Machine Shop Village
Neighborhood Conservation District Study Report

1. INTRODUCTION

The Machine Shop Village Study Committee (MSVSC) was established by the North Andover Board of Selectmen in February 2006. The MSVSC reviewed Machine Shop Village history, reviewed requirements for Local Historic Districts and for Neighborhood Architectural Conservation Districts, solicited input from neighborhood residents and determined that a Neighborhood Architectural Conservation District would be most appropriate for Machine Shop Village.

The Massachusetts Historical Commission has defined a Neighborhood Architectural Conservation District as a group of buildings and their settings that are architecturally and/or historically distinctive and worthy of protection based on their contribution to the architectural, cultural, political, economic or social history of the community. A Neighborhood Architectural Conservation District bylaw protects the overall character of the neighborhood by regulating the demolition of significant buildings and making sure new construction respects the scale, massing, setback and materials of the historic structures.

In Massachusetts, Boston, Cambridge, Lowell and Northampton have all established historic preservation protection districts that could be defined as Neighborhood Architectural Conservation Districts. Neighborhood Conservation Districts in the cities of Boston and Lowell operate under special acts of legislature which granted certain powers to the Boston Landmarks Commission and the Lowell Historic Board. Among them was the establishment of neighborhood architectural conservation districts. In Cambridge and Northampton, on the other hand, neighborhood architectural conservation districts were established under the home rule authority of the State Constitution.

A Neighborhood Architectural Conservation District is different from both a Local Historic District and a National Register District. A Local Historic District is a group of buildings and their settings that are worthy of protection at the local level, and are generally more historically intact than buildings in a Neighborhood Architectural Conservation District. Local Historic District regulations are generally more restrictive than Neighborhood Architectural Conservation District regulations. A National Register District is a group of buildings and their settings that are formally recognized at the Federal level by the Secretary of the Interior by being placed on the National Register of Historic Places. This is primarily an honorary designation and does not restrict use or change within the district's boundaries. Machine Shop Village was placed on the National Register of Historic Places in 1982 (National Register No. 82000482).

In the opinion of the MSVSC, a Neighborhood Architectural Conservation District will benefit the community by preserving the fabric of Machine Shop Village without overly encumbering the residents with restrictions. The residential portions of the neighborhood

consist of a variety of housing, from owner-occupied single family homes and two-families, to large homes converted to apartments and owned by investors. The income levels and financial means for historic preservation are expected to be variable within the neighborhood. Therefore, it is expected that a Neighborhood Architectural Conservation District will be able to preserve structures, eliminate demolition and require that significant structural changes suit the character of the neighborhood, without limiting the ability of routine maintenance and minor alterations to be made in a cost-effective manner.

2. METHODOLOGY

Since about 2003, neighbors within Machine Shop Village have been working together to improve the neighborhood. With North Andover's enactment of the Community Preservation Act (CPA) in 2001, it was recognized that Machine Shop Village would be eligible for improvements under the Historic Preservation aspect of the CPA. Machine Shop Village residents have been working with the Community Preservation Committee to identify ways to improve the neighborhood in a thoughtful and logical manner with funding from the CPA and other sources. In FY 2005, a master plan study of the streetscape within Machine Shop Village was executed by a Boston landscape architecture firm using CPA funds. In FY2006, funding for streetscape improvements was authorized, and in FY2007, funding for a federal grant application was authorized.

Prior to 2003, there was little sense of neighborhood identity within Machine Shop Village. The "Machine Shop Village" designation was rarely used. Newspaper articles, a website, and community meetings have increased the neighborhood identity and pride. Currently, properties for sale are using the neighborhood's raised identity as a marketing tool.

The Historic Commission and the Community Preservation Committee expressed concern about using CPA funding for an area that was not protected from alteration, thereby changing the character that warranted the historic preservation funding. In addition, the neighborhood's multifamily zoning and the recent real estate market has led to the conversion of several smaller homes in the neighborhood to multifamily homes with large additions, altering the character of these homes. These factors along with the increased neighborhood awareness led to the recognition that a protected district would benefit Machine Shop Village.

The main method of disseminating information to the neighborhood has been door-to-door distribution of flyers. Flyers were distributed in advance of two neighborhood public meetings, held in the fall of 2005 and the spring of 2006, to discuss the issue of becoming a protected district. Each meeting was led by a panel consisting of a member of the North Andover Historic Commission, the chairman of the Old Center Local Historic District Commission (the town's Local Historic District), and a Machine Shop Village resident. Each meeting was attended by about 20 to 30 residents. Generally the meeting attendees appeared to support a historic protection, preferring the less restrictive Neighborhood Architectural Conservation District.

An informational sheet and a postcard survey were distributed to residences in Machine Shop Village by volunteers canvassing the neighborhood door-to-door after the public meeting held in the fall of 2005. Approximately 300 postage-paid surveys were distributed, and about 2/3 of the respondents were in favor of instituting a historic protection for Machine Shop Village, with the remaining 1/3 either neutral or against historic protection. However, it should be noted that only 10% of the surveys were returned.

After the results of the fall public meeting and the postcard survey indicated that there was neighborhood interest in becoming a protected district, the North Andover Board of Selectmen appointed a study committee (Machine Shop Village Study Committee) in February 2006. The study committee then held the subsequent public meeting in the spring, led by the panel.

It should be noted that the work conducted by this study committee relies heavily on work completed in a previous effort designate Machine Shop Village as a protected district. In the late 1970s/early 1980s, an effort was made to designate Machine Shop Village as a Local Historic District. This effort was led by town residents involved in historical advocacy, but not neighborhood residents. Research was conducted at that time to identify the appropriate district boundaries and compile the history of the area. Properties within Machine Shop Village were inventoried on MHC forms, and historical information was compiled from documents at the North Andover Historical Society and at other local museums.

During this effort, it was recognized that neighborhood support for a Local Historic District was lacking due to the restrictions on private property. Ultimately the work was used for the National Register District application, and Machine Shop Village was added to the National Register of Historic Places in 1982. This report is being prepared to support the designation of the current National Register District as a Neighborhood Architectural Conservation District.

Upon review of this draft report by the Massachusetts Historical Commission, it is expected that the public hearing would be held in January 2007, the report finalized in February 2007, and a warrant article submitted for vote in the May 2007 North Andover Town Meeting.

3. SIGNIFICANCE

Machine Shop Village represents the survival and evolution of a New England factory village. The district retains its integrity of design, setting, materials and feeling; it is significant not only to the development of North Andover, but also to the growth of textile manufacturing in the Merrimack Valley and the growth of machine shop development in the Northeast.

Machine Shop Village is a mid-nineteenth century factory neighborhood that grew up along Cochichewick Brook in North Andover. The district contains approximately 151 structures on 90 acres of land, sloping gently downward from Main Street on the west to Osgood Mill Pond and the Boston and Maine Railroad on the east. Immediately north of Machine Shop Village is the town's civic and commercial center.

The architecture of Machine Shop Village is dominated by the conservative, functional outlook of the industries that crated the neighborhood. Sturdy brick mill complexes are complemented by rows of very simple, vernacular workers' housing – the most pervasive building type. A full spectrum of building types, however, is achieved in the Village's several stores, three churches, and range of middle and high style residences. Siting, scale, and landscaping follow various patterns, reflecting the multifarious functions of this district.

Industrial Development

During the time of its greatest use, Cochichewick Brook supported four major textile-related mills in North Andover. Grist mills and filling mills were established in North Andover in the seventeenth century, but not until 1802 was the first of three major woolen mills established (Sutton Mill, Stevens Mill and North Andover Manufacturing Company). From the manufacture of woolen products it was but a step to the construction of the necessary machinery.

Woolen machinery manufacturing originated in Andover (then the South Parish) in 1832, when Sawyer, Phelps and Company began manufacturing cards and spinning jacks. The firm was succeeded by that of Gilbert & Richardson, which in 1836 moved to the North Parish, on the Cochichewick Brook. The business operated under various partners until 1851, when the name of the firm was changed to Davis & Furber. In addition to making cards and jacks, the company built nearly every kind of machine used in woolen manufacturing. For many years it was the largest manufacturer of this class of machinery in the United States.

North Andover experienced its golden industrial age from the 1860s through the 1880s. High demand for textiles during the Civil War continued into several decades of increasing prosperity. In 1880, for example, the Sutton Mill employed about 130 operatives and manufactured 450,000 pounds of flannel; 85 operatives at the Stevens Mill produced 300,000 pounds of flannel; and the North Andover Manufacturing Company's 100 operatives manufactured another 300,000 pounds of flannel. Davis & Furber, in order to keep up with the textile manufacturers, constructed seven new buildings and made major additions to several existing buildings between 1860 and 1890. The massive brick structures of Davis & Furber Machine Company, located east of the Water Street and Elm Street intersection, form the physical, and once economic, core of Machine Shop Village.

The oldest extant structure of Davis & Furber is Machine Shop 1 built in 1860, an eclectic, High Victorian style structure which dominates the complex. The building was

designed by Phineas Stevens, and engineer, and is a clear conservative example of the Greek Revival style in factory architecture. The main block of the brick structure is 4 ½ stories high, with a gable roof, and corbelled entablature and returns. The original windows were 6 over 6 windows with granite sills and windows.

The most impressive structure from the later period of Davis & Furber's growth is the Office of Card Clothing Building 7 (1887), designed by architect Augustus Stevens of Manchester, NH. The long length of this flat-roofed, brick building is articulated vertically by piers ending in pairs of corbelled brackets. Horizontally, ornamental brick corbelling, dentils, and hood molding distinguish the three stories of segmentally arched windows. The striking High Street façade has a gabled frontispiece with a Romanesque arched entrance; its patterning is echoed by a prominent 5 ½ story tower at the rear of the building. The Mule or "Cement" building (1920) is a modern example of the company's functional approach to mill building, using reinforced concrete and steel construction.

North Andover's three mills and machine shop began to decline in the Depression and limped through the mid-twentieth century. In 1960, the Sutton Mill shut down, and its buildings subsequently underwent major renovations. The Stevens Mill ceased production in 1970, and was razed in 1974. Still standing in primarily in its nineteenth century condition is the Davis & Furber complex, which is currently used for office space. Its survival is a major historical and architectural asset of Machine Shop Village.

Residential, Ecclesiastical and Civic Development

Since the mills and machine shops required a daily presence of many workers, a great demand for housing and other services grew in their vicinity. The mill owners met this demand over the years by constructing a wide variety of domestic and public buildings that remains largely intact in the Village today.

Among the earliest dwelling houses built for the mill operatives are those within "Yellow Row", a series of eight double cottages on Water Street, was built by the North Andover Mills beginning in 1839. Its conservative, no-frills Federal style – featuring 1½ stories, gable roof, and paired center entrances on a three-bay façade – was to become the standard form much of the Village's company housing. Although the design was common throughout New England in the early nineteenth century, its late appearance here set a standard for factory housing in Machine Shop Village. Davis & Furber used this spare, flank-gabled style in a variety of forms over time: 1½ story duplexes on East Water Street; 2-story double houses on Pleasant Street and 2½ story six-unit tenements on East Water Street.

In addition to the North Andover Mills housing, three less standardized residential structures put up by Gilbert & Richardson (forerunner of Davis & Furber) in the 1830s still survive. The original company boardinghouse (1836) stood on the site of the present Congregational Church (for construction of which it was moved to 14 Pleasant Street), and two 3-bay single family houses were built at 59 and 65 Elm Street, as rental housing

for upper-level workers and their families. These Greek Revival structures exhibit a quaint grace despite their simplicity.

A third intermediate type of antebellum housing is represented by somewhat larger and more stylish homes in the middle of the 19th century, built in the 1840s for middle-level factory workers at Davis & Furber. 1½ and 2½ story side hall plans in the Greek Revival and Italianate styles are characteristic of this period, and Elm Street is particularly rich in this type. Similar entablatures, gable returns, porches and sidelighted doorways are recurring details. Similar scale, setback and spacing unify the variety of Greek, Gothic, and Italianate styles employed here.

Throughout the nineteenth century, several mill owners selected sites in the Village for their mansions and displayed sharp contrast to the simple factory housing of the period. The earliest example, The George Hodges House, 266 Main Street (ca. 1839) is an outstanding but essentially conservative Greek Revival residence. Although based on traditional patterns similar to the contemporaneous "Yellow Row," the Hodges House aspires to much grander effects through its splendid Greek Revival motifs. The rectangular main block has a center entrance on its flushboarded façade; corner pilasters, fully pedimented gable ends, and an octagonal cupola highlight the design. The Hodges House is also remarkable for the survival of much of its original landscape, including a large fenced lot, barn, sheds, gardens, and trees.

The Civil War spurred demand for woolen goods and initiated a tremendous expansion of productive capacity in North Andover, with a corresponding enlargement of the factories' labor force. During the war, rows of housing for the workers, stores, churches and impressive factory-owners' mansions appeared in the district. The cultural activity of town began to shift away from the old rural center to the south and become firmly fixed in Machine Shop Village. By 1872, the area boasted three churches, an engine house, school union hall, and several stores.

In 1862, Davis and Furber embarked on a large-scale program to build housing for its workers. Over the next six years, open fields were converted into the compact neighborhood of workers' cottages and boarding houses along Water, East Water, Clarendon, and Pleasant Street; some 50 residential buildings were constructed. During this period three basic housing types were employed, all using a traditional flank gable, center entrance design. The earliest, along Water Street to Clarendon, were 1½ story double cottages; 2-story double blocks were soon added on East Water Street and Bixby Avenue; after 1864, 2-story double houses were constructed along Pleasant Street. In addition, a very large three-family house and a boarding house with a store below were built on the corners of Bixby Avenue and Water Street. The local contracting firm of Abbott & Clement built at least two-thirds (and probably all) of the 1860s company housing as well as the contemporary Congregational Church.

The sudden increase in business associated with the Civil War also enabled the partners in Davis & Furber to erect mansions and public buildings suitable to their status as successful businessmen and civic leaders. Unfortunately, of the three major residences

constructed during the late nineteenth century, only one still stands – the Wiley Mansion at 93 Elm Street (1864-65). This early example of the Second Empire style is an excellent display of the era's new wealth and sophistication, and represented the highest style house in town when it was built by a partner in Davis & Furber. Designed by G. F. Meacham, this impressive building is 2 ½ stories high with a mansard roof, rusticated wood siding and a recessed center bay. Heavily ornamented with a cupola, paired eaves, brackets, classical window cornices, and elaborate dormers and porches, the Wiley Mansion is a striking counterpoint to the factory buildings across Water Street.

The landmark Trinitarian Congregational Church at 72 Elm Street was built in 1865 through the beneficence of the three partners in Davis & Furber and the company itself. Architect John Stevens had designed Andover's Old South Church a few years earlier, and gave North Andover a strikingly similar style church. The building is an excellent exposition of Stevens' favorite Romanesque Revival style, using flushboarded wood construction to imitate masonry forms. Narrow buttresses visually brace the nave which also features eaves, bracket and round arched windows with label molding. A gabled frontispiece on the façade forms the base for an elaborate, three-stage tower and steeple – a landmark visible from surrounding towns in the Merrimack Valley. Of particular social significance was the establishment of a Congregational Church separate from North Andover's rural Centre Village parish.

Development after the war was less intense but did fill out the physical framework established earlier in the century. Large new Davis & Furber mill buildings, a number of fashionable homes for factory supervisors and wealthy merchants, and a few new civic and institutional buildings were constructed. Company-built housing was more sporadic in this period and mostly consisted of remodeled private dwellings.

Most of the late Victorian, upper class residences in Machine Shop Village are found along Main Street, which maintains its suburban appearance. The Francis Clarke House, 247 Main Street (1880) was designed by George Adams, a Lawrence architect in the stick style. This is a free-wheeling composition of wings, bays dormers and porches, capped by a steep gable roof with slate shingles and iron filigree cresting. Most outstanding is the lavish use of stickwork and elaborately structured porches. Next door, the George E. Wilson House, 257 Main Street, (1880-81), another stick-style house, has a traditional side hall plan animated with a gable truss, attic story balcony, stickwork, eaves, brackets, and front veranda. Of the same period and comparable in architectural intent is the Blanchard House, 10 Elm Street (ca 1881) which appeared in the November 1881 issue of "American Architect and Building News" and was later used as the Episcopal rectory and as Davis & Furber apartments. William C. Richardson (later of the famous Boston firm of Hartwell & Richardson) designed this large Queen Anne style house with moderating Shingle Style characteristics. Separate clapboard and shingle sided stories enclosed simple volumetric shapes, curved surfaces, recessed porches and patterned shingling, prior to being covered with vinyl siding in the late 20th century. These Main Street houses are set well back from the street with generous side lots complementing their distinctive architectural details.

The easterly side of Elm Street contains good examples of stylish middle-class homes from the turn of the century – an interesting comparison with the mid-nineteenth century houses across the street. Typical of these are the Leverett Downing House, 45 Elm Street (1906, James Allen), a Shingle Colonial Revival style home build for an independent inventor and machinist; the Colonial Revival Elijah Wright house, 77 Elm Street (ca. 1910-11) built for a machinist; and the Wiley-Wright House, 83 Elm Street, (ca. 1881-1900) a Queen Anne style house given by John Wiley to his nephew George Wright who succeeded his uncle as president of Davis & Furber. The owners of all three of these houses were close relatives of Wiley through his wife Eliza Downing.

Of the public buildings constructed during the boom period of the late nineteenth century, most have since been destroyed or substantially altered. A public library (1851-52, remodeled 1872), Merrimack Hall (1882), Merrimack School (1865, rebuilt 1914) and the Eben Sutton Steamer House (1872) are no longer standing. Only a few of the once numerous small shops, stores and civic structures remain in Machine Shop Village. Historically these structures have been concentrated on Water Street between Elm and Main. The vernacular Greek Revival building at 94 Elm Street was built as a store by Steven Parker in 1860-61 and is currently a multi-family residence. A small vernacular two-story structure at 73 Water Street was built outside the district in 1865 as a police station but was moved 10 years later and converted to commercial use.

Two churches from the mid-19th century still stand in Machine Shop Village in addition to the Congregational Church. The Methodist Episcopal Church was built in 1849 at the corner of Water and Main Streets, and is currently the home of St. Gregory's Armenian Church. The existing Roman Catholic Church was originally built in the Victorian Gothic style in 1868 on Water Street, was later moved to Main Street and has been remodeled and expanded several times.

The importance of the mills – and thus of Machine Shop Village – to North Andover continued into the early twentieth century, when New England's entire textile industry began to decline. Machine Shop Village likewise suffered a period of stagnation, and with very limited exceptions the district has not been greatly altered in the twentieth century. Despite its location next to the modern commercial center of town, Machine Shop Village is a notably intact reflection of the diverse elements which formed a nineteenth century factory village. Changing development patterns have located new construction outside the district, and relatively few modern alterations have been made to the historic structures and settings that define the neighborhood.

4. JUSTIFICATION OF THE BOUNDARIES

The boundaries for the proposed Machine Shop Village Neighborhood Conservation District are the same boundaries as the existing National Register District. Refer Riders B and E of the 1982 National Register nomination form, attached for a description and justification.

5. MAP OF THE PROPOSED DISTRICT

Refer to the attached Figure 1.

6. PROPERTY STREET ADDRESS INDEX

Refer to the attached Table I.

7. OPTIONS AND RECOMMENDATIONS FOR THE BYLAW

The recommended bylaw was drafted using an example provided by the Massachusetts Historical Commission for the proposed Machine Shop Village Neighborhood Conservation District. The study committee judged that the example bylaw is appropriate for the Machine Shop Village Neighborhood Conservation District based on the condition of the existing buildings and the current uses within the neighborhood. The major points of the proposed bylaw are as follows:

- The governing Machine Shop Village Neighborhood Conservation District Commission would consist of five members.
- The Commission would regulate alterations to Machine Shop Village within the context of design guidelines.
- Proposed alterations would require a Certificate to Alter issued by the Commission.
- Proposed alterations would be excluded if a building permit is not required for the alteration.
- Major alterations, as defined in the bylaw, would be subject to a binding review.
- Certificates would be issued within 60 days of application, and denials could be appealed to a court with competent jurisdiction.

The intent of creating a Neighborhood Conservation District rather than a Local Historic District for Machine Shop Village is to recognize that the external facades of many structures have been altered, primarily with artificial siding and replacement windows. However, the neighborhood is fortunate in that, although altered, most of the historic structures remain. Therefore, the exclusions recommended by MHC and listed in the bylaw were judged to be appropriate for these conditions within Machine Shop Village.

8. DRAFT BYLAW

Refer to the attached bylaw and design guidelines.

9. INVENTORY FORMS

Inventory forms for Machine Shop Village are on file with the Massachusetts Historical Commission as part of the National Register submission made in 1982. A photo inventory for the district is provided on the CD included herein.

10. SLIDES

MS PowerPoint slides are provided on the CD included herein.