A
National Register Proposal
for the
American Tube Works Complex
Somerville, MA

December 1, 2014

***This is a proposal to the Community Preservation Commission from the Planning Division for the City of Somerville to secure FY15 funding.**

American Tube Works Complex

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JOSEPH A. CURTATONE
MAYOR

Somerville CPA

CITY OF SOMERVILLE, MASSACHUSETTS
COMMUNITY PRESERVATION COMMITTEE
FY15 FUNDING APPLICATION
COVER PAGE

1. PROJECT INFORMATION

PROJECT NAME: American Tube Works Complex National Register Nomination

PROJECT LOCATION: American Tube Works Complex (438 R-440R, 440, 444, 460 Somerville Ave., 24 Dane St, & 40 Lake St)

LEGAL PROPERTY OWNER OF RECORD: misc. - please refer to supplemental property owner sheet

ONE SENTENCE DESCRIPTION OF PROJECT: Contract a historic preservation consultant to prepare a National Register Nomination for the American Tube Works Complex. Designation would make the complex eligible for historic tax credits which will incentivize rehabilitation.

Please indicate (X) the approved category(s) from your Eligibility Determination Form.

	Open Space	Recreational Land	Historic Resources	Community Housing (blended projects only)
Acquisition				
Creation				
Preservation			X	
Support				
Rehabilitation/ Restoration			X	

ESTIMATED START DATE: Summer 2015

ESTIMATED COMPLETION DATE: Winter 2015

CPA FUNDING REQUEST: $7,000

TOTAL BUDGET FOR PROJECT: $7,000

2. APPLICANT INFORMATION

APPLICATION NAME / ORGANIZATION: City of Somerville, OSPCD - Planning Division

CO-APPLICATION NAME / ORGANIZATION:

CONTACT PERSON: Amie Hayes, Planner - Planning Division

MAILING ADDRESS: 93 Highland Avenue, Somerville, MA 02143

PHONE: (617) 625-6600 x 2534 EMAIL: ahayes@somervillema.gov

3. SIGNATURES

I (we) certify that all information provided in this entire submission is true and correct to the best of my (our) knowledge and that no information which might reasonably affect funding has been excluded. I (we) authorize the Community Preservation Committee and/or the City of Somerville to obtain verification from any source provided.

Name (printed) Amie Hayes Signature A. Hayes Date December 1, 2014

Name (printed) _____ Signature _____ Date _____

FOR CPC USE: Date Received _____ Date Reviewed _____ Date Applicant Notified _____

JOSEPH A. CURTATONE
MAYOR

Somerville CPA
Open Space Affordable Housing Historic Preservation Recreation

CITY OF SOMERVILLE, MASSACHUSETTS
COMMUNITY PRESERVATION COMMITTEE
FY15 FUNDING APPLICATION
SUBMISSION REQUIREMENTS CHECKLIST

Please check (✓) each item included in your submission, which should include the applicable items in the order listed below.

GENERAL:

- [X] Application Cover Page (form provided)
- [X] Submission Requirements Checklist (this form)
- [X] Narratives (prompts provided)
- [X] Project timeline: a project schedule showing all major milestones (i.e., study, design, environmental, permitting, construction, etc.), including receipt of other funding sources

FINANCIAL:

- [X] Budget Summary (form provided)
- [ ] Itemized budget of all project costs, including the proposed source for each cost
- [X] At least two written quotes for project costs. If quotes cannot be secured, detailed cost estimates may be used if a thorough explanation of the estimates is included.
- [ ] Proof of secured funding (e.g., commitment letters or bank statements), if applicable

VISUAL:

- [X] Map of the property location showing all features pertinent to the project, including current or future rapid transit stations
- [X] Photos of the project site (not more than 4 views per site); include digital copies

OWNERSHIP/OPERATION (NON-CITY):

- [ ] Documentation of site control or written consent of the property owner to undertake the project, if the owner is not the applicant
- [ ] Certificate of Good Standing from the City, if applicable
- [ ] 501(c)(3) certification, if operating as a non-profit
- [ ] Purchase and sale agreement or copy of current recorded deed, if applicable

COMMUNITY SUPPORT (RECOMMENDED):

- [X] Letters of support from residents, community groups, other City boards, commissions, or departments, or from City, state, or federal officials

HISTORIC RESOURCES PROJECTS:

- [X] Documentation that the project is listed on the State Register of Historic Places or a written determination from the Somerville Historic Preservation Commission that the resource is significant in the history, archeology, architecture, or culture of Somerville.
- [ ] Photos documenting the condition of the property
- [ ] Report or condition assessment by a qualified professional describing the current condition of the property, if available.

PLANS AND REPORTS (IF AVAILABLE)

[if available in 8½ x 11, include in the application. If not, include separately, not bound to the application]

- [ ] Renderings, site plans, engineering plans, design and bidding plans, and specifications
- [X] Applicable reports (e.g., 21E, historic structure report, appraisals, survey plans, feasibility studies). Note: for reports of more than 10 pages, applicant may provide 2 copies, rather than 11.

Narrative Statement:
American Tube Works Complex National Register Proposal

Project Description

1. The Project

The Planning Division for the City of Somerville, through the Mayor's Office of Strategic Planning and Community Development, seeks Community Preservation Act (CPA) funding of $7,000 to hire a consultant to prepare a nomination form for the American Tube Works Company Complex for placement on the National Register of Historic Places. The complex is located west of Union Square, between Somerville Avenue and the Fitchburg Division railroad tracks, and is composed of six (6) remaining buildings. These are: 440 Somerville Avenue (Administrative Office), 444 Somerville Avenue (Drawing Mill), 460 Somerville Avenue (Rolling/Drawing Mill), 438R-440R Somerville Avenue (Blacksmith/Machine/Pattern Shop), 24 Dane Street (Boiler House), and 40 Lake Street (Garage/Warehouse).

The proposal is to contract a historic preservation consultant to prepare a nomination form to the National Register. This is a federal program to coordinate and support public and private efforts to identify, evaluate and protect America's resources and the National Register is the official list of historic places worthy of preservation. Listing on the National Register provides formal recognition of a property's historical significance based on national standards used by every state. National Register listing places no obligations on private property owners, though consent is required. There are no restrictions on the use, treatment, transfer or disposition of private property. Owner benefits of listing a property on the National Register include access to historic tax credit options, federal preservation grants for rehabilitation, and preservation easements. The use of tax credits or rehabilitation grants requires compliance with the Secretary of the Interior's Standards for Rehabilitation, as identified in the CPA legislation; therefore, listing strongly incentivizes federal preservation standards for rehabilitation.

The National Register nomination process begins with a determination of eligibility. To be considered eligible, a property must meet the National Register Criteria for Evaluation. The American Tube Works Complex was determined eligible as a potential historic district in 2010 by Public Archaeology Lab, see Appendix A. The process then requires a formal nomination be submitted to the Massachusetts Historical Commission (MHC) and that property owners be contacted. This submission includes historic and archival research, a detailed description of the architecture and materials, and a statement of significance. Property owners must be informed and submit consent. Complete nominations, with certifying recommendations, are submitted by the state to the National Park Service for final review and listing by the Keeper of the National Register.

2. Needs and Public Benefit

Listing the American Tube Works Complex on the National Register will implement SomerVision and directly support economic growth through historic preservation. The comprehensive plan identifies this industrial complex as an area to both preserve and enhance, and establishes a city-wide

goal to provide tax credits options. The Somerville community is currently engaged in a Union Square planning process and an overhaul to the current zoning ordinance is imminent; this listing will be well-timed to further ensure that the preservation of this complex is integrated into the long-range planning for this area. The use of historic tax credits and eligibility for further funding, due to listing on the National Register, will immediately support and motivate property owners to use federal preservation standards for rehabilitation. The preservation of this complex will continue to benefit the community as a visual representation of the late industrial development of the City and has great potential to fulfill a variety of needs as well as provide amenities for the larger community. This industrial space can easily offer artist or maker space, and will be accessible by the future Green Line Extension. The success of this project is in the rehabilitation of these industrial buildings and spur of economic growth as a result that will integrate a mix of uses to service the whole community.

3. Compliance with CPA Priorities

This project proposal will most likely be a recommendation in the upcoming Historic Preservation Plan (HPP) and meets several of the priorities stated in the Community Preservation Plan.

Category Specific – Historic Preservation

The HPP will identify historic resources of value, evaluate their significance and integrity, and create a plan to protect these resources. The remaining buildings that compose the American Tube Works Complex are unique, as a group of structures, within the built environment of the city. They retain their historic significance and demonstrate integrity; therefore, listing this complex on the National Register will surely be captured within the HPP recommendations.

This is a well-timed opportunity, due to the ongoing planning process and impending zoning update, to further ensure that the preservation of this complex will be well-integrated into the long-range planning for the Union Square area.

Consistency with Community Values & Strategic Use of CPA Funding

The community identified sustainable practices, endorsement, and consistency with other planning documents as being worthy of funding, and established strategic values that include urgency, time-sensitivity, and the ability to influence transformative change.

Community Value B: S**ustainable Practices**

Listing on the National Register will enable tax credits options and opportunities for grant funding, which will be an impetus to sustainable practices as preservation is inherently sustainable. Preservation maximizes the use of existing materials, reduces waste, and preserves architectural character.

Community Value C: Endorsement

The proposal is formally supported by the Somerville Historic Preservation Commission (SHPC), due to the historical significance and remaining integrity which warrants historic designation on the national and local level.

Community Value D: Consistency with Planning Documents

This listing will execute a specific SomerVision goal, the establishment of tax credit options, and support the community's vision for this collection of resources- to enhance and preserve- through the use of federal preservation standards.

Strategic Use Value B: Long-Standing Urgent Needs
Funding to support the historic rehabilitation of private property is a long-standing and city-wide need. Due to ongoing planning efforts, this is an important opportunity to ensure the preservation of these buildings will be a priority.

Strategic Use Value C: Exceptional, Time-Sensitive Opportunity
This is a well-timed opportunity, due to the ongoing planning process and impending zoning update, to further ensure that the preservation of this complex will be well-integrated into the long-range planning for the Union Square area.

Strategic Use Value D: Catalyst for Transformative Change
The ability to offer tax credit options and eligibility for federal funding will serve as a catalyst to rehabilitate, which will benefit the entire community through services and amenities more easily provided by industrial buildings.

Financial

Through a cautious prioritization of city-sponsored projects, a careful deliberation of funding sources, and the preparation of a detailed cost estimate, this project is determined to be both a priority for CPA funding and the only source for support. Various municipal divisions have requested CPA funding for FY15. Many of these projects are vitally important to preserving the city's most unique and historically significant resources. These projects will also require large sums from multiple funding cycles and will not directly influence transformative change. For a relatively small project cost, listing the American Tube Works on the National Register will directly catalyze the revitalization of this complex.

1. **Funding**
Municipal funding is difficult to secure, largely because this complex is under private ownership. For this reason, without CPA funding, the municipality will not be able to finance this proposal.

2. **Determination of Funding**
The funding request is determined by a detailed estimate of the project costs including historic and archival research, photography, drafting, owner engagement, and printing. This request also takes into account a competitive hourly rate for a historic preservation consultant as well as previous research and existing documentation. Please see Appendix D for a detailed cost estimate.

3. **Funding Cycles**
The funding requested is for FY15 and would not extend to future cycles.

Project Management

1. **Applicant**

The Applicant is the Planning Division for the City of Somerville. This division is charged with facilitate development of an appropriate mix of uses, protect and enhance the physical environment, and shape the built character of the City of Somerville by implementing the Somerville Zoning Ordinance.

2. Project Experience

The Planning Division routinely contracts historic preservation consultants to prepare Massachusetts Historical Commission building and area survey forms. These forms and the information presented on these documents is similar to and in many cases the same information that will be presented within the National Register nomination.

3. Known Participants

The proposal is to contract a historic preservation consultant to prepare a nomination form to the National Register. The planning staff will act as the local project coordinator and provide technical support throughout the process.

4. Feasibility

The planning staff anticipates the nomination form will be sent to the MHC within six (6) months of the start date.

5. Potential Barriers

There are no known barriers to completion; however, the start date is dependent upon disbursement of funds and a formal contract with a consultant.

Conclusion

As a collection, the American Tube Works Complex represents early 20th century industrial development of Union Square and contributes to the industrial narrative of the City. This project is timed well with regard to the larger planning process and incentivizes the use of historic standards for rehabilitation, which will serve to catalyze economic growth and implement SomerVision. Furthermore, without CPA funding, the opportunity to provide tax credit options and eligibility for further rehabilitation funding could be lost. The Planning Division, with support from the SHPC, hope the Community Preservation Commission will recognize listing the American Tube Works Company Complex on the National Register of Historic Places to be a worthy project and a valuable investment for the whole community.

Appendix A:
National Register Criteria Statement

National Register of Historic Places Criteria Statement Form

Check all that apply:

☐ Individually eligible ☐ Eligible **only** in a historic district

☐ Contributing to a potential historic district ☒ Potential historic district

Criteria: ☒ **A** ☐ **B** ☒ **C** ☐ **D**

Criteria Considerations: ☐ **A** ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐ **F** ☐ **G**

Statement of Significance by: Virginia H. Adams and Carey L. Jones, PAL May 2010

The criteria that are checked in the above sections must be justified here.

The American Tube Works Company Complex is recommended eligible for listing in the National Register under Criterion A at the local level in the area of Industry for its association with the antebellum development of industry in New England, first in the production of tubing for steam engines and later for the production of domestic plumbing fixtures. The company was founded in 1851 after acquiring the patent for the production of seamless brass and copper tubes. The company is credited as being the first in America to manufacture seamless tubes that were originally used for locomotive, marine, and stationary boilers. In the late 19th and early 20th century, they expanded their production to include seamless tubes for domestic uses, such as indoor plumbing and heating fixtures. The company remained one of the major regional producers of seamless tubes and was in operation until the Great Depression halted production in ca. 1933.

The American Tube Works Company Complex is also recommended eligible for listing in the National Register under Criterion C in the area of Architecture as a distinct group of late 19th and early 20th century brick industrial buildings. While the buildings lack individual distinction, as a collection they represent a significant and distinguishable entity as a group of intact structures whose architecture clearly expresses their purpose. The long, low-scale drawing mill buildings with their distinct monitor roof forms are easily identifiable as industrial production sheds. Additionally, ancillary and support structures also remain on site, including the office building, the boiler house, and the machine and blacksmith shop. Taken together, these remaining buildings relate the type and magnitude of industrial process that occurred at this location.

Appendix B:
Property Sheet

No.	Street	MBL	Owner Name	Owner Address	Owner Town, State	Owner Zip	Construction Date	MHC
24	Dane St	64-A-09	JWF LLC	21 Properzi Way #A	Somerville, MA	02143	1915-20	SMV.793
40	Lake St	47-E-01	H D Chasen Inc.	PO Box 170	Somerville, MA	02143	1912, 1918	SMV.794
438R-	Somerville Ave	64-A-04	Rilo LLC	PO Box 400751	Cambridge, MA	02140	1890-1918,	SMV.793 (#438R), SMV.793 (#440
440	Somerville Ave	64-A-03	Cusack, Paul E. & Susan R.	58 Middle Street	Lexingtone, MA	02420	1913	SMV.793
444	Somerville Ave	64-A-02	Krisco Realty LLC	444 Somerville Ave	Somerville, MA	02143	1900-1933	SMV.793
460	Somerville Ave	64-A-01	Extra Space of Somerville	PO Box 320099	Alexandria, VA	22320	1900	SMV.793

Appendix C:
Budget Summary (form provided)

JOSEPH A. CURTATONE
MAYOR

Somerville CPA
Open Space Affordable Housing Historic Preservation Recreation

CITY OF SOMERVILLE, MASSACHUSETTS
COMMUNITY PRESERVATION COMMITTEE
FY15 FUNDING APPLICATION
BUDGET SUMMARY

PROJECT NAME: American Tube Works Complex National Register Nomination

APPLICANT: City of Somerville, Planning Division

SUMMARY OF PROJECT COSTS

Please include a complete itemized budget of all project expenses, including the proposed funding source for each expense, in your submission.

PROPOSED SOURCE		EXPENSES				
		STUDY	SOFT COSTS*	ACQUISITION	CONSTRUCTION**	TOTAL
1	Somerville CPA	$	$ 7,000*	$	$	$
2			* Please refer to detailed cost estimate			
3						
4						
5						
6						
TOTAL PROJECT COSTS		**$**	**$** 7,000	**$**	**$**	**$**

*Soft costs include design, professional services, permitting fees, closing costs, legal, etc.
** Construction includes new construction, preservation, rehabilitation, and/or restoration work

EXPLANATION OF FUNDING SOURCES

Please explain the status of each funding source (i.e., submitting application on X date, applied on X date, received award notification on X date, funds on hand, etc.). For sources where funding has been awarded or funds are on hand, please include documentation from the funding source (e.g., commitment letter, bank statement) in application packet

	SOURCE	SECURED? (YES/NO)	STATUS OF FUNDING SOURCE
2	Somerville CPA	No	Submitted application for CPA funding 12/1/2014
3			
4			
5			
6			

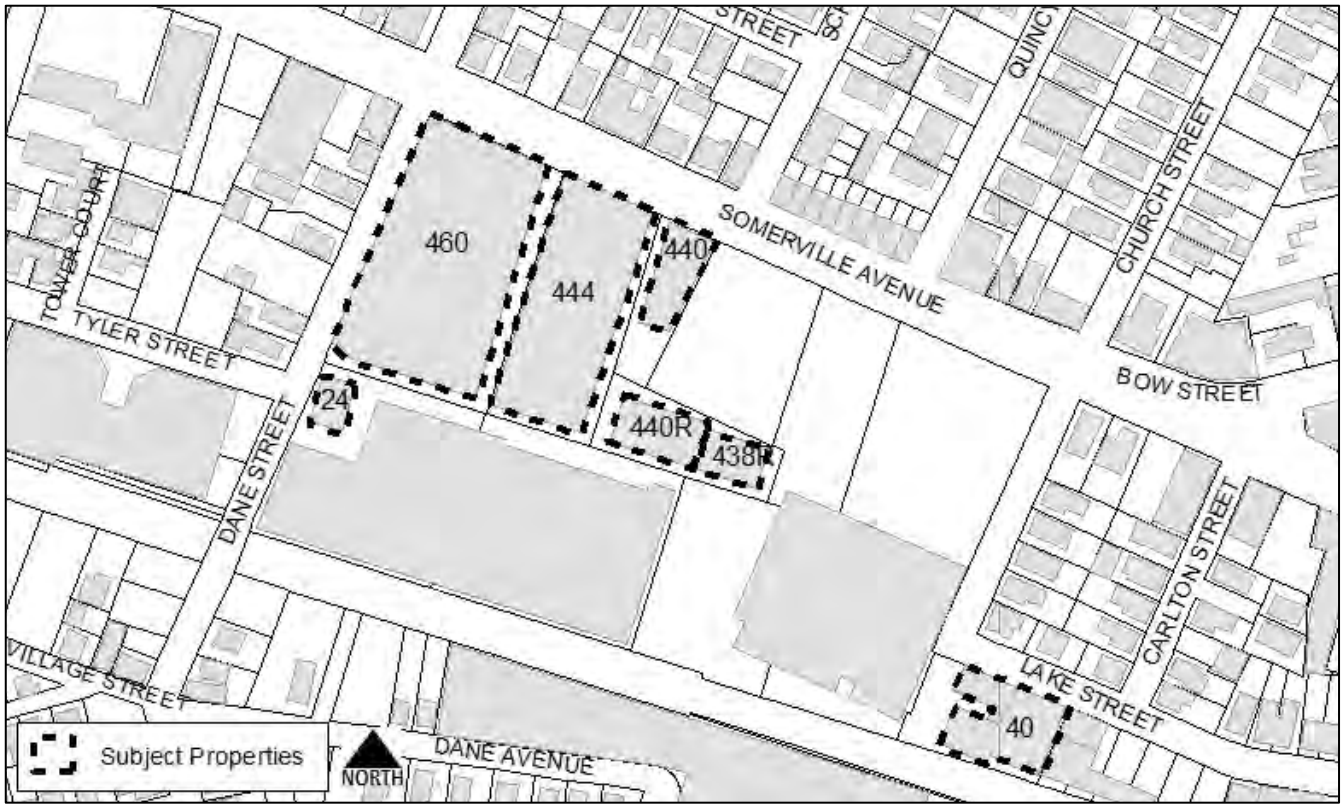
Appendix D:
Detailed Cost Estimate

Tasks	Hours	Total	Task Details
Ownership Engagement	10	$1,000	The consultant will be required to reach out to property owners to explain: 1) the process and requirements, 2) the meaning and benefits of being listed on the National Register, and 3) to obtain written consent.
Administration Tasks	7	$700	The National Register listing process requires a variety of administrative tasks such as communications with state and federal agencies, like the Massachusetts Historical Commission and National Park Service; soliciting recommendations for the nomination; meeting with planning staff; and preparing the nomination.
Materials		$600	This is the estimated cost for printing all draft and final submissions, to include CDs, photographic printing, archival paper, etc.
Printing	3	$300	The consultant will be required to submit: 5 draft nominations (hard copies) for review prior to formal submission; 5 final nominations (hard copies/archival paper); digital versions in PDF and JPEG formats; and copies of any related documentation relevant to final submission.
Research	20	$2,000	The consultant will be required to verify the existing documentation and further research the development of this industrial complex regarding its historical significance to the City
Photography	4	$400	The consultant will be required to photographically document the interior (if possible) and exterior of each building and the overall complex.
Drafting	20	$2,000	The consultant will be required to draft the nomination form which includes the narrative, maps, photos, archival documentation, etc.
TOTAL	**64**	**$7,000**	**This accounts for a $100/hourly rate**

Appendix E:
Timeline

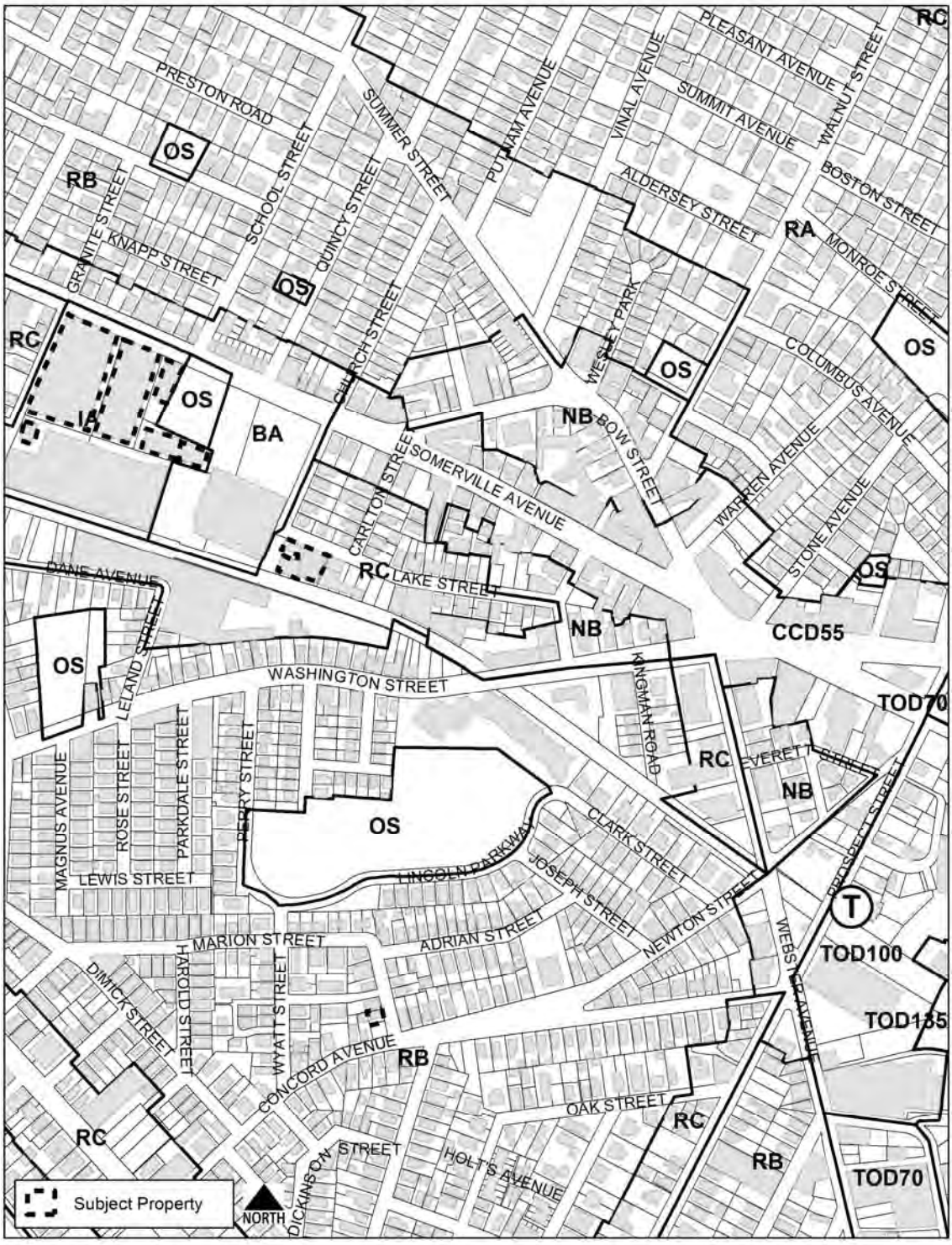
	Milestones	Tasks
March 2015	CPC issues award letters	
April 2015 - May 2015	Issuance of RFQ	Planning staff will issue a Request for Qualifications to begin the procurement process for a consultant
June 2015	Contract a historic preservation consultant	Planning staff will establish due dates for draft deliverables and the final nomination package
July 2015 - September 2015	Project begins	
October 2015 - December 2015	Project completes	Submission of nomination to Massachusetts Historical Commission who will submit to the National Park Service

Appendix F:
Maps of the Proposal Area

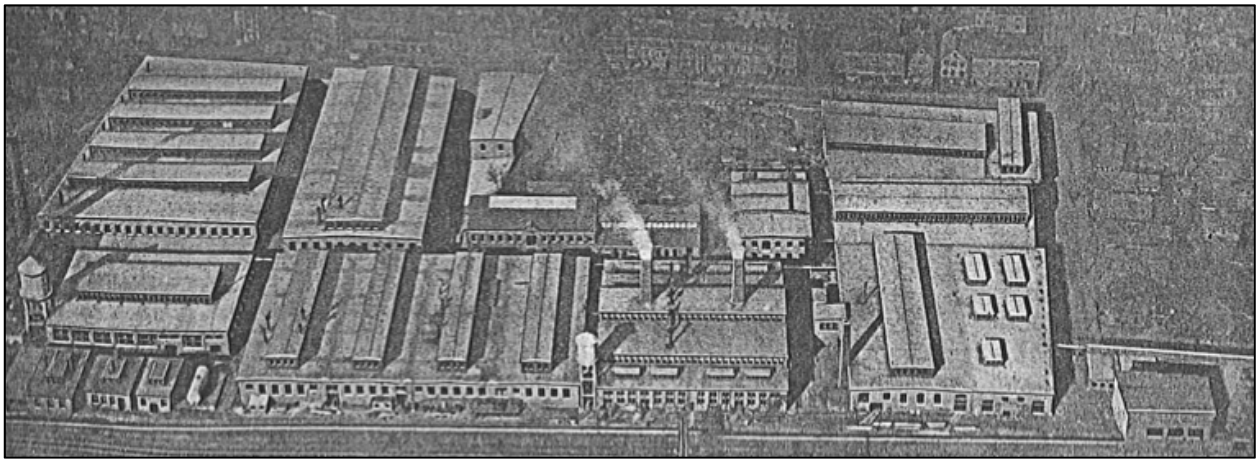


Map of American Tube Works Company Complex: *440 Somerville Avenue (Administrative Office), 444 Somerville Avenue (Drawing Mill), 460 Somerville Avenue (Rolling/Drawing Mill), 438R-440R Somerville Avenue (Blacksmith/Machine/Pattern Shop), 24 Dane Street (Boiler House), and 40 Lake Street (Garage/Warehouse)*

Map of property location illustrating existing zoning and future Green Line Extension



Appendix G:
Aerials/Photographs of the Proposal Area



Top: Air view of the American Tube Works Company Complex (Source: The Metal Industry 1931)
Bottom: American Tube Works, aerial view of former rolling/drawing mill, looking southwest (City archives

Top: 438R-440R Somerville Avenue, north elevations, looking southwest from Milk Row Cemetery
Bottom: 24 Dane Street, former Boiler House, north and west elevations, looking southeast from Dane Street

Top: 40 Lake Street, former warehouse, north and west (facade) elevations, looking southeast
Bottom: 438R-440R Somerville Avenue, south and west elevations, looking northeast from the alley

Appendix H:
Letter of Support

CITY OF SOMERVILLE, MASSACHUSETTS
OFFICE OF STRATEGIC PLANNING AND COMMUNITY DEVELOPMENT
JOSEPH A. CURTATONE
MAYOR

HISTORIC PRESERVATION COMMISSION

November 18, 2014

Community Preservation Commission
93 Highland Avenue
Somerville, MA 02143

RE: Support for projects funded through the Community Preservation Act

Dear Community Preservation Commission members,

The Somerville Historic Preservation Commission fully supports four projects the City of Somerville has proposed to the Community Preservation Commission. These projects are: 1) restoration of Prospect Hill Tower; 2) restoration of City Hall; 3) renovation of West Branch Library; and 4) National Register nomination for the American Tube Works Complex.

These buildings and complex are historically and architecturally significant to the City of Somerville. Prospect Hill Tower was constructed in the early 20th century to commemorate militia located at this site during the Revolutionary and Civil wars. City Hall was constructed in 1852 as Somerville's first high school; town offices took over the building in 1872. Andrew Carnegie donated $25,000 in 1907 to construct the West Branch Library, a high and Classical Revival style building. The American Tube Works Company is credited as being the first in America to manufacture seamless tubes; as a collection of buildings, their scale and architecture express the manufacturing purpose and magnitude of the industrial process. Prospect Hill Tower, City Hall and the West Branch Library are local historic districts; the American Tube Works was determined Significant by the HPC in September.

The Historic Preservation Commission hopes the Community Preservation Commission will recognize these to be valuable investments that will benefit the entire community. Thank you for your consideration of these projects.

Sincerely,

Dick Bauer, Chairman
Somerville Historic Preservation Commission

CC: George Proakis, Director of Planning, OSPCD
Stephen Vitello, Project Manager, Department of Public Works

Appendix I:
Determination of Significance

CITY OF SOMERVILLE, MASSACHUSETTS
MAYOR'S OFFICE OF STRATEGIC PLANNING & COMMUNITY DEVELOPMENT
JOSEPH A. CURTATONE
MAYOR

MICHAEL F. GLAVIN
EXECUTIVE DIRECTOR

HISTORIC PRESERVATION COMMISSION

Determination of Historic Significance

For Historic Resource Projects Funded through the Community Preservation Act

To be determined eligible for Community Preservation Act (CPA) funding, a historic resource must either be listed on the state register of historic places or be determined "significant in the history, archaeology, architecture or culture" of Somerville by the Historic Preservation Commission (HPC). This report provides a recommendation to the HPC through an analysis of the adopted "Guidelines for a Determination of Historic Significance."

Site:	American Tube Works Company Complex
Applicant Name:	Planning Division, City of Somerville
Recommendation:	Significant
Date:	September 16, 2014
HPC Vote:	Significant (6-0)

1. Date of Construction

From the PAL 2010 survey Form B:
The American Tube Works Complex originally consisted of approximately 20 buildings, of which only 7 currently remain. The remaining buildings are brick masonry construction built between 1890 and 1935 and are located on approximately five acres.

2. Cultural or Historic Association

This industrial complex exemplifies the cultural, economic, and industrial heritage of the City.

From the PAL 2010 survey Form B:
The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville with 175 employees and a production output of $1.2 million worth of brass and copper tubing. The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand

their distribution capabilities. The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All of the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks, with the exception of the City's cemetery. Residential buildings were demolished, and Sherman Street and Frost Avenue, both now gone, were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization.

3. Architectural/Design Quality

This industrial complex embodies distinctive characteristics of a type, period, or method of construction; represents a distinguishable entity whose components may lack individual distinction; and represents an established and highly visible feature of the neighborhood and City within the urban landscape.

From the PAL 2010 survey Form B:
The Blacksmith Shop (1890-1918) at 438R Somerville Avenue is located in the center of the industrial complex. It is a rectangular, seven-bay by eleven-bay, one-and-one-half-story building. It has brick walls laid in common bond and an asphalt-clad, gable-front roof with a flat-roofed monitor. Almost all of the building's openings have been filled. The machine shop is connected to the blacksmith shop on the west.

The Administration Office (ca. 1913) at 440 Somerville Avenue is located north of the blacksmith shop along the northern edge of the industrial complex. It is a rectangular, five-bay by twelve-bay, two-story building. It has brick walls laid in common bond and a shallow-pitched, front-gabled roof. A metal hoist rail runs between the administrative office building and the drawing mill to the west.

The Machine Shop (ca. 1900) at 440R Somerville Avenue is located in the center of the industrial complex. It is a rectangular, thirteen-bay by seven-bay, two-and-one-half-story building. It has brick walls laid in common bond and a gable-end roof with a center half dormer on the south (facade) elevation. A brick stair hall was added to the north elevation after 1925. The machine shop is connected to the blacksmith shop on its east elevation.

The Drawing Mill (ca. 1900-1933) at 444 Somerville Avenue is located west of the administration building along the northern edge of the industrial complex. It is a rectangular, six-bay by twenty-eight-bay, one-and-one-half-story building. It has brick walls laid in common bond and a shallow-pitched, front-gabled roof with a monitor. A brick exterior smoke stack is located on the west elevation.

The Rolling/Drawing Mill (ca. 1900) at 460 Somerville Avenue is located in the northwest corner of the industrial complex. It is a rectangular, 17-bay by 19-bay, one-story building. It has brick walls laid in common bond and a shallow-pitched, front-gable roof with four monitors. The building was converted to a drawing mill by 1933.

The Boiler House (1915-1920) at 24 Dane Street is located in the southwest corner of the industrial complex. It is a rectangular, nine-bay by four-bay, two-and-one-half-story building. It has brick walls laid in common bond and an asphalt-clad, side-gabled roof with a parapet and a tall and

narrow wood shingle-clad monitor. A detached smoke stack originally located on the north side of the building has been demolished.

The Garage and Warehouse (1912 and ca. 1930) at 40 Lake Street is located in the southeast corner of the complex, separated from the other buildings by modern infill. The entire building is comprised of two primary sections: a rectangular, nine-bay by one-bay, one-story garage constructed in 1912, and a rectangular, six-bay by four-bay, three-story warehouse constructed before 1931. The garage has brick walls laid in common bond and a shed roof with a stepped brick parapet on the north elevation. The warehouse has brick walls laid in common bond and a flat roof with a brick parapet on the south elevation. The two buildings are connected by a two-bay loading dock. A one-story modern metal building is located on the east elevation of the garage, obstructing view of that elevation.

4. Integrity

The National Park Service defines historic integrity as the ability for a historic resource to convey significance. A historic resource should possess sufficient integrity to convey, represent, or contain the values and qualities for which it is judged significant.

From the PAL 2010 survey Form B:
The American Tube Works Company Complex is in fair condition and forms an identifiable intact group of early 20th-century, traditional brick, industrial buildings, although the overall integrity of the area is somewhat compromised by the demolition of a number of historic buildings and the intrusion of modern buildings. The first group of American Tube Works buildings was built by the business in this location ca. 1850-1860; all of these buildings were demolished when the production plant was expanded and modernized starting in the late 19th century. By 1933, the company had constructed 15 buildings in the area bounded by Somerville Avenue, Dane Street, the former Fitchburg railroad tracks, and Church Street. Seven of these original buildings are extant. The buildings that housed a rolling mill, two of the drawing mills, the foundry, the proving mills, the shipping mills, and a storage house have been demolished. Despite the removal of these historic buildings, the variety of extant building forms clearly express the function and use of the buildings as well as of the complex as a whole. Intrusions into the area include a modern grocery store set back from Somerville Avenue by a large parking lot and a low-scale office building and parking lot located just north of the railroad tracks. These intrusions alter the setting of the district by removing the historic relationship between the buildings within the complex and between the complex and the railroad. Despite these alterations and intrusions, the area overall retains its integrity of location, design, materials, workmanship, feeling and association.

National Register eligibility as determined by PAL in 2010:
The American Tube Works Company Complex is recommended eligible for listing in the National Register under Criterion A at the local level in the area of Industry for its association with the antebellum development of industry in New England, first in the production of tubing for steam engines and later for the production of domestic plumbing fixtures. The company was founded in 1851 after acquiring the patent for the production of seamless brass and copper tubes. The company is credited as being the first in America to manufacture seamless tubes that were originally used for locomotive, marine, and stationary boilers. In the late 19th and early 20th century, they expanded their production to include seamless tubes for domestic uses, such as indoor plumbing and heating fixtures. The company remained one of the major regional producers of seamless tubes and was in operation until the Great Depression halted production in ca. 1933.

The American Tube Works Company Complex is also recommended eligible for listing in the National Register under Criterion C in the area of Architecture as a distinct group of late 19th and

early 20th century brick industrial buildings. While the buildings lack individual distinction, as a collection they represent a significant and distinguishable entity as a group of intact structures whose architecture clearly expresses their purpose. The long, low-scale drawing mill buildings with their distinct monitor roof forms are easily identifiable as industrial production sheds. Additionally, ancillary and support structures also remain on site, including the office building, the boiler house, and the machine and blacksmith shop. Taken together, these remaining buildings relate the type and magnitude of industrial process that occurred at this location.

From PAL 2010 survey Form B: View of 440, 444, and 460 Somerville Avenue, north elevations, looking southeast from the north side of Somerville Avenue.

From PAL 2010 survey Form B: View of 438R and 440R Somerville Avenue, south and west elevations, looking northeast from the alley.

Appendix J:
Applicable Reports

1. **American Tube Works Company Complex, Survey Form A - Area**
2. **440 Somerville Ave., Administrative Office, Survey Form B - Building**
3. **444 Somerville Ave., Drawing Mill, Survey Form B -Building**
4. **460 Somerville Ave., Rolling/Drawing Mill, Survey Form B - Building**
5. **4438R-440R Somerville Ave., Blacksmith/Machine/Pattern Shop, Survey Form B - Building**
6. **24 Dane Street, Boiler House, Survey Form B - Building**
7. **40 Lake Street, Garage/Warehouse, Survey Form B - Building**

FORM A - AREA

Assessor's Sheets	USGS Quad	Area Letter	Form Numbers in Area
64-74	Boston North	SMV.H, SMV.X	SMV.793, SMV.794

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Photograph

Town Somerville

Place Union Square

Name of Area American Tube Works Company Complex

Present Use Commercial

Construction Dates or Period 1890-1935

Overall Condition Fair

Major Intrusions and Alterations See attached

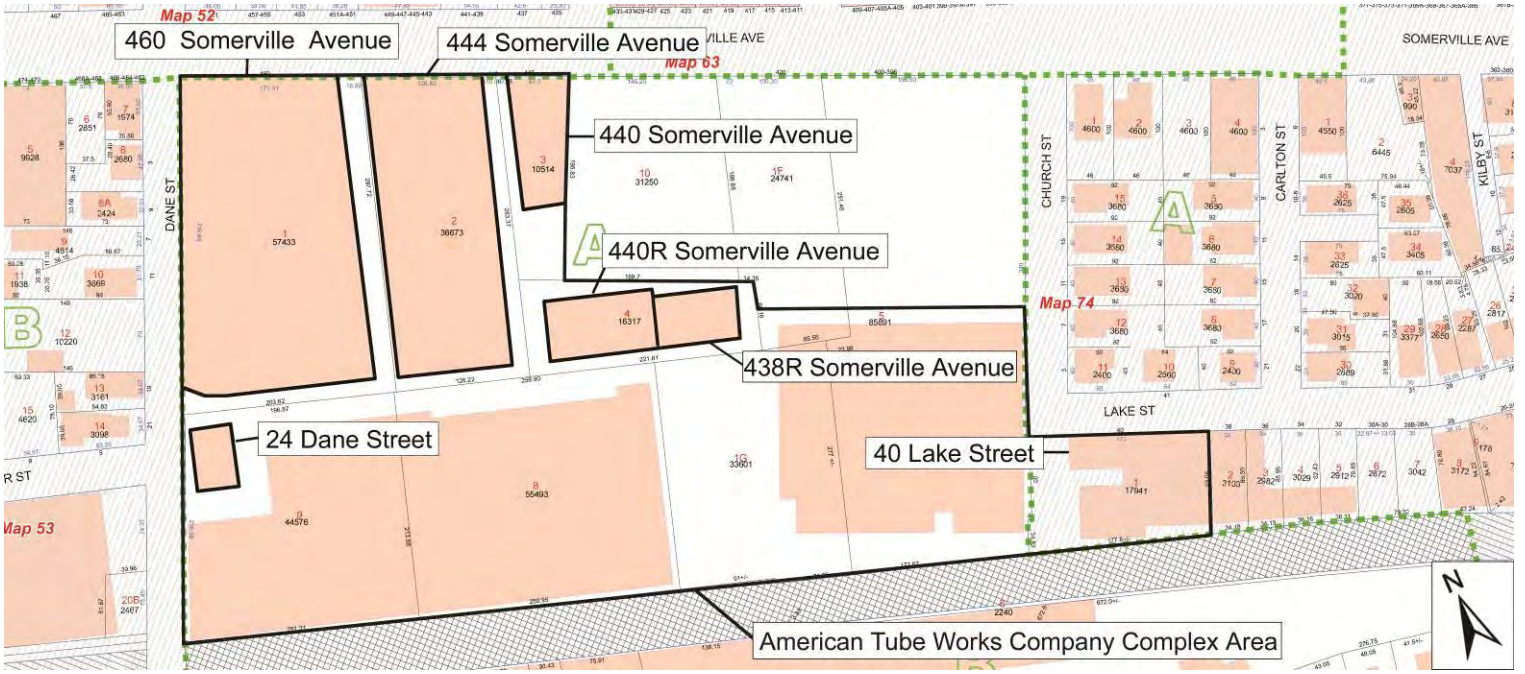
Acreage Approximately 5.9 acres

Recorded by Carey L. Jones, Laura Kline, Quinn R. Stuart, and Melissa Antonelli

Organization PAL

Date *(month/year)* May 2010

Topographic or Assessor's Map



☒ *see continuation sheet*

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

AREA FORM

ARCHITECTURAL DESCRIPTION ☒ *see continuation sheet*
Describe architectural, structural and landscape features and evaluate in terms of other areas within the community.

HISTORICAL NARRATIVE ☒ *see continuation sheet*
Explain historical development of the area. Discuss how this relates to the historical development of the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

__X__ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The American Tube Works Complex originally consisted of approximately 20 buildings, of which only 7 currently remain. The remaining buildings are brick masonry construction built between 1890 and 1935 and are located on approximately five acres. The complex is primarily bounded by Somerville Avenue, Church Street, Dane Street, and the railroad tracks of the former Fitchburg Division of the Boston and Maine Railroad. The seven buildings include a one-and-one-half-story blacksmith shop, a two-story administration building, a two-and-one-half-story machine shop, a one-and-one-half-story drawing mill, a one-story rolling/drawing mill, a two-and-one-half-story boiler house, and a one- to three-story garage and warehouse.

The Blacksmith Shop (1890-1918) at 438R Somerville Avenue is located in the center of the industrial complex. It is a rectangular, seven-bay by eleven-bay, one-and-one-half-story building. It has brick walls laid in common bond and an asphalt-clad, gable-front roof with a flat-roofed monitor. Almost all of the building's openings have been filled. The machine shop is connected to the blacksmith shop on the west.

The Administration Office (ca. 1913) at 440 Somerville Avenue is located north of the blacksmith shop along the northern edge of the industrial complex. It is a rectangular, five-bay by twelve-bay, two-story building. It has brick walls laid in common bond and a shallow-pitched, front-gabled roof. A metal hoist rail runs between the administrative office building and the drawing mill to the west.

The Machine Shop (ca. 1900) at 440R Somerville Avenue is located in the center of the industrial complex. It is a rectangular, thirteen-bay by seven-bay, two-and-one-half-story building. It has brick walls laid in common bond and a gable-end roof with a center half dormer on the south (facade) elevation. A brick stair hall was added to the north elevation after 1925. The machine shop is connected to the blacksmith shop on its east elevation.

The Drawing Mill (ca. 1900-1933) at 444 Somerville Avenue is located west of the administration building along the northern edge of the industrial complex. It is a rectangular, six-bay by twenty-eight-bay, one-and-one-half-story building. It has brick walls laid in common bond and a shallow-pitched, front-gabled roof with a monitor. A brick exterior smoke stack is located on the west elevation.

The Rolling/Drawing Mill (ca. 1900) at 460 Somerville Avenue is located in the northwest corner of the industrial complex. It is a rectangular, 17-bay by 19-bay, one-story building. It has brick walls laid in common bond and a shallow-pitched, front-gable roof with four monitors. The building was converted to a drawing mill by 1933.

The Boiler House (1915-1920) at 24 Dane Street is located in the southwest corner of the industrial complex. It is a rectangular, nine-bay by four-bay, two-and-one-half-story building. It has brick walls laid in common bond and an asphalt-clad, side-gabled roof with a parapet and a tall and narrow wood shingle-clad monitor. A detached smoke stack originally located on the north side of the building has been demolished.

The Garage and Warehouse (1912 and ca. 1930) at 40 Lake Street is located in the southeast corner of the complex, separated from the other buildings by modern infill. The entire building is comprised of two primary sections: a rectangular, nine-bay by one-bay, one-story garage constructed in 1912, and a rectangular, six-bay by four-bay, three-story warehouse constructed before 1931. The garage has brick walls laid in common bond and a shed roof with a stepped brick parapet on the north elevation. The warehouse has brick walls laid in common bond and a flat roof with a brick parapet on the south elevation. The two buildings are connected by a two-bay loading dock. A one-story modern metal building is located on the east elevation of the garage, obstructing view of that elevation.

Integrity

The American Tube Works Company Complex is in fair condition and forms an identifiable intact group of early 20th-century, traditional brick, industrial buildings, although the overall integrity of the area is somewhat compromised by the demolition of a number of historic buildings and the intrusion of modern buildings. The first group of American Tube Works buildings was built by the business in this location ca. 1850-1860; all of these buildings were demolished when the production plant was expanded and modernized starting in the late 19th century. By 1933, the company had constructed 15 buildings in the area bounded by Somerville Avenue, Dane Street, the former Fitchburg railroad tracks, and Church Street. Seven of these original buildings are extant. The buildings that housed a rolling mill, two of the drawing mills, the foundry, the proving mills, the shipping mills, and a storage house have been demolished. Despite the removal of these historic buildings, the variety of extant building forms clearly express the function and use of the buildings as well as of the complex as a whole. Intrusions into the area include a modern grocery store set back from Somerville Avenue by a large parking lot and a low-scale office building and parking lot located just north of the railroad tracks. These intrusions alter the setting of the district by removing the historic relationship between the buildings within the complex and between the complex and the railroad. Despite these alterations and intrusions, the area overall retains its integrity of location, design, materials, workmanship, feeling and association.

HISTORICAL NARRATIVE

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary, Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, the company was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon. 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together), creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME, and moved to Boston in 1823. In 1831, Hinkley and Child opened a small machine shop in Boston, and in 1840, Hinkley produced his first locomotive. Within a few years, locomotives became their primary product and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850s, Hinkley was one of the major producers of

Continuation sheet 2

locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in the technology is reflected in his early investment in the American Tube Works, and it seems likely that Hinkley's locomotive works would have used the product. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100 to 150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly, and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property, in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased, prompting the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon. 1907b, Anon. 1908). The American Tube Works, however, was able to recover, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon. 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All of the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks, with the exception of the City's cemetery. Residential buildings were demolished, and Sherman Street and Frost Avenue, both now gone, were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

Since the American Tube Works ended its Somerville productions, the remaining buildings in the complex have been used for various commercial and industrial functions, such as metal fence manufacturers, a paper retailer, a boxing club, auto body repair shops, self-storage, and small commercial offices.

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Area Data Sheet

MHC #	Property Name	Address		Resource Type	Style/Form	Est. Date
SMV.793	Boiler House	24	Dane Street	Building	Industrial	1915-1920
SMV.794	Garage and Warehouse	40	Lake Street	Building	Industrial	ca. 1912, 1918
SMV.793	Blacksmith Shop	438R	Somerville Avenue	Building	Industrial	ca. 1890-1918
SMV.793	Administrative Office	440	Somerville Avenue	Building	Classical Revival	1913
SMV.793	Machine and Pattern Shop	440R	Somerville Avenue	Building	Industrial	ca. 1900
SMV.793	Drawing Mill	444	Somerville Avenue	Building	Industrial	ca. 1900-1933
SMV.793	Rolling/Drawing Mill	460	Somerville Avenue	Building	Industrial	ca. 1900

PHOTOGRAPHS

Photograph 1. View of 440, 444, and 460 Somerville Avenue, north elevations, looking southeast from the north side of Somerville Avenue.

Photograph 2. View of 438R and 440R Somerville Avenue, south and west elevations, looking northeast from the alley.

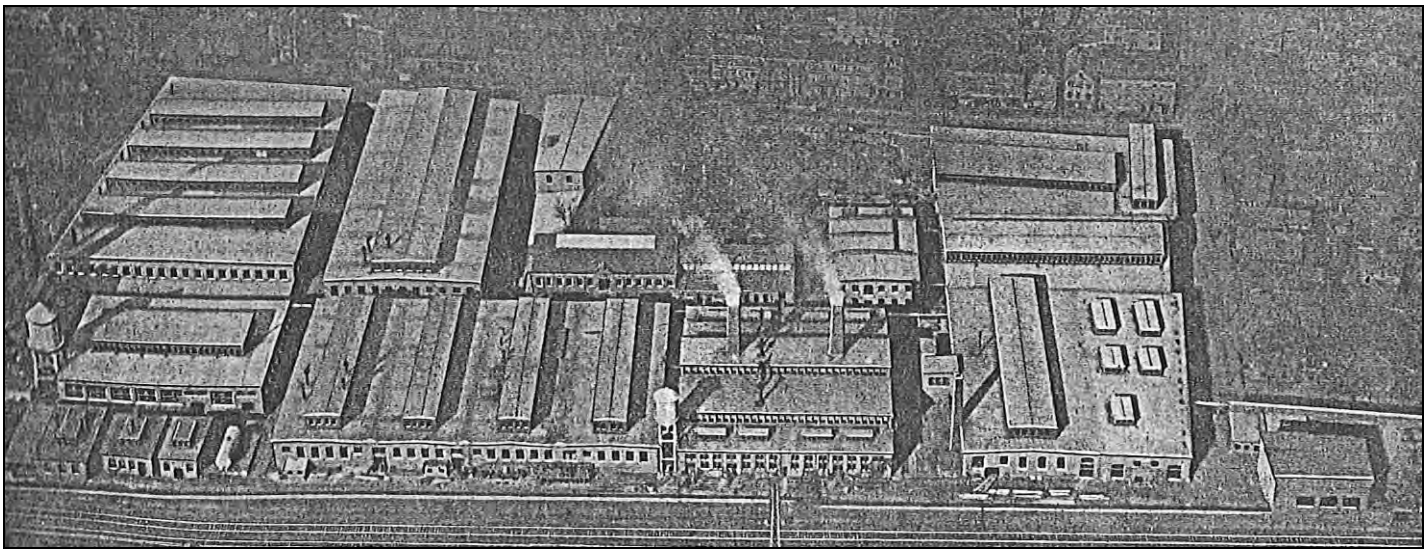
Photograph 3. Detail of metal hoist rail between 440 and 444 Somerville Avenue, looking north from the alley.

Photograph 4. View of 24 Dane Street, north and west elevations, and 460 Somerville Avenue, south elevation, looking east from Dane Street.

Photograph 5. View of 438R and 440R Somerville Avenue, north elevations, looking southwest from Milk Row Cemetery.

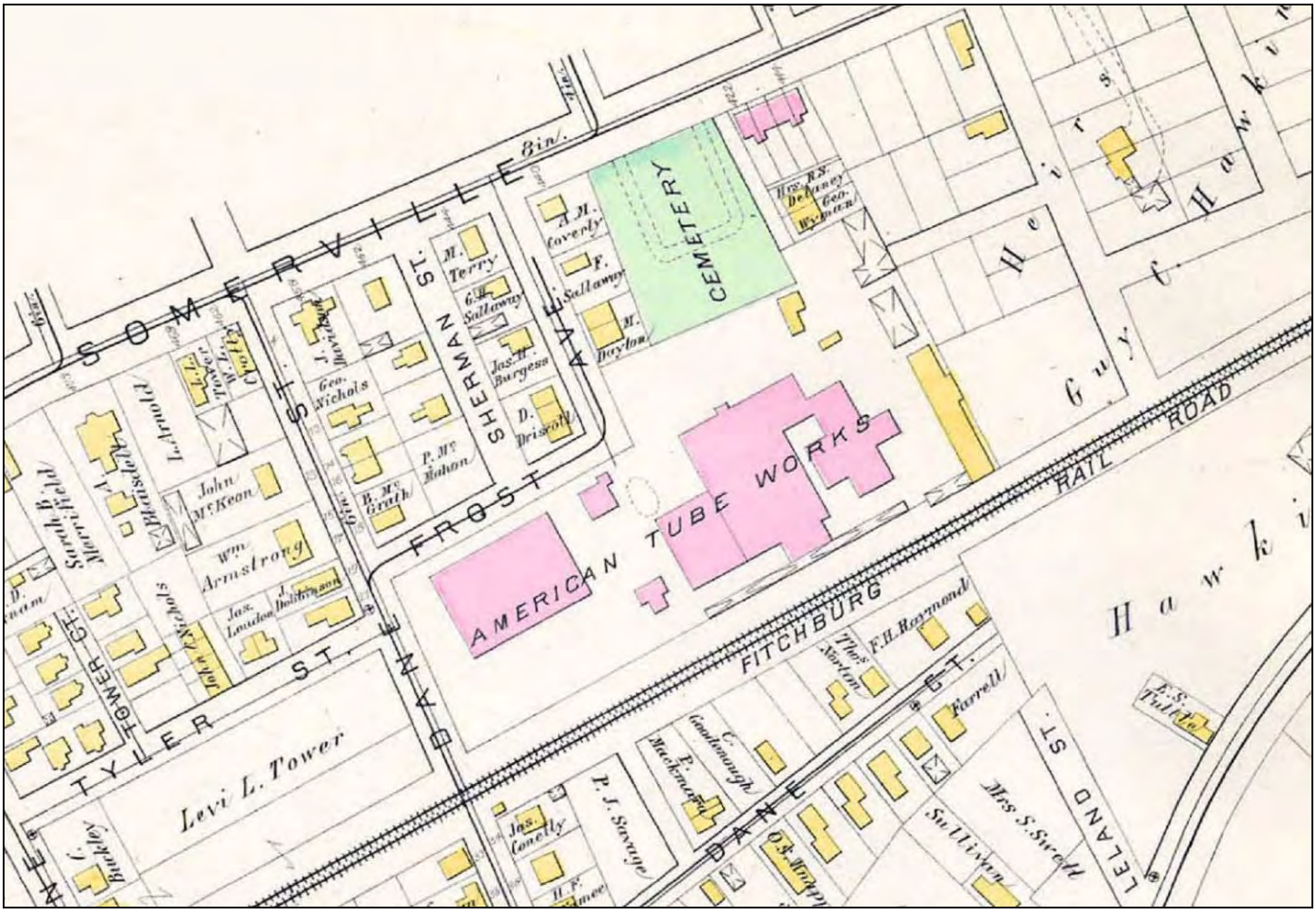
Photograph 6. View of 40 Lake Street, north and west elevations, looking southeast from Lake Street.

HISTORIC VIEW



Air view of the American Tube Works Company Complex (Source: *The Metal Industry* 1931).

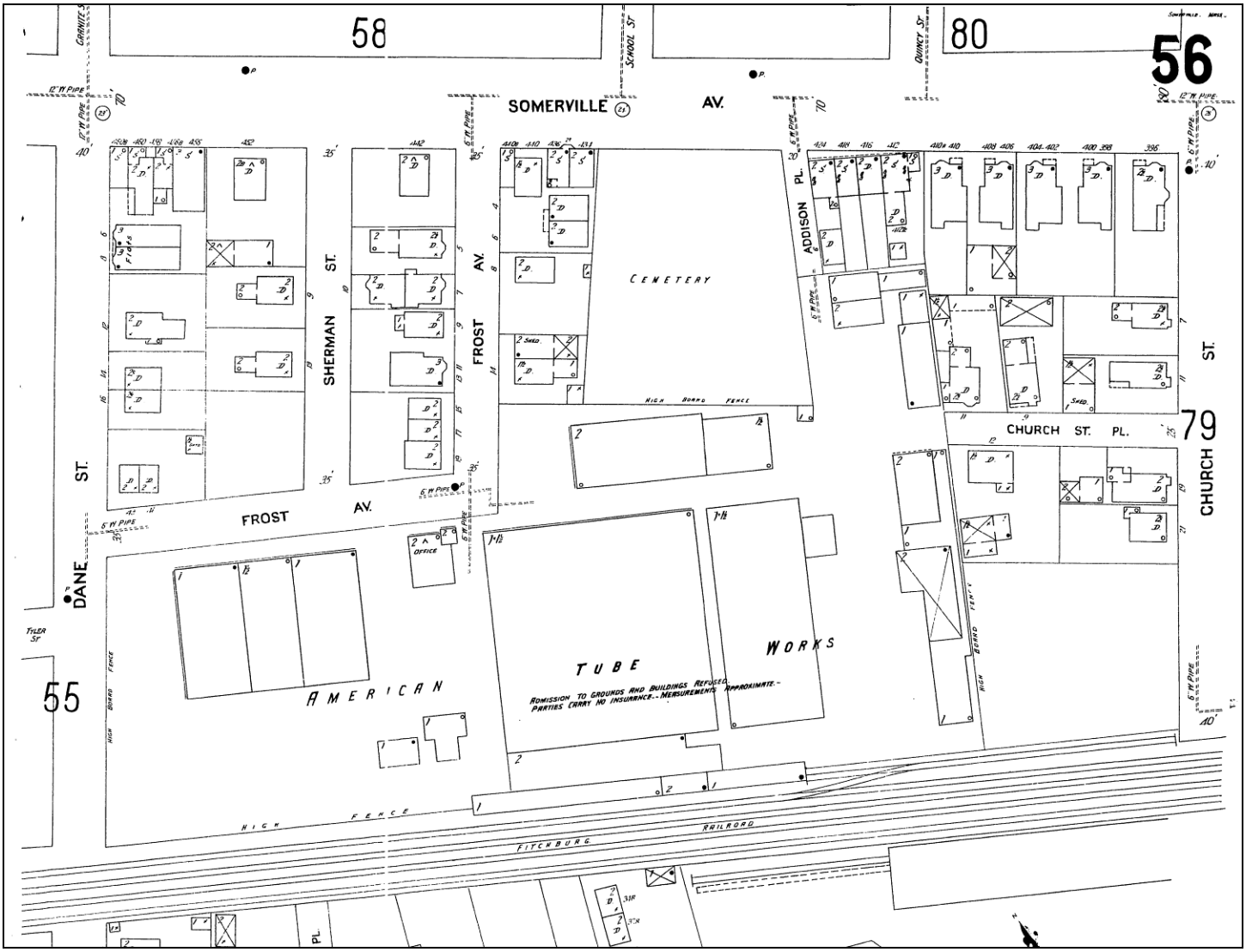
HISTORIC MAPS



Hopkins Map showing American Tube Works Company Complex (Source: G.M. Hopkins, 1884).

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD, BOSTON, MASSACHUSETTS 02125

Area Letter	Form Nos.
SMV.H, SMV.X	SMV.793, SMV.794



1900 Sanborn Map showing American Tube Works Company Complex (Source: Sanborn 1900).

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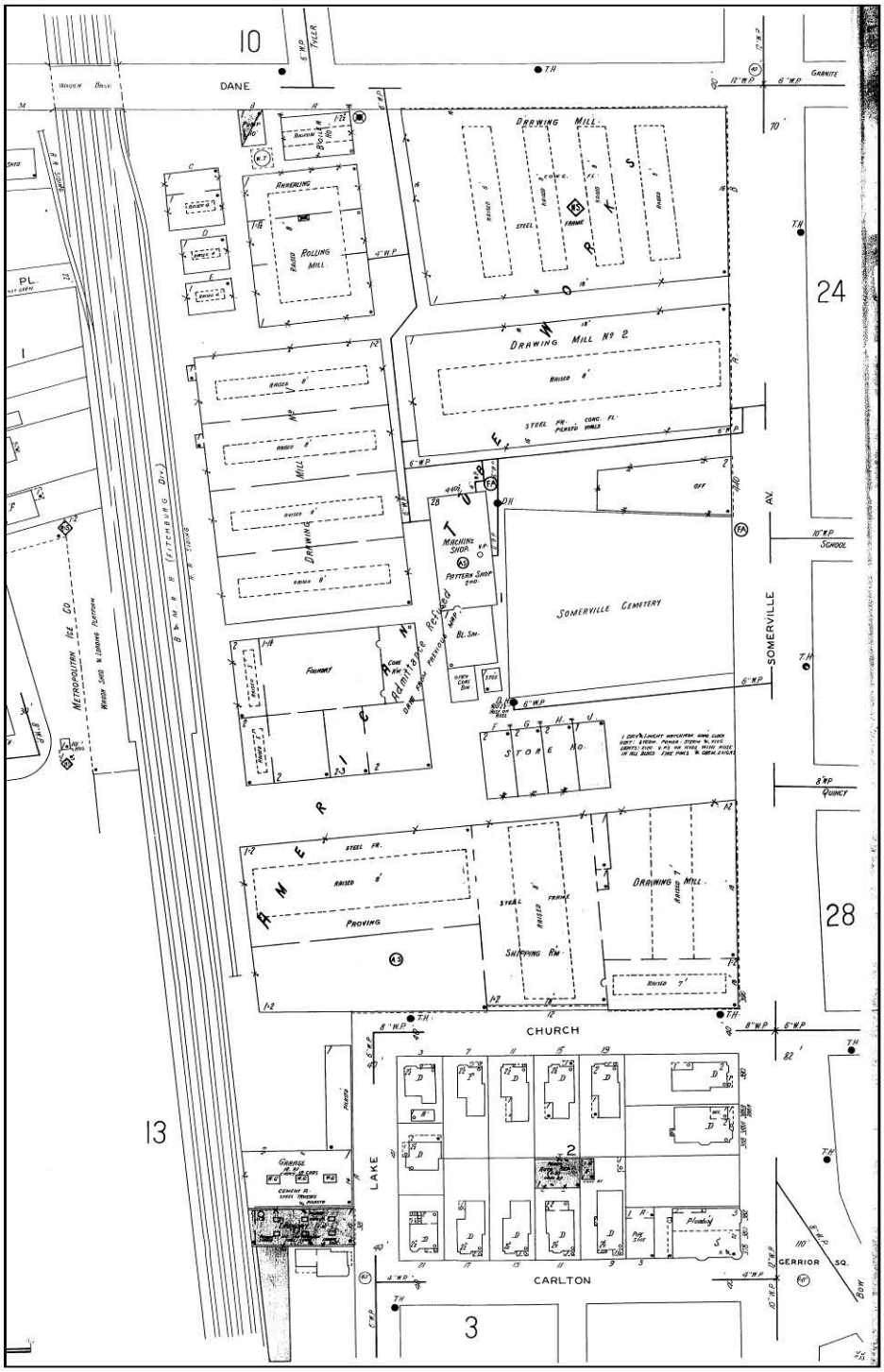
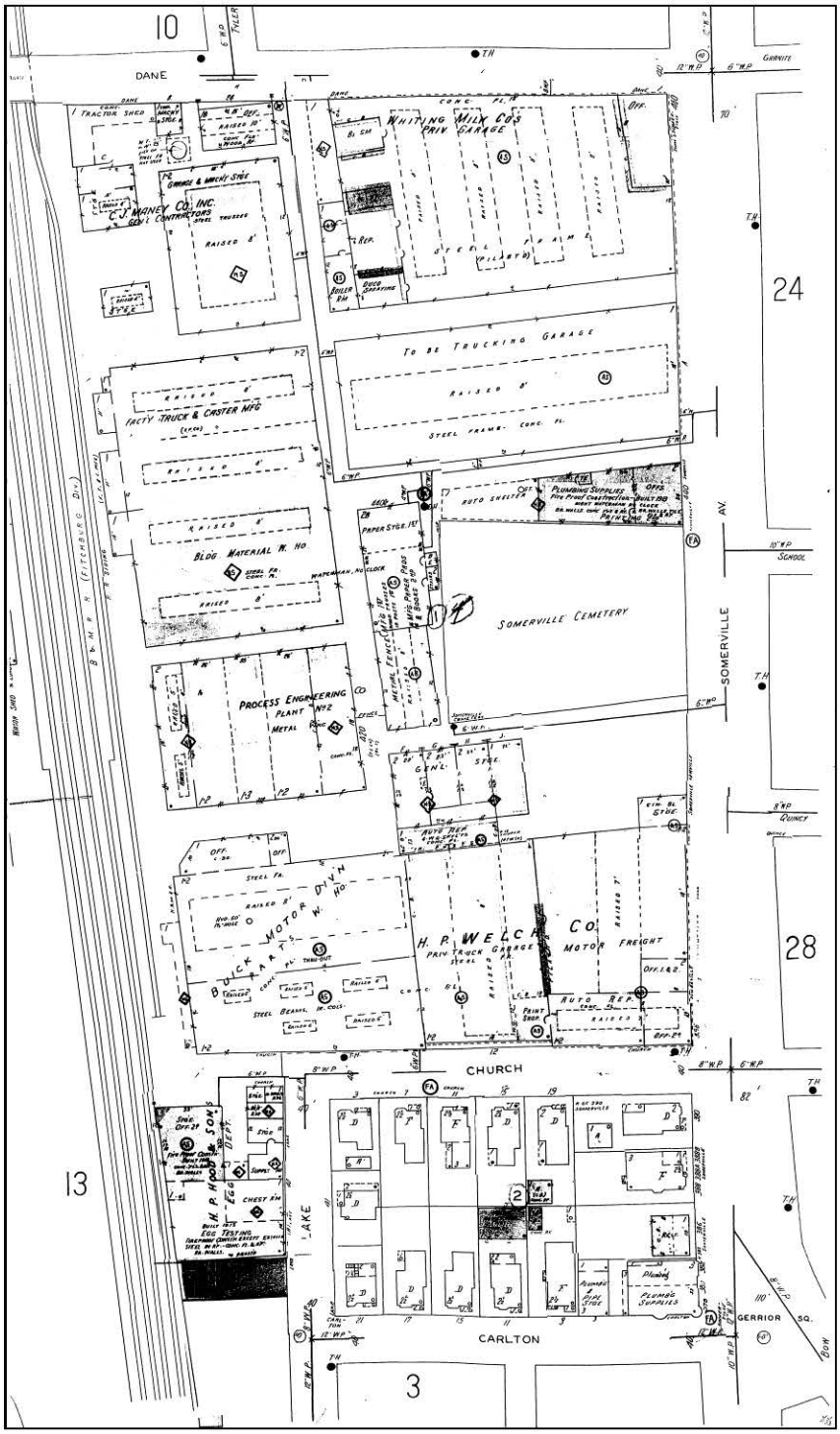
Area Letter	Form Nos.
SMV.H, SMV.X	SMV.793, SMV.794



1933-1934 Sanborn Map showing American Tube Works Company Complex (Source: Sanborn 1933-1934).

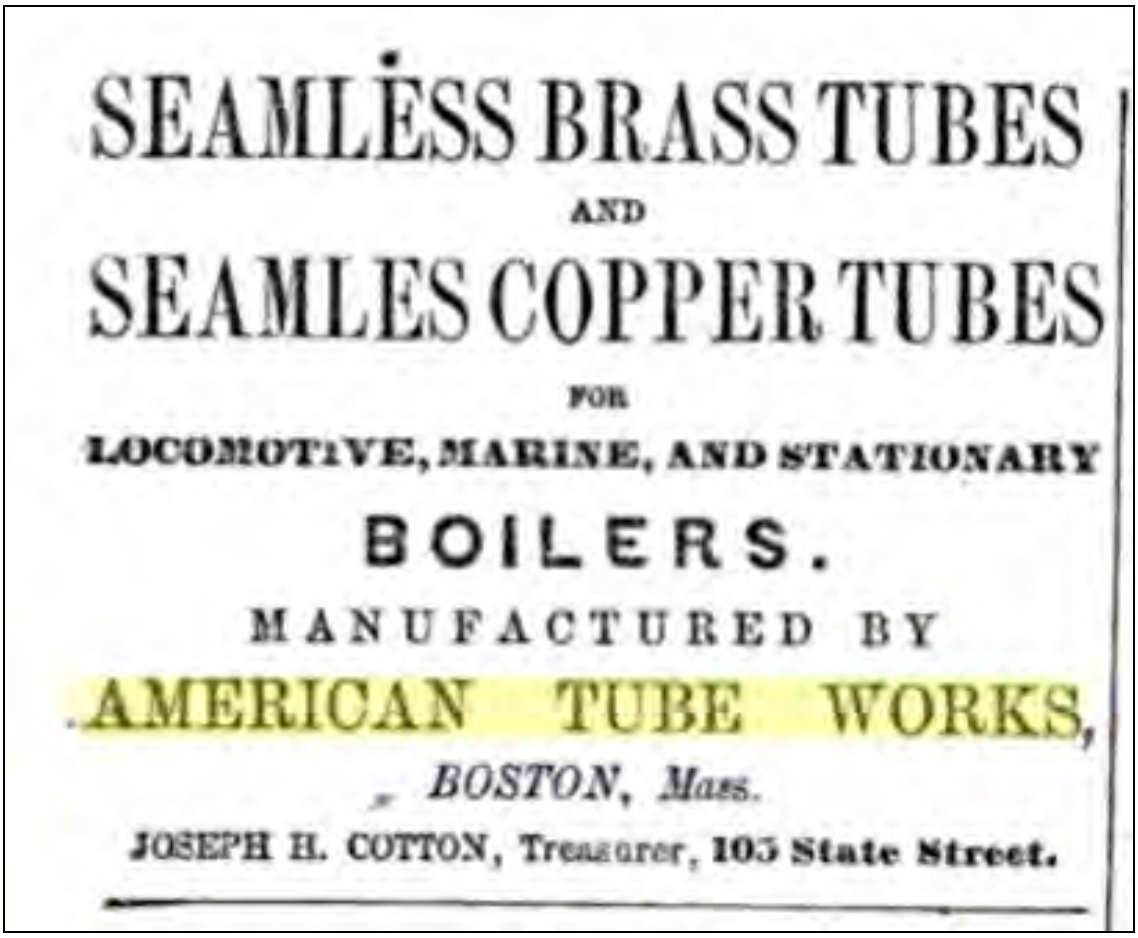
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD, BOSTON, MASSACHUSETTS 02125

Area Letter	Form Nos.
SMV.H, SMV.X	SMV.793, SMV.794

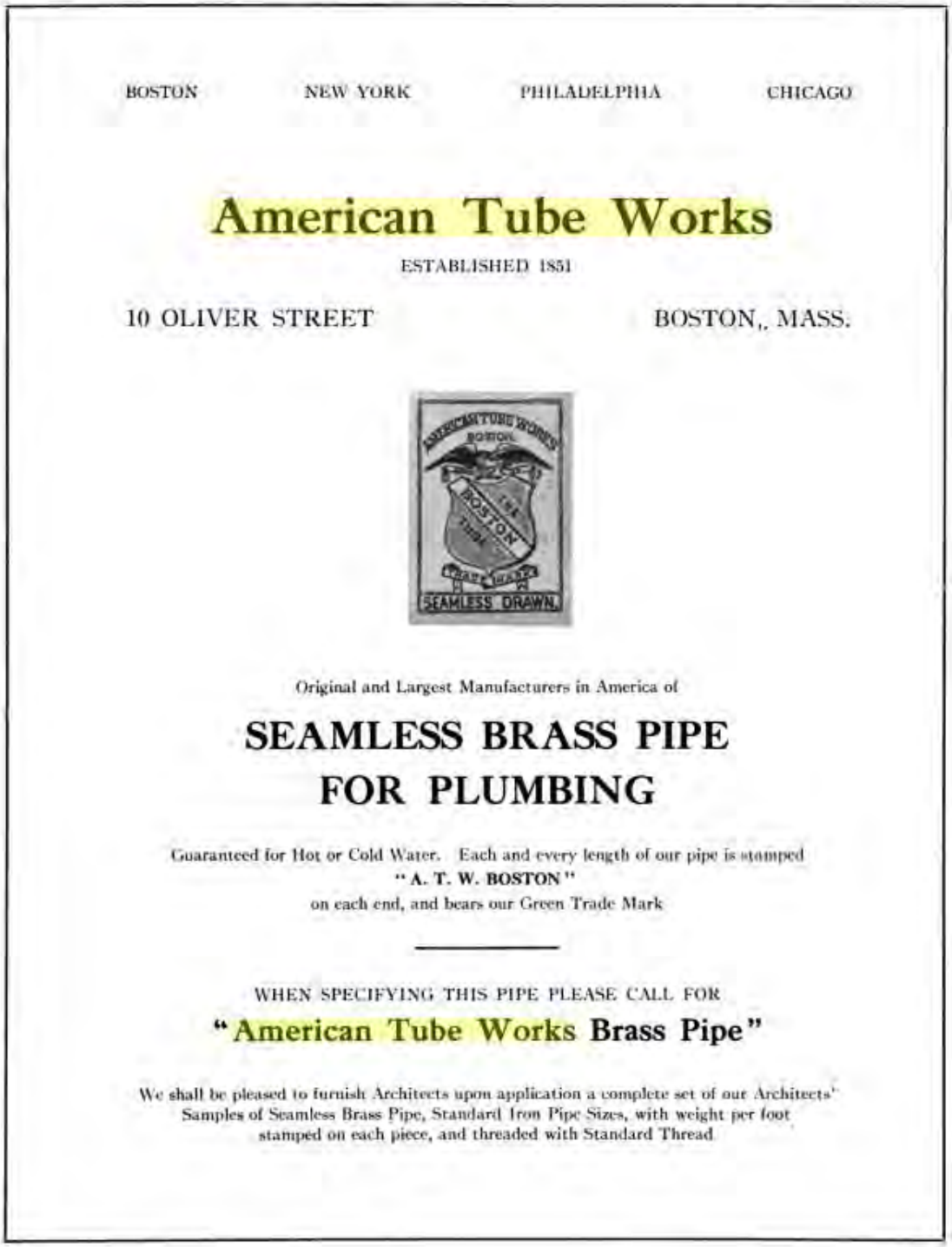


1950 Sanborn Map showing American Tube Works Company Complex (Source: Sanborn 1950).

HISTORIC GRAPHICS



American Tube Works Company Advertisement (Source: *Hillyer's American Railroad Magazine and Journal of Engineering and Practical Science,* 1860).



BOSTON NEW YORK PHILADELPHIA CHICAGO

American Tube Works

ESTABLISHED 1851

10 OLIVER STREET BOSTON,. MASS.

Original and Largest Manufacturers in America of

SEAMLESS BRASS PIPE FOR PLUMBING

Guaranteed for Hot or Cold Water. Each and every length of our pipe is stamped
"A. T. W. BOSTON"
on each end, and bears our Green Trade Mark

WHEN SPECIFYING THIS PIPE PLEASE CALL FOR

"American Tube Works Brass Pipe"

We shall be pleased to furnish Architects upon application a complete set of our Architects' Samples of Seamless Brass Pipe, Standard Iron Pipe Sizes, with weight per foot stamped on each piece, and threaded with Standard Thread

American Tube Works Company Advertisement (Source: *Boston Architectural Club Year Book,* 1918).

National Register of Historic Places Criteria Statement Form

Check all that apply:

☐ Individually eligible ☐ Eligible **only** in a historic district

☐ Contributing to a potential historic district ☒ Potential historic district

Criteria: ☒ **A** ☐ **B** ☒ **C** ☐ **D**

Criteria Considerations: ☐ **A** ☐ **B** ☐ **C** ☐ **D** ☐ **E** ☐ **F** ☐ **G**

Statement of Significance by: Virginia H. Adams and Carey L. Jones, PAL May 2010

The criteria that are checked in the above sections must be justified here.

The American Tube Works Company Complex is recommended eligible for listing in the National Register under Criterion A at the local level in the area of Industry for its association with the antebellum development of industry in New England, first in the production of tubing for steam engines and later for the production of domestic plumbing fixtures. The company was founded in 1851 after acquiring the patent for the production of seamless brass and copper tubes. The company is credited as being the first in America to manufacture seamless tubes that were originally used for locomotive, marine, and stationary boilers. In the late 19th and early 20th century, they expanded their production to include seamless tubes for domestic uses, such as indoor plumbing and heating fixtures. The company remained one of the major regional producers of seamless tubes and was in operation until the Great Depression halted production in ca. 1933.

The American Tube Works Company Complex is also recommended eligible for listing in the National Register under Criterion C in the area of Architecture as a distinct group of late 19th and early 20th century brick industrial buildings. While the buildings lack individual distinction, as a collection they represent a significant and distinguishable entity as a group of intact structures whose architecture clearly expresses their purpose. The long, low-scale drawing mill buildings with their distinct monitor roof forms are easily identifiable as industrial production sheds. Additionally, ancillary and support structures also remain on site, including the office building, the boiler house, and the machine and blacksmith shop. Taken together, these remaining buildings relate the type and magnitude of industrial process that occurred at this location.

FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
64-A-3	Boston North	SMV.H	SMV.793

Town Somerville

Place *(neighborhood or village)* Union Square

Address 440 Somerville Avenue

Historic Name American Tube Works Administrative Office

Uses Present: Mixed

Original: Office

Date of Construction 1913

Source Building plaque

Style/Form Classical Revival

Architect/Builder Unknown

Exterior Material

Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Asphalt Shingle

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Replacement windows and new openings inserted into the west elevation.

Condition Good

Moved X **no** ___ **yes** **Date**

Acreage 10,514 S.F.

Setting The building faces onto Somerville Avenue and is surrounded by a mix of modern commercial buildings and other buildings formerly owned by the American Tube Works. To the east is the Milk Row Cemetery. Directly to the south are the railroad tracks for the former Fitchburg Division of the Boston and Maine Railroad.

Photograph

Topographic or Assessor's Map

Recorded by: Virginia H. Adams, Carey Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION _X_ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The former American Tube Works' Administrative Office is a rectangular, five-bay by twelve-bay, two-story brick building built in 1913. It is currently used as private commercial and office space. The building has brick walls laid in common bond and a shallow-pitched, front-gable roof. The facade faces north onto Somerville Avenue. A wood cornice with brick dentils wraps around the building at the roof line and has copper gutters and flashing. Fenestration on the building consists primarily of modern aluminum and original wood, one-over-one, double-hung windows in rectangular or segmentally arched openings with splayed brick lintels. Several other windows are the same aluminum and wood, one-over-one, double-hung sash, but are located in openings with arched brick lintels. All window openings have quarry-faced granite sills with chamfered edges. Many of the windows on the first story have metal security bars.

The primary entrance, located off-center on the facade, is a wood panel door with a single-pane transom covered by a decorative metal grate. A granite door surround is capped by a granite lintel. Two arched brick doorways on the west elevation contain single wood panel doors, partially glazed with transoms. Two arched brick doorways further south on the same elevation have been filled with concrete. Three arched brick loading bays on the west elevation have also been filled with concrete. A solid modern metal door with a fixed transom and a modern, solid metal emergency exit door, accessed via a metal fire escape, are located on the south elevation.

Significant features of the building include a metal hoist rail that runs between the administrative office building and the drawing mill to the west (444 Somerville Avenue), the retention of many of the original windows and doors, the granite sills, and a granite date stone on the west elevation labeled "1913".

HISTORICAL NARRATIVE

The building at 440 Somerville Avenue was originally constructed in 1913 as an office building for the American Tube Works Company. The office building was built by the company as part of its late 19th and early 20th century expansion and modernization effort. Prior to the construction of this building, a small office building (not extant) was located on Frost Avenue. As the company expanded their physical plant, the original office building was demolished, and Frost Avenue was incorporated into the site. The current building is much larger than the original building and occupies a more prominent location both on the site and in relation to the surrounding streets. In 1940, after the company ceased operations in Somerville, the building was in use as an office building for the Locke Stevens Inc. plumbing supply company on the first floor and the City Press printers on the second floor (Sanborn Map Company 1950, Somerville City Directory 1940). Locke Stevens remained there through at least 1961, and the City Press, through at least 1970. Other businesses listed at this address in the City Directories from 1940 through 1970 include Bangor Metal Culvert Co., Basil P. Babcock Building Materials, George Moncrief Storage, Harrison Walker Sales Co. Storage, Welsh HP & Co. Transfer Department, BTU Engineering Company, Colson Corporation, Portland Sheet Metal Works Inc., Fan Distributors Co., Raychord Corporation, and the Shopmen Iron Workers Welfare Plan and Union, although it is not clear where in the complex these concerns were located. The building is now occupied by a mix of businesses, including an architecture firm and a Tai Chi center (Sanborn Map Company 1933, 1950).

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

Continuation sheet 1

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary, Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, the company was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together) creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME, and moved to Boston in 1823. In 1831, Hinkley and Child opened a small machine shop in Boston, and in 1840, Hinkley produced his first locomotive. Within a few years locomotives became their primary product, and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850s, Hinkley was one of the major producers of locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in the technology is reflected in his early investment in the American Tube Works, and it seems likely that Hinkley's locomotive works would have used the product. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100 to 150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly, and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased. This prompted the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon 1907b, Anon 1908). The American Tube Works was able to recover, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All the original buildings that comprised their original production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks (with the exception of the cemetery). Residential buildings were demolished, and Sherman Street and Frost Avenue were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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PHOTOGRAPHS

Photograph 1. American Tube Works, former Administrative Office, north elevation, looking south.

Photograph 2. American Tube Works, former Administrative Office, west elevation, looking southeast.

Photograph 3.
American Tube Works, former Administrative Office, south elevation, looking north.

Photograph 4.
American Tube Works, former Administrative Office, east elevation, looking southwest.

Photograph 5.
Detail of entrance on north elevation.

Photograph 6.
Detail of brick cornice on north elevation.

Photograph 7.
Detail of window
grille on north elevation.

FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
64-A-2	Boston North	SMV.H	SMV.793

Town Somerville

Place *(neighborhood or village)* Union Square

Address 444 Somerville Avenue

Historic Name American Tube Works Drawing Mill

Uses Present: Mixed

Original: Drawing Mill

Date of Construction ca. 1900-1933

Source Sanborn Maps

Style/Form Industrial

Architect/Builder Unknown

Exterior Material

Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Asphalt Shingle

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Windows have been filled in, new openings cut into the side elevations.

Condition Fair

Moved X **no** ___ **yes** **Date**

Acreage 36,673 S.F.

Setting The building faces onto Somerville Avenue and is placed between two other buildings formerly owned by the American Tube Works. Other buildings in the area include modern commercial buildings and early to mid-nineteenth-century residences. The railroad tracks for the former Fitchburg Division of the Boston and Maine Railroad are located to the south.

Photograph

Topographic or Assessor's Map

Recorded by: Virginia H. Adams, Carey Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION _X_ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The former American Tube Works' Drawing Mill is a rectangular, six-bay by twenty-eight-bay, one-and-one-half-story, brick building with a steel frame, constructed ca. 1900-1933. The building has brick walls laid in common bond and a very shallow pitched, front-gable roof with a monitor. The facade faces north toward Somerville Avenue, and the rear (south) eleven-bay elevation faces an alley. A wood and brick corbelled cornice and gutter system wraps around the roof line of the entire building. A similar wood cornice is located on the monitor. Modern metal flashing has replaced portions of the original cornice around the building. A brick exterior smokestack is located on the west elevation.

Fenestration on the building consists primarily of segmental arched brick openings with quarry-faced brick sills that have chamfered edges in varying sizes. The primary window types are wood, 15-over-15, double-hung sash and 45-light windows. All windows are rectangular with wood-filled arches, and some windows have been filled on the interior. The windows in 7 of the 27 bays on the east elevation have been shortened and the lower sections have been filled with brick. Some windows on the west elevation have been removed and are completely bricked in. The windows located in the monitor are wood, eight-light fixed sash, many of which are covered by corrugated metal siding or plywood.

The primary entrance, located on the north elevation, is a large, two-story garage bay with a modern, rolling metal door. Two modern paneled doors with filled side-lights flank the garage bay. The east elevation contains another modern metal garage door. Four arched openings on the south, east, and west elevations have been filled with concrete, and each has a solid metal door. The west elevation also contains two large openings, one with large, steel sliding doors, and one with a modern, metal rolling garage door in a modern opening. Two more steel doors are located on the west elevation, one on the basement level, and one leading to the second story via a metal staircase.

Other significant features include the original anchor plates in varying shapes and remnants of utilities, such as metal insulators and tubing for electrical components, found sporadically on all the elevations; a metal door to the coal chute located on the facade; and metal pier protectors and bollards at each large opening.

HISTORICAL NARRATIVE

The building at 444 Somerville Avenue was originally constructed as one of the four drawing mills built by the American Tube Works Company at this location. It was constructed by the company as part of its late 19th and early 20th century expansion and modernization effort. The American Tube Works Company was the first company in America to manufacture seamless tubes, and the process of drawing or pushing the heated brass or copper through a machine to produce a single tube that did not need to be welded occurred in this building. The patented process of producing seamless brass tubes was a well-guarded secret, and all elements of the manufacture and distribution of their products occurred at this complex. The building was constructed on a block of residential buildings that were demolished as the company expanded their plant. It remained in use as a drawing mill until ca. 1934. The company had ceased operations in Somerville by 1935, and this address is not listed in the City Directory for the year 1940. By 1950, the Underwood Machinery Company had converted the building into a garage for their delivery trucks. The Admiral Brass & Copper Company is listed at this address in the City Phone Directories from at least 1961 through the late 1970s. Since the mid-1980s, Maaco, an auto-body repair and painting company, has used the building.

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second

Continuation sheet 1

largest employer in Somerville with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary, Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, the company was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together) creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME, and moved to Boston in 1823. In 1831, Hinkley and Child opened a small machine shop in Boston, and in 1840, Hinkley produced his first locomotive. Within a few years, locomotives became their primary product and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850s, Hinkley was one of the major producers of locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in the technology is reflected in his early investment in the American Tube Works, and it seems likely that Hinkley's locomotive works would have used the product. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100 to 150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly, and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased. This prompted the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon 1907b, Anon 1908). The American Tube Works was able to recover

Continuation sheet 2

from this, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks (with the exception of the cemetery). Residential buildings were demolished, and Sherman Street and Frost Avenue were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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PHOTOGRAPHS

Photograph 1. American Tube Works, former drawing mill, north (facade) elevation.

Photograph 2. American Tube Works, former drawing mill, south (rear) elevation.

Photograph 3. American Tube Works, former drawing mill, east (side) elevation.

Photograph 4. American Tube Works, former drawing mill, west (side) elevation.

Photograph 5.
Detail of monitor and corbelled cornice on south elevation.

Photograph 6.
Detail of utility remnants on west elevation.

Photograph 7.
Detail of coal chute door on north elevation.

Photograph 8.
Detail of filled window opening alongside original window on east elevation.

FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
64-A-1	Boston North	SMV.H	SMV.793

Town Somerville

Place *(neighborhood or village)* Union Square

Address 460 Somerville Avenue

Historic Name American Tube Works Rolling/Drawing Mill

Uses Present: Long Term Storage

Original: Industrial/Rolling Mill/Drawing Mill

Date of Construction ca. 1900

Source Sanborn Map

Style/Form Industrial

Architect/Builder Unknown

Exterior Material

Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Asphalt Shingle

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Windows removed and filled in with modern materials.

Condition Fair

Moved X **no** ___ **yes** **Date**

Acreage 57,433 S.F.

Setting The building is located on the southeast corner of Somerville Avenue and Dane Street, and on a block with other buildings formerly owned by the American Tube Works. Other buildings in the area include modern commercial buildings and early to mid-nineteenth-century residences.

Photograph

Topographic or Assessor's Map

Recorded by: Virginia H. Adams, Carey Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION _X_ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES __X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The former American Tube Works' Rolling/Drawing Mill at 460 Somerville Avenue is a rectangular, 17-bay by 19-bay, one-story, brick building with a steel frame, constructed ca. 1900. The building has brick walls laid in common bond and a very shallow pitched, front-gable roof with four monitors. The facade faces north toward Somerville Avenue, and the rear (south) elevation faces an alley. A wood and brick denticulated cornice and gutter system wraps around the facade and west elevation, but the wood has been replaced by an aluminum cornice on the south and east elevations. The cornice of the monitors has also been replaced with aluminum.

Fenestration on the building consists of segmental arched brick openings with quarry-faced granite sills that have chamfered edges. The arched window openings on the facade have been partially filled with brick and glass block with granite sills. Side and rear elevation window openings have either been entirely filled with brick or plywood or partially filled with rectangular, aluminum replacement windows. These replacement windows have a single pane of opaque black glass. Where still extant, the window openings in the monitors contain modern, aluminum replacement windows. The majority of the monitor wall surfaces are covered with T-111 and clapboard siding.

The primary entrance, located on the facade, is an aluminum, replacement door with full glazing hung in a modern opening. Two similar doors are located on the west elevation. One door is accompanied by a single-pane transom and a three-pane aluminum storefront window. The west elevation also contains two modern, overhead rolling steel garage doors in modern openings. Two more metal doors with partial glazing are located on the south elevation, but all other door openings have been filled with brick or concrete block.

HISTORICAL NARRATIVE

The building at 460 Somerville Avenue was originally constructed by the American Tube Works Company as part of its late 19th and early 20th century expansion and modernization effort. The American Tube Works Company was the first company in America to manufacture seamless tubes, and the process of drawing or pushing the heated brass or copper through a machine to produce a single tube that did not need to be welded occurred in this building. The patented process of producing seamless brass tubes was a well-guarded secret, and all elements of the manufacture and distribution of their products occurred at this complex. The building was constructed on a prominent corner and necessitated the demolition of a block of residential buildings. It was originally constructed as a rolling mill and later used as a drawing mill. After the company ceased operations ca. 1935, the Whiting Milk Company occupied the building, according to the 1940 City Directory and the 1950 Sanborn Map. The occupant and phone number for this address are not listed in the 1956 or 1961 Phone Directories. From at least 1965 through 1997, Precision Motors Rebuilders, Inc. was located there. The building is currently used as a long-term storage facility.

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary, Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, it was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon. 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together) creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME and moved to Boston in 1823. In 1831 Hinkley and Child opened a small machine shop in Boston and in 1840, Hinkley produced his first locomotive. Within a few years locomotives became their primary product and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850's Hinkley was one of the major producers of locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in the technology is reflected in his early investment in the American Tube Works and it seems likely that Hinkley's locomotive works would have used the product. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100-150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased. This prompted the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon 1907b, Anon 1908). The American Tube Works was able to recover, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All of the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and

Continuation sheet 2

continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks (with the exception of the cemetery). Residential buildings were demolished, and Sherman Street and Frost Avenue were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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Zellie, Carole, and Peter Stott. 1990. *Beyond the Neck: The Architecture and Development of Somerville, Massachusetts*, *Updated Edition*. St. Paul, MN: Landscape Research.

PHOTOGRAPHS

Photograph 1. American Tube Works, former rolling/drawing mill, north (facade) elevation, looking southwest.

Photograph 2. American Tube Works, former rolling/drawing Mill, south (rear) elevation, looking northeast.

Photograph 3. American Tube Works, former rolling/drawing mill, east (side) elevation, looking north.

Photograph 4. American Tube Works, former rolling/drawing mill, west (side) elevation, looking south.

Photograph 5. American Tube Works, aerial view of former rolling/drawing mill, looking southwest. Somerville Historic Preservation Commission, 1997.

Photograph 6. American Tube Works, former rolling/drawing mill, north (facade) elevation, looking southwest from the north side of Somerville Avenue. Somerville Historic Preservation Commission, 1997.

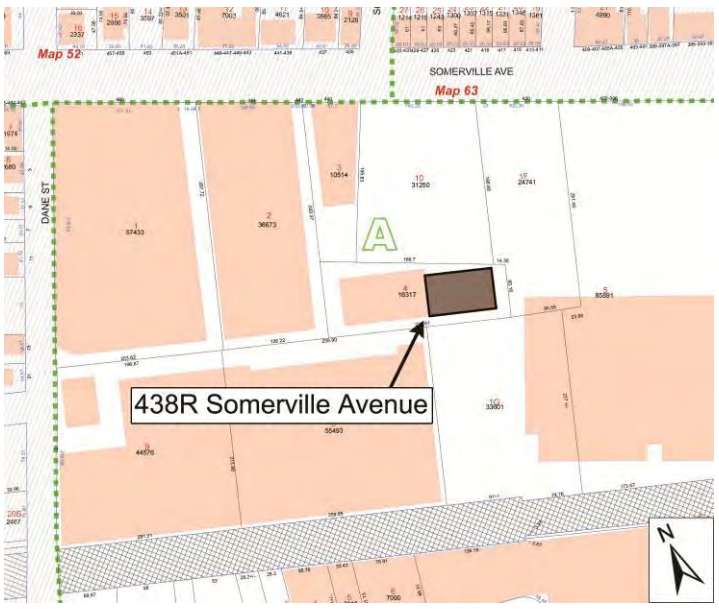
FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
64-A-4	Boston North	SMV.H	SMV.793

Photograph

Topographic or Assessor's Map



Town Somerville

Place *(neighborhood or village)* Union Square

Address 438R Somerville Avenue

Historic Name American Tube Works Blacksmith Shop

Uses Present: Commercial

Original: Blacksmith Shop

Date of Construction ca. 1890-1918

Source Sanborn Map, Building Plaques

Style/Form Industrial

Architect/Builder Unknown

Exterior Material
Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Asphalt Shingle

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Windows altered and filled in

Condition Fair

Moved X **no** ___ **yes** **Date**

Acreage 16,317 S.F.

Setting The building is set back from Somerville Avenue and is surrounded by a mix of modern commercial buildings and other buildings formerly owned by the American Tube Works. To the north is the Milk Row Cemetery. Directly to the south are the railroad tracks for the former Fitchburg Division of the Boston and Maine Railroad.

Recorded by: Virginia H. Adams, Carey Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION _X_ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The former American Tube Works Blacksmith Shop is a rectangular, seven-bay by eleven-bay, one-and-one-half-story brick building constructed circa 1890-1918. The facade faces east, parallel to Somerville Avenue, and the American Tube Works Machine Shop at 440R Somerville Avenue (SMV.793) is connected on its west elevation.[1] The building has brick walls laid in the common bond pattern and an asphalt-clad, gable-front roof with a flat-roofed monitor. The monitor has asphalt shingles on its east elevation. A corbelled brick cornice wraps around the roof line, including the gable end; however, the monitor has a wood cornice. Copper gutters and flashing are located on the north and south elevations, and there is copper flashing on the monitor.

Fenestration on the building consists primarily of segmental arched openings with quarry-faced granite sills and brick lintels with chamfered edges. The majority of the openings have been filled with concrete block or plywood. Several of the filled openings have corrugated plastic or vinyl windows inserted into them. The monitor has corrugated plastic panels, possibly covering original fenestration, in wood frames, with modern fixed windows sporadically placed. The primary entrance, located on the east elevation, is a modern aluminum double door with full glazing and a fixed aluminum transom in an arched brick opening. A rectangular opening in the half-story of the facade has a granite sill and is filled with plywood. The rectangular doorway on the north elevation has been filled with concrete block, and its granite lintel doubles as a sill for the opening above. The south elevation contains two doorways. One is an arched loading bay with a granite sill and stair; it has been filled with plywood. The second is a rectangular opening with a recessed solid metal door, with a steel storm, or security, door. It also has a granite sill and two stairs, and a granite lintel doubling as the sill for the opening above.

Other significant details include a granite date stone on the east elevation marked with "1890-1918" and remnants of the building's original function, such as metal brackets and hooks on the north and south elevations. Alterations to the building include the filling in of almost all the openings and the replacement of the primary entry with the current aluminum door. Some brick has been replaced, and re-pointing has occurred on all three elevations.

HISTORICAL NARRATIVE

The blacksmith shop for the American Tube Works Company was one of the first buildings constructed by the company as part of its late 19th and early 20th century expansion and modernization effort. The building was first constructed ca. 1890. The patented process was a well-guarded secret, and all elements of the manufacture and distribution of their products occurred at this complex. The blacksmith shop and the attached machine shop were likely built as support structures to fabricate and repair the necessary machinery. Between 1900 and 1933, an open coal storage structure was attached to the east elevation. In 1940, after the American Tube Works Company ceased operations in Somerville, the Security Fence Company, a metal fence producer, used this building and the first floor of the attached machine shop (Sanborn Map Company 1950, Somerville City Directory 1940). Sometime between 1933 and 1950, the fence company expanded the blacksmith shop to the east by one bay width (Sanborn Map Company 1933, 1950). In 1956, a company called Security Steel and Wire Works appears in the City Phone Directory alongside the Security Fence Company. Although the fence company is gone by 1961, the steel and wire works business remains at this address until at least 1965. By 1970, it had relocated to Tewksbury, MA. The building is currently vacant but is undergoing interior renovations for use as a small grocery store.

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green, who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the

[1] At present, the City considers the two attached buildings to be a single property at the address 438R Somerville Avenue. However, beginning with their construction at different times by American Tube Works up until the present day, the buildings have served different functions. Therefore, each building is documented on a separate building inventory form.

United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville, with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

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With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing

Continuation sheet 2

Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased. This prompted the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon 1907b, Anon 1908). The American Tube Works was able to recover from this, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks (with the exception of the cemetery). Residential buildings were demolished, and Sherman Street and Frost Avenue were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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PHOTOGRAPHS

Photograph 1. American Tube Works, former blacksmith shop, east elevation.

Photograph 2. American Tube Works, former blacksmith shop, south elevation.

Photograph 3. American Tube Works, former blacksmith shop, north elevation.

FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
64-A-4	Boston North	SMV.H	SMV.793

Town Somerville

Place *(neighborhood or village)* Union Square

Address 440R Somerville Avenue

Historic Name American Tube Works Machine and Pattern Shop

Uses Present: Mixed

Original: Machine and Pattern Shop

Date of Construction ca. 1900

Source Sanborn Map

Style/Form Industrial

Architect/Builder Unknown

Exterior Material

Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Slate and Asphalt

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Most windows have been filled in with modern materials. Brick stairwell inserted on the north elevation.

Condition Fair

Moved X **no** ___ **yes** **Date**

Acreage 16,317 S.F.

Setting The building is set back from Somerville Avenue and is surrounded by a mix of modern commercial buildings and other buildings formerly owned by the American Tube Works. To the north is the Milk Row Cemetery. Directly to the south are the railroad tracks for the former Fitchburg Division of the Boston and Maine Railroad.

Photograph

Topographic or Assessor's Map

Recorded by: Virginia H. Adams, Carey Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION _X_ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The former American Tube Works' Machine and Pattern Shop is a rectangular, thirteen-bay by seven-bay, two-and-one-half-story, brick building constructed ca. 1900. The building has brick walls laid in common bond, a gable-end roof with a half dormer, and slate shingles with asphalt patches. A brick stair hall was added to the north elevation between 1933 and 1950. The facade faces south, toward the alley that runs parallel to Somerville Avenue, and the American Tube Works Blacksmith Shop at 438R Somerville Avenue (SMV.793) is connected to the machine shop's east elevation.[1] A corbelled brick cornice wraps around the roof line, including the gable ends. Copper gutters and flashing are located on the facade and north elevation. The stair hall addition, which is slightly bowed, has an almost flat roof and a granite and brick corbelled cornice. A brick chimney with a granite cap is located on the east elevation at the connection with the blacksmith shop.

Fenestration on the building consists primarily of arched openings with brick lintels and quarry-faced granite sills that have chamfered edges. Concrete block partially fills the openings on the first story, which are inset with modern vinyl, double-hung windows. Modern, rectangular, aluminum double-hung windows have been inserted into the arched openings of the second story. The second story of the stair hall addition on the north elevation has corrugated plastic panels in the partially filled window openings. The gable of the west elevation contains two round brick window openings, with 12-light wood windows and granite sills, that flank an arched brick opening with an eight-over-eight, wood double-hung window. A 12-light fixed window is located in the opposite gable end and is likely original. Basement-level window openings have been filled with brick.

A rectangular doorway is located on the western side of the facade. It has a modern, solid steel door, with granite sill, stair, and lintel. A loading bay is located at the center of the facade beneath the half dormer. The doorway on the first story has an arched brick opening with granite springer stones and sill and has been filled with plywood. The doorway on the second story is an arched brick opening with a granite sill, partially filled by concrete block, and a pair of wood double-hung windows.

Other significant features include a hoist located in the dormer of the loading bay, exposed structural beams, star-shaped anchor plates for the interior tie rods, and metal pier protectors on each corner. Remnants of old utility conduits are visible on all elevations, most notably in the southwest corner of the building. A corrugated metal loading bay addition with a shed roof is attached to the north elevation.

HISTORICAL NARRATIVE

The machine and pattern shop for the American Tube Works Company was one of the first buildings constructed by the company as part of its late 19th and early 20th century expansion and modernization effort. The building was first constructed ca. 1900. The patented process was a well-guarded secret, and all elements of the manufacture and distribution of their products occurred at this complex. The machine shop and the attached blacksmith shop were likely built as support structures to fabricate and repair the machinery. The pattern shop, located on the second floor, would have likely been a storage and production area for the patterns used to make fittings and other related hardware. In 1940, after the American Tube Works Company ceased operations in Somerville, the Security Fence Company, a metal fence producer, used the first floor of this building as well as the attached blacksmith shop (Sanborn Map Company 1950, Somerville City Directory 1940). In 1956, a company called Security Steel and Wire Works appears in the City Phone Directory alongside the Security Fence Company. Although the fence company is gone by 1961, the steel and wire works business remains at this address until at least 1965. By 1970, it had relocated to Tewksbury, MA. By 1950, an unknown manufacturer of paper pads and books was using the second floor of this building (Sanborn Map Company 1950). Sometime between 1933 and 1950, a tall stair and elevator tower was constructed on the east elevation (Sanborn Map Company 1933, 1950). The building is currently vacant and undergoing renovations.

[1] At present, the City considers the two attached buildings to be a single property at the address 438R Somerville Avenue. However, beginning with their construction at different times by American Tube Works up until the present day, the buildings have served different functions. Therefore, each building is documented on a separate building inventory form.

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville, with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary, Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, the company was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together) creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME, and moved to Boston in 1823. In 1831, Hinkley and Child opened a small machine shop in Boston, and in 1840, Hinkley produced his first locomotive. Within a few years, locomotives became their primary product and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850s, Hinkley was one of the major producers of locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in the technology is reflected in his early investment in the American Tube Works, and it seems likely that Hinkley's locomotive works would have used the product. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100 to 150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly, and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

Continuation sheet 2

With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased. This prompted the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon. 1907b, Anon. 1908). The American Tube Works was able to recover, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon. 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks (with the exception of the cemetery). Residential buildings were demolished, and Sherman Street and Frost Avenue were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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Continuation sheet 3

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PHOTOGRAPHS

Photograph 1. American Tube Works, former machine and pattern shop, view of the south (facade) elevation, looking northwest.

Photograph 2. American Tube Works, former machine shop, view of the facade and west elevation, looking northeast.

Photograph 3.
American Tube Works, former machine shop, view of the north (rear) elevation, looking southwest.

Photograph 4.
Detail of utility conduit remnants at southwest corner of building.

Photograph 5.
Detail of west elevation, showing corbelled brick cornice, round brick window opening, and star-shaped tie-rod anchor plates.

Photograph 6.
Detail of hoist in loading bay on south elevation.

Photograph 7.
Detail of metal pier protectors on southwest corner of building.

FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
64-A-9	Boston North	SMV.H	SMV.793

Photograph

Topographic or Assessor's Map

Recorded by: Virginia H. Adams, Carey L. Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Town Somerville

Place *(neighborhood or village)* Union Square

Address 24 Dane Street

Historic Name American Tube Works Boiler House

Uses Present: Industrial/Commercial

Original: Industrial

Date of Construction 1915-1920

Source Sanborn Maps

Style/Form Industrial

Architect/Builder Unknown

Exterior Material
Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Asphalt Shingle

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Replacement windows ca. 1990
Smokestack removed after 1950

Condition Fair

Moved _X_ **no** ___ **yes** **Date**

Acreage 44,576 S.F.

Setting The building faces west onto Dane Street and is surrounded by a mix of modern commercial buildings and other buildings formerly owned by the American Tube Works. To the east are a number of early to mid-nineteenth-century residences. Directly to the south are the former railroad tracks for the Fitchburg Division of the Boston and Maine Railroad.

BUILDING FORM

ARCHITECTURAL DESCRIPTION _X_ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The former American Tube Works' Boiler House at 24 Dane Street is a rectangular, nine-bay by four-bay, two-and-one-half-story, brick building constructed ca. 1915-1920. The building has brick walls laid in common bond and an asphalt-clad, side-gable roof with a parapet, a tall and narrow wood shingle-clad monitor, and copper flashing. The facade faces west toward Dane Street. The basement level has been obscured by a modern concrete sidewalk. A brick denticulated cornice and copper gutters are located on the facade and east (rear) elevations. A granite stringcourse with brick dentils wraps around the building, and the north and south elevations are further divided by brick buttresses with granite bases and caps.

Fenestration on the building consists of rectangular sliding and fixed aluminum replacement windows. The east and south elevations have arched brick lintels and granite sills with rectangular aluminum windows and horizontal sliding sash, or rectangular aluminum, one-over-one, double-hung replacement windows. The windows on the facade, the upper story of the east elevation, and in both gable ends of the monitor are rectangular aluminum sliding windows with splayed brick lintels. The monitor has similar aluminum sliding windows.

The primary entrance, located on the facade, is positioned off-center. It has a single, solid wood door with a wood surround and Doric pilasters. A concave copper door hood is located directly above it. The south elevation contains two additional entrances and two metal fire escape landings. The paneled door on the lower story of the south elevation has been hung in a retrofitted window opening, and a second modern emergency exit door is located in the gable. The east elevation has a modern, overhead rolling steel garage in a modern opening where a window was originally located. The building has been altered; the window openings have been filled in with brick, and concrete was used to mimic the granite caps on some of the buttresses on the north elevation. The detached smoke stack originally located on the north side of the building has been removed.

HISTORICAL NARRATIVE

The boiler house for the American Tube Works Company was one of the later buildings constructed by the company as part of its late 19th and early 20th century expansion and modernization effort. The building was constructed ca. 1915-1920 to produce heat and power for the entire complex. It is unknown where the original early boiler house was located on this site, since the patented process was a well-guarded secret and individual building uses are not detailed on early maps. In 1940, after the American Tube Works Company ceased operations in Somerville, the building was used as offices for the C.J. Maney Company, general contractors (Sanborn Map Company 1933, 1950; Somerville City Directory 1940, 1950). By 1956, Builders Iron Works was located at this address and remained until at least 1965; by 1971, it had relocated to 33 Park Street in Somerville. The J. L. Caputo Construction Company also had offices here in the 1960s. Currently, the building continues to be used for private commercial offices.

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville and opened an office at 103 State Street in Boston. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville with 175 employees and a production output of $1.2 million worth of brass and copper tubing. In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary,

Continuation sheet 1

Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, the company was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together) creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME, and moved to Boston in 1823. In 1831, Hinkley and Child opened a small machine shop in Boston, and in 1840, Hinkley produced his first locomotive. Within a few years, locomotives became their primary product and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850s, Hinkley was one of the major producers of locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in locomotive technology and innovation is reflected in his early investment in the American Tube Works. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100 to 150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly, and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

With the increased demand for seamless tubes in the late 1880s and 1890s the company was able to expand. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased. This prompted the American Tube Works to cease production for one day per week and to cancel many of its contracts; production did not pick up four more months (Anon 1907b, Anon 1908). The American Tube Works was able to recover from this, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon 1912).

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. Beginning in 1902 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities including four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the Milk Row Cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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PHOTOGRAPHS

Photograph 1.
American Tube Works, former Boiler House, north and west elevations, looking southeast from Dane Street.

Photograph 2.
American Tube Works, former Boiler House, east elevation, looking west from the south side of Tyler Street.

Photograph 3.
American Tube Works, former Boiler House, north elevation, looking southwest from alley.

Photograph 4.
American Tube Works, former Boiler House, south elevation, looking northeast from Dane Street.

Photograph 5.
Detail of entrance.

FORM B – BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
74-E-1	Boston North	SMV.H	SMV.794

Photograph

Topographic or Assessor's Map

Recorded by: Virginia H. Adams, Carey Jones, Quinn R. Stuart, and Melissa Antonelli
Organization: PAL
Date (*month / year)*: May 2010

Town Somerville

Place *(neighborhood or village)* Union Square

Address 40 Lake Street

Historic Name American Tube Works Garage and Warehouse

Uses Present: Industrial/Commercial

Original: Garage and Warehouse

Date of Construction ca. 1912 (garage), before 1931 (warehouse)

Source Building Plaques

Style/Form Industrial

Architect/Builder Unknown

Exterior Material
Foundation: None Visible

Wall/Trim: Brick/Limestone

Roof: Asphalt

Outbuildings/Secondary Structures
None

Major Alterations *(with dates)*
Replacement windows and filled in openings.

Condition Fair

Moved X **no** ___ **yes** **Date**

Acreage 17,941 S.F.

Setting The building faces west onto Church Street, and is surrounded by a mix of modern commercial buildings and residences built during the mid- to late-nineteenth century. Directly to the south are the former railroad tracks for the Fitchburg Division of the Boston and Maine Railroad.

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

BUILDING FORM

ARCHITECTURAL DESCRIPTION __X__ *see continuation sheet*
Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

HISTORICAL NARRATIVE _X_ *see continuation sheet*
Discuss the history of the building. Explain its associations with local (or state) history. Include uses of the building, and the role(s) the owners/occupants played within the community.

BIBLIOGRAPHY and/or REFERENCES _X_ *see continuation sheet*

_X_ Recommended for listing in the National Register of Historic Places. *If checked, you must attach a completed National Register Criteria Statement form.*

ARCHITECTURAL DESCRIPTION

The garage and warehouse at 40 Lake Street is a connected group of two buildings. At the south (rear) of the lot is a rectangular, six-bay by four-bay, three-story, brick warehouse building constructed before 1931. The building has brick walls laid in common bond and a flat roof with a brick parapet on the south elevation. The facade faces west, perpendicular to Lake Street, and the rear (east) elevation faces onto an asphalt parking lot. A brick denticulated cornice and copper gutter system wraps around the roof line of the building. Located to the north of the building is a ca. 1912 L-shaped, nine-bay by one-bay, one-story building, which is connected to the warehouse by a two-bay loading dock. This building has brick walls laid in a common bond and a shed roof with a stepped brick parapet on the north elevation. A brick denticulated cornice is located on the north and south elevations. A modern corrugated metal building is connected on the east elevation and obstructs that elevation from view.

Fenestration on the warehouse consists primarily of rectangular brick openings with quarry-faced granite sills that have a chamfered edge. The primary types of windows are wood, eight-light, fixed windows over four-light awning windows, and replacement single-pane fixed windows, several with horizontal sliding windows below. The windows on the north elevation have been filled in with wood, as well as the upper portions of the windows on the second story of the west elevation. All the windows on the first story of the west elevation have been removed and completely filled in with brick; however, two of the original openings still retain their granite sills. The window openings on the garage, as well as the two bays of the loading dock, have been entirely filled in either by brick or concrete block; however, several openings still retain their original concrete or granite sills and lintels. The south elevation is bounded by the former Fitchburg Line of the Boston and Maine Railroad and is not accessible. The primary entrance to the warehouse, located on the west elevation, consists of a modern metal door with full glazing. A modern steel door is located in an arched brick opening to the south of the primary entrance. Two arched brick openings on the second and third stories of the facade have large board and batten bay doors with quarry-faced granite sills that have a chamfered edge. A solid steel door is set in a rectangular brick opening on the south elevation of the garage.

Other significant features include a granite date stone on the north elevation marked with "1918" on it; however, map evidence contradicts this date. The warehouse does not appear on any map until ca. 1933, but an illustration of the industrial complex from a 1931 article contains this building (Sanborn 1933, Anon. 1931). A granite date stone on the north elevation of the garage is marked with "1912". An iron hoist is located on the roof of the west elevation of the warehouse.

HISTORICAL NARRATIVE

The building was built as a garage and warehouse for the American Tube Works Company and was one of the later buildings constructed by the company as part of its late 19th and early 20th century expansion and modernization effort. When it was originally constructed, it had the capacity for 18 cars that were used as part of the company's local distribution network. The patented process was a well-guarded secret, and all elements of the manufacture and distribution of their products occurred at this complex. In 1940, after the American Tube Works Company ceased operations in Somerville, the Stuart Milk Company occupied the building. From about 1950 to 1965, H. P. Hood & Sons used it as part of an egg testing facility (Sanborn Map Company 1933, 1950; Somerville City Directories 1940, 1950, 1956, 1960, 1965). A Somerville address is not listed for the Hood company in 1971. Currently, the building is used as private commercial space for H.D. Chasen Co. Inc., an industrial supply company founded in 1946.

The American Tube Works was founded in 1851 by Joseph H. Cotton, Holmes Hinkley, and Daniel F. Child and was the first American company to manufacture seamless brass and copper tubes. In 1848, they sponsored a trip for Joseph Fox, an engineer, to go to England to learn the process of making seamless brass and copper tubes from Charles Green who had developed and patented the process in 1838. They also paid for the right to produce and distribute seamless brass and copper tubes in the United States. The American Tube Works established its production plant in Somerville, at the location of the current buildings, and opened an office at 103 State Street in Boston. The original production plant was located north of the former Fitchburg Railroad line on a block bounded by Dane Street, Frost Avenue (no longer extant), and an unnamed street. The original factory shared a block with residences and a cemetery. The company was almost immediately successful, and by 1865 it was the second largest employer in Somerville, with 175 employees and a production output of $1.2 million worth of brass and copper tubing.

Continuation sheet 1

In 1875, the firm acquired two patents, one for a tube-drawing mandrel issued August 3, 1875, and one for seamless metal tubes registered on July 20, 1875.

The company remained under the control and management of the Cotton family for multiple generations. Other involved members of the Cotton family included William C., George H., and Walter G., all sons of Joseph H. Cotton. Joseph Hall Cotton, son of George H., served as treasurer and director of the company until his death in 1919. By 1931, Elizabeth A. Cotton, daughter of Joseph H. Cotton, was the only member of the Cotton family still involved in management of the firm. At this time, the president was Walter B. Grant, with John J. Dervan serving as treasurer and general manager, John J. Stankard as secretary, Thomas W. Bloomer as superintendent, and William T. D'Arcy as assistant superintendent, all of whom had been with the company for over 30 years. In 1933, Walter E. O'Hara of Fall River acquired a controlling interest in the company, thereby ending the ownership of the company by the Cotton family. At the time of this purchase, the company was reputed to be the largest manufacturer of copper pipes and tubes in the country (Anon. 1907a, Anon. 1909, Anon. 1919, Anon. 1931, Depew 1895:335, USGPO 1876, Zellie and Stott 1990:70).

The seamless tubes produced by the American Tube Works were originally for use in locomotive, ship, and stationary steam engines. Prior to the introduction of the seamless tube, all engine tubes were brazed (made of strips of metal in a rounded form with the edges welded together), creating seams that could leak or weaken. Holmes Hinkley and Daniel F. Child, two of the original partners, were early locomotive manufacturers and innovators. Hinkley was born in Hallowell, ME, and moved to Boston in 1823. In 1831, Hinkley and Child opened a small machine shop in Boston, and in 1840, Hinkley produced his first locomotive. Within a few years, locomotives became their primary product and they became the largest locomotive manufacturer in New England. Continuing into the mid-1850s, Hinkley was one of the major producers of locomotives in the United States, until production ceased when his plant closed in 1889 (White 1968:453). Though there is no information available to indicate he used seamless tubes in his locomotives, his interest in the technology is reflected in his early investment in the American Tube Works, and it seems likely that Hinkley's locomotive works would have used the product. In general, copper and brass tubing were used early on in the production of steam boilers. The earliest locomotive boilers contained anywhere from 100 to 150 copper tubes; brass tubes were introduced later, around 1851. Though they were more expensive, the use of brass tubes spread quickly, and within the next four years 800 locomotives employed them (Ure 1867:947-948, White 1968:99-100, Zellie and Stott 1990:70).

By the 1880s, the American Tube Works expanded its production and its plant in Somerville to meet the growing demand for domestic pipes. Increasing urbanization in the post-Civil War years and a growing sense of the importance of sanitation systems led to an increased demand for plumbing and other domestic fixtures. In the 1870s, urbanized areas began to consider larger sanitation systems, including sewers and water mains, to decrease the spread of disease. This gave rise to a number of sanitation-related books and articles and an increasing professionalization of the plumbing industry. Coupled with this was a growing concern by local municipalities over plumbing and sanitary systems. This led to the enactment of local laws and codes that required specific types of plumbing and "sanitary fixtures." For example, in 1880 the Somerville Board of Health adopted requirements for domestic drainage systems that required residents to use "best quality pipes" for drains inside and outside of the house. In addition, architects of new buildings were required to produce a complete set of drainage plans. Trade journals and publications relating to domestic plumbing and heat distribution systems promoted seamless brass and copper pipes for use in sanitation, heating, and drinking and cooking water systems, since they would not corrode, leak, or poison these facilities (International Textbook Company 1906:30, Ogle 1996:4-6, 145-146).

With the increased demand for seamless tubes in the late 1880s and 1890s, the American Tube Works Company was able to expand their distribution capabilities. By 1899, they had moved their Boston office to 187 Milk Street and had opened offices in New York at 20 Gold Street, in Philadelphia at The Bourse, and in Chicago at The Rookery (American Railway Publishing Company 1899). In 1902, they purchased a large parcel of land in Braintree on the Fore River; however, it appears they never developed the property, in part due to a strike in 1904 as well as fluctuations in the market. Further, in 1907 the price for the raw materials needed for copper production greatly increased, prompting the American Tube Works to cease production for one day per week and to cancel many of its contracts (Anon. 1907b, Anon. 1908). The American Tube Works was able to recover, and by 1912 they employed about 800 employees and were reported to be one of the largest industries in the State (Anon. 1912).

Continuation sheet 2

The growth experienced by the company in the early 20th century allowed them to completely rebuild their production plant. All the original buildings that comprised their production facilities in Somerville were demolished. Beginning in 1890 and continuing until at least 1920, they completely rebuilt the complex and modernized their production facilities. As part of the expansion, they acquired all the land between Dane Street, Somerville Avenue, Church Street, and the railroad tracks (with the exception of the cemetery). Residential buildings were demolished, and Sherman Street and Frost Avenue were incorporated into the site. Between 1900 and ca. 1920, the company constructed four large drawing mills, a rolling mill, a foundry, and pattern and blacksmith shops, all arranged around three sides of the cemetery (Zellie and Stott 1990:70). The company remained in Somerville until 1934, the year after Walter O'Hara gained control of the organization. It is not listed in the 1935 Somerville City Directory, and in 1936 a Cambridge address is given for the company.

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PHOTOGRAPHS

Photograph 1. American Tube Works, former warehouse, north and west (facade) elevations, looking southeast.

Photograph 2. American Tube Works, former garage, north and west elevations, looking southeast.

Photograph 3.
Detail of iron hoist on roof of warehouse.

Photograph 4.
Detail of granite date-stone on north elevation of garage.