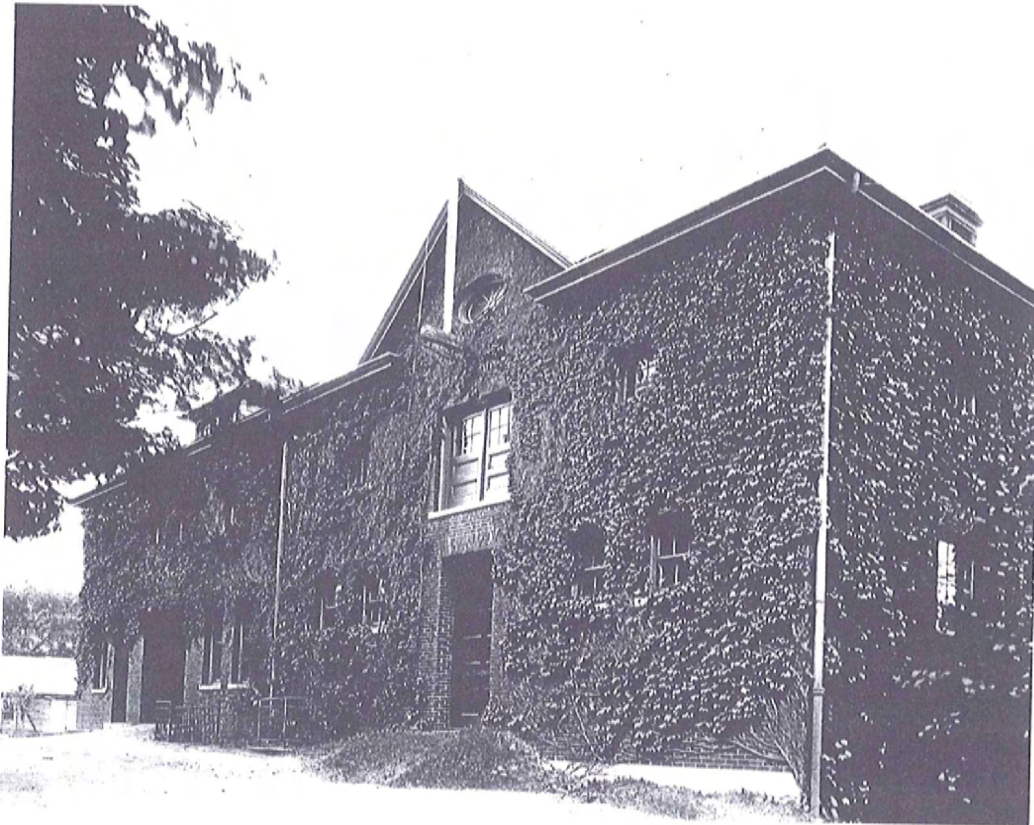




CSS ARCHITECTS, INC.

ARCHITECTURE • PLANNING • INTERIOR DESIGN



**BUILDING ENVELOPE EVALUATION  
CRAFT STREET STABLE DPW FACILITY  
NEWTON, MA**

*AUGUST 29, 2008*



*Members of the American Institute of Architects and USGBC*

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CSS Architects Inc.  
Wakefield, Massachusetts

### BUILDING ENVELOPE EVALUATION

Crafts Street Stable – DPW Facility  
Newton, MA

August 26, 2008

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## **EXECUTIVE SUMMARY**

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### **INTRODUCTION**

CSS Architects Incorporated was retained by The City of Newton to conduct a building envelope evaluation and A.A.B compliance review of the Crafts Street Stable Building that is presently being used as a DPW Facility at 92 Crafts Street, Newton, MA. The objective was to review the existing building envelope and handicap compliance. This report summarizes the findings from CSS Architects Inc and Thompson & Lichtner's inspection of the building envelope; comprised of exterior masonry, slate roofs, copper gutters and downspouts, wood windows and doors and handicap accessibility. The report provides recommendations for repairs and an estimate of repair costs.



## **EXISTING CONDITIONS**

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### **BACKGROUND**

The Crafts Street Stable was originally designed as a City Stable for Newton in 1894. The building is not listed on the National Register of Historic Places but an application has been submitted by the Newton Historic Commission for nomination. The building is two stories and a basement that is accessible at grade level. The building is a rectangular structure with one horizontal wing extending out from the right side of the south elevation of the long side of the main building section. The exterior walls are solid water struck brick masonry with granite trim and partial rubble stone and brick walls at basement. The roof is comprised of wood planking supported by wood trusses and is covered with slate roofing. There are four dormer roofs at the second floor. Copper cap flashings are located at the hip ridges. The copper gutters and downspouts are not original to the building. The wood windows are a combination of double-hung, or pivot type awning and are original to the building. The floor construction is wood frame supported by wood beams and steel columns. The building is not open to or used by the public and therefore does not need to address 521 CMR A.A.B compliance. The building does address A.D.A compliance with the installation of wood ramps at the first floor interior. Men's and women's accessible toilets are provided at the first floor.

## EXISTING CONDITIONS

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### OBSERVATIONS

#### A. WOOD WINDOWS:

The exterior windows are original to the building and are approximately 114 years old. The windows inspected consisted of 75 window openings having several different types and configurations. The window types consist of wood double-hung, and pivot awning. See window survey schedule Appendix II-01

The exterior sill and frames have failed paint to no paint coverage; the wood appears to be in fair condition. Generally the windows are of inferior construction quality probably since the original use was a stable for horses. The sills are heavily weathered with some fissure and splits in the wood. The main area of deterioration is the paint coverage and decayed sills (see Appendix photos #xx). Many of the bottom sashes on the first floor are not original and are of poor quality.

Overall the existing sash joinery is in fair condition. The muntin assembly is in fair condition. The glass is mostly intact with only about 1% broken or cracked, but the glazing compound is in poor condition.

There does not appear to be any caulking between the window trim and the brick, creating a gap where water could penetrate.

All window openings have granite that are in good condition.

In conclusion the overall condition and quality of the wood and the wood components and construction on the above features averages fair to poor.

#### B. EXTERIOR DOORS:

The entry doors are not original to the building. Since the building has changed from being a stable to housing the City of Newton's DPW facility a number of changes were made to the door openings. Notably three openings for large vehicle access were created and two larger openings once used for horse drawn buggies were filled in or made smaller with masonry infill. Most of the doors are in poor condition.

The overhang canopy at the front entry door is not original to the building. It is in good structural condition but need to be repainted. The overhang canopy at the left side entrance is badly deteriorated and should be replaced.

## **EXISTING CONDITIONS**

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### **OBSERVATIONS CONT'D**

C. MISCELLANEOUS

The shed structure at the rear of the building is badly deteriorated and should be removed.

D. HANDICAP ACCESSIBILITY:

A concrete ramp and stairs have been added to the front of the building. The ramp is not handicap accessible due to the step grade and stairs at one end. Presently there is no handicap accessibility to building.

The building is not open to or used by the public and therefore does not need to address 521 CMR A.A.B compliance to provide an accessible public entrance and accessible toilets. Americans with Disabilities Act allows for employers with 15 or more employees to make reasonable accommodations.



## EXISTING CONDITIONS

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### COMMENTS

Based on the results of our investigation we have the following comments relative to the condition of the Crafts Street Stable/DPW facility.

#### A. WINDOWS

1. The following components require restoration or replacement:

- a. Sashes, exterior trim, frames and sills.
- b. Broken sash cords
- c. Weather stripping and caulking

#### B. DOORS

1. The doors have been replaced and are not original to the building. They are in poor condition and need to be replaced.

#### C. HANDICAP ACCESSIBILITY

1. No further action required at this time

**Note: The condition of the slate roof, gutters/downspouts, and masonry walls will be addressed in Thompson and Lichtner's report. See Appendix V**

## **RECOMMENDATIONS**

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### **RECOMMENDATION A – WINDOWS**

The windows are in poor condition and are not structurally sound. We recommend replacing the existing windows with a aluminum clad insulated wood window. The type and configuration should match the existing original windows to maintain the historical integrity of the building and the insulated glass would improve the energy efficiency of the building.

1. Replace existing windows (See Appendix II and III )

### **RECOMMENDATION B. – DOORS**

The recommendation would be to replace entry doors with new fiberglass entry door that would mimic the original door style. The vehicular overhead doors should be replaced with new heavy duty paneled doors to mimic the original style.



**COST ESTIMATE**

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**BUILDING ENVELOPE EVALUATION**

Crafts Street Stable- DPW Facility  
Newton, MA

18 July 2008

<b><u>ITEM</u></b>	<b><u>ESTIMATED COST</u></b>
<b>RECOMMENDATION A-WINDOWS</b>	
1. Replace seventy five (75)windows .....	120,000
<b>RECOMMENDATION B- DOORS</b>	
1. Replace six (6)Type A doors .....	15,000
2. Replace four (4) overhead doors.....	20,000
2. Rebuild /restore two door canopies .....	6,000
 See Consultants Report for Cost Estimate Note: Costs do not include General Conditions ( 10%), Insurance/bonds (2%), Overhead and Profit(15%)	
<b>ESTIMATED COST ABOVE ITEMS A, B.....</b>	<b>\$161,000.00</b>
<b>ESTIMATED COST – CONSULTANT REPORT ITEMS A-B</b> .....	<b>\$261,775.00</b>
<b>TOTAL ESTIMATED COST</b> <b>(including G.C.,I &amp;B, O&amp;P).....</b>	<b>\$544,533.00</b>



North Elevation

01



North Elevation

02

Exterior Building Preservation Study  
Craft Street Stable  
Newton, MA

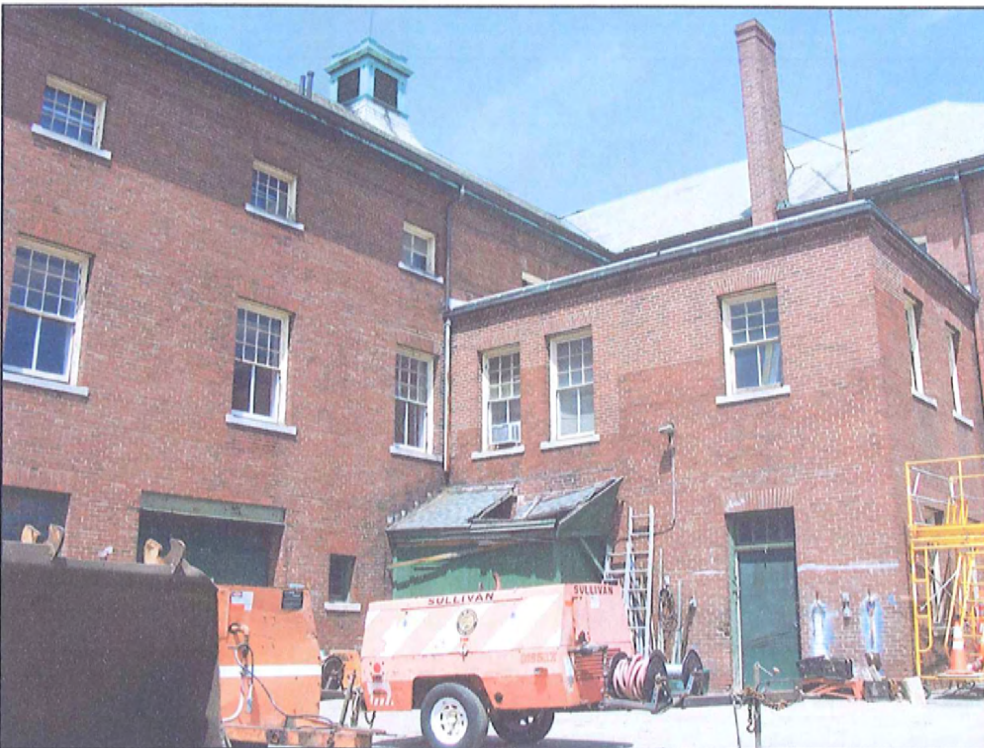
I-1





East Elevation

03



East/South Elevation

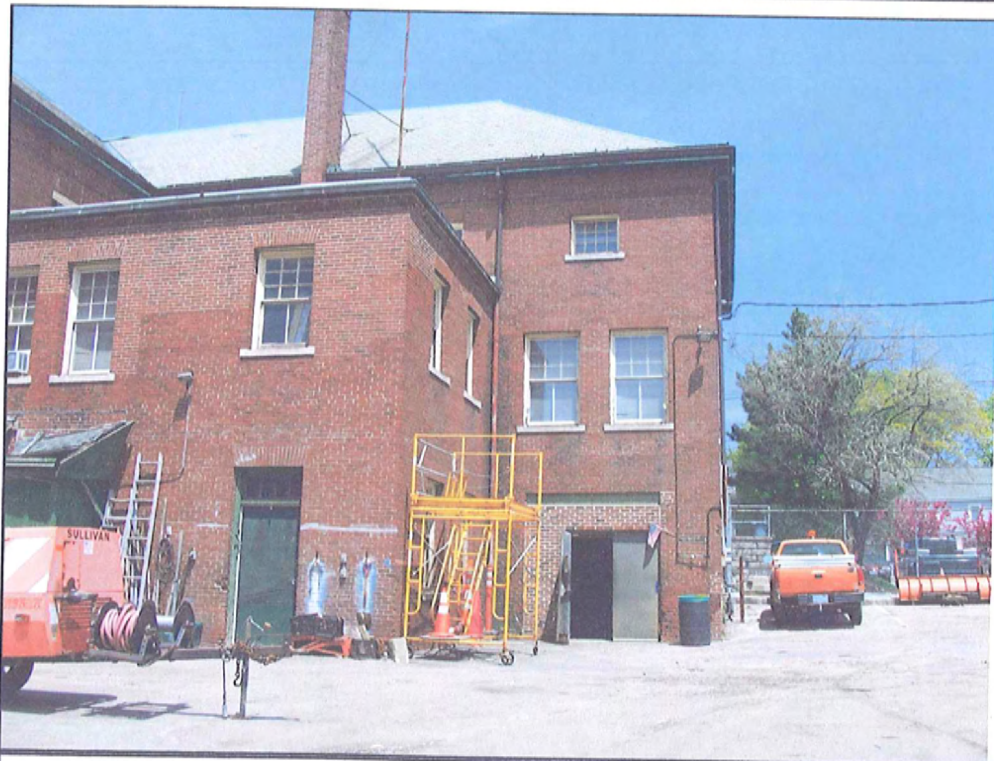
04





East Elevation

05



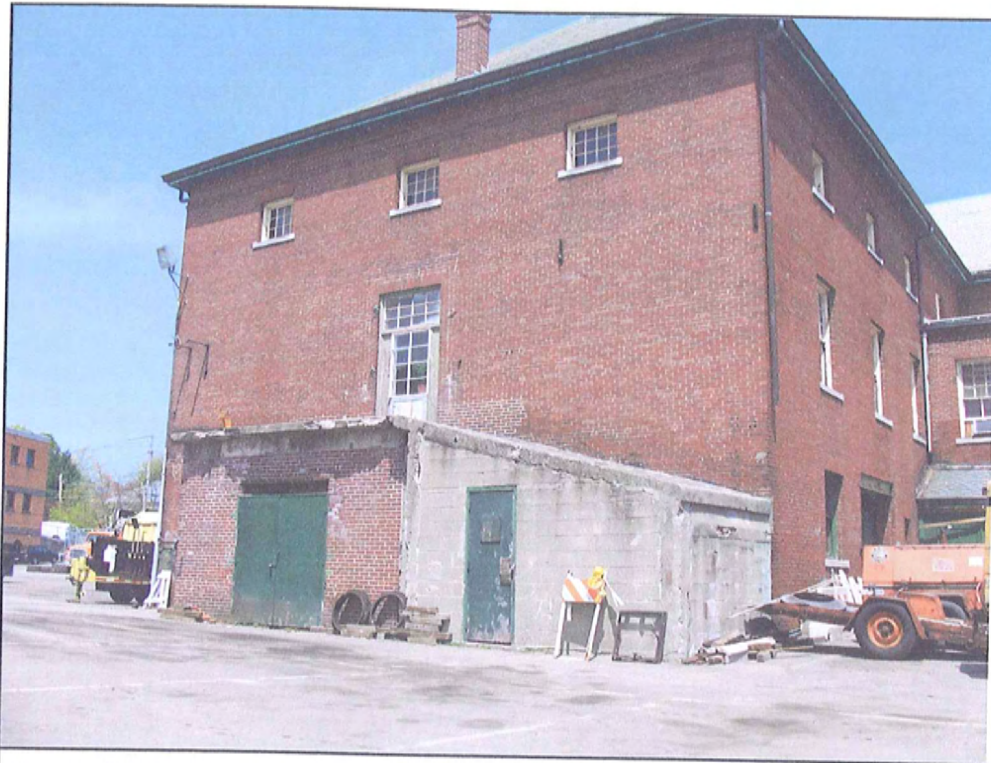
South Elevation

06

Exterior Building Preservation Study  
Craft Street Stable  
Newton, MA

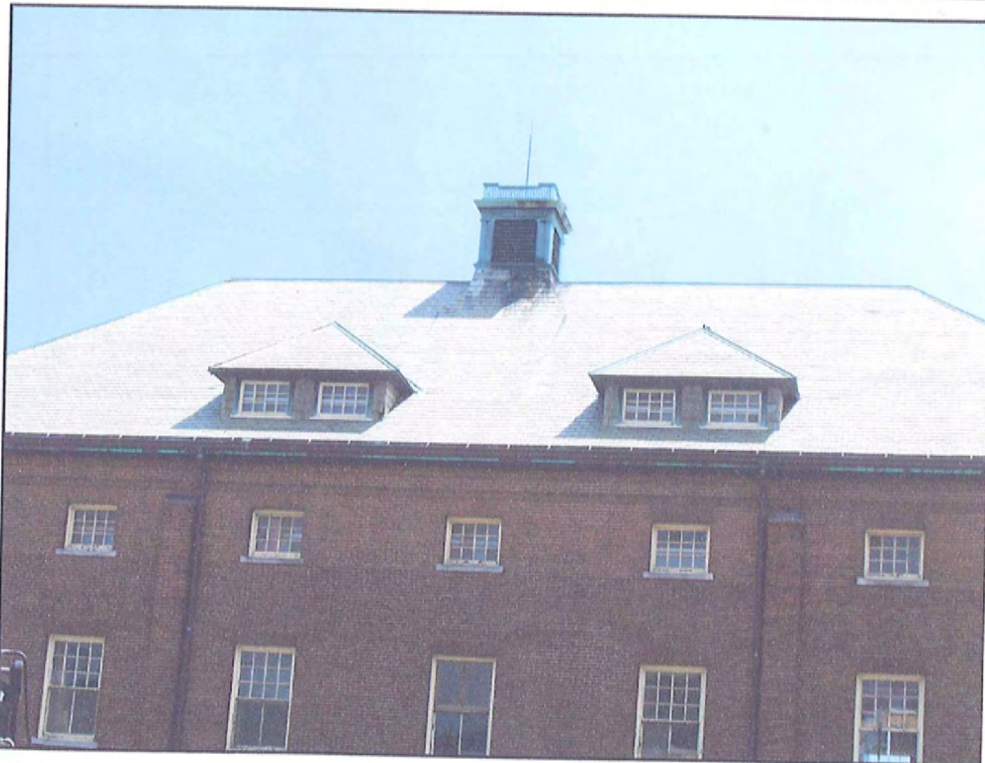
I-3





South Elevation - Concrete Ramp

07



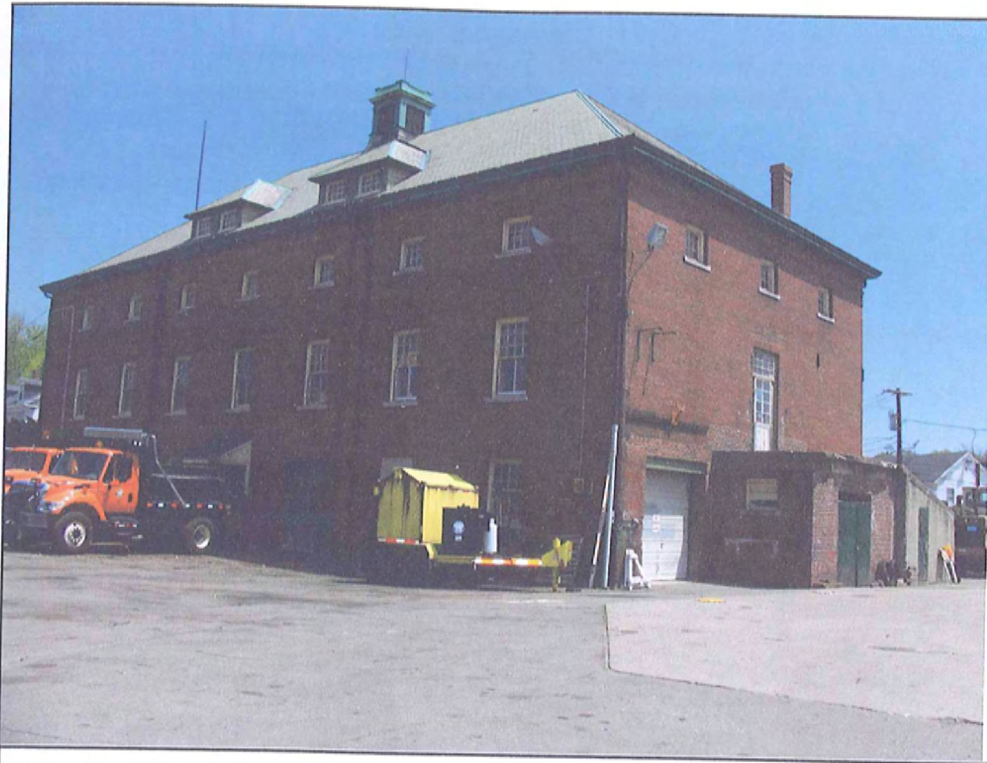
West Elevation - Dormer Windows/Cupola

08

Exterior Building Preservation Study  
Craft Street Stable  
Newton, MA

I-4





West/South Elevation

09



West Elevation

09

Exterior Building Preservation Study  
Craft Street Stable  
Newton, MA

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11



Second Floor - Wood Trusses

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Exterior Building Preservation Study  
Craft Street Stable  
Newton, MA

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Second Floor - Wood Trusses

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First Floor - Break Room

14





Toilet at First Floor

15



Garage, Vehicle Storage - Basement

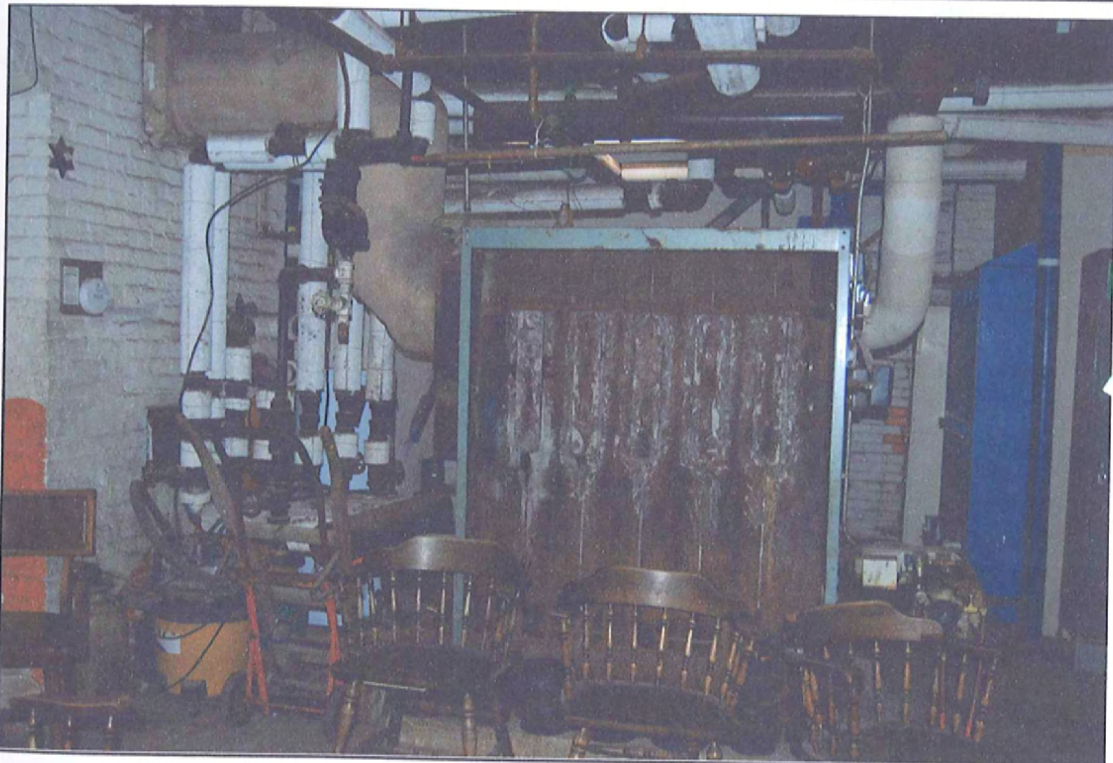
16





Basement - Vehicle Storage

17



Basement - Boiler Room

18

Exterior Building Preservation Study  
Craft Street Stable  
Newton, MA

I-9





Garage Door at Basement - Damaged Brick Jambs

19



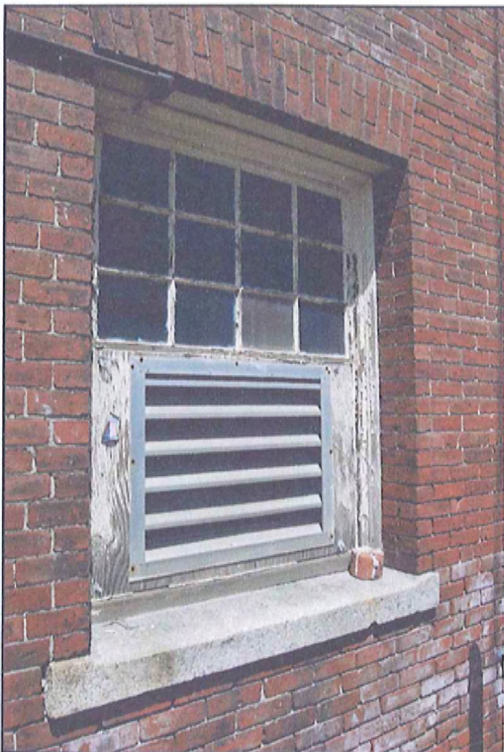
New Overhead Door - Concrete Ramp

20



Window - Basement - Type 1

21



Window with Louver - Basement - Type 1

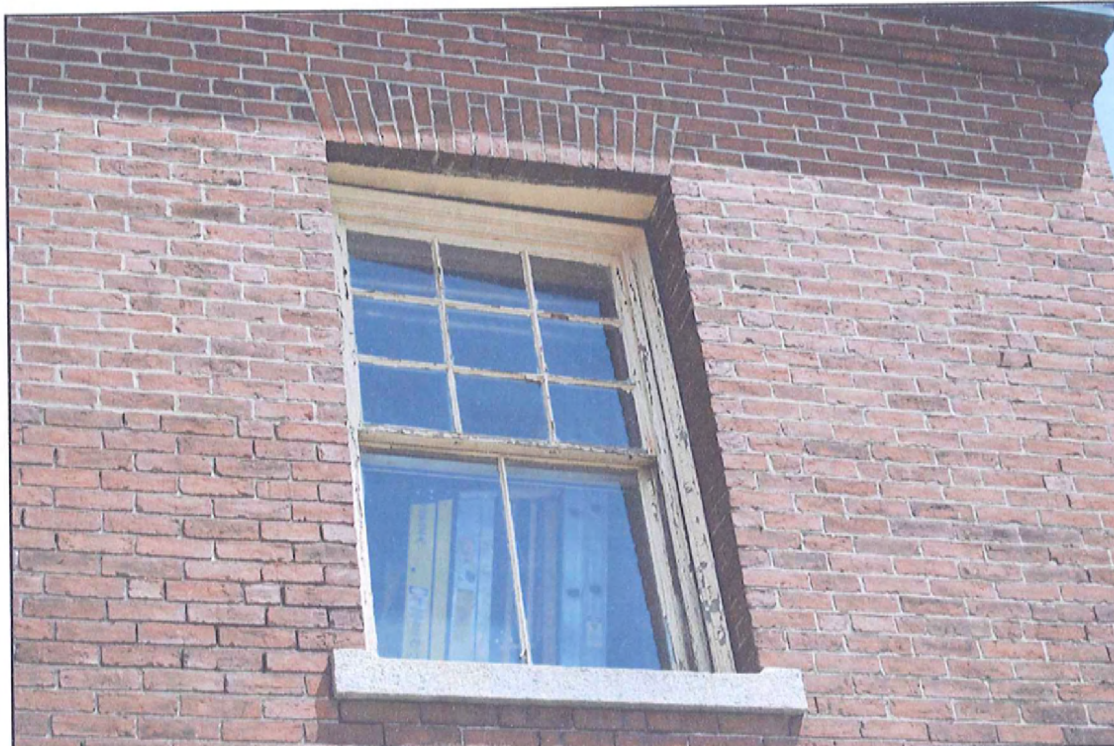
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Window - First Floor - Type 4

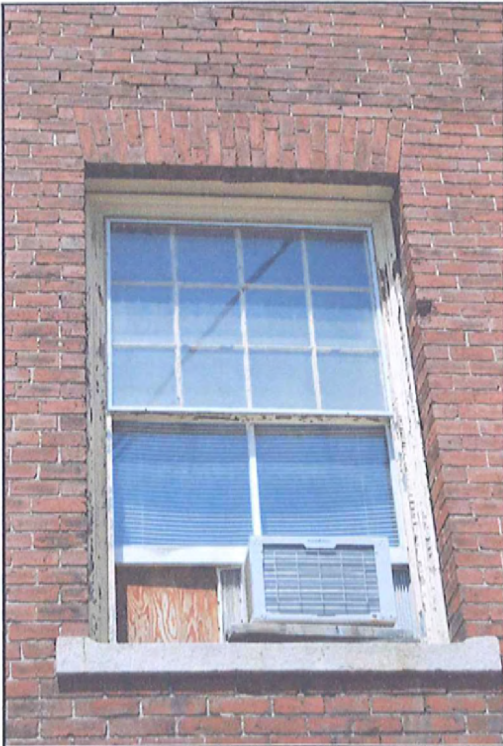
23



Window - First Floor Storage Room - Pushed In - Type 5

24





Window - Rebuilt Sash - Type 4

25



Window - Basement - Type 5

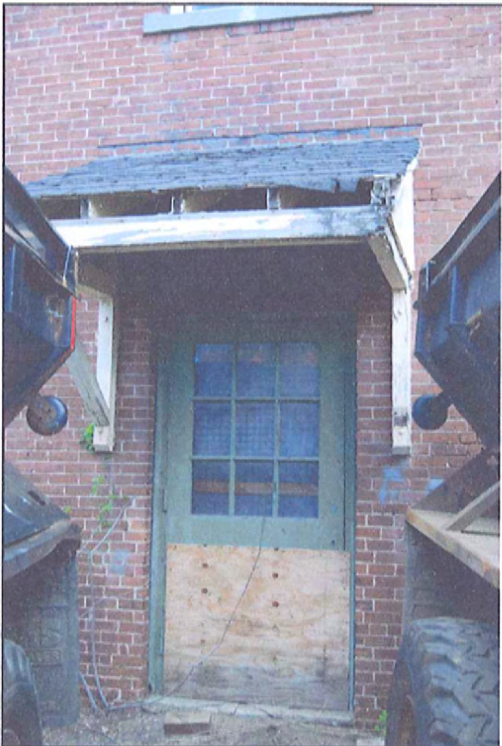
26





Rebuilt Window Sashes at First Floor

27



Door to Basement Storage

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