.state.ma.us/mhc](http://www.sec.state.ma.us/mhc)

[mhc@sec.state.ma.us](mailto:mhc@sec.state.ma.us) / 617-727-8470

## MHC RECONNAISSANCE SURVEY REPORT

Date: 1985; Updated: 1997

Community: North Andover

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### I. TOPOGRAPHY

The town of North Andover lies in the northwestern portion of Essex County, Massachusetts. It contains about 15,400 acres and is bounded on the north by the Merrimack River, Haverhill and Boxford, easterly by Boxford and Middleton, southerly by Middleton and North Reading and westerly by Andover and Lawrence. Physiographically the town lies within the New England Seaboard Lowland, a relatively smooth coastal strip of land with some hills usually below the 400 and 500-foot contours. Locally, this portion of Essex County is higher in elevation than more easterly areas, containing several hills, valleys, meadows and plains. Elevations average between 100 and 200 feet throughout most of the town except along the Merrimack River where elevations are less than 50 feet. Most hills in the town approach or exceed 300 feet. A few hills approach or exceed 400 feet.

Bedrock deposits in North Andover are characterized by igneous deposits throughout most of the town. Igneous Andover granite is the most common type present particularly in the western half of town. Small distributions of igneous Salem gabbro-diorites (diorite and gabbro-diorite) are also present in the eastern portion of town and along much of the Andover/Boxford boundary. Sedimentary formations represented by gneiss and shist of undetermined age are also present in the northeastern portion of town.

Soils in the North Andover area represent a mixture of types formed in outwash deposits, glacial till and organic deposits. Soils of the Paxton-Woodbridge-Montauk association are present in a large area in the western and northern portion of town from the northern shore of Lake Cochichawick south to the Berry Pond area. These soils are found in deep deposits and nearly level to steep areas. They are generally well-drained loamy soils formed in compact glacial till. Soils of the Canton-Charlton-Sutton association are found throughout the central portion of town from Lake Cochichawick south to the Harold Parker State Forest. These soils are found in deep deposits and nearly level to steep areas. They are generally well-drained loamy soils formed in friable glacial till. Most of the southern third of North Andover is represented by soils of the Charlton-Rock outcrop-Medisapristis association. These soils are found in deep deposits as well as nearly level and steep areas. They range from well-drained loamy soils

formed in glacial till to rock outcrops and poorly-drained mucky soils formed in organic deposits. Rock outcrops are also present. Small distributors of soils belonging to the Hinckley-Windsor-Merrimac association are present at the extreme northern tip of town and around Mosquito Brook north of Woodchuck Hill. These soils are found in deep deposits and nearly level to steep areas. They are excessively drained sandy and loamy soils formed in outwash deposits.

Major drainage in North Andover is characterized by the Merrimack River running west to east along the town's northern border and the Shawsheen River running southwest to northeast along the town's northeastern border. Major drainage in this area is also present in the vicinity of Lake Cochichawick, which drains into Cochichawick Brook flowing northerly into the Merrimack River. In the southern half of town major drainage is through Mosquito Brook draining into Boxford, the Skug River draining to Andover, and Boston Brook draining to Middleton. Numerous swamps, freshwater meadows, and springs exist throughout the town. Ponds include Berry Pond, Sharpners Pond, Osgood Pond, Stevens Pond, Salem Pond and Sudden Pond.

The original forest growth in North Andover and in Essex County in general consisted of a mixed growth of white pine, oak, chestnut, poplar, maple, birch and some other hardwoods and conifers. However, second growth patterns characterize most of the town today, including oak and chestnut in upland areas; birch, cedar, juniper and white pine are also present.

## II. POLITICAL BOUNDARIES

North Andover was the site of the Plantation at Merrimack, also known as the Village as Cochichawick, established in ca. 1642. The town was purchased from Native Americans and incorporated as Andiver, later Andover in 1646. North Andover together with present day Andover comprised Old Andover, originally bounded by the Merrimack River and the towns of Rowley, Salem, Woburn and Cambridge. North Andover was created as the Andover North Parish in 1708. In 1855 North Andover was incorporated as a town from Andover. A portion of North Andover was annexed to Lawrence in 1879. Boundaries between North Andover, Boxford, North Reading, and Middleton were established in 1904.

### III. HISTORIC OVERVIEW

Modern North Andover, an affluent outlying suburban town on the northern periphery of the Boston metropolitan area, derives from the inland Plantation township, Cochichewick, named for the brook and lake within its bounds, reserved by the General Court in 1634. Renamed Andover in 1646 in reference to some planters who came from Andover in Hampshire, England, its territory is also originally included present-day towns of Andover, Middleton and the City of Lawrence (south of the Merrimack River).

North Andover has benefited economically from a consistent, general prosperity generated by a significant, continuing manufacturing sector to its economy and the continuation of longstanding, early farmsteads. Traversed by an interstate highway (Route 495), and crossed by intersecting state highway Routes 114, 133 and 125, the last connecting to Interstate Route 93, North Andover has also grown substantially in the last thirty years as a commuter community.

Original settlement was restricted to the meetinghouse center in this the northern part of the original plantation (distinguished as North Parish in 1708, incorporated at as North Andover in 1855) with open fields in the area that became present-day Andover. Settlement on the farmlands (Andover) was authorized in 1660 and movement of owners to their lands quickly began. Density of settlement shifted from the northern to southern part of town within fifty years. Andover suffered little from Indian attack, but was subject to the witchcraft hysteria in 1692-93.

Dispersed-settlement farming outside the meetinghouse center dominated economic life in the eighteenth century. Cochichewick Brook which runs from Lake Cochichewick to the Merrimack River provided water power first for numerous saw and grist mills. By the Federal Period it also supported three woolen factories. A machine shop was added immediately thereafter. Utilization of these mill privileges intensified after the Revolutionary War which served as a catalyst for self-reliance through local industries.

The institution of manufacture at four privileges along Cochichewick Brook had a determining influence on the development of growth and settlement patterns in North Andover. Facilitated by the introduction of railroad lines, the prosperity, intensity and physical concentrations of North Andover's manufacturing interests established the town's character by the middle nineteenth century.

Expansion of manufacturing promoted physical development centered around Cochichewick Brook away from the early, meetinghouse center. The "new center" attracted unprecedented population growth during the 1840s and 1850s, generated cultural, ethnic, architectural, social and religious diversity and advanced the congenial, formal separation of South from North Parish with incorporation of the latter as North Andover in 1855.

Associated development along the proximate, two middle mill sites, the North Andover Mills and Davis & Furber Machine Shop, evolved into a factory village, colloquially known as "Machine Shop Village" for its identification with the Davis & Furber Machine Company. Construction of mill housing and subsidy of public buildings by the firm was responsible for much of the built environment in the its immediate vicinity. The contiguous, civic and commercial center of North Andover emerged to the north.

The economic dynamism of the Civil War further advanced the maturation of North Andover's industrial and commercial centers. Manufacturing expanded remaining the dominant economic activity and absorbing an increasing proportion of an expanding workforce. The population, growing steadily if slowly, doubled during the Late Industrial Period. Davis & Furber Machine Company emerged as the world's largest maker of textile machinery.

The town lost much of its agrarian disposition during the second half of the nineteenth century as employment increasingly shifted from farming to manufacturing and trades. Despite losses in the number of farms, agricultural production rebounded at end of the nineteenth century.

After World War I, the textile and machine industries continued to expand in North Andover despite a general decline in textile manufacture throughout New England. Sutton Mills and Davis & Furber continued to improve and enlarge their plants. Both the textile and machine tool sectors in North Andover were weakened by the Depression and began to decline. All the businesses are now closed and have been converted to office space. Manufacturing survived in an enormous, new, campus complex for Western Electric Company and in other new construction along local highways.

Pervasive adoption of the automobile as the primary means of transportation was a major trend of the early modern period in North Andover. Suburban residential development intensified. First in the area adjacent to the factory villages and most proximate to the City

of Lawrence. Additional advancements in highway transportation after World War II allowed the town to become further suburbanized as residential development expanded into outlying areas and concentrated in subdivisions made from former farmsteads. Large office parks were created off state highway Route 114, (the old road to Salem) during the last twenty years.

#### IV. CONTACT PERIOD (1500-1620)

##### A. Transportation Routes

Native American transportation routes in the North Andover area likely emphasized water travel along the Shawsheen and Merrimack rivers which provided travel inland as well as travel to the coast. Water travel along the Merrimack corridor provided faster and often safer travel than inland routes. Inland brooks such as Cochichawick, Mosquito and Boston Brooks may have also provided water transportation. Land based travel was also probably important with trails along major waterways and cross country routes. Major trails were probably present along the Merrimack River and the Shawsheen River. The latter trail may have been part of a regional corridor between the Merrimack River and Boston area. A second inland route may have been present along the Salem Street/Forest Street corridor providing a link with the Salem area. Secondary trails extending to the town's numerous ponds and other wetlands likely spurred from the major inland and riverine trails.

##### B. Population

North Andover was inhabited by members of the Pawtucket group (often called Penacook) who inhabited the coast from the north side of Massachusetts Bay in the Saugus/Salem area to York Village, Maine. Locally, this group is commonly referred to as the Naumkegs who may have been a subtribe of the Massachusetts but seemed to be under the leadership of the Penacooks. Most seventeenth-century colonists considered the Pawtucket and Massachusetts Indians closely related but separate entities. Both Swanton (1952) and Speck (1928) include Pawtucket Indians in the Salem area among the Massachusetts. Gookin (1792) lists ca. 3,000 men belonging to the Pawtucket group prior to the 1617-19 epidemics, while Mooney (1928:4) lists 2,000 men belonging to the Penacook group (probably Pawtucket), as many as 12,000 natives, probably exaggerated. During the same period, both Gookin and Mooney list ca. 3,000 men belonging to the Massachusetts which probably included some Pawtuckets. The Native American population in the North Andover area may have numbered in the

vicinity of 200 individuals during much of this period. Following the epidemics, fewer than 50 individuals if any remained in the North Andover area.

#### C. Settlement Pattern

Woodland and Contact period sites are not currently known for the North Andover area. However, environmental variables and known Contact period sites in surrounding towns indicate sites of this period should be present. For example, locales along the Merrimack and Shawsheen Rivers may have been good site locations as well as other areas along the periphery of major wetlands, streams and ponds. In addition to habitation and village type sites, special purpose sites such as fishing sites, shell middens and burials were also probably present. These sites may have been located in similar areas as those noted above. Contact Period sites have been recorded in several towns surrounding the North Andover area including Haverhill, Newbury, Newburyport, Ipswich, Salem, Marblehead, and probably Saugus. This factor plus the local environmental potential indicates the North Andover area is likely underreported for the Contact Period. Sites of this period should be present in the township.

#### D. Subsistence Pattern

Native Americans in the North Andover area subsisted on a variety of seasonally determined activities including hunting, fishing, the collection of wild plants and shellfish and horticulture. Hunting was a major activity focusing on larger mammals such as deer and smaller fur bearers. Upland game birds and ducks were also hunted, particularly in wetlands and meadows surrounding riverine areas. Seasonal runs of alewives were probably present in most brooks leading to the Merrimack and Shawsheen Rivers. Shad, salmon, and trout were also available though their distribution was probably restricted to the main rivers noted above. Gathering activities probably focused on numerous species of terrestrial as well as freshwater plants. Domestic plants such as corn, beans, pumpkins, squash and tobacco were important. Native fields were likely located along major riverine areas or around the periphery of major ponds and wetlands.

## V. PLANTATION PERIOD

### A. Transportation Routes

Indian trails likely continued in use in the North Andover area throughout most of the Plantation period. Water travel for transportation of goods and individuals was also important particularly along the Merrimack River. European transportation routes in North Andover began at settlement in ca. 1646 as a centralized village was laid out around two roughly parallel streets in the area of the green in the older section of North Andover. From this area colonists upgraded Indian trails and developed new horse paths and cartways to farming areas in the surrounding countryside. Regional transportation routes also developed during this period. By ca. 1647 the Andover to Reading and Andover to Haverhill roads were laid out establishing a travel corridor between Maine and Boston through the North Andover/Andover area. Salem Street was also likely laid out during this period linking the North Andover area with Salem. A trail or cartway was probably present along the Merrimack River though no record of it exists.

### B. Population

Cochichawick or North Andover may have been settled as early as 1634 by squatter colonists who built homes without official authorization from the General Court. Official permanent settlement did not occur until shortly after 1640. Most of North Andover's population was concentrated in and around the village throughout this period. Only after ca. 1660 did the town's population begin to disperse into the countryside. North Andover's population may have included 105 individuals in ca. 1646 based on the existence of 21 houselots in the first division of land. This figure may have tripled by 1675 including around 300 individuals. North Andover's original settlers were ethnically English, predominantly from Hampshire, Lincolnshire and Wiltshire Counties. Some residents had originally settled in Newbury and Ipswich. A Congregationalist Church was organized in 1646.

### C. Settlement Pattern

North Andover or Cochichawick as the area was then called may have been settled by squatters as early as 1634. However, official settlement of the area did not occur until after 1638 when the General Court allowed John Woodbridge and others from Newbury and Ipswich to begin a plantation at Merrimack. Little information

survives of the village at "Cochitawit" (Cochichawick) between the years 1638-1642 although a settlement and village is implied by 1642 when the General Court granted lands along the Shawsheen, Concord and Merrimack Rivers provided a settlement was started which did not extend to prejudice Charlestown village or the village of Cochitawit (Fuess 1959:19). In 1643 the General Court divided the Bay Colony into four shires creating Essex County. At that date eight towns were included in the county last of which was Cochichawick or North Andover, not yet incorporated. The village at Cochichawick changed its name to Andover soon after official settlement in ca. 1642. Andover, or as it was early spelled Andiver, was originally bounded by the Merrimack, Rowley, Salem, Woburn and Cambridge. The town was purchased from Cutshamache, the sagamore of the Massachusetts in 1646. Following confirmation of the sale by the General Court, Andover was incorporated later that year.

North Andover's original 18 settlers and 23 proprietors influenced important decisions pertaining to initial land distribution by reflecting traditional patterns of open field agriculture in their English homelands (Greven 1970:40). North Andover was settled as a nucleated village where inhabitants concentrated house lots along two roughly parallel streets in the village center. Inhabitants were granted farmland in varying sizes and shapes in large open fields outside the town. The original Andover, now North Andover, village center was located in the northeastern section of the plantation near the Great Pond, roughly between the Cochichawick and Shawsheen rivers. This locale today forms the area of the village green in the older section of North Andover. Initial land divisions were house lots determined by the economic and social standing of the settlers. Land divisions represented a hierarchy of rank and wealth rather than an equal sharing of land. House lots were limited in size from 4 acres, the smallest, to 20 acres, the largest. Prior to 1662, 40 house lots were granted, of which 27 were 5 acres or less, 10 were between 6 and 10 acres, with one at 15 acres and 2 at 20 acres. After house lots were divided, land distribution then focused on approximately 60 square miles of remaining lands. These divisions were distributed hesitantly and were generally small, reflecting a reluctance to break with traditional English agricultural patterns (Greven 1970:49). The first division of land was probably in ca. 1646 in an open field known as Shawsheen Field. It contained about 160 acres on the west side of the river. The field was divided among 21 holders of houselots, based on 1 acre of field for each acre of houselot. Ownership ranged from 4 to 20 often discontinuous acres in the field. The second division of land was similar to the first in an open field called Newfield. It is unknown exactly when the second

field was divided though it was probably some time after Shawsheen Field was laid out. Some land grants were consolidated though most were scattered. The exact location of this field is unknown but was probably north of the Shawsheen Field near the Merrimack River. By the 1650s and 1660s rules of land division were changing and the open field system beginning to break down. By ca. 1658 in the third division of land, land allotments were now more generous with 4 acres of upland. Lands in this division were dispersed throughout the town rather than in 1 open field granted for each acre of house lot. Total farm sizes were now considerably larger. Another effect of the third land division was that parcels of farming land at long distances from the village made daily farming difficult. This contributed towards a breakdown of nucleated village life since settlers now wanted to reside on their farms. This change in settlement pattern was resisted by the town which instituted fines (with little effect) against those who settled outside the town.

The fourth and final division of land in this period and in the 17th century was in 1662 when 20 acres of upland were granted for each acre of houselot. Lands in this division could be taken anywhere beyond the Shawsheen River west of the village center or on the east side of the river, providing the lands were not within 4 miles of the meetinghouse. The open field system in North Andover was now permanently abandoned. By 1662 North Andover (Andover) had made four divisions of upland, two divisions of meadow and one division of swampland. Most landowners now held roughly between 125 and 150 acres with some holdings as high as 610 acres.

North Andover's first meetinghouse was erected in ca. 1646 in the area of the Old North burying ground opposite the Governor Bradstreet House. A new meetinghouse was erected in the same area in 1669.

#### D. Economic Base

As North Andover was settled by Europeans, hunting and gathering wild foods were important for their subsistence. However, the combined use of agriculture and husbandry were clearly the most important aspects in the economic lives of North Andover's early settlers. North Andover was the site of the original settlement of Andover which followed the practice of open field farming through the mid-17th century. Most individuals lived in North Andover but farmed in several open fields near the Shawsheen River north to the Merrimack River. Many of these lands are now in Andover and Lawrence. This pattern began to change in the 1650s and 1660s, as fields were fenced and holdings were more dispersed throughout the area. Indian corn,

wheat, barley and rye were the most important food crops. Fruit and vegetables were also grown but grains were the most important food produce. Shortly after settlement, the production of vegetable fibers from hemp and flax were also an important activity in North Andover. Cattle, horses, sheep and swine were the most important animals on local farms. Oxen and fowl were also present.

Industry developed in North Andover during this period, some say as early as 1644, when Simon Bradstreet built the first sawmill on Cochichawick. The Bradstreet mill may have actually been built though the first definite proof for a mill on the Cochichawick is with the Parker grist mill built by ca. 1661 near the later Stevens mill. The Johnson sawmill was also built by ca. 1667. Textile weaving was also an important industry in North Andover throughout this period. Most homes are reported to have had hand looms, predominantly used by women. Fishing was important in the Merrimack River, Shawsheen River and Cochichawick Brook where alewives, and in the former two rivers salmon and shad, were caught in weirs. Peat for fuel and possibly clay were mined during this period.

## VI. COLONIAL PERIOD (1675-1775)

### A. Transportation Routes

Native trails had been upgraded to horsepaths and cartways by this time or had become overgrown. The Andover to Haverhill Road continued as a major thoroughfare through North Andover along the Elm Street/Andover Street and Osgood Street/Stevens Street corridor. This route formed part of a line of travel through North Andover northerly to Haverhill and Maine and southerly to Andover. Locally, the Andover to Haverhill Road also connected with Salem Street on the road from the North Meetinghouse to Salem, the Newbury Road (Great Pond Road) and the Ipswich Road (Dale Street). The latter two roads were laid out in 1688. Water Street and Main Street were also probably laid out during this period, beginning a dense street network that would develop west of Lake Cochichawick and north of the meetinghouse.

### B. Population

In 1675 North Andover's population was probably around 300 individuals. Most of the population was concentrated in the Andover village area west of Lake Cochichawick. By 1692, tax lists indicate most residents in Andover, possibly 420 individuals, still resided in the North End or North Andover. However, by 1707-08 a vote for a new meetinghouse indicated most residents then resided at the South End.

At this time, North Andover's population may have slightly increased over the 1692 estimate. Most population statistics include North Andover's population with Andover throughout the Colonial period. North Andover's population underwent a period of constant but unsteady population growth from 1700 to 1775. Population growth was slower than in the late 17th century and lagged behind growth in the South Parish. At the time the first census was taken in 1765, North Andover together with Andover contained 2442 individuals or 5.6% of the Essex County total. North Andover's population may have included approximately 1,000 persons in that total. From 1765 to 1776 Andover's populations (including North Andover) increased by 20.93% to contain 2953 individuals or 5.8% of the Essex County total. Little of this growth may have actually occurred in North Andover. Most residents of North Andover were still ethnically English though new residents were now the result of birth or emigration from other colonial towns rather than from England. Congregationalism continued to dominate religious worship in the town.

### C. Settlement Pattern

North Andover's settlement pattern was rapidly changing at the start of this period. The once nucleated village was now dispersing among its farmlands in what is today North Andover and Andover. Prior to 1700 only house lots were granted to new settlers. Other divisions of land were through inheritance as larger first generation grants were broken up amongst sons of the first settlers. After the 1662 land division, little had been done with the remaining large tracts of undivided land. In 1702, 102 men were declared heirs to the first generation of settlers in Andover (including North Andover) and proprietors of the common lands. In 1714, 120 men were added to the list of proprietors. Between that date and 1720 three successive divisions of common land were granted. Lands in these divisions were rarely more than 30 acres with none as large as the third and fourth divisions. Newly settled landowners were now rare in North Andover.

By ca. 1708, most residents in Andover were residing in the South End or present town of Andover. At that date, the General Court ordered Andover be split into two parishes. The original Andover settlement became the North parish, later North Andover. The South End became the South Parish, later Andover. Prior to 1708 the North Parish contained the meetinghouse, minister and principal citizens. After that date, the South Parish became the principal community. Settlement in the South Parish continued to exceed that in the North Parish throughout the Colonial period though the North Parish did remain a thriving town. The second meetinghouse was repaired in 1708.

In 1711 the third church was raised in North Andover at the same site of earlier meetinghouses. The fourth church was built in 1753. By the end of the Colonial period a nucleated village was still present in North Andover while in other areas of town dispersed farms were more characteristic.

#### D. Economic Base

Agriculture and husbandry continued to characterize most aspects of North Andover's economic base throughout the Colonial period. Grains remained the main focus of most agricultural production with corn as the chief crop. Husbandry also continued in importance. Industrial activity expanded in North Andover during this period with most mills locating on Cochichawick Brook and others on Musketo Brook, Ladle Meadow Brook and Scoonk River. Shawsheen River mills were located in present day Andover. The Osgood, Abbot and Chandler saw mill was built on Cochichawick Brook by ca. 1695. In 1686 the Ingalls sawmill was built on Musketo Brook. The Gray scythe grinding mill was built on or near the Scoonk River in 1715. The Holt sawmill was on Ladle Meadow Brook. Home spun textiles were probably an important local industry throughout the Colonial period.

#### E. Architecture

**Residential:** The town's Parson Barnard house (ca. 1715) is a well-known First Period house of center-chimney, hall-and-parlor, integral lean-to form; both the Frie and Abiel Stevens (1714) houses were originally center-chimney, hall-and-parlor forms. At least one other saltbox is known but the remaining houses adopt the symmetrical gable form known from three gable roof, one gambrel roof, and one hip roof example, the latter having undergone later renovations. The town also includes two examples of double interior chimney, Georgian plan houses, one with gambrel, and one with hip roof and ell plan.

**Institutional:** As the focus of the large Andover settlement, this area was the site of the earliest public buildings. The first meetinghouse was constructed in 1661, probably ca. 1646; a second, with upper and lower galleries, was built in 1669. In 1709 the town voted to build a meetinghouse measuring 50 x 54 with 24-foot studs, with a roof like Salem Village (Danvers) and seats like Bradford, and to retain the old pulpit; presumably a similar building was constructed in 1711 after parish division. A fourth house was built in 1753 of unknown appearance. A schoolhouse measuring 16 x 20 feet was built in 1701. The town funded a grammar school in 1700 but built the schoolhouse in the south in 1718.

## VII. FEDERAL PERIOD (1775-1830)

### A. Transportation Routes

At least two major developments occurred in North Andover's road network by 1830. First, the town's road network at least doubled, particularly west of Lake Cochichawick where a town center road matrix was developing around the meetinghouse. Local roadways which developed during this period included Farnum Street, Campbell Road, Lacy Street, Boxford Street, Foster Street, Winter Street, Johnson Street, Rea Street and Barber Street. The development of the Salem or Essex Turnpike in 1806 was also a major development during this period. This turnpike formed an important link between Boston and points in New Hampshire and Vermont. Toll gates were placed at each end of town per order of Common law then in effect. The Essex turnpike became a free highway in 1829. Colonial period transportation routes also continued to be important. The Andover to Haverhill Road was still traveled although as turnpikes and bridges in the Lawrence area were constructed more travel was directed towards these routes. Locally, the Elm Street/Andover Street portion of this road remained an important link between the Andover/North Andover centers. The old Andover to Reading Road (Salem Street) was still used as part of a link between the town center and Salem though this also was eclipsed by the construction of the Essex turnpike. Forest Street first appears on 1830 series maps running roughly parallel with Salem Street into Middleton. This road was probably in existence during the Colonial period since it appears in Middleton as Liberty Street but is not present on the 1795 Andover Map. Great Pond Road and Dale Street known during the Colonial period as the Newbury and Ipswich Roads respectively also continued as important local links to neighboring towns.

Water travel also continued to be important particularly in transporting industrial freights. Goods from Lowell and other towns along the river were transported downstream for shipment in Newburyport. Lumber travel was also important on the river. Timber from New Hampshire was transported downriver to Swan's Ferry (ca. 1795) in Andover where cargoes were taken over by local raftsmen for further shipment downstream.

### B. Population

No separate figures are available for each Andover parish but the South continued to grow more rapidly than the North. The pulpit remained liberal in theology, a counterpoint to the focus of

orthodoxy in the South. In 1799 a co-educational academy was formed as the North Parish Free School; it changed its name four years later to Franklin Academy and closed in 1853. The Academy was known for the presence of educational reformer Cyrus Pierce, and the use of female teachers. A Masonic Lodge was formed prior to 1820 but suspended during the anti-Masonic scare; a temperance society was formed in 1825, and a Lyceum in 1829.

#### C. Settlement Pattern

The substantial pattern of local roads, the network of district schools and the division of the community into two parishes (North Parish, North Andover, added in 1709), all before the beginning of the Federal Period, suggests agricultural settlement had become substantially dispersed throughout the town. The locus of concentrated settlement for the North Parish remained the original meetinghouse center. The original agricultural village located at the convergence of major inter-community connectors (roads to Salem, Newbury, Haverhill and Billerica), it remained the home of the minister, principal citizens of the parish and a few tradesmen as well as the locale of a few stores, a tavern and the hay scales.

Prompted by the availability of water power, the initiation of industry beyond agriculture-related mills was induced by both the need and a local motivation for economic independence during and immediately after the Revolutionary War. Although a number of mills employing a few workers had operated on Cochichewick Brook, in the Federal Period available water power was first exploited for textile manufacture. Moving south to north as the brook flows, three of four power privileges on Cochichewick Brook spawned the woolen factories. Nathaniel Stevens's Woolen Mill (1813, demolished 1974) located near the intersection of Stevens and Harkaway streets, site of the first saw mill in town. A flannel mill was opened in 1828 by George Hodges and Edward Pranker in a stone mill (1822-25) leased from Dr. Joseph Kittridge. A primitive mill near the confluence of Cochichewick Brook and the Merrimack River was established in 1802 by English emigrants, John, James and Arthur Scholfield to operate carding machines invented by the latter. After several intermediate owners, it was purchased in 1826 by William Sutton. This activity initiated three new clusters of settlement, focused on the Stevens Mill, the North Andover Mills and Sutton's Mills which attracted development away from the original, meetinghouse center.

#### D. Economic Base

During the last quarter of the eighteenth century North Andover was almost exclusively an agricultural town. Manufacturing activities were initiated in 1802, signalling a movement that would eventually transform the economic base to heavy dependence on manufacturing. Between 1802 and 1828 three waterpowered woolen textile mills were established on Cochichawick Brook on privileges previously occupied by grist and saw mills. In 1802 James Scholfield set up a woolen carding machine made by his brother Arthur, who was himself an early pioneer in the development of American-made textile machinery. Scholfield's mill also contained hand-powered spinning jacks and looms, enabling him to produce fine woolen goods. After a decade of almost continuous production, Scholfield was forced to sell his mill and privilege for lack of the capital necessary to expand and thereby compete with cheaper British goods. For a year the Abbot brothers, owners of a woolen mill in Andover, ran this North Andover mill before selling in 1813 to Abraham Moreland, also an Andover woolen manufacturer, and Issac Osgood. After changing hands at least once more the mill and privilege was purchased by William Sutton in 1826. Sutton added water-powered looms and established Sutton's Mills, a business that endured for several decades. Meanwhile, upon selling his mill, James Scholfield became manager of Nathaniel Stevens' woolen mill, newly established in 1813 further up the Cochichawick Brook, near the site of the first saw mill in North Andover. There broadcloth and flannels were manufactured. The third woolen mill on the Cochichawick was established in 1828 by George Hodges and Edward Pranker. Located midway between Stevens' and Sutton's mills, in a stone mill erected a few years earlier by an associate of Nathaniel Stevens, Hodges' and Pranker's factory also produced woolen flannels.

#### E. Architecture

Residential: At least one example is known of a house retaining the 5-bay center-chimney form, as well as one possible 3-bay example. Paired chimney forms came to dominate, but in a number of variations. Most common was the gable-roofed, double-interior, 2-1/2-story type; two examples are known of smaller 3-bay and 4-bay types; fashionable hip roofs are known in a 2 and a 3-story example. End wall chimney placement is known from two examples, one employing brick end walls. Rear wall chimneys are somewhat more common, particularly for L-plans including a 3-bay and a 5-bay gable-roof example and a 2-story and a 3-story hip roof example.

Institutional: A school building for the Franklin Academy was constructed shortly after its formation in 1799, with a separate schoolroom for each sex.

Commercial: The Brick Store of 1829 is a 2-1/2-story gable block with entries in the third, seventh and tenth bays, and chimneys on the front roof plane above the second, sixth, and ninth bays.

Industrial: In 1802 the Scholfields erected a one-story frame, water-powered wool carding mill, 40 feet by 12 feet, on Cochichawick Brook near Shawsheen River junction (extant). In 1813 Nathaniel Stevens erected a 2-1/2-story frame woolen mill with basement, 60 feet by 36 feet, further south on the Brook, also employing water-power. Circa 1825 the Hodges and Pranker two-story stone woolen mill with steep gable roof was erected midway between the Scholfield's (by then Sutton's) and Steven's mills (extant).

## VIII. EARLY INDUSTRIAL PERIOD (1830-1870)

### A. Transportation Routes

North Andover's Colonial and Federal period roads continued in use with few additions outside the Center Village and North Andover Depot areas. Street networks expanded in these locales in response to industrialization/urbanization of the North Andover/Lawrence area. Main thoroughfares in the town continued to be the Essex turnpike, a major link between Boston and northern New England and the old Andover to Haverhill and Andover to Reading roads. The Elm Street/Andover Street portion of the Haverhill Road continued to be an important link between the Andover/North Andover town centers. Railroad travel represented one of the major developments in North Andover's transportation systems during this period, while stage travel continued throughout the period, its importance diminished while rail travel grew. By 1848 the Essex Railroad began to run between Salem and Lawrence roughly paralleling the route of Salem Street. North Andover Depot was the main station along this route with a second depot in the southern portion of town near the juncture of Campbell and Salem streets. Between ca. 1845 and 1848 the Boston and Maine Railroad constructed five miles of track between Andover and North Andover. The route of this line was changed in 1848 so that it ran around South Lawrence. By ca. 1867-68 the Lowell and Lawrence Railroad was also extended to North Andover.

Street railways were also important in North Andover. As the city of Lawrence grew, increased travel between North Andover and that city

also grew so that the Merrimack Valley Horse Railroad was extended from Lawrence to North Andover in ca. 1868. This railway was later known as the Boston and Northern Street Railway and still later the Bay State Street Railway.

#### B. Population

At the first census after incorporation the town's population equaled 2218 in 1855, and expanded by nearly 15% to 2549 in 1870. The percentage of foreign-born in the town was exceptionally high, 23.3% in 1855, and 26.5% in 1865; the largest group was the Irish, followed by the English and smaller numbers of Scots. New religious groups were organized for the first time, including an Evangelical church in 1834, a Methodist church in 1845, and Saint Michael's Roman Catholic Church in 1868. A debating society was formed in 1841. The town sent 250 men to the Civil War, and 33 died there.

#### C. Settlement Pattern

Industrial activity, the prosperity of manufacturing and arrival of the railroad in 1853 stimulated associated growth. Settlement around Cochicewick Brook, initiated in the Federal period, expanded to consist of a contiguous factory village and civic and commercial center. A separate cluster of factory and associated residential buildings grew around the Stevens Mill, upstream to the South. In this period, the textile factories expanded. An important new business (1836) which fabricated mill machinery evolved into Davis & Furber Machine Shop (1851) located at the intersection of Water, Elm and High streets, the site of an earlier grist mill operated by Isaac Osgood.

The North Andover Mills (1839) were built by the partnership of Eben Sutton, Dr. Joseph Kittredge and George Hodges between Main and High streets to replace Kittridge's earlier stone mill which had been leased to Pranker and Hodges. By 1847, Sutton assumed sole proprietorship and formed the North Andover Manufacturing Company.

Fabrication of textile machinery had begun in the South Parish (Andover) with the manufacture in 1832 of cards and spinning jacks by Sawyer Phelps & Company. Its successor firm moved to North Parish in 1836, settled just upstream from the North Andover Mills and after changes in ownership in 1851 became Davis and Furber Machine Company.

North Andover became a prominent mill town. Even before mid century, these mills employed many workers generating a great demand for

housing and services in the vicinity. The mill owners responded by constructing a variety of residential and public buildings creating a development known locally as "Machine Shop Village". A boarding house, now on Pleasant Street, and two, single-family rental houses on Elm Street were erected by Gilbert and Richardson, forerunner to Davis & Furber. A row of small residences on the west side of Elm Street was built in the 1840s for middle-level factory workers at Davis & Furber. A row of double cottages (c. 1840) on the banks of the Mill Pond along the east side of Water Street and several houses on the east side of Main Street, north of the intersection of Water Street, were built by the North Andover Mills. A cluster of workers houses was built along Harkaway Street by the Stevens Mill in its more isolated enclave at Stevens Pond.

A new, civic and commercial center associated with the arrival of the railroads as well as the expansion of industry developed immediately north and continuous to the factory village of the North Andover Mills and the Davis & Furber Machine Company. The center also included the industrial and residential construction associated with the Sutton Mills at the north end of Main Street. By mid century, another enclave of worker housing was clustered along both sides of Sutton Street east of Main Street. Similarly, worker housing had been constructed and continued to be built through the end of the period along North Main Street, Ferry Street and North Riverview Street. Commercial and residential construction concentrated on the west side of Main Street, while the east remained open under the control of the Sutton Mills.

Demand for woolen goods generated by the Civil War initiated tremendous expansions of plant, capacity and workforce in North Andover mills. The factory villages gained architectural, social and cultural diversity as the population grew at unprecedented rates. Rows of worker housing, stores, churches and mill owner's mansions appeared.

Between 1862 and 1868, Davis and Furber accomplished a large-scale housing program for its workers, converting open fields into a compact neighborhood of workers' houses along Water, East Water, Clarendon and Pleasant streets. The principals also constructed mansions for themselves (Wiley Mansion, 93 Elm Street, extant) and established a Congregational Church on Elm Street separate from the first meetinghouse at the "Old Center". A Methodist Episcopal Church (1849, extant) was built at the intersection of Main and Water streets.

The old meetinghouse center (Old Center) gained some commercial, civic and residential construction before mid century. A new parish meetinghouse (1833, extant); a long brick commercial building (1829, extant) that accommodated several stores; carriage (not extant) and blacksmith shops (not extant); a post office (not extant); engine house (not extant) and a school (not extant). A number of small shoe shops established at the beginning of the century disappeared when the railroad was built in the "new Center" to the north. Franklin Academy, the first, co-educational school in the state, was located on Academy Road between 1801 and 1853. Several small cottages, established on Andover Street beyond the intersection of Chestnut, on Milk and Stevens Streets, contrast with the imposing homes of the Federal Period. The Old Center also remained a choice location for homes of the wealthy, especially for members of the Stevens Family including the Nathaniel Stevens mansion (1846, extant) 140 Academy Road and the Stevens-Coolidge House, 139 Andover Street (extant). A major change was the construction of Lawrence Street (Massachusetts Avenue) which extends in nearly a straight line from the "Old Center" to the new City of Lawrence, but it remained unsettled in this period.

#### D. Economic Base

Expansion at the three woolen mills and the rise of textile machine manufacture during the Early Industrial period resulted in a shift from dependence on agricultural employment to manufacturing occupations. By 1865 there were more than twice as many men employed in manufacturing (571) as in agriculture (228). Of the former. 60% were employed in the Davis and Furber Machine Company, while most of the remaining 40% worked in the textile mills (which also employed numerous women).

Textile machinery was first manufactured in North Andover in 1836 when the Andover-based machine shop of Sawyer and Phelps was moved to what became known as Machine Shop Village on Cochichawick Brook. After changing hands several times the machine shop was purchased ca. 1850 by Messrs. Davis and Furber who proceeded to vastly enlarge the plant and operations. While primarily engaged in the production of cotton and woolen machinery, Davis and Furber also made steam engines, turbines and locomotives. Between 1855 and 1865 employment increased 483% to 350 people and product value 500% to \$480,000. In addition to the 350 people (mostly men) employed in the machine shop there were 50 men employed in an associated foundry.

The three woolen mills--Steven's, Sutton's, and the North Andover Mills--were enlarged repeatedly during the period. Much of the impetus for this growth was provided by the Boston and Maine and Eastern branch railroads which built lines very close to the mills and facilitated the cheap transportation of both raw and finished materials. The machinery used to make woolen flannels was purchased from Davis and Furber. During the decade from 1855 and 1865 employment expanded slightly, from 212 to 250, while production increased 33% to 2.4 million yards of flannel and product value jumped 270% to \$985,000. Textiles and textile machinery accounted for 99% of the \$1.55 million manufacturing product value in 1865. The other 1% was generated by a manufacturer of addles and by a firm making reeds and harnesses for looms.

In 1865 there were 142 farms in North Andover. Of the 15,382 acres of agricultural land, 8,231 acres or 54% were improved. Haying land accounted for 385 of the improved acreage, pasturage for an undetermined but probably equally large portion, while the remainder was divided among grains, vegetables and fruit trees. The principal agricultural products were hay, meats and animal products, corn and potatoes. Lesser products included milk, butter, lumber and firewood. In 1865 the value of all farm products was \$126,799, a 61% increase from 1855. One sawmill was in operation throughout the period.

#### E. Architecture

**Residential:** Traditional paired-chimney house types remained common; in the 2-1/2-story variation double-interior, end wall, and rear-wall ell plan chimney placements are all known. Smaller 1-1/2-story houses are also built, and several two-family houses are known in this form from mid-century. The gable-front form is comparatively rare here but known from isolated 2-1/2-story examples of both single- and multi-family use. Most houses constructed during the period received simple Greek Revival ornament.

**Institutional:** The North Parish Church built a new house in 1835-36 from Gothic Revival designs by Richard Bond of Boston; the primary hip block has a semi-projecting square tower ornamented by a spire and pinnacles, and openings are pointed-arched. The Evangelical Church built a meetinghouse then, too, but its appearance is unknown; in 1865 they relocated in Machine Shop Village and built the surviving Renaissance Revival church, an elaborate design by John Stevens of Boston of gable-front form with portico and spire, round-headed openings and exceptional cornice moldings. The Methodist and Roman Catholic churches are unknown in appearance. No information is

available on the town schools. The hay scales building of 1833 is a single-story pyramidal block with shed addition.

Industrial: In 1830 a brick addition 36 feet by 36 feet was built on the north end of the wooden 1813 Stevens mill. Another brick addition, 36 feet by 44 feet, was erected on the north end of the 1830 mill soon thereafter. Around the same time the walls of the 1813 mill were replaced with brick, and a small addition was erected at the mill's south end. Near the site of the 1825 stone mill the North Andover Mills Co. erected a new brick mill of four stories, 120 feet by 50 feet. In 1844 a two-story stone storehouse, 76 feet by 35 feet, with shallow pitch roof was added in 1839. (Both are extant.) Sutton's Mills erected a new brick mill in 1846 near the 1802 Scholfield mill, four stories high, with a pitch roof, 218 feet by 64 feet (extant, but considerably altered). Also in 1846 a two-story brick storehouse, 30 feet by 33 feet, with pitch roof was erected (extant). Another two-story brick dye and cleaning house was erected ca. 1850 (extant). In 1836 Gilbert and Richardson erected a two-story frame machine shop on the later site of Davis and Furber Machine Co. Following the incorporation of Davis and Furber this frame building was destroyed and replaced in 1860 with a new brick machine shop, 156 feet by 50 feet, four stories high with gable roof, corbelled entablature and returns, 6 over 6 windows with granite lintels and sills, and two stair and water towers, erected on Elm Street. In 1863 a three-story brick addition, 62 feet by 52 feet, with shallow pitch roof, was also erected. To the east side of the machine shop a wheelhouse was erected in 1861.

## IX. LATE INDUSTRIAL PERIOD (1870-1915)

### A. Transportation Routes

The existing street networks in North Andover continued to grow and be improved as a direct outgrowth of industrial development in that town and its proximity to Lawrence. Transportation growth was particularly great in the North Andover Depot area where most rail lines established during the preceding period merged. It was in this area that the earlier Merrimack Valley Horse Railroad was electrified in 1890-91 and subsequently spread throughout major routes in the town. The North Andover street railways were now known as part of the Bay State Street Railway system. At its peak around the turn of the century at least three major street rail lines extended through the town. One line -- the longest -- extended the entire length of Route 114 from its intersection with Andover Street south to Middleton. A second line connected the town centers of Andover, North Andover and

Lawrence via Elm Street, Andover Street and Massachusetts Avenue. A third line paralleled the Boston and Maine Railroad along the Merrimack River. Smaller local lines also existed such as those along Water Street and Sutton Street along the river.

#### B. Population

The town's total population more than doubled between 1870 and 1915, beginning at 2549 and ending at 5556. Except for a brief decline in the early 1890s, the population rose steadily if still slowly. The real number and percentage of the foreign-born increased during the period. Increasing 141% to 1987 people in 1915, the foreign-born percentage of the total population expanded from 27.6% in 1875 to 33.4% in 1915, the highest percentage it would ever achieve. The Irish and English were the largest immigrant groups, followed by Canadians. Small numbers of Russians, Poles, Lithuanians, Italians, Germans and Swedes immigrated to the town toward the end of the period.

#### C. Settlement Pattern

Development in Machine Shop Village was less intense after the Civil War, but continued in the same patterns as economic interests and employment in North Andover continued to shift from agriculture to industry and trades. Main Street south of Third Street became a vicinity of fashionable homes of the wealthy. Middle-class homes continued to be constructed along Elm Street.

Settlement expanded around Stevens Mills. A development of new worker, duplex housing, Phillips Court, was created by the firm off Pleasant Street.

During the beginning of this period at the Depot Center (New Center), new streets were added (Union, Marblehead and Beverly) near the border with the City of Lawrence and began to fill with modest Victorian and Colonial Revival residential construction.

Intensive new construction occurred around the turn of the century in the new (Depot) center. The largely open land on the east side of lower Main Street held by General E. Sutton, proprietor of the nearby North Andover Mills, was subdivided with the construction of Saunders Street and Cleveland Streets and quickly filled in with modest residences. The same was true of the area around Railroad Street (Waverly Road) as development intensified in the parts of North Andover adjacent to the growing city of Lawrence. Streets were laid

out and the property subdivided between Railroad Street (Waverly Road) and Sutton Street, as far south as Massachusetts Avenue and east of Railroad Street to Main, Third and Middlesex Streets. Indications of continuing expansion are found in the grid pattern of streets still vacant of construction but platted as Waverly Park, laid out on the south side of Massachusetts Avenue west of Railroad Street (Waverly Road). Another enclave that was subdivided in a grid pattern, but which filled in slowly, perhaps due to its isolation, was east of Sutton Street north of the rail lines.

With commercial interests drawn elsewhere, the Old Center largely remained rural in character and retained its qualities as the early parish center with well-established residences of early, prosperous families. The school and engine house were replaced. Some additional duplex housing was added at the base of Salem Street and at the end of Stevens Street near its intersection with Salem Street. The latter was worker housing erected by the Stevens Mill. In the 1880s, the Village Improvement Society introduced "colonial" renovations to the Old Center by relocating roads, planting trees and moving or removing buildings.

#### D. Economic Base

Manufacturing consolidated its hold on the Late Industrial North Andover economy as expansion in the machine shop and textile mills vastly enlarged manufacturing employment opportunities. Between 1875 and 1915 the number of men employed in manufacturing increased from 511 to 1141 or from 59% of all occupations to 70%. During the same span agricultural employment fell slightly in real terms but more significantly in relative terms, dropping from 32% of the occupation base to 15%, indicating that the growing industrial sector stimulated demand for wholesale and retail services.

The value of manufactured goods also increased from \$1.4 million in 1875 to \$2.1 million in 1905) or by 49%. Davis and Furber Machine Company became an important international firm during this period. Having changed from a partnership to a corporation in 1883, the company's capitalization and production increased to the point where Davis and Furber was the largest supplier of woolen carding machines and spinning mules in the world. The firm also continued to make steam engines, locomotives, turbines, boilers, and machine tools. The manufacture of woolen flannels also increased during the period. Sutton's Mills and M. F. Stevens Co. (new owners of North Andover Mills) continued to grow. In 1888 the two companies employed about 320 operatives and manufactured flannels from more than one million

pounds of wool.

Despite a decline in the number of farms and farmers the value of the agricultural product increased tremendously, beginning the period at \$161,921 and more than doubling to \$323,723 in 1905. In 1875 hay was the principal product, followed by vegetables and milk. By 1905 milk and other dairy products were first in value, accounting for 33% of the total product, followed by hay, straw and fodder at 26% and vegetables at 9%. Meat and animal products declined in importance while poultry products increased, each accounting for 7% of the 1905 total. The sawmill remained in operation throughout the period.

#### E. Architecture

**Residential:** As the area became popular as a rural retreat for the wealthy, large and fashionable houses were constructed. Queen Anne-style houses are known from about six comparatively simple examples relying on projecting gabled bays and porches for massing interest. The town also includes examples of the rare Chalet style, a 2-story house with wide overhanging eaves (1886-90), and Stick Style, the 3-story hip block Clark House (1880s). The Shingle was employed on the largest estates including Osgood Hill by Hartwell and Richardson (1886); Curriavan House, a cross-gable form built the same year; and Hall House of 1890-93 by William G. Preston. Steven's Mill management's housing employed the style also: the Agent's Way House is a high gable block with facade gable, and the Engineer's House is a cross-gambrel with gambrel entry porch. Only half a bowling alley remained from Eben Sutton's Hillcrest. Historical revival styles were popular during the early years of the twentieth century, and examples include the 1906 Kuhnhardt "shingle-germanic" styled house, the eclectic Georgian Revival 3-story Byers House and the Federal Revival Foster-Bigelow House. A handful of smaller homes continued to be built in the adaptable gable-front form and at least two bungalows are known.

**Institutional:** Saint Paul's Episcopal Church was built in 1881 from designs by Rotch and Tilden, a gable-front form with projecting vestibule and porch entry, covered with shingles; the long low angled complex was achieved through the addition of the French memorial building in 1893, the parish hall in 1915, and the rectory in 1915-20, the latter two designed by Codman and Despradelle. The undated Masonic Lodge is a 3-bay center-entry block pyramidal block with pyramidal central dormer; the undated Grange Hall is similar but employs no dormer.

Industrial: In 1872 the 1839 North Andover Mills woolen mill burned. The first three stories were salvaged and a new fourth story and attic with mansard roof were added. In the 1880s a boiler house, dye house and picker house were erected. In 1893 a four-story brick addition, 54 feet by 53 feet, was erected east of the 1839/1872 mill. Taken over by Moses T. Stevens in 1899, these mills were renamed the Osgood Mills. The attic mansard was removed and a fifth story was added to the 1846 mill in 1899. (In the modern period, ca. 1970, all but the first two stories were removed.) At Davis and Furber a three-story brick building, 160 feet by 50 feet, was added to the machine shop in 1881. In 1887 a brick, three-story structure with shallow pitch roof and bell tower was constructed for company offices and some manufacturing (extant). The company also erected a powerhouse, foundry, and pattern shop during the period. The Farnum sawmill on Farnum Street was renovated in the 1870s and 1880s (extant). A frame factory was erected by the Campbell Silk Yarn Manufacturing Co. (ca. 1900) on May Street. Around the same time a large brick and frame woolen mill was erected by the Brightwood Manufacturing Co. on Sutton Street.

## X. EARLY MODERN PERIOD (1915-1940)

### A. Transportation Routes

Increased automobile and motorbus travel stimulated several changes in North Andover's transportation networks during this period. By 1926 the Old Essex Railroad or Salem and Lawrence Railroad made its last run in Middleton and probably ended in North Andover about the same date. By 1939 this line extended south only as far as Stevens Street in the North Andover Center area, probably as a service for local mills. The Boston and Maine Railroad still extended along the river from Sutton Street to Haverhill. Street railway service also ended in North Andover shortly after 1930 as motorbuses and automobile travel continued to grow and replace rail services.

Increases in automobile travel also brought about varying degrees of improvement for North Andover's roads. By 1939 most major roads in the town were paved with bituminous high type paving. These roads included the two major highways in the town, Route 125/133 and Route 114, as well as most of Boxford Street, the northern portion of Massachusetts Avenue, Osgood Street and Sutton Street. Other important but probably less traveled roads were paved with bituminous low type paving including most of Salem Street, Johnson Street, southern portions of Massachusetts Avenue, Great Pond Road, Dale Street and Andover Street. A surprisingly large number of roads were

also paved simply with gravel or stone by 1939. Some of these streets included: Barker, Bradford, Chestnut, Rea, Mill, Summer, Farnham, Forest, Lacy and the southern portion of Salem Street. Several roads minimally improved were also listed as primitive roads including the southern portion of Bradford Street, the eastern portion of Abbott Street and parts of Farnham Street.

By the end of the period air travel was also introduced to North Andover. In 1934 the Lawrence Municipal Airport was built in the area between Lake Cochichawick and the Merrimack River. The airport was built to service local interests in the Lawrence/North Andover/Andover area.

#### B. Population

North Andover grew steadily during the Early Modern decades. With perhaps its most rapid growth occurring between 1950 and 1955 (up 10.3%), the city's population increased nearly 69% for the period as a whole. Slightly above the county average in its proportion of foreign-born, North Andover's nativities comprised 33.4% of the city's population in 1915, and fell to just under 23% by 1940. In 1915, important among the foreign-born were the English (36%), Scottish (11%), Irish (17%), and Canadians, many from Nova Scotia (17%).

#### C. Settlement Pattern

Expansion in the physical plants of Sutton Mills and Davis & Furber Machine Company occurred in the early part of this period. Although textile manufacture declined elsewhere in New England during and after the Depression, all the major firms in North Andover continued operations through mid-century, maintaining stability (if stagnation) for some period in the building stock of the factory villages.

Pervasive adoption of the automobile as the primary mode of transportation, the introduction of water and sewage systems, professional fire and police departments advanced suburbanization and further redirected development in North Andover. The area closest to the City of Lawrence continued to be the most densely developed. The platting of open space continued to move up Massachusetts Avenue from Lawrence, east of Railroad Street (Waverly Road) and south east of machine shop village between Main, Pleasant and Park streets.

One outstanding development was promoted by the Stevens family. Moses Stevens donated the Stevens Memorial Library in 1907 built at

the juncture of Main and Greene streets. Between 1866 and 1868, he had accumulated open land from several owners near the site of a former historic tavern (not extant). His sons inherited the property. They developed a 9-acre, new neighborhood with restrictive covenants for upper level management and other affluent residents based on a 20-acre plan devised by Olmsted Brothers Landscape Architects and house plans created by Parsons & Company of Boston. Tavern Acres focused on a new park and utilized the Stevens Memorial Library as a showpiece. The remainder of the subdivision was sold to investors and was slowly developed between 1930 and 1950.

Industrial wealth also generated the creation of a number of large estates around Lake Cochichewick where the North Andover Country Club is also located.

Manufacturing employment continued to expand, but the principal industrial development in the mid-twentieth century was construction of the enormous and isolated campus complex of Western Electric Company, manufacturers of telephone and telegraph equipment, located on Osgood Street (Route 125) in an outlying section of town near the border with the City of Haverhill.

Decline in the local textile industry occurred in the middle of the twentieth century. Factories closed. The Sutton Mills and the Davis and Furber plants were adapted to office space with varying sensitivity to their historic architecture and some demolitions. In the early 1950s, the Davis & Furber housing was sold off to private ownership, but most survives substantially unaltered.

In the 1970s and 80s, huge campus office parks were created off State Highway Route 114, indicative of a transition to a service economy in North Andover rather than diversification of the manufacturing base and reflective of the suburbanization of white collar employment opportunities as well as residential choices. Surprisingly, few commercial or service support structures were created in the immediate vicinity until recently.

#### D. Economic Base

Manufacturing assumed even greater importance in early to mid twentieth-century North Andover. Davis and Furber Machine Co., Sutton's Mills and J.P. Stevens and Co. all remained in business throughout the period despite the general decline of textiles and related manufacturing in New England during and following the Great Depression. In fact, employment in manufacturing expanded greatly. In

1957 there were 8198 people employed in this sector, or 92% of the total workforce. A fourth firm of significance to the local economy was the Western Electric Co., makers of telephone and telegraph equipment. Another 550 people (6.2%) worked in retail and service sector jobs while agricultural became statistically insignificant.

#### E. Architecture

Residential: No period homes are inventoried.

Institutional: No period buildings are inventoried.

Industrial: In 1924 Sutton's Mills erected a saw toothed roof weave shed, 106 feet by 77 feet, near Sutton and Main streets (extant). In 1920 Davis and Furber erected their last new building, a four-story concrete machine shop, 240 feet by 90 feet (extant).

### XI. SURVEY OBSERVATIONS

Much of this inventory is outdated, and omits information including dates, owners, and uses.

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