

MHC Reconnaissance Survey Town Report

HAVERHILL

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.



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MHC RECONNAISSANCE SURVEY REPORT

Date: 1985

Community: Haverhill

I. TOPOGRAPHY

The town of Haverhill is located in the northern portion of Essex County, Massachusetts. It is at 42°47' north latitude and 71°4' west longitude. The northern border of the town forms the boundary line between the states of Massachusetts and New Hampshire in the towns of Newton, Salem, Atkinson and Plaistow. The town is bounded northeasterly by Merrimac, easterly by West Newbury and the Merrimack River, southeasterly by Groveland and the Merrimack River, southerly by Boxford and North Andover, and westerly by Methuen and the Merrimack River. The town is about nine miles in length along the river and three miles wide northerly, covering about 15,200 acres. Haverhill 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. The maximum ground elevation in Haverhill reaches 325 feet. Several separate hills exist including Johnson's Highlands, Golden Hill, Silver Hill, Turkey Hill, Job's Hill, Brandy Brow Hill and Great Hill. Most hills are located in the eastern portion of the town.

Bedrock deposits in the Haverhill area are predominantly characterized by sedimentary rocks, although small areas of igneous formations also exist. Sedimentary Merrimac quartzites are the most common formation, nearly covering the entire town. Small concentrations of Ayer granite, also an igneous rock and gneiss and shists of undetermined age are also present in the eastern portion of town. The latter group is a sedimentary formation containing gneiss of igneous origin with beds of limestone.

Soils in the Haverhill area represent a mixture of types found in outwash deposits and glacial till. Soils of the Paxton-Woodbridge-Montauk association are the most dominant soil group in the town, found in over three-quarters of Haverhill north of the Merrimack River and areas north of Chadwick and the southeastern/southwestern corners of town. These soils occur in deep deposits and nearly level to steep areas.

They are generally well drained loamy soils formed in compact glacial till. Soils belonging to the Hinckley-Windsor-Merrimac association form a strip-like distribution along the north side of the Merrimack River and around the East Meadow River. These soils also occur in deep deposits and nearly level to steep areas. They are excessively drained sandy and loamy soils formed in outwash deposits. Soilds of the Canton-Charlton-Sutton association are found in small areas of town east of

Chadwick Pond, the Ward Hill area and the Scotland Hill area. These soils are found in similar deposits and areas as the soils noted above. They are well drained loamy soils found in friable glacial till.

Major drainage in Haverhill is characterized by the Merrimack River and several of its tributary lakes, ponds, streams, rivers and swamps. The Merrimack River drains through Haverhill from west to east, dividing the town in the south in the old Bradford area. Haverhill lies at the head of tidewater in the Merrimack, approximately 13 miles from its mouth. The river is navigable through the area.

On the north side of the river, major drainage also occurs through the Little and East Meadow rivers, which flow into the Merrimack. Several important brooks are also present, including West Meadow Brook, Snow's Brook, Creek Brook, and Fishin' Brook.

Major ponds and lakes in Haverhill include Chadwick Pond, Crystal Lake, Lake Pawtucket, Lake Saltonstall, Kenoza Lake and Milldale Reservoir. Several small ponds and unnamed swamps are present throughout the town.

At European contact, most of Haverhill was deep forest with little undergrowth. Several meadowlands, said to be old Indian fields, were the only open areas in the town. The largest meadow areas were in the western part of Pawtucket (Haverhill), where names like West Meadow Hill and West Meadow Brook persist to present times. The original forest growth in Haverhill and throughout much of Essex County included a mixture of oak and pine, as well as chestnut, poplar, maple, birch, and some other hardwoods and conifers. Second-growth patterns including oak, pine and maple characterize most of the town today. Wetlands vegetation is also present throughout the town.

II. POLITICAL BOUNDARIES

Haverhill, earlier known as Pawtucket Plantation, was authorized by the General Court for settlement in 1640. Actual settlement and the plantation's boundaries were established by the Court in 1641. The Indian deed to Pawtucket Plantation was granted in 1642 and included a tract of land 8 miles from the Little River to the west, 6 miles to the north and 6 miles east. The Indian deed and later bounds established by the General Court roughly defined the town in the shape of a triangle, each side being about 15 miles in length. This area originally included much of Methuen and Lawrence in Massachusetts, and Salem, Atkinson, Plaistow and Hampstead in New Hampshire. In 1643 the Massachusetts Colony was divided into four counties, with Haverhill being grouped with other towns north of the Merrimack River to form Norfolk County. In 1740-41, the state line was established between New Hampshire and Massachusetts, setting off about 1/3 to 1/2 of Haverhill to New

Hampshire. Subsequently, in 1680, Haverhill was transferred per order of the General Court to Essex County, at which time the old Norfolk County ceased to exist. The island in the Merrimack river was granted to Haverhill in 1650. Methuen (which then included most of Lawrence) was incorporated from Haverhill in 1725.

Haverhill had 4 18th-century parishes. The North Parish bounds (New Hampshire towns) were established by the General Court in 1728, leaving the original settlement area as the First Parish. The West Parish was incorporated in 1734, with the East Parish incorporated in 1743. Bounds with Salisbury were established in 1654 and 1667. Haverhill was incorporated as a city in 1869. That portion of Haverhill south of the Merrimack River was originally part of Rowley Plantation known as the Merrimac Lands or Rowley by the Merrimac. This area was incorporated as Bradford in 1675. Indian deed for the Bradford territory was obtained in 1700. Bradford was annexed as the 7th ward of Haverhill in 1897.

III. HISTORIC OVERVIEW

IV. CONTACT PERIOD (1500-1620)

A. Transportation Routes

Native American transportation routes in the Haverhill area likely emphasized water travel along the Merrimack River and its major tributaries, the Little and East Meadow rivers. Water travel along the Merrimack River provided faster, more convenient and at times probably safer travel from the coast westward to interior areas of Massachusetts, and eventually Central New Hampshire. Haverhill lies at the head of tidewater on the Merrimack, approximately 13 miles from its mouth. The river has been historically navigable to this area. North of the Merrimack River, water transportation on the Little and East Meadow rivers provided water-bound travel northerly to the New Hampshire area.

Land-based travel was also probably important linking interior areas with the Merrimack River and its tributaries, as well as land-based counterparts to riverine routes. Main land routes through Haverhill likely found along the banks of major riverine areas noted above, providing links between the coast and interior as well as northerly routes.

Secondary land travel extending to the town's numerous ponds, meadows and wetlands, likely spurred from major inland trails along the Merrimack River and its tributaries.

B. Population

Haverhill 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 Pentuckets. Most seventeenth-century colonists considered the Pawtucket and Massachusetts Indians closely related but separate entities. Some Pawtucket Indians in the southern portion of Essex County have been included among the Massachusetts (Swanton 1952; Speck 1928). Goskin (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 Goskin and Mooney list ca. 3,000 men belonging to the Massachusetts, which probably included some Pawtuckets. The Native American population in the Haverhill area may have numbered in the vicinity of 100 to 200 individuals, during much of this period. Following epidemics and Indian wars in the early 17th century, fewer than 25-50 individuals remained in the Haverhill area.

C. Settlement Pattern

Numerous Woodland and several probable Contact Period sites are known for the Haverhill area. Existing site inventories, amateur artifact collections, environmental ensembles and known Contact period sites in surrounding towns support this conclusion. Recent research by the Massachusetts Historical Commission's (MHC) Survey team of prehistoric archaeological collections of the Haverhill Historical Society have indicated three Contact period sites in Haverhill. These sites were indicated in the notes of Fred Luce, a local amateur archaeologist, while artifacts identifying these sites (glass beads, iron copper) have now been lost, Luce's notes are suggestive of sites containing contact or early historic-period associations. Each site is a multi-component habitation type site located near the Merrimack River. Haverhill's diversified wetland resources offer several potential locales for Contact period settlement. For example, fall lines along the Merrimack, Little and East Meadow rivers may have been good site locations as well as other areas along the periphery of major wetlands, streams and ponds. The mouth of the Little River has been suggested as the location for the principle village of the Pawtucket Indians (Hurd 1888:1909). Evidence of the village was non-existent at the time of European settlement. 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 Haverhill area, including Newbury, Newburyport, Ipswich,

Salem, Marblehead and probably Saugus. Each of the factors noted above indicates Contact period sites should be present in Haverhill.

D. Subsistence Pattern

Native American in the Haverhill area subsisted on a variety of seasonally determined activities including hunting, fishing, the collecting of wild plants and shellfish and horticulture. Hunting was a major activity focusing on larger mammals such as deer and smaller furbearers. 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 River. Shad, salmon and trout were also available though their distribution was probably restricted to the Merrimack River. 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 Haverhill area throughout most of the Plantation Period. Water travel was also important with the Merrimack River providing an important corridor between Haverhill and coastal settlements. Haverhill represented the head of ship navigation and tidewater on the Merrimack River.

The Little and East Meadow rivers may have also provided important water-based routes. European transportation routes in Haverhill began shortly after ca.1640 as Indian trails were upgraded to horsepaths and cartways connected settled areas along the north side of the Merrimack River with ferry points leading to settlements in the south. Some early tracks or cartways probably connected meadowlands along the river. However, Water Street and probably Summer Street were likely the first roads laid out around house lots granted in the allotment of 1643. Water Street was made the town's first official highway in 1648. In 1651, Mill Street was laid out, known as the Great Road leading to the Village. As grants were made in plow and pasturage lands, the town voted in 1658 to lay out roads to any meadows or uplands not previously having a road. Many such roads were laid out after that date. Portions of Kenoza Street were probably laid out in 1665 from "Holt's Rocks" just below the later Rock's Bridge, to the County Bridge in the East Meadows. By 1667 a highway was laid out down the Little River valley to Holt's Rocks. This

road probably followed the route of what later became the Main County Road or the Main Street/Primrose Street corridor.

A highway from Haverhill Ferry to Topsfield was accepted at the General Court in 1669. This route likely followed the route of the Boxford road south of the river. Portions of the River Road westward towards Methuen were likely in use during this period.

A regular ferryman did not exist in Haverhill until 1665. However, by 1648 the first Merrimack River ferry was in operation over the from a point opposite Kent Street. William Simmon was a ferryman over the Great River in 1657. The first ferry authorized by the General Court was to Robert Haseltine of Bradford in 1665. A bridge was present over the Sawmill River prior to 1669.

B. Population

Native Americans were still living in the Haverhill area during this period, though their numbers were small and few records exist of them. Europeans first settled the area in 1640 as 12 men, possibly 60 individuals, from the Ipswich and Newbury settlements moved to the area. The European population grew slowly in the new settlement as each settler was under constant fear of Indian attack but also probably because land was strictly controlled by the proprietors or original settlers. By 1650, 44 individuals were either rated or omitted from tax valuations. After 1650, 16 new individuals were added to the valuation lists. In the Second Division of plow land in 1652, 41 persons received a share in the division. These statistics indicate a total of approximately 200 individuals in the new settlement by c.1650. Settlement continued to grow at a slow rate, especially when one considers the large size of the early plantation relative to numbers of new settlers. By 1664, 64 freemen, possibly 320 individuals, are listed in the town. It is unlikely that more than 300 individuals resided within the original bounds of Haverhill by 1675.

All Haverhill settlers during this period were ethnically English and exclusively Congregationalist. Most early settlers were first generation colonists who had previously settled in coastal settlements such as Newbury and Ipswich. Haverhill's first church was organized in 1645. Quakers were present after 1655.

C. Settlement Pattern

Native Americans were probably living in Haverhill during this period, although their numbers were small. Mention of wigwams was made in 1650 and 1660 in the west part of town (Hurd 1888:1909). Records are also present from 1662 in General Court documents, alluding to Old Will's

planting ground on the east side of the Spicket River within the original bounds of Haverhill.

In 1640 authorization was given for residents of Ipswich and Newbury to settle in Andover or Haverhill. The latter area was chosen, leading to the settlement of Pawtucket Plantation in the summer of 1640. In 1642 the settlers obtained the deed from the Indians including a tract of land extending for 8 miles west along the Merrimack from Little River 6 miles east and 6 miles north. This tract in effect amounted to a triangular piece of land including what would later be set off as Methuen, Lawrence, and the New Hampshire towns of Salem, Hampstead, Plaistow, and Atkinson. In 1643, the Massachusetts [portion] was divided into 4 counties with Haverhill being originally included in Norfolk County. The landing place of Haverhill's first settlers was where Mill Brook (now gone but where Mill Street is) met the Merrimack River. Lands west of this area from the vicinity of Pentucket Cemetery were chosen for the original dwellings. Pawtucket Plantation was incorporated as the Town of Haverhill in 1645, the 23rd town in the colony. The first two meetings were held in 1643, when it was voted that 300 acres would be laid out for house lots. Individuals who were valued at 200 pounds or greater were given the maximum house lot size of 20 acres. All those valued under that sum were given house lots proportional to their value as well as proportional meadow and common planting grounds. The latter allotments were called "accommodation grounds." Each of these grounds laid the foundation for the land system in Haverhill. In 1644 it was voted that public rates were to be determined proportionally on the basis of the number of acres an individual held with their house lots. The townsmen who in 1643 purchased the Haverhill territory considered themselves sole proprietors of the land. Lands were divided in amounts and when the proprietors saw fit. Proprietors could admit anyone they saw fit for participation in their association and its privileges.

During the allotment of 1643, house lots were concentrated near the bank of the Merrimack River, where the settlers had first landed. Settlement was made in this manner, due to fear of Indian attack probably never materialized during this period. The hamlet was centered near where Mill Brook met the Merrimack River in the lower part of [] and Water Street. 300 acres of house lots were laid out along and back from the river with a strip along the river held in reserve. Early houses faced the river with a highway running in front of them. Each house lot usually contained adjacent gardens. An area around the lower course of Mill Brook known as the Mill Lot was reserved for public purposes. This area was later occupied by the Linwood and Pawtucket Cemetery, and the tract between Pawtucket Cemetery and Mill Street. Early houses were built around the Mill Lot.

An additional tract of land was reserved for public purposes from the Haverhill Bridge site to what is now the Winter Street Bridge over Little River. After houselots were allotted, additional lands were granted for pasturage, planting grounds, and commonage. Pasturage included early meadows - said to be the product of Indian fires - which were prized for grasses as cattle feed. Many of the lands lay along the East Meadow River, Pond meadows in the Lake Kenozan area, Hawkes Meadow, Cruel Meadow and the Spicket Meadows in what would later become Methuen. Early planting grounds were in the Great Plain area or the plain below the village end up the Merrimack River. Commonage was considered woodlands or pasture lands of inferior quality. As land was distributed, each individual usually held a house and garden in one place, planting grounds in another area, meadows in other areas, and commonage everywhere.

Commons were among the first lands distributed for individual and public use. In 1645 it was voted that each man could keep a horse, ox, cow or calf on each acre of common. One mature animal was allowed on the Common for each acre of houselot. The Great Ox Common was laid out prior to 1650. In 1651 it was ordered that it be for the use of those who lived on the east side of the Mill Brook. Those who lived on the west side of the brook had an ox common westward. In 1651 it was ordered that all meadows be laid out. In 1652 the Second Division of plow lands was made commencing at the head of Pond meadows and extending north, east and west. Forty-one persons received a share in the division. Shares were proportional in quality and quantity relative to houselot size. The largest share was 22-1/2 acres, though most were below 10 acres. Following the division of meadow lands and Second Division of plow lands, the town, or at this time, the proprietors, voted that all individual land would remain in common to the proprietors of the original 306 acres (houselots of 1643). All commons would remain the property of the proprietors. This policy was the source of law suits and heated debates over the years, but in general, proprietors usually won out. Grants were made by the proprietors, but expenses usually absorbed the proceeds of grants. In 1653 the Second Division of Meadow land was made during which 48 lots were drawn. About this time, the island below the village was also divided into 48 lots. The Third Division of upland or plow land was also made ca.1653. This land was situated west and north of West Meadows in the West Parish. Only three estates were valued at 200 pounds or better receiving the maximum allotment of 20 acres each.

In 1659 the Fourth Division of upland was ordered. This land lay beyond the Spicket River and is now partly in Methuen and Salem, New Hampshire. In 1660 the General Court passed a law that no cottage or dwelling shall have commonage except those now built or that at the consent of the town. An exception to this law occurred in 1667 when 413 acres of

accommodation land was granted out to those who had built houses after 1660. This [land?] was usually parceled out in allotments of 2 to 6 acres, although some were over 20 acres.

The first meetinghouse was built in 1648 on the lower end of the Mill lot. A stockade was built around the meetinghouse. In 1660 the town voted the land behind the meetinghouse should be reserved as a burial yard. This land now lies in the central part of Pawtucket Cemetery. The Mill Lot may have been used as the earlier burial yard. By 1675, Haverhill probably had no more than 20 houses in the village with others scattered within 2 miles of the village.

That part of Haverhill south of the Merrimack River was originally part of Rowley Plantation. This area was settled in 1649 by a few herdsmen from Rowley. The settlement was originally called Merrimac Lands, Merrimac, and later Rowley-by-the-Merrimac. Lands were given to this new town for use as a meetinghouse and burial lot in 1655. A meetinghouse (possibly the second meetinghouse) was built in 1670 and a burial ground in 1672. Rowley-by-the-Merrimac was incorporated as Bradford in 1675.

D. Economic Base

Native Americans remaining in the Haverhill area during this period probably continued to subsist on hunting, fishing, gathering wild foods and possibly horticulture. As colonial settlers established themselves in the Haverhill area, hunting and gathering wild foods were also important to their subsistence. Wild turkey, now rare in the Haverhill area, was common throughout the Plantation Period. However, the combined use of agriculture and husbandry were clearly the most important aspects in the economic lives of the town's first settlers. 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. Hemp and flax were also important for export and home textile production. Meadow hay was exploited but was gradually replaced by English hay.

At first, crops were grown on houselots in the village. As initial threats of Indian attacks subsided and plowlands were divided, outlying fields were increasingly used. Husbandry was an important activity in Haverhill. Flocks and herds were pastured together by town herdsmen until 1652. Cattle, horses, sheep and swine were the most important [] animals on local farms; oxen and fowl were also present.

Fishing developed as a major occupation shortly after Haverhill's settlement. Native Americans called the Merrimack River "Monomack" or "River of Sturgens" indicating the importance of this species of fish. Salmon, shad, alewives and bass were also present in large quantities. Haverhill residents exploited each of these resources as the earliest,

latest and largest town on the Merrimack River to engage in the fisheries. Native Americans were the first to develop fisheries in the Haverhill area, as indicated by allusions made, probably during this period, to an Indian weir in the Fishing River (Hurd 1888: 1909). The first European fishery attempts in Haverhill began in 1654 as liberties were granted to Stephen Kent to erect a weir to catch alewives and other fish on the Little River. Similar rights were granted to John Hutchins of Newbury on the Merrimack River, Hutchins was also granted rights on the island above the town [by?] the falls to use the flats to dry fish. Small-scale shipbuilding may have been started during this period. Commerce on the Merrimack River was also likely present as the river represented the life line between this community and others down river on the coast. Goods were likely imported to Haverhill and exported during this period.

Mills also developed throughout Haverhill during this period. The first grist mill in Haverhill was likely built in the 1650s on Mill Brook, which ran southerly from Dyers Pond or Plug Pond to the Merrimack River. In 1665 Heath and Greely were given rights to set up the second grist mill anywhere on town lands, but particularly in the street on both sides of the brook at Emerson's lot (Hurd 1888:1916). There appears some question as to whether the mill or the second grist mill in Haverhill was built here or on the Little River. By 1671 the third grist mill was voted on the West River also known as Saw-Mill River or east Meadow River. A grist mill may have also been built during this period on Crystal Brook (Merrie's Creek), the principal outlet of Creek Pond (Crystal Lake). Residents of Haverhill built a sawmill on the Spicket River by 1659 in the area that would later become Methuen, then Salem, New Hampshire. Numerous other industries and trades developed in Haverhill by 1675. A brick yard was established in the West Parish in 1650. The town's first shoemaker was present by 1649. Blacksmiths were located in Haverhill after 1651.

VI. COLONIAL PERIOD (1675-1775)

A. Transportation Routes

Native trails had been upgraded to horsepaths and cartways by this time or had become overgrown. Main corridors through the town existed along the River Road west to Methuen and eastward along the Kenoza Street/East Broadway corridors to the Millvale Road area. East Broadway and the River Road were joined with the south bank of the Merrimack River by ferries at several locations. Northerly routes to New Hampshire also existed on both sides of the Little River (West River). The Main County Road continued up the Little River valley along the course of Main Street. To the west, the Derry Road also extended north along North Broadway and Broadway. Boundary and Monument streets were laid out in

1734 as part of a road network to the west Parish meetinghouse. By ca.1700, main residential streets in the village included Mill Street, Water Street, Main Street up to Summer Street, and Winter Street (called the Spicket Path). In 1725, a road was ordered built for the Haverhill Plantation to the Plantation at Penacoot. By 1744, Front Street was laid out, later to be renamed as Merrimack Street. The Washington Square area began to develop in the last half of the 18th century.

The Merrimack River continued to play a major role in Haverhill's transportation networks throughout this period. By 1745 at least two ferries were in operation between the village and Holt's Rocks. They included Griffin's Ferry on Water Street near the foot of Lindell, Mullkin's at the chain ferry, Pattie's ferry, Cottle's ferry on Cottle's Creek at the mouth of the East Meadow River, and Swett's ferry at Holt's Rocks. Transportation on the river was also important. Water Street to the river was developing as an important maritime center with coasting vessels up to 200 tons burden traveling between the town and Newburyport.

B. Population

A few Indians were probably living in Haverhill at the start of this period, although by 1700 they were likely extinct in the township. By 1675 Haverhill's population included about 300 white inhabitants plus 25 negro slaves. This population grew slowly between 1676 and 1708, during which the area suffered severely from numerous Indian attacks. Over 60 Haverhill residents were killed in this period, particularly in 1697, the worst year for attacks. In 1675 Haverhill ranked 25th in wealth among 49 colony towns.

By 1710 Haverhill had increased its wealth though its settlement was no larger than in 1675 (Cogswell 1940: 15). After the threat of Indian attacks had subsided, Haverhill's population began to grow at a faster rate. By 1721, 50 names were listed as Haverhill proprietors, their heirs or assignors. Since by this date proprietors or commoners were outnumbered by non-commoners, over 500 individuals may have resided in the town by that date. At the time the first census was taken in 1765, Haverhill together with Bradford contained 3105 individuals or 7.13% of the Essex County total. Bradford included just 1166 individuals at that date. From 1765 to 1776, Haverhill's population (including Bradford) increased by 30.43% to contain 4050 individuals or 7.95% of the Essex County total. Most of this growth occurred in the Haverhill area north of the Merrimack River, where outlying areas grew more rapidly than the center of town, possibly reflecting the agrarian base of the community.

Haverhill's population basically remained ethnically English throughout this period. Sixteen Scotch-Irish settled the town in 1719 but moved on

to Londonderry in 1723. Congregationalism continued to dominate religious worship in Haverhill throughout this period. Separate churches and parishes were created in the North Parish (1728), West Parish (1734) and East Parish (1743). Methuen was incorporated from Haverhill in 1725. Baptists were meeting in Haverhill in 1765, although an official church was not established during this period. Quakers were probably present in Haverhill although their settlement or existence was not encouraged. Witchcraft prosecutions did not occur in Haverhill during the Witchcraft Delusion of the 1690s, although some residents were tried away from the town.

C. Settlement Pattern

Concentrated settlement in the Mill Brook / Merrimack River area continued to characterize most settlement in the Haverhill area during the Colonial period. Haverhill was a frontier settlement through the early 18th century, containing about 30 houses in the village and several more scattered within 1 to 2 miles of the village. Indian attack was a reality during this period, with over 27 Haverhill residents killed and 13 taken captive between 1676 and 1708. Fortifications were present in the form of 2 watch houses, 6 garrison houses and four houses of refuge. Watch houses were present on Main Street and Water Street. Garrison houses were usually made of brick or mud brick between the walls and were commanded by the owners with 6 to 8 men under their command. Garrison houses included Marsh House on Marsh's Hill or Pecker's Hill, Webster House near the river east of Haverhill Bridge, Emerson House at the corner of Winter and Harison streets, Ayer House on Pond Street near the west end of Plug Pond, Bradly House in the northerly part of town and White House on Mill Street, opposite Linwood Cemetery. After several Indian attacks, residents considered abandoning the settlement in 1690, Haverhill residents were able to withstand Indian attacks, which ended by ca.1710. At this point, the small village clustered in the area around Water and Main streets began to expand. Proprietors and non-commoners again formed their attentions towards the division of common and individual lands. The town's original proprietors sought to ensure ownership of individual lands for themselves, their heirs and assignors. Non-commoners continually tested their claim, culminating in continued litigation often referred to as the War about the Commons. While proprietors were a minority by ca.1720, they appear to have secured their interests in most instances. In 1721, the Fifth Division of land was made including all undivided lands except the Cow Commons. The latter lands, originally laid out in 1665, remained the largest and most valuable remaining tracts after the 4th Division. The Cow Commons was divided in ca.1723

In 1735 the Proprietors voted to divide all remaining meadows in the town proportionately amongst themselves. By 1751, the Proprietors still

retained a strip of land between Water Street and the river. The land was in great demand for wharfage and shipyards.

D. Economic Base

Agriculture and husbandry continued to characterize most aspects of Haverhill's economic base throughout the Colonial period, although other pursuits such as lumbering, commerce, fishing, shipbuilding and other industries were also making important advances. Grains remained the major focus of most agricultural production with corn as the chief crop. Husbandry also continued in importance with a possible greater emphasis on sheep. Lumbering was growing in importance with some timber cut locally but most probably rafted down the Merrimack River to Newburyport for shipment overseas. Fishing continued through the period, with numerous laws being passed to protect the passage of fish upstream in view of increased mill development. By 1722, individuals were elected or appointed at town meetings to ensure that rivers were free of obstructions so fish could pass. Shipbuilding developed on an industrial scale during this period. In 1733 the town voted encouragement to Henry Springer as the town's first shipbuilder. Other shipyards were also established during this period, including the Flynt Shipyard in 1743. Shipyards and other maritime-related trades were developing in the Water Street riverside area. This area was undeveloped until the 1750s, when the town's proprietors began granting wharfs and warehouses in this locale.

Commerce was developing with Haverhill's other economic interests. The Merrimack River was navigable for vessels of 200 tons burden up to the Haverhill area. This provided a direct access to foreign trade for merchants and industries in the town. Simon Wainwright was the first merchant (1683) in Haverhill. Mills continued to grow on nearly every waterway in the town. In 1678 Richard Bartlett was voted a privilege to set up a sawmill in Haverhill on the New Meadow River. Water power on East Meadow River was also harnessed by ca.1696 when Samuel Currier and Joseph Greely built a grist mill later known as Johnson's mill on the river about 1/4 mile from its mouth. Fishing River was developed during this period beginning with William Stanton who built the first mill, a grist mill on the river by ca.1684. By 1688, a second grist mill was built near the river mouth and a sawmill about 1/4 mile from the river's mouth at Winter Street. In ca.1738, Clark's Mill was built on the Fishing River near the state line. The outlet from Creek Pond (Crystal Lake), known as Crystal Brook or Merrie's Creek, received most of its mill development early in this period. One grist mill was probably already present at the outlet of the pond with another grist mill (Bradley's Mill) built later near the Merrimack River. In 1683 additional mill rights were granted on this waterway to Joseph Kingsbury, Samuel Hutchins, Richard Swan, Jr., and Josiah Gage, who

built a sawmill on the creek below the bridge and to Stephen Dalton, who was given rights to build another grist mill. Cottle's Creek was developed by 1693 when Joseph Peasley built a sawmill on the creek. Later saw and grist mills were built on Cottle's Creek by Peasley's descendents. Anthony Chase built a sawmill on Cottle's Creek in 1757 about 1/2 mile from the mouth of the stream. Chase built another sawmill and fulling mill at the same site a few years later. John Chase (son of Anthony) built a fulling mill about one mile above his father's mill. The latter mill was probably built around the Revolution. In 1705 Joseph Swan and Jonathan Emerson were granted a privilege to set up a grist mill on Little River supposedly half way between the river mouth and Winter Street bridge.

Mill Brook continued to be a major focus of industry in Haverhill throughout the Colonial period. In 1706, John White built the first fulling mill in town on the brook near his house. Other industries on Mill Brook included a pot and pearl ash works in 1759, a salt works in 1759 and several tan houses. In the 1767 tax valuation in Haverhill, a total of 19 mills were listed in the town. Three distilleries, over 40 work houses and sail cloth manufacturers were also present.

E. Architecture

Residential: The town has a significant number of surviving period houses, particularly at Rocks Village. No houses have been firmly documented as First Period, but several retain the early saltbox form. Examples include the Sargent-Moody-Tenney House (1700), the Ephraim David House (1705, with alterations), and the Gideon Challis House, with a Beverly jog and entry porch (1741-42), all in Rocks Village. The more common symmetrical, gable center-chimney house include Hastings Tavern (ca. 1700), Hastings-Morse House (1710), Abner Chase House (1743), Phineas Nichols four-bay house (1743), William Sawyer (mid-century), and the later Samuel Esterbrook, again, all in Rocks Village. The Kimball Tavern in Bradford is said to date to 1690, and has an entry porch and lateral and rear ells. Two smaller single story under a gable roof, one of four bays, are also known from Rock Village. Large double interior chimney houses are also known there, including the Jacob Chase (1744) and Gideon George (1737) houses. Pained chimney saltbox forms include the Swett-Osgood and Swett-Cheese houses (ca. 1700), and the undated Joseph Billoway House with Beverly jog. The Peaslee Garrison is an unusual survivor, a 2 1/2-story, stuccoed brick house with gabled roof, center chimney, and end chimneys.

Institutional: The town built its first meetinghouse in 1640, a single story cube measuring 20 feet on a side; galleries were added in 1666 and 1684. A new house was constructed in 1699, voted in 1695 to measure 50 by 42 feet, with 18 foot studs, to be finished inside like Beverly and

on the sides like Salisbury; a steeple was added in 1720. A new meetinghouse, built in 1766, measured 66 by 48 feet with a steeple on the east end. Additional meetinghouses were added in the north precinct (1728), the west (1734), and the east (1744). A small group of Baptists built a meetinghouse ca. 1763-65. The first schoolhouse was built in 1670; three schoolhouses were built in 1723, located in the north, northwest, and west; a school was added near the east meetinghouse in 1748. An almshouse was operated from 1738, but was sold in 1746. An eight-foot-square powderhouse was built in 1767.

Bradford's first meetinghouse dated to 1670 and was allegedly log; a gallery was added in 1690. A second meetinghouse was built in 1706, and a third in 1750-51, but no material is available on appearance. A schoolhouse was constructed nearby at an unknown date, measuring 22 by 18 feet with seven foot studs.

VII. FEDERAL PERIOD (1775-1830)

A. Transportation Routes

By 1830 the town's road network had increased two-fold. Turnpike development, a characteristic of this period, was notably absent from this development. Instead, numerous local roadways comprised the town's transportation network. Major roadways added during this period included Broadway, thru the West Parish to Methuen, Lowell Avenue, Hilldale Street, Rosemont, Whittier Road, Amesbury Road, Elliot Street, Lovers Lane, Concord Street, Summer Street and Merrill Avenue. Haverhill was divided into 19 highway districts in 1792.

Main east/west corridors through the town continued along Broadway and the Lowell Street/River Road corridor in the western part of town. Similar travel in the east was along Amesbury Road, Kenozan Street and East Broadway. Northerly travel was along North Broadway, Main Street, Whittier Road and Hilldale Street.

By 1790, the first stage line was begun between Haverhill and Boston. The service was run with a two-horse vehicle, which ran an irregular schedule. River travel along the Merrimack River also continued with coasting vessels traveling between Newburyport and Haverhill. By 1828, the first steamboat, "the Merrimack," had begun runs between these towns. Smaller steamers also began travel between Lawrence and Newburyport with stopovers in Haverhill. Travel also began across the Merrimack in 1794 as the first Haverhill Bridge was built across the Merrimack in the town area. The bridge was rebuilt in 1808; then in 1827 changed from an open to a covered bridge.

B. Population

Haverhill's population grew by 42% from 4,050 in 1776 to 5,752 in 1830 when it was the region's fifth largest town after Salem, Gloucester, Newburyport, and Lynn. A second Baptist society was formed in 1821, a Universalist society in 1823, and Methodists began to meet in 1830. The town experienced a revival in 1806. The town had seven neighborhood schools, and after an 1828 bequest for a secondary school, Haverhill Academy operated in the Whittier Building. Bradford Academy began in 1803. The Philendian Society was formed in 1813 to support female teachers, and the Female Benevolent Society in 1818. In about 1820, two libraries operated in the town. A poorhouse was operated at the same time. A Temperance Society was formed in 1827, and a Lyceum operated after 1830.

C. Settlement Pattern

D. Economic Base

Haverhill's Federal period economy thrived on a diverse base of commercial, manufacturing and agricultural activities. During the years between the American Revolution and the War of 1812, property was afforded by Haverhill's position as an important inland commercial center. As the town was/is located at the westernmost navigable point on the north side of the Merrimack River, it "was noteworthy as a market place... the principal street of the place filled with regions of farmers who came in from New Hampshire, [Vermont and northern Essex and Middlesex counties]... to exchange their produce for other necessities of life" (Hurd 1888: 131). Several Haverhill merchants, including John White, Benjamin Willis, Issac Osgood and James Duncum, traded with these farmers, purchasing their agricultural products in exchange for specie or dry goods that they imported from American, English and West Indian ports. Small vessels were able to sail directly into Haverhill while larger vessels unloaded at Boston or Newburyport and transferred their goods to Haverhill in snows, other small vessels, or by wagon teams. Imports from London included manufactured goods and other dry goods, while the principal West Indies products were sugar and molasses. For many years, there were three distilleries near the wharf in Haverhill where the sugar and molasses was turned to liquor which was then re-exported or sold. Exports to these distant ports included corn and other grains, beef, fish, pearl-ash, linseed oil, and large quantities of ship lumber and other lumber.

An important by-product of the shipping trade was shipbuilding and its ancillary crafts. The peak for shipbuilding came ca. 1800 when there were three shipyards -- two at the village and a third at "the Rocks." Ships as large as 30 tons were built in Haverhill. In 1810, nine

vessels, including a ship, a bugs, a sloop, a schooner, and a snow, were built by a workforce of sixty men. This was essentially the last gasp for both shipping and shipbuilding; the interruption of trade during the War of 1812 proving near fatal to the sector of the economy.

Despite the post-1812 commercial decline, banks were established in 1813 -- the Merrimack Bank, and in 1829, the Haverhill Institution for Savings. The impetus for these developments was the continued economic prosperity afforded by the emergence of large-scale shoe manufacturing. During the last quarter of the 18th century, Haverhill was home to a few shoemakers and leather dealers and tanners. Shortly after the Revolution, Davie How established a currying shop in Water Street. His product was probably sold mostly to farmers who worked up shoes in the off-season. There may have also been a few small shoe shops in town. By 1794, there were seven tanneries. How and others probably supplied leather to the shoe shops in Bradford where there were four shoe shops as early as 1792. When oceanwise commerce was interrupted in 1812, David How, having recently gone into shoe manufacturing himself, established Haverhill as a center for shoe production. How travelled to Philadelphia to sell his shoes and in the process opened a new market that encouraged other Haverhill-area shoemakers to expand their operations. By 1817, there were about 200 shoemakers employed in Haverhill and another 150 in Bradford. Most of their product was marketed in the mid-Atlantic and southern states.

Other manufacturing operations in Federal Haverhill included hat and cloth production. The only recorded hat-making shop was the firm of S. Webster, established in 1815. Others were undoubtedly in business before and after this date. The town was also home to an early flax-spinning mill. The factory on Little River spun flax and hemp for sailcloth, beginning in 1780. In 1790, the mill was equipped with a water-powered, multiple-spinning machine containing 32 spindles, one of the first such machines employed in the United States. In 1800, the mill was converted to cotton cloth production by Ezekial Hale. Then in 1804, Hale again converted the mill, this time to woolen cloth manufacture. In all, manufacturing firms employed 56% of Haverhill's male workforce, while 46% of those counted worked in agricultural pursuits.

Haverhill was an active farming community in the Federal period. In 1791, 894 acres, or 13.6% of the 6,527 total acres of agricultural land was under tillage, a higher than average percentage for Essex County towns. With haying lands, the percentage exceeded 51%, also above average for the region. The 1791 census revealed nine grist and saw mills in operation. Farmers made extensive use of the uncultivated land as well, keeping large numbers of cattle for dairying and slaughtering. In 1791, there were three slaughterhouses. Many of the hides were sold to area tanners for later use in shoe production. In the Bradford

section, salt hay was cultivated in abundance and large fruit orchards were maintained.

E. Architecture

Residential: Through the end of the eighteenth century, builders occasionally chose the traditional New England center-chimney form. Far more common, however, were paired chimney forms, numbering about fifteen, including three hip roofed examples, a two-family example, and two small 1 1/2-story examples.

Institutional: New institutional building focused on the school system. By 1800, the town included six districts with seven school buildings. An academy was organized in 1827. In Bradford, an academy was organized in 1804, in a single-story building with girls and boys classrooms on either side of an entry passage. The primary new ecclesiastical structure was a brick structure for the newly formed universalist society in Haverhill, measuring 40 by 55 feet. The South Christian Church was built in 1806, of unknown appearance. A second Baptist Church was built in Rocks Village in 1822. The gable front block has a projecting hip roofed vestibule/entry porch with paired entries, rising to a square tower with octagonal belfry, and lancet openings.

Transportation: A small 1-1/2 story frame toll house survives at Rocks Village, gable front in form, four bays in width.

VIII. EARLY INDUSTRIAL PERIOD (1830-1870)

A. Transportation Routes

Federal period roads continued in use and were improved. New roads such as Webster Street and portions of Summer Street were laid out and others named early in the period (ca.1838). Haverhill streets were lighted by gas for the first time in 1858. Many streets, such as Merrimack from Main Street to Washington Square and Winter Street were paved by ca.1858.

Stage travel continued through the mid 19th century, though even before its end, rail travel had become more important. In 1835 the Boston and Andover (later Boston and Maine) Railroad from Andover to Haverhill began with a line formally opened to Bradford in 1837. Rail lines were extended through Haverhill to Kingston in 1839 and soon after to Portland. By ca. 1870, the Boston and Main (B&M) Railroad ran main lines through Haverhill parallel with the Little River. The B&M crossed the Merrimack at Haverhill Bridge and connected with track running roughly parallel with the south bank of the river through what was then Bradford.

Local horse railways may have been also present during this period. Haverhill Bridge, originally wood, was replaced by an iron structure, in 1874. River transportation decreased during this period with the expansion of railroads. Small-scale steam travel on the river remained carrying coal and towing ocean vessels upriver.

B. Population

Haverhill's population grew dramatically by 162.6% from 5,752 in 1830 to 15,106 in 1870, the third highest rate in the region. It remained the fifth largest town in the region, following Lawrence, Lynn, Salem, and Gloucester. Haverhill had just over 13% of its population foreign born, including Irish, Canadian, English, and Scots immigrants. Bradford's foreign population was smaller, about 10.5%, dominated by the Irish.

New churches kept up with the rising population. Congregational societies include Independent/Centre (1833/40), Winter Street (1839-60), and North (1859). A third Baptist society was formed in 1838. Trinity Episcopal church was established in 1855, and subsequently the Free Church of John the Evangelist. The Winter Street Free Will Baptist Church dates to 1859. The town's Roman Catholics had services at St. Gregory's after 1852. A Youth's Temperance Society was formed in 1831, an Atheneum in 1852, and an Old Ladies' Home in 1856. Thirteen hundred townsmen, including 31 "colored", fought in the Civil War, where 186 died. City municipal organization came in 1869.

C. Settlement Pattern

D. Economic Base

Following the consolidation of maritime commerce in large ports such as Boston, New York and Portland, and the construction of a rail network connecting these ports with many inland towns, Haverhill's position as an inland commercial center suffered further decline. Likewise for the related industries such as shipbuilding and associated crafts. However, this trend did not spell overall economic decline for the town. On the contrary, considerable growth in Haverhill's shoe industry in the early-1830s and again in the 1850s, transformed the town from a community mixed with a economy to one heavily dependant on the manufacturing sector. In 1840, 788 men (65%) of the 1,215 men employed in the town worked in the manufacturing sector, 690 of them in the shoe industry. In the ensuing 25 years, total male workforce grew by 207% to 3,737 men. Fully 92% (3,436) of them worked in manufacturing, the vast majority (3,039) as shoe workers. The remaining 8% worked in agricultural occupations.

The enormous expansion of the shoe industry is indicated by several statistical comparisons. In 1832, there were 28 shoe manufacturing establishments employing 939 people (73% male). Only five years later there were 42 such factories (including those making heels, soles, etc.) with 2,885 employees (59% male), a 207% increase in the size of the workforce. For a decade after 1837, the local and national shoe industry was mired in depression, causing a large number of bankruptcies and severe unemployment. However, another period of enormous expansion occurred in the late 1840s and early 1850s. By 1855, there were 6,344 people (64% male) employed in more than 100 shoe, sole and heel factories. Between 1832 and 1855, production increased 635% -- from 575,330 pairs to 4.33 million pairs. Likewise, leather treatment establishments increased from six in 1837 to eight in 1855, the number of employees from 59 to 103, and the value of tanned and curried leather from \$132,000 to \$341,000. In addition to those employed in the Haverhill shoe factories, several hundred people in the neighboring countryside were engaged in "outwork" for Haverhill shoe manufacturers.

Following the introduction of the sewing machine to local shoe factories in 1857, the "outwork" system and craft production were gradually phased out. By utilizing the new technology and thus requiring most shoe workers to work in the factory, shoe manufacturers gained greater control over the workers and the production process. Close scrutiny of the work force allowed the manufacturers to further speed-up production while maintaining, or even reducing wages. The great shoe workers strike of 1860, most widely felt by Lynn, also hit Haverhill, as workers protested the new factory system.

1860 Haverhill was the third largest shoe producer in the U.S., behind Philadelphia and Lynn, with a product value of \$4 million. This figure represented a 972% increase over the 1832 shoe product value of 372,985. The Civil War put a temporary damper on this growth as the southern market -- where Haverhill manufacturers sold their women's shoes and men's and women's slippers -- was cut off. Because Haverhill firms specialized in "light goods", i.e., women's shoes and slippers, the local manufacturers were not in a position to capture a significant share of the war-stimulated demand for army-grade, heavy boots and shoes. Despite 1865 figures reflecting a 25% drop in production and a 36% drop in employment, Haverhill shoe manufacturers realized a 65% increase (over 1855) in the value of the shoe product, thus demonstrating that workers and consumers were harder hit by the war than the shoe manufacturers. Ancillary businesses, such as those making shoe lasts, tacks, awls and boxes, also were established and prospered.

The only other important industries in Early Industrial Haverhill were hat and textile manufacturing. In 1832 there were seven small hatters' shops with 140 employees. They made 125,000 hats worth \$97,000. By 1865

the number of firms were down to three. However, these were considerably larger factories, with a total of 227 employees who produced almost 450,000 hats valued at more than \$360,000. In 1832, there was one small mill where woolen cloth was produced. In 1837 the firm employed 38 people and manufactured 180,000 yards of cloth worth \$78,000. By 1865 a second small mill was in operation and together the two factories (same owner, whose identity is unknown) employed 68 people who produced 500,000 yards of flannel and 50,000 yards of cassimere worth \$240,000.

Less important manufacturing activities included production of combs, tin-ware, chaises and wagons, and clothing. In all, Haverhill manufacturers employed 4591 people (75% male) in 1865, compared to about 1275 people in 1832, and total product value was \$5.7 million, compared to about \$220,000 in 1832.

During the pre-1837 years the shoe industry also thrived in Bradford. In 1832 there were sixteen small shoe factories with 425 employees. They produced 260,000 pairs of shoes worth over \$200,000. There were also six tanning and currying establishments in operation. In 1837 the shoe firms of Bradford employed more than 1000 people and production exceeded 1/2 million pairs valued at almost \$400,000. Many of these firms, like those in Haverhill and elsewhere, were bankrupted by the 1837 depression. When business activity returned to a prosperous state, many of the shoe companies re-established themselves or began anew in Haverhill, where railroad service (and hence cheaper transport of goods) had already been initiated. By 1855, only 23 people still worked as shoemakers in Bradford, and production was a mere 20,000 pairs. Increasingly, Bradford was becoming a residential district of Haverhill.

Agricultural activity increased slightly during the period. The number of farmers increased from 235 in 1840 to 301 in 1865. In the latter year there were 280 farms of 14,278 total acres. An unusually high proportion of land (89%, or 121,669 acres) was improved -- cultivated or grazed. The principal crops and products were English hay, corn, and potatoes. Large numbers of neat cattle and swine were also raised.

E. Architecture

Residential: Gable roof, five-bay, two-story houses remain popular, particularly for large houses. Both Greek Revival and Italianate examples are known; the former include a brick double house; the latter include quite elaborate examples. A late, 1837 saltbox form survives in Bradford. The new gable-front form is also known in the town, also in these styles, and primarily in the large, 2 1/2-story form. Again, Italianate examples include elaborate T-plan examples such as the Warren Ordway and towered Farrar houses. A five-bay, center-entry, 2-1/2-story gable front is now the Bradford Branch Library. Two gothic cottages

survive in Bradford, the Leaverett Kimball house of 1849-50, and the simpler Morse House.

Institutional: Although many new churches (ten in Haverhill) were built during the period, little is available on their appearance due to inventory omissions. The East Parish Church on Middle Road is a simple, gable front with paired entries and a square tower and low steeple built in 1838. In Bradford, the First Parish built their fifth church in 1848, a gable front with pedimented vestibule ornamented with Corinthian columns in antis, a square tower, and belfry. Schools, too, were built in large numbers (about eleven), but few are known. At the Academy, the Hall was built in 1868-1870, a brick Second Empire design by Emerson and Fehmer, of four stories with a five-bay central frontispiece with two story Doric portico; ells were added in 1892 and 1915. The Primrose St. School is a 2-1/2-story, three-bay brick design by Josiah Littlefield, now a residence. In Rocks Village, a combination tub house / meetinghall survives as a Greek Revival gable block with cupola, an engine door and palladian window in the gable end, five bays in length with entry at the opposite end. Neither the town hall (1847) nor the City Hall (1861) are known in appearance.

Commercial: Although dating to 1868, the glass front (1936) of the single story Little River Building is the dominant visual element.

IX. LATE INDUSTRIAL PERIOD (1870-1915)

A. Transportation Routes

Existing street networks continued to be improved throughout this period with few new streets laid out other than connecting streets in the city center and in village areas. As residential population centers changed and industry grew, the character of streets also changed. By ca.1871 Merrimack Street changed from a residential type street to a business area. Washington Street also changed from a residential village street to a street lined with brick factories.

Railroads continued to develop throughout this period, particularly at the local level. Boston and Main routes remained unchanged from the previous period with trunk lines running roughly parallel with the Little River and along the south bank of the Merrimack. Locally, street railways underwent considerably development throughout the period. By 1877 the Haverhill and Groveland Street Railway was built from the Boston and Main station in Haverhill to the Groveland end of Groveland Bridge. In 1884 the line was extended one mile in Groveland to Savaryville and in 1886 from Savaryville to West Newbury, Haverhill to Bradford and in various parts of Haverhill increasing its tracks to about 14 miles. By ca.1915 major street railways were operated by the

Bay State Street Railway and the Massachusetts Northeastern Street Railway System. The former line extended from Methuen to Haverhill along Routes 113/110 through Haverhill Center, then on Groveland Street crossing the Merrimack River into Groveland. The Bay State line also crossed the river from Haverhill Center extending into Groveland on Salem Street and into North Andover along the Boston Road/South Main Street corridor. North of the Merrimack River major corridors also existed for the Massachusetts Northeastern Street Railway System, all connecting in Haverhill Center. These rail lines extended from Haverhill Center eastward along route 110 to Merrimac, northerly along Primrose Street/Main Street to Plaistow, New Hampshire, and westerly along Broadway to Ayers Village and Methuen with a second line forking to Methuen from the Broadway/Forest Street junction. Street railways were changed from horse-drawn to electric power in ca.1890.

B. Population

The city experienced rapid population growth during the period, increasing 227% from 15,106 in 1870 to 49,450 in 1915. By 1915 Haverhill was the third largest municipality in Essex County, behind Lynn and Lawrence. Every census taken between 1870 and 1915 counted a larger population than the previous one. The periods of greatest growth were 1875-1880, 1885-1890, and 1905-1910. The foreign-born population experienced even greater proportional growth than the general population, expanding 499% from 2147 in 1875 to 12,867 in 1915. At the period's beginning, the immigrant population accounted for 14.7% of the total, compared to 26% in 1915. Canadians were by far the largest immigrant group early in the period, followed by the Irish and English. There were also smaller numbers of Germans, Italians and Scots. In 1915 Canadians were still the largest foreign-born group with about 25% of the total. Then came the Irish, followed closely by large numbers of Italians, Russians, Greeks, Poles and smaller numbers of Scots, Armenians, Lithuanians and Turks,

French Catholics organized the Society of St John the Baptist in 1870. In 1873 the Haverhill Public Library was established. In 1877 the Haverhill Coop Savings Bank was chartered. In 1878 the Haverhill Women's Suffrage Association was organized. In 1884 the Knights of Labor Cooperative Publishing Company was organized and the *Haverhill Daily Laborer* began publication. The same year the Academy of Music was established.

C. Settlement Pattern

D. Economic Base

Haverhill's economy began to recover from the Civil War-era slump in the mid 1870s. Because the town was heavily dependent on the shoe industry, overall economic prosperity awaited the good fortunes of shoe manufacturing. Considerable expansion of shoe production provided many new jobs in the manufacturing sector. In addition, it led to Haverhill's re-emergence as an important commercial center, and this to new employment opportunities in that sector. In 1875 manufacturers employed 2947 men, or 74% of the total male workforce. Another 656, or 16%, worked in commercial occupations, while the remaining 8% worked in agriculture. By 1915, the male workforce had expanded 253% to 14,065 men. Of these, 76% (10,668) worked in manufacturing, 21% (2945) in commerce and 3% (452) in agriculture.

The vast majority of the manufacturing (and total) workforce was, of course, employed in shoe manufacturing. In 1875 there were 189 shoe factories and related establishments, almost double the total from the previous decade. Likewise, product value almost doubled to \$8.8 million. Then during the decade 1880-1890 the city experienced the largest economic expansion in its history. In just ten years the investment of capital increased from \$2 million to \$8 million, the value of manufactured products increased from \$12 million to \$23 million, and the number of manufacturing employees grew from 8145 to 15,000. The shoe industry accounted for most of this growth. By 1887 there were 383 shoe factories and related establishments. Of these, 170 were actually making shoes. The 213 ancillary firms included machine shops, "dealers in patterns, trimmings, dies, lasts, cut soles, leather of all descriptions, wooden and paper boxes, leather board, paints, varnishings, and ... other minor essentials" (Chase: 1889, 140).

Hats and woolen textiles were still important industries, even if distant seconds to shoes. In 1875, there were three hatters who produced \$410,000 worth of hats. Following a period of expansion in the 1880s, the three firms more than doubled their annual product value to almost \$1 million. Still, the industry only employed 400-500 people. The two textile mills on Little River were purchased by the Stevens Company in the 1880s and employed 150 people who produced 800,000 yards of woolen flannels and women's dress goods. Other minor industries included several small printing, publishing and bookbinding firms, and several food preparation establishments. In 1883 a paper mill was established on the Bradford side of the Merrimack where newspaper was made by 50 people. In 1905 the manufacturing product of almost \$25 million ranked third in Essex County, behind Lynn and Lawrence.

The Late Industrial period was also a time of expanded agricultural activity, as farmers sought to meet the demands of an urban market. The

number of farms increased from 216 in 1875 to 252 in 1905, and agricultural product value increased almost 90% from \$201,000 to \$380,000. Principal products sold in the city were milk, vegetables, fruit, meat and poultry. Dairy products accounted for almost 30% of the total product value throughout the period, followed by hay, straw and fodder at about 25%. While the percentage of Haverhill residents working on farms declined relative to other employment sectors, the real number increased from 376 in 1875 to 452 in 1915.

E. Architecture

Residential: Moderate sized homes continued to employ the gable front form, again favoring 2-1/2-story and T-plan variations. Some examples are now nearly devoid of ornament while others have ornamental shingle walls and spindle-work porches. A handful of large Queen Anne-style houses are known, with unusually symmetrical facade arrangements. Shingle examples include a gambrel block, and a cross-gable that may be a two-family. Later in the period, pyramidal-roofed four-squares were popular, most with side entries. A related but more elaborately ornamented form is the hip blocked, five-bay colonial and Classical Revival house, larger with a larger Georgian based plan and numbering about seven. The Mysel house is a large and exceptional bungalow with wide overhanging eaves and multiple wide gable roof planes (1914); a simpler 1916 example is known. A Dutch Colonial house dates to 1913. Most of these examples are known from Bradford.

Institutional: Both churches and (especially) schools were added, but little information on appearance is available for Haverhill. Bradford schools are well represented, however. The Greenleaf School also served as the town hall; a two-story, hip block has projecting entry porches, elaborate cornice corbelling, and string courses linking window labels. The Cogswell School is an 1891 Romanesque Revival design by W.P. Phillips, brick with granite trim, a two-story pyramidal block on a basement with a projecting hip roofed frontispiece with offset tower. The Peabody School of 1895 is a four-room Romanesque Revival design by C. Willis Damon, a brick hip block with facade gable and two Romanesque entry porches. Related examples include Damon's Wood School of 1905 and the U-shaped Knipe School of 1914. The Kimball School of 1903 was a frame Colonial Revival design. In Haverhill, the Central Fire Station is a Romanesque Revival design by Josiah M. Littlefield for a three-story brick building with segmental openings for entry and for two engines, and a rear hose tower. In Bradford, two new churches were constructed: The 1891 People's Baptist Church is a broad cross-gable form with corner entry tower with belfry and lancet windows. Sacred Heart Church is a brick with stone trim gable block with offset belltower with pinnacles, transepts, and buttresses.

Commercial: Most of the large brick structures that line Haverhill's downtown corridor are shoe manufactories, and most date to after the large fire of 1882. Comparatively few had other primary uses, mostly for banks and hotels. Both the Merrimac and the First National Bank buildings are four-story panel brick Queen Anne designs, the former a more elaborate design with different treatments to openings on each floor; both have altered first floor facades. Still more elaborate is the Whittier Inn, five stories of brick with sandstone trim and lancet windows on the upper story. The Pearson Block was also constructed to house a restaurant and hotel in a panel brick, four-story building. Although built in 1897, the single story Washington Building reflects the 1938 alteration to all window facade. The Railroad Square Building of the same year is a long multi-bayed building with segmental arch openings, altered first floor, and fire damage noted. The Haverhill National Bank is a seven-story brick building of 14 bays, with Classical Revival design elements on the first floor including semi-attached columns and pilasters (1915).

X. EARLY MODERN PERIOD (1915-1940)

A. Transportation Routes

Haverhill's street network continued to increase in density with most expansion focusing on the center of town north and south of the Merrimack River. Most roads in the town were now paved to varying degrees. Some roads were still soil-surfaced, such as the Old Ferry Road and East Broadway to Water Street. Other roads, such as Forest St., Lowell Ave., Methuen Road, Crystal St., Vale St., Hilldale Ave., Middle Road and others, were paved with gravel or other stone surfaces. Roads paved with bituminous surfaces were classified by the State as having either "low type" or "high type" surfaces. Roads with Low Type surfaces included the central portion of Hilldale Avenue, the northern portion of North Broadway, the southern portion of Liberty Street, Primrose Street, Mill Street, Kenosha Street, East Broadway and others. High type paved roads included the southern part of Hilldale Avenue, Broadway, Lawrence Street, and Main Street. Major routes and roads with the best surfaces in Haverhill continued to be the State Routes 97, 112 and 110, particularly in the area around Haverhill Center.

Increased automobile travel resulted in an end to Street Railway service by ca.1930. The Boston and Maine Railroad continued to survive emphasizing freight rather than passenger service. Railroad routes essentially remained unchanged from the previous period.

B. Population

After growing 163% to 228% during the Early and Late Industrial Periods, Haverhill after 1915 sharply reversed its trends. Although its population increased nearly 9% in the first five years of the period, its losses thereafter were steady and with little interruption until by 1955, Haverhill's population had declined by 8%. Its percentage of foreign-born fell during the period, from 26% in 1915 to 14.5% in 1950. While Canadians remained the major nativity throughout (averaging 32% between 1915 and 1950) and the Greeks and Russians remained fairly constant at 9.3% and 8.8% respectively, the proportions of Irish and Italians underwent substantial change. While the Irish fell from 14.5% of the foreign-born in 1915 to only 7.7% by 1950, the Italians increased during the same period, jumping from 11.5% to 16.6%.

C. Settlement Pattern

D. Economic Base

The first decade of the Early Modern period was still a time of general prosperity in Haverhill as the good fortunes of the shoe industry continued. By 1919 Haverhill had almost 400 manufacturing establishments, 52 of which were begun between 1915 and 1919. At the latter date, Haverhill had "more individual shoe manufacturing concerns than any other city on the North American continent, about [250] firms being devoted [directly] to the manufacture of boots and shoes" (Arrington: 1921, 481). Total shoe production was about 25 million pairs in 1919, and the total manufacturing product exceeded \$25 million.

However, as the decade of the 1920s progressed, the city's economy deteriorated rapidly. The crushing blow came during the Great Depression when many of the shoe firms either went bankrupt or moved south in search of lower taxes and cheaper, non-union labor.

E. Architecture

Residential: Few period houses are inventoried. Known examples include a 1916 hip roofed Georgian Revival house, a 1917 stucco mission style house with tile roof and porches, a 1926 hip roofed variation of the Dutch Colonial house, and a 1936 center chimney Colonial Revival.

Institutional: The city's post office was built in 1930, a Colonial Revival brick block of two stories with a central tower and cupola. Two new halls were added at Bradford, nearly identical Colonial Revival designs by Edwin S. Dodge of Ames, Child, and Graves from 1938-40. These three-story gable fronts were built of brick with two-story Tuscan porticos and three entries. Denworth Hall has a fan-lit center entry and

a single three-part window in the upper story; Hasseltine Hall has a round-headed door and four windows above.

XI. SURVEY OBSERVATIONS

XII. BIBLIOGRAPHY

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