

WESTFORD TOWN FARM - ADAPTIVE REUSE CONSIDERATIONS

35 Town Farm Road

Westford MA



MILLS WHITAKER ARCHITECTS LLC
PO Box 750089
Arlington MA 02475

22 October 2019

Westford Town Farm – Adaptive Reuse Considerations

35 Town Farm Road

Westford, MA

Prepared by Mills Whitaker Architects LLC

22 October 2019

TABLE OF CONTENTS

1 INTRODUCTION

Historical Significance

Study Scope

Prior Uses & Studies

2 FACILITY DESCRIPTION

Site Configuration

1837 & 1900 Buildings

Appurtenant Buildings

4 EXISTING CONDITIONS

Exterior Conditions

Interior Conditions

Historic Fabric

6 REGULATORY CONSIDERATIONS

Zoning & Site Issues

Accessibility Compliance

Building Code Upgrades

9 RECOMMENDATIONS

Define Preferred Uses and Terms

Prepare Preservation Restriction

Establish Lot Size

10 APPENDICES

A: Site Plan & Historic Nomination Info

B: Captioned Photographs of Existing Conditions

C: Historic Photographs 1893 to 1970's

D: Prior Assessments of Town Farm Facilities

INTRODUCTION

Historical Significance

The Town Farm in Westford was listed individually in the National Register of Historic Places on March 14, 2008, based on its significance as one of the few remaining “poor farms” from the era in which municipalities were charged with caring for the welfare of unfortunates, a policy rooted in England from the early 1600’s. The listing was also noted for architectural significance of the Greek Revival 1837 building and the late Victorian 1900 building (Italianate), both of which retain their historic character in many respects.

Appropriately, the 35 Town Farm Task Force established by the Board of Selectmen in the spring of 2019 is recommending that the historic facility be rehabilitated for affordable housing for seniors, and as the new location of the Westford Food Pantry to serve those in need. These two uses for this significant facility are a compatible fit for its adaptive reuse.

Study Scope

The intent of this study was to assist the Task Force in understanding the suitability of this historic building for adaptive reuse. The focus was limited to reviewing historic documents, previous studies, and observing existing conditions with a view toward providing highlights of consideration for the next steps related to rehabilitation of the property. This study report does not reiterate or summarize the full body of work that precedes it, but does include historic nomination forms, excerpts of a 2014 building assessment and a structural report from 2011 that was referenced in the 2014 assessment. Captioned photographs of existing conditions are also included to illustrate and describe extant facility components.

This study was not intended to be a comprehensive assessment of existing conditions as it was limited to visual observations and initial comments related to rehabilitation needs. Prior to implementing any renovation work, more significant analysis will be required, and those services should include consulting engineers for reviews of the site, structure, potential hazardous materials, mechanical and electrical systems conditions and the like.

Prior Uses & Studies

The Town Farm facility served the poor in various capacities from 1837 until 1959 when the last resident was transferred to the Tewksbury Hospital. In 1960, the Town formed a committee to consider other uses or demolition of the building, so consideration for its adaptive reuse or disposal has a long history. Subsequent committees formed in 1966, 2015 and 2019 reviewed the potential for adaptive reuse or demolition. The Westford School’s administrative staff used the building until 2003, and the Recreation Department occupied the facility from 2007 to 2016. Portions of the original farmland acreage were provided for the Norman E. Day Elementary School, the Roger’s Fire Station and other portions were allotted to the Water Department. Building inspection reports were filed in 1994 and 2006, and the aforementioned 2014 assessment reported on current conditions. The 2014 report provided an order-of-magnitude project budget of \$3.7m for maintenance. These costs must be increased to account for escalation (4% per year), site improvements and any proposed additions and other upgrades needed to meet reuse requirements.

FACILITY DESCRIPTION

Site Configuration

The Town Assessor's database lists the lot area for 35 Town Farm Road as 0.675 acres (29,403 SF). A 2017 draft survey by Alan Engineering did not indicate the lot size, and an RFP issued by the Town in 2017 for proposals to purchase and develop the site listed it as 0.9 acres. The building is sited parallel to Town Farm Road between the Roger's Fire Station to the north and the railroad to the south. The lot area immediately adjacent to the building is paved on the south, west and north sides, and a paved driveway extends to the east for access to the back of the Roger's Fire Station and its training facility. The area immediately east of the building is landscaped but not maintained.

1837 & 1900 Buildings

The original brick building, constructed in 1837, is a two-and-one half story structure with a simple pitched roof with an east/west ridge and gable ends facing the roadway in front and the woods in back. The sloping roof is punctuated on each side by a small, single dormer providing light to the middle of the third floor, considered a half story because of the eave line being at the level of the third floor framing. Original 6-over-9 double hung windows, trimmed with granite sills and lintels, are located on every side. Some windows on the east façade are trimmed in brick and, while matching original muntin patterns, are not original to the building. A contemporary addition on the east conceals the original façade at the first floor from the exterior, but that façade is retained in full view within the interior. The back addition replaced an earlier porch that was visible in 1952 photographs after a fire was reported by the *Lowell Sun* newspaper (Nov 17, 1952, Issue No. 274). Windows in the east addition are contemporary vinyl and do not match the original windows.

The 1837 portion has two front "porches" on the street façade that were likely added in 1900 as fire escapes to serve Town Farm residents. Access to these porches is via an original door at the first floor, a hinged door in a window opening on the second floor, and a window leading to a roof hatch at the third floor. The first floor door at the porch is no longer visible from the interior, having been blocked by shelving. The primary entrance to the building is on the north side via an original opening with sidelights that is visible in early photographs, but the door and sidelight materials are not original. A third exterior doorway is located on the south side of the east addition, adjacent to basement bulkhead doors serving the original basement.

The 1900 addition to the north of the 1837 building replaced a former ell that is visible in a photograph taken after construction of the 1893 barn and prior to removal of the older ell. This building is also a two-and-one half story structure with a north/south ridge with gable ends facing the fire station and the 1837 building. A single dormer is located on the front roof slope facing Town Farm Road. This addition has a central entrance with an original bracketed canopy, although the door is a contemporary replacement. Original 2-over-2 double hung windows are present throughout. The original clapboarded façade has been covered in vinyl siding and exterior triple-track aluminum storm windows provided. A one-story ell on the north side of the house is visible in early photographs, but modern floor framing visible from the crawl space indicates that repairs or partial reconstruction may have been done in the not-too-distant past.

Both buildings have single interior stairways that originate at the main entrance doorways and serve all floor levels, including the basements. The stairs are “stacked” with single runs connecting each floor with the originating landing adjacent to the entrance door. The two buildings are interconnected at the first and second floor levels, effectively providing access to each stairway at those two levels. There are no connections between the buildings at the basement level, but each basement has a bulkhead on the back wall. There are no connections between the third floor levels between buildings.

With a few exceptions, the room configurations in each building appear to be relatively unchanged over time. Noted exceptions to the original layouts are as follows:

- Removal of partitions in the eastern half of the 1837 first floor that created a meeting room and a transverse corridor on the south side of that room.
- Removal of partitions in the eastern half of the 1837 second floor that created a recreation and exercise space.
- Provision of toilet rooms in both buildings, introduced in 1924 to replace outhouses.
- Partially finished partition to enclose the stairway at the second floor of the 1837 building, but if done for fire prevention it has an open doorway (not self-closing), insufficient landing space, and the door does not swing in the direction of egress.

Appurtenant Buildings

To the north of the 1837 – 1900 residential buildings, there are two storage barns that are accessed from the shared paved areas. The barn closest to the road is a two-level facility with openings at the lower level on the south side (facing the Town Farm) and at the upper level on the west side (facing Town Farm Road). This is a storage facility for the schools. The second barn is storage for the fire department. Neither of these buildings was toured as part of this current study, but current exterior photographs and assessment information from the 2014 report are included in the appendices for reference.

A third building toward the back of the paved area is a concrete bunker used in the past for training fire department personnel. None of these three buildings are shown to be within the defined lot area indicated in the 2017 survey plan, although the southwest corner of the fire storage barn was shown to be within the lot line. Before the Town issues an RFP for adaptive reuse of the Town Farm, the future of these three buildings and the land they occupy should be determined so that clarity of the lot size can be properly communicated. If the fire barn and training bunker could be demolished, the lot size could be increased for the benefit of parking, landscaping and septic system requirements. An easement could be defined for retaining access to the south side of the school storage barn and to the rear parking lot of the fire station. Since there is a significant grade change between the fire station and the site to the east (parking) and south (school barn), providing a travel easement to those areas seems to be a logical configuration of the site area.

EXISTING CONDITIONS

Exterior Conditions

As indicated previously, this current study was not intended to provide a comprehensive assessment of existing conditions due to its limited scope. Available documents indicate that the shingled roof areas of the Town Farm were replaced in 2007 with a 40-year asphalt fiberglass shingled roofing system. In the construction documents, there were references (as add alternates) to selective repointing of chimneys and replacement of rubber membrane roofing, the extent of which these items were performed is not certain. Nonetheless, it appears that there are no active roof leaks in the building and that the shingled roofing was professionally installed.

The exterior brick surface of the 1837 building was previously painted and those coatings were abrasively removed, the date of which is likely to be in the 1970's post-dating a photograph showing the exterior of both buildings painted white. Of note is that the formerly exposed east façade of the first floor, now interior within the east addition, was part of the sandblasting operation and that places the date of that addition sometime after the paint removal. Early photos are inconclusive about whether or not the building had always been painted, as they depict a tonal quality of brick that is matched by the wood siding of the ell and former barn, but that does not exclude the possibility of all surfaces having been painted. Given that the granite sills and lintels appear to be much brighter than the brick body in those early photos, those could have been painted in a different color than the brick, as it would be unlikely that only the granite would have been painted.

The outer surface of the brick façade was severely textured by the sandblasting, which can lead to long term concern about water absorption given the pits and crevices that allow more surface area for infiltration. Also, the outer surface of a fired brick is more consolidated and less absorptive than the inner composition. However, since the paint was removed more than four decades ago, one might expect to see significant cracking and deterioration if that were to have been the result of the sandblasting. Recent studies have been done to compare water absorption rates in bricks that were sandblasted versus the same bricks that were not, and the rate differences were minor. Time will tell how the paint removal will affect the building, but meanwhile, effort to maintain the integrity of the mortar joints will be even more important than it would be with fully intact brick.

The exterior of the 1900 building is now covered with vinyl siding and trim, presumably to avoid periodic prep work and painting. The integrity of concealed trim is unknown without selective exploratory work, but typically existing elements are concealed without removal or significant damage. Therefore, restoration of the underlying wood materials is possible.

The entrance canopy of the 1837 building is a contemporary addition not visible in early photographs, but the provision of a gabled canopy is understandable due to the north facing sloping roof above the entrance. The bracketed 1900 canopy is original and in good condition. The wooden steps and ramp leading to the entrances do not conform to current accessibility and egress codes and visually detract from the character of both buildings.

The fire escape balconies on the front façade of the 1837 portion date from 1900, so they have gained historic significance even though they are not original. Their preservation or removal should be determined as part of the Preservation Restriction. Since they date from the same era as the 1900 Ell, it seems that preservation of that time period would be of more merit than restoration to an earlier period. They could be properly maintained without being used for egress, especially since their configurations are unsafe due to low railing heights, open risers and the tentative third floor hatch access. If they were to be removed, earlier conditions of the exterior brick would be revealed under the wood.

Original 6-over-9 and 2-over-2 double hung windows in the 1837 and 1900 buildings respectively are intact and should be repaired and retained. Exterior storms should be replaced with low infiltration triple-track storms for improved energy efficiency and to protect original sash from the elements. Extant shutter pintles should be scraped and painted so that the replication of missing shutters could be implemented if desired.

Contemporary replacement doors at the entrances to the 1837 and 1900 buildings should be replaced with replicas of the original doors. Photographic evidence should be reviewed and the original door on the front façade of the 1837 portion should be preserved.

Interior Conditions

Since the buildings were constructed for residential purposes, the rooms are inherently small and the floor-to-floor heights are not extensive. Consequently, the buildings would best be used as they were historically (for residential use), or as small office suites as they served for the past four decades. The interior conditions are fairly worn and have not been well maintained, presumably due to the lack of future definitive use and the sense that the municipal office uses at this location were perceived as being temporary. Preserving the residential scale of the buildings should be prioritized, while allowing discreet interior modifications that correct the ills of the present and restore simplicity of character that would have been inherent in the utilitarian nature of the building's original intentions.

Historic Fabric

Recent modifications have concealed some of the original flooring, walls and ceiling surfaces in various locations. Some painted wood plank floors in the 1837 portion are still exposed while others are covered in strip wood flooring or carpeting. It would be good to remove modern overlays and restore original painted planks where possible. Strip wood tongue-and-groove flooring in the 1900 Ell is likely the original flooring and it should be restored where present. Wall coverings like "Masonite" panels and added drywall or plaster should be removed and the earlier plane of finishes restored, although considerations of insulating the exterior walls will need to be reviewed. Flat wood casings should be retained or replicated to match original trim. Original doors should be reused and replacement doors should match extant doors in each building. Ceiling tiles should be removed, and in areas where acoustical absorption is needed that could be accomplished with acoustical plaster or similar sound-absorbing materials that replicate the look of flat painted plaster so that the original visual character is restored. Original windows should be restored, and window hardware should be reused or matched in kind.

REGULATORY CONSIDERATIONS

Zoning & Site Issues

35 Town Farm Road is located in a “Residence A” zoning district (RA), which has the following allowed uses per the Westford Zoning Bylaws:

- Single Family Dwellings (Use A.1)
- Religious Purposes (Use B.1)
- Educational Purposes (Use B.2)
- Child Care Facility (Uses B.3 & B.4)
- Municipal Facility (Use B.6)
- Agricultural & Produce Sales (Uses C.1 & C.2)
- Non-Profit Membership Club (Use D.1)
- Removal of Sand & Gravel (Use E.4)
- Accessway to Other Districts (Use F.3)

The RA district does not allow multifamily dwellings, defined in the Bylaws as, “A building or buildings containing two (2) or more attached dwelling units or more than one (1) dwelling unit, whether or not attached, on a single lot, and the buildings accessory thereto.” Interestingly, there are no bylaw provisions that would have allowed the Town Farm to exist in its former state without special permits or variances. If the Food Pantry were to be defined as a “retail” use, it would be prohibited by zoning but would be allowed if appropriately classified as a “municipal facility.”

There are two potential zoning vehicles that could be applicable for redeveloping the Town Farm for senior housing. One would be to establish a “Senior Residential Multifamily Overlay District” (SRMOD) that would require approval of a site plan by the Planning Board and a zoning overlay designation of the land by Town Meeting. However, the stated criteria noted for this approach is not feasible for this site since it requires five contiguous acres and a density of one bedroom per 8,000 SF of land or two dwelling units per acre.

A more suitable approach might be to pursue approval through the “Flexible Development” provisions of the Bylaws. While the initially stated density descriptions are far from being conducive to the intensity of use that could be achieved on this site, three of the stated purposes of Flexible Development are compellingly compatible with the hopes of the Task Force for adaptive reuse. These are, as paraphrased from 7.2.1 of the Zoning Bylaws:

2. Affordable Housing
3. Historic Preservation
9. Housing for Persons 55 Years & Older

Aside from the importance of zoning considerations, the site will need to be evaluated for the proximity of wetlands and design and placement of an approved septic system. For a multifamily development, assuming favorable percolation rates and setbacks, a maximum capacity of 10,000 gallons per day could be allowed for a septic system at a rate of 110 gallons per day per bedroom, yielding up to 90 bedrooms if space and soils allow.

Accessibility Compliance

This project will require full compliance with the current accessibility regulations of the Commonwealth as described in 521 CMR “Rules and Regulations of the Architectural Access Board.” An expenditure on renovation of 30% or more of the value of the building over a three-year period, exclusive of land value, requires full compliance with all aspects of accessibility requirements. The assessed value of the building, as stated in the most recently published database information, is \$250,700. Regardless of this requirement, the Town should intend to make the facility accessible since it will be used for seniors and for public access to the Food Pantry. Accessibility requirements will extend to all components of the building, including public entrances, accessible routes, maneuvering clearances, toilet rooms, common areas, fire alarm systems, signage, a percentage of residential units, and the like. Consideration should be given to exceeding the minimums of accessible living quarters in the code since the target population for the residents will be seniors.

Incorporating vertical accessibility with a passenger elevator should be well integrated with the common areas, normal paths of circulation and respectful of historic fabric. Presumably, this may best be accomplished within a rear addition if one is contemplated for other reasons (such as a new residential wing or an expanded Food Pantry), depending upon the internal organization of the facility and the intended role of the historic entrances. Also of importance will be to restore the character of the front entrances to both buildings so that, if those are to be used, an accessible ramp and stairs do not detract from the historic appearance as they do in the current configuration.

Variance requests for portions of the historic facility can certainly be part of the strategy for accessibility compliance. The Architectural Access Board is very supportive and responsive to variance requests for historic facilities when the logic of the requests are cast in light of overall improvements, and yet they are constrained by the code stipulations of when variances can be granted per 521 CMR. The Board can only grant variances when full compliance is technically infeasible, or when the cost of full compliance is excessive as compared to the benefit gained for the disabled.

Building Code Upgrades

The 9th Edition of 780 CMR is the current Massachusetts State Building Code, and this code modifies the 2015 International Building Code (IBC) and the 2015 International Existing Building Code (IEBC). For code interpretation related to this facility and its improvements, all analysis should begin in 780 CMR Chapter 34 – Existing Building Code, which modifies the IEBC, and the starting place in that document should be Chapter 12 – Historic Buildings. All elements of the building code should be interpreted in light of the provisions and directives that originate in IEBC 12, the intent of which is to improve public safety without mandating full compliance with the code for new construction.

It is premature to provide code analysis prior to having a development concept outlined for this facility. However, a few comments for when that time arrives are summarized below:

- Building Evaluation: 2015 IEBC 1201 requires an investigation and evaluation of the historic building with information about the intent to conform to Chapter 12. A report must be issued that includes descriptions of any features that cannot be brought into compliance with this chapter while demonstrating how an equivalent level of safety will be provided.
- Repairs: 2015 IEBC 1202 allows repairs to a historic building to match original materials and methods of construction without requiring compliance with the code for new construction. Any conditions determined to be unsafe by the building commissioner must be appropriately remedied.
- Fire Safety: 2015 IEBC 1203 addresses issues related to egress, interior finishes, stairways, and similar life safety systems. Also noted is that certain fire hazards can be waived by the provision of automatic sprinkler systems in some cases. (The provision of sprinklers is not limited to this section since other portions of the IEBC also have specific directives as to when sprinklers are required for a project.)
- Accessibility: 2015 IEBC 1204 addresses accessibility requirements, but the trail of references are all replaced by 521 CMR since accessibility regulations of the Commonwealth govern this area of improvement.
- Change of Occupancy: 2015 IEBC 1205 refers to Chapter 10 – Change of Occupancy, along with other chapters in the IEBC, subject to the provisions of what is allowed for historic buildings per this section 1205. This analysis leads the interpreter well beyond the limits of this section and becomes the heart of development of a building code narrative for a historic building undergoing significant renovations, the detail of which is extensive and specific to the intended project parameters.
- Structural: 2015 IEBC 1206 refers to Chapter 5 – Classification of Work, which then refers to Chapters 7, 8 and 9 based on the extent of work as defined in the analysis. Again, the intent of the IEBC is not to require full compliance with the code for new construction but to provide appropriate improvements for assurance of safety.

A key building code interpretation point that will require analysis relates to the Use Group as defined in 2015 IBC Chapter 3 – Use and Occupancy Classification. For example, changes in occupancy can trigger issues related to “means of egress” and “building heights and areas” by comparing the relative hazard of the prior occupancy classification to the new occupancy classification. What is an interesting nuance for the code interpretation of this facility is whether its historic use as a group home would be considered, as opposed to its more recent use as offices. The facility was built as a group home, and the offices were a temporary use for which a formal change in occupancy classification may have not been provided. The reason that this is an important distinction is because a group home is an institutional use (Group I-1), whereas an office is a business use (Group B). If the proposed use is to be residential multi-family such as congregate housing (Group R-2 if 16 or more residents) and mercantile for the Food pantry (Group M), both of these uses have lower relative hazards than Group I-1 and higher relative hazards than Group B.

One final note for the building code highlights is that an addition, assuming that this is likely to be proposed, must be guided first by 2015 IEBC Chapter 11 – Additions.

RECOMMENDATIONS

Define Preferred Uses and Terms

As noted, the Task Force will propose an adaptive reuse project that will incorporate affordable senior housing and relocation of the Westford Food Pantry to this site. These uses should be outlined in more detail with what is meant by “affordable” for senior housing, and what space requirements will be needed for success of the Food Pantry. This will provide potential developers with expectations of the Town in reference to physical changes that will need to be implemented. Elements such as common amenities would best be determined by the proposer rather than mandated by the RFQ, but the quality of living environment for seniors (in both common areas and private spaces) should be noted as a consideration when judging submitted proposals.

NOTE: The Food Pantry has preliminarily stated they require 2,500 net SF on the first floor. The footprint of the first floor in both buildings is 3,739 gross SF, which includes existing stairways, hallways and less-than-sufficient public toilet rooms. Prior to stating this net SF on a single floor as a mandatory requirement, options for accessible food storage on an accessible basement level should be considered. Also, since the existing building consists of smaller rooms than would normally be found in a food “store,” and since the floor loads for wholesale food storage are higher than any other contemplated use, this preliminary space requirement and contingency should be carefully reviewed prior to RFP issuance.

Prepare Preservation Restriction

In the 2017 RFP issued by the Town, the terms indicated that the purchaser must demonstrate how they will preserve historic features and must enter into a preservation restriction with the Town. The Town should more precisely establish this requirement, in advance of a future RFP, since the restriction should not be left in the hands of the purchaser to define as it may lead to needless confrontational negotiations. A prospective developer should be able to know in advance what will be expected of them in terms of preserving historic character, retaining intact historic fabric, and similar aspects in keeping with the Secretary of the Interior’s Standards for Rehabilitation as defined by the National Park Service: <https://www.nps.gov/tps/standards/rehabilitation.htm>. While drafting the restriction, care should be given to allowing for sustainable development to occur while preserving character defining features. Also, it could be beneficial to require an annual conditions review and prior authorization for any subsequent repairs and alterations.

Establish Lot Size

The disparity between the 0.675 and 0.9-acre lot sizes noted in the Assessor’s database and 2017 RFP respectively must be resolved. Also, as described earlier, the fate of the adjacent storage barns and the fire training facility should be determined so that, if possible, the site area can be enlarged to make it more attractive and feasible for development. For example, it would be visually beneficial if the front lawn were not completely paved since there was lawn area there historically as evidenced in the 1903 photographs. Providing separate entrances and/or parking for the residents and the Food Pantry may be desirable, and that could serve to better attribute the differing uses to site areas that serve their respective needs well.

APPENDICES

- A: Site Plan & Historic Nomination Info**
Pages A.0 through A.44

- B: Captioned Photographs of Existing Conditions**
Pages B.0 through B.51

- C: Historic Photographs 1893 to 1970's**
Pages C.0 through C.02

- D: Prior Assessments of Town Farm Facilities**
Pages D.0 through D.71

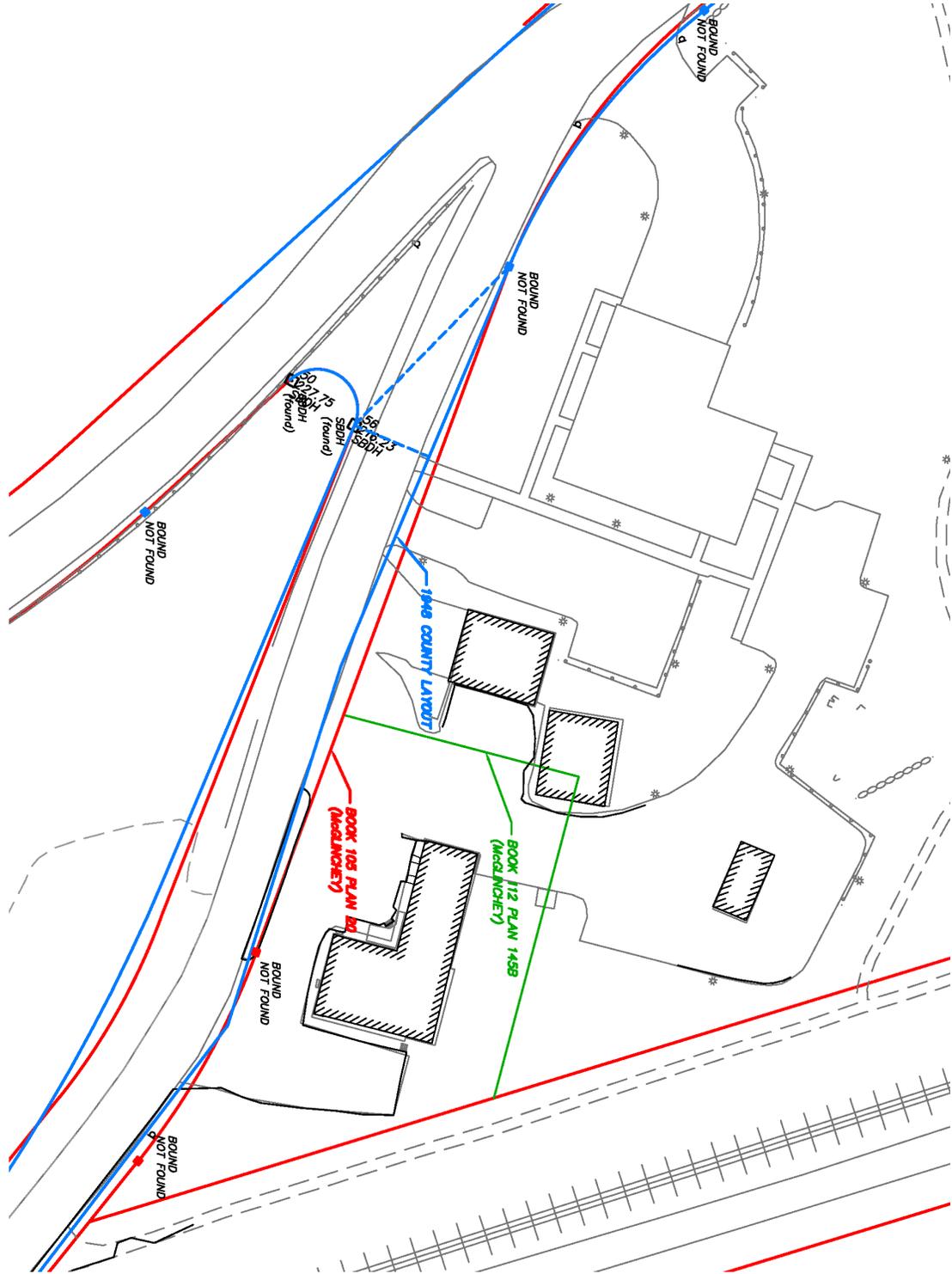
Westford Town Farm – Adaptive Reuse Considerations

35 Town Farm Road
Westford, MA

APPENDIX A

SITE PLAN AND HISTORIC NOMINATION INFO

- A.01:** 2017 Land Survey by Alan Engineering LLC
- A.02:** 2019 Aerial View / Google Screenshot
- A.03:** Massachusetts Cultural Resource Information System (MACRIS)
Scanned Resource Cover Page
Form B Building / Two Versions – 2003 & 2005
Architectural Description
Historical Narrative
Criteria Statement
Inventory Form – Prepared August 1975
- A.18:** National Register of Historic Places Registration Form – Jan 2008
Narrative Description
 Setting
 Exterior
 Archaeological Description
Statement of Significance
 Introduction
 1729-1837
 1837-1931
 Residents
 1931-1960
 1960-2007
 Archaeological Significance
Bibliography
Geographical Data
Photo Log



2017 Draft of Site Survey by Alan Engineering LLC Showing Town Farm and Appurtenant Structures in Cropped Version of Plan



Screenshot Image from Google Showing Town Farm and Surrounding Buildings

Massachusetts Cultural Resource Information System

Scanned Record Cover Page

Inventory No:	WSR.32
Historic Name:	Westford Town Farm
Common Name:	Poor Farm - Westford Home - Westford Infirmary
Address:	35 Town Farm Rd
City/Town:	Westford
Village/Neighborhood:	Forge Village
Local No:	132, 24-23, 38
Year Constructed:	1837
Architect(s):	Francis, Henry Martyn; Hartwell, Daniel W.
Architectural Style(s):	Greek Revival; Italianate
Use(s):	Abandoned or Vacant; Administration Office; Agricultural; Dairy; Fire House; Nursing Home; Other Educational; Penal Institution; Police Station; Poor House or Almshouse; Poultry Farm
Significance:	Agriculture; Architecture; Community Planning; Education; Health Medicine; Law; Politics Government; Social History
Area(s):	
Designation(s):	Nat'l Register Individual Property (03/14/2008)
Building Materials(s):	Roof: Asphalt Shingle Wall: Brick; Granite; Vinyl Siding; Wood; Stone, Cut Foundation: Brick; Granite; Stone, Cut



The Massachusetts Historical Commission (MHC) has converted this paper record to digital format as part of ongoing projects to scan records of the Inventory of Historic Assets of the Commonwealth and National Register of Historic Places nominations for Massachusetts. Efforts are ongoing and not all inventory or National Register records related to this resource may be available in digital format at this time.

The MACRIS database and scanned files are highly dynamic; new information is added daily and both database records and related scanned files may be updated as new information is incorporated into MHC files. Users should note that there may be a considerable lag time between the receipt of new or updated records by MHC and the appearance of related information in MACRIS. Users should also note that not all source materials for the MACRIS database are made available as scanned images. Users may consult the records, files and maps available in MHC's public research area at its offices at the State Archives Building, 220 Morrissey Boulevard, Boston, open M-F, 9-5.

Users of this digital material acknowledge that they have read and understood the MACRIS Information and Disclaimer (<http://mhc-macris.net/macrisdisclaimer.htm>)

Data available via the MACRIS web interface, and associated scanned files are for information purposes only. THE ACT OF CHECKING THIS DATABASE AND ASSOCIATED SCANNED FILES DOES NOT SUBSTITUTE FOR COMPLIANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL LAWS AND REGULATIONS. IF YOU ARE REPRESENTING A DEVELOPER AND/OR A PROPOSED PROJECT THAT WILL REQUIRE A PERMIT, LICENSE OR FUNDING FROM ANY STATE OR FEDERAL AGENCY YOU MUST SUBMIT A PROJECT NOTIFICATION FORM TO MHC FOR MHC'S REVIEW AND COMMENT. You can obtain a copy of a PNF through the MHC web site (www.sec.state.ma.us/mhc) under the subject heading "MHC Forms."

Commonwealth of Massachusetts
Massachusetts Historical Commission
220 Morrissey Boulevard, Boston, Massachusetts 02125
www.sec.state.ma.us/mhc

NR 109
3/1-1/08

FORM B - Building

**Massachusetts Historical Commission
Massachusetts Archives Building
220 Morrissey Boulevard
Boston, Massachusetts 02125**

Map and Lot # 24-23 USGS Quad Area(s) Form Number 32

Town Westford
Place (neighborhood or village)

Address 35 Town Farm Road

Historic Name Town Farm/Westford Home

Uses: Present School Dept. Offices

Original Town Farm

Date of Construction 1837

Source Town Report

Style/For Greek Revival

Architect/Builder Daniel W. Hartwell, builder

Exterior Material:

Foundation Split granite

Wall/Trim Brick

Roof Asphalt shingle

Outbuildings/secondary structure

Major Alterations (with dates)

North side addition, late 19th c; front porch, c. 1900;
addition re-sided with vinyl, late 20th c.

Condition Fair

Moved no yes Date

Acreage .9

Setting Rural

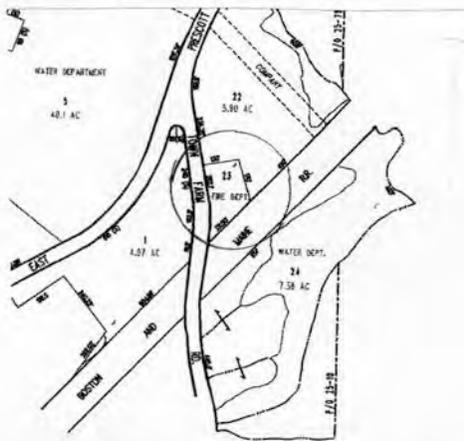
Photograph

(3"x3" or 3-1/2x5" black and white only) Label photo on back with town and property address. Record film roll and negative numbers here on form. Staple photo to left side of form over this space. Attach additional photos to continuation sheets.

Roll Negative(s)

Sketch Map

North Toward Top



Recorded by Sanford Johnson

Organization Westford Historical Commission

Date (month/year) 2/05

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

RECEIVED

MAR 15 2006

MASS. HIST. COMM

FORM B - Building / FEB 2005

WSR. 137

BUILDING FORM**ARCHITECTURAL DESCRIPTION** see continuation sheet

Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

- * The former Town Farm is a 6x5-bay, 2 1/2-story, front-gabled brick building with elements of the Greek Revival style
- * Wood frame additions with gabled and shed roofs have been made to the north side elevation; a shed roofed addition has been made to the rear
- * A 2-story porch was added, possibly in 1900, and covers the entire width of the façade
- * Gabled dormers and a brick chimney occupy the roof of the main block
- * Decorative elements include the symmetrical fenestration in the façade and side elevations
- * Windows are 9/6 double-hung sash with stone lintels and sills
- * The off-center entry has simple trim and a five-pane transom
- * A secondary entry at the north side of the main block has a modern gabled entry hood
- * The gable-roofed addition at the north side has a gabled dormer and Victorian entry hood with carved brackets
- * The cellar contains the former town lockup which consists of two barred jail cells

HISTORICAL NARRATIVE see continuation sheets

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.

The town of Westford bought the farm of John Read in 1824 for use as a poor farm. The former Read farmhouse was replaced on the same site in 1837 with the current brick building, built by Daniel W. Hartwell. The building committee recommended a 2-story, 39'x40' building with a buttery and well-room in the shed. The existing lockup in the cellar may have been installed at this time. The total cost of the house and shed was \$3002.45. A wood frame addition was made in 1839-40 according to entries in the town report concerning a second Town Farm building committee. Twenty-one ill or indigent people were housed in the building in 1838. The number of inmates remained steady through the 1830s and declined to an average of around 10 by the late 1800s. A gable-roofed barn was built north of the house in 1893. A second ell was built onto the north side of the house in 1900, probably to replace the one from 1840. A woodshed and ice house were also built, mainly from lumber from the old ell according to town reports. Town reports also indicate that running water, steam heat and a fire escape were added around the turn of the 20th century. The fire escape mentioned in the town report may be the existing porch based on a 1903 photo which shows it in place. Silos were built in 1913 and in 1928, indicating the presence of cows and dairying operations. Poultry are also mentioned in town reports of 1931. The name of the facility was changed by vote at the 1919 town meeting from Town Farm or Poor Farm to Westford Home. The 1893 barn burned as a result of arson in 1920 and was replaced in 1922 at a cost of \$3000. The 1959 town report indicates "On April 3, 1959, the last patient at the Westford Infirmary was transferred to Tewksbury Hospital and the home was officially closed. The remaining cattle were disposed of in September. Until other arrangements are made, Mr. and Mrs. Maurice Rooks will remain at the home as caretakers". Mr. and Mrs. Rooks had served as the Superintendent and

BIBLIOGRAPHY and/or REFERENCES continuation sheet

Research by Westford Museum employee, Marilyn Day; Town Reports; Hodgman's town history, 1883; Interview by Marilyn Day with retired fire chief George Rogers, 12/02; Collection of historic photos by Quincy Day, c. 1903; Research by WHC member Bob Oliphant

**** All properties mentioned in bold type with ** are individually inventoried resources**

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

FEB 2005: Architectural Description & Historical Narrative

INVENTORY FORM CONTINUATION SHEET

Massachusetts Historical Commission
220 Morrissey Boulevard
Massachusetts Archives Building
Boston, MA 02125

Town
Westford

Property Address
Town Farm Road

Area(s)

Form No.

WSR. 32

Matron of the Westford Home for 10 years. A fire in the farmhouse burned part of the interior in 1952. The 1920 barn was demolished and burned c. 1970. Subsequent occupants of the Town Farm house included the Fire Department and the Police. It has been occupied by the School Department since the 1970s.



FEB 2005: Photograph of Front Facade

RECEIVED

JAN 02 2003

MASS. HIST. COMM

FORM B - Building

**Massachusetts Historical Commission
Massachusetts Archives Building
220 Morrissey Boulevard
Boston, Massachusetts 02125**

Map and Lot # USGS Quad Area(s) Form Number

24 23 Billerica

32

Town Westford

Place (neighborhood or village)

Address 35 Town Farm Road

Historic Name Town Farm/Westford Home

Uses: Present School Dept. Offices

Original Town Farm

Date of Construction 1837

Source Town Records

Style/Form Greek Revival

Architect/Builder Daniel W. Hartwell, builder

Exterior Material:

Foundation Split granite

Wall/Trim Brick

Roof Asphalt shingle

Outbuildings/secondary structure

Major Alterations (with dates)

North side addition, late 19th c; front porch, c. 1900;
addition re-sided with vinyl clapboards, late 20th c.

Condition Fair

Moved no yes Date

Acreage .9

Setting Rural

Photograph

(3"x3" or 3-1/2x5" black and white only) Label photo on back with town and property address. Record film roll and negative numbers here on form. Staple photo to left side of form over this space. Attach additional photos to continuation sheets.

Roll Negative(s)

Sketch Map



Recorded by Sanford Johnson

Organization Westford Historical Commission

Date (month/year) 1/03

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

FORM B - Building / JAN 2003

WSR. # 32

BUILDING FORM**ARCHITECTURAL DESCRIPTION**

see continuation sheet

Describe architectural features. Evaluate the characteristics of this building in terms of other buildings within the community.

- * The former Town Farm is a 6x5-bay, 2 1/2-story, front-gabled brick building with elements of the Greek Revival style
- * Wood-frame additions with gabled and shed roofs have been made to the north side elevation; a shed roofed addition has been made to the rear of the brick block
- * A 2-story porch was added, possibly around 1900, and covers the entire width of the façade
- * Gabled dormers and a brick chimney occupy the roof the main block
- * Decorative elements include the symmetrical fenestration in the façade and side elevations
- * Windows are 6/9 double-hung sash with stone lintels and sills
- * The off-center entry has simple trim and a 5-pane transom
- * A secondary entry at the north side of the main block has a modern gabled entry hood
- * The gabled addition at the north side has a gabled dormer and Victorian style entry hood with carved brackets
- * The cellar contains the former town lock-up which consists of two barred jail cells

HISTORICAL NARRATIVE

✓ see continuation sheets

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.

The town bought the farm of John Read in 1824 for use as a poor farm. The Read farmhouse was replaced on the same site in 1837 with the current brick building, built by Daniel W. Hartwell. The building committee appointed at town meeting recommended a 2-story, 39' x 40' building with a buttery and well-room in the shed. The existing lockup in the cellar may have been installed at this time. The total cost of the house and shed was \$3002.45. A wood framed addition was made in 1839-40 according to entries in town reports concerning a second Town Farm building committee. Twenty one ill or indigent people were housed in the building in 1838. The number of inmates remained steady through the 1830s and declined to an average of around 10 by the late 1800s. A detached gable-roofed barn which burned in 1920 was built north of the house in 1893. The existing ell was built onto the north side of the house in 1900, probably to replace the one built in 1840. A woodshed and ice house were also built in 1900, mainly from lumber from the old ell according to town reports. Town reports indicate that running water, steam heat and a fire escape were added around the turn of the 20th century. The fire escape mentioned in the town report may be the existing porch based on a 1903 photo depicting it in place. Silos were built in 1913 and 1928, indicating the presence of cows and dairying operations. Poultry are also mentioned in town reports of 1931. The name of the facility was changed by vote at the 1919 town meeting from Town Farm or Poor Farm to Westford Home. The 1893 barn burned as a result of arson in 1920 and was replaced in 1922 at a cost of \$3000. The 1959 town report indicates: "On April 3, 1959, the last patient at the Westford Infirmary was transferred to the Tewksbury Hospital and the home was officially closed. The remaining cattle were disposed of in September. Until other arrangements are made, Mr. and Mrs. Maurice Rooks will remain at the home as Caretakers." Mr. and Mrs. Rooks had served as the Superintendent and

BIBLIOGRAPHY and/or REFERENCES

□ continuation sheet

Research by Marilyn Day; Town Reports; Town History, Hodgman, 1883; Interview by Marilyn Day with retired fire chief George Rogers, 12/02; Historic collection of photos taken by Quincy Day; Research by Bob Oliphant;

*** All properties mentioned in bold type with ** are individually inventoried resources*

- ✓ Recommended for listing in the National Register of Historic Places. If checked, you must attach a completed National Register Criteria Statement Form.

JAN 2003: Architectural Description & Historical Narrative

INVENTORY FORM CONTINUATION SHEET

Massachusetts Historical Commission
220 Morrissey Boulevard
Massachusetts Archives Building
Boston, MA 02125

Town **Property Address**
Westford 35 Town Farm Road

Area(s) **Form No.**
32

Matron of the Westford Home for 10 years. A fire in the farmhouse burned part of the interior in 1952. The 1920 barn was demolished and burned c. 1970. Subsequent occupants of the Town Farm house included the Fire Department and the Police. It has been occupied by the School Department since the 1970s.



12/02

DEC 2002 Photograph of Front Facade

MHC INVENTORY FORM CONTINUATION SHEET
MHC Inventory scanning project, 2008-2009

MACRIS No. WSR.32



3/104



3/104

MAR 2004 Photographs from Town Farm Road

MHC INVENTORY FORM CONTINUATION SHEET
MHC Inventory scanning project, 2008-2009

MACRIS No. WSR.32



3/104

MAR 2004: Photograph of Front Facade

INVENTORY FORM CONTINUATION SHEET

Massachusetts Historical Commission
220 Morrissey Boulevard
Massachusetts Archives Building
Boston, MA 02125

Town
Westford
Property Address
Town Farm Road

Area(s)
Form No.
32



12/'02



12/'02

DEC 2002 Photographs from Town Farm Road

FORM B - BUILDING

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, State House, Boston

A-FOAM
USGS WEST
SOUTH

In Area no. <u>4</u>	Form no. <u>132</u>
-------------------------	------------------------



Town Westford, Massachusetts ³²

Address Town Farm Road

Name _____

Present use School Administration Offices

Present owner Town of Westford

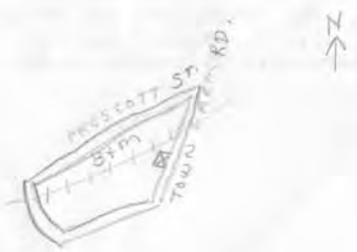
Description: 2 1/2 story building with porches up and down attached 2 1/2 story ell.

Date 1837

Source History of Westford P 181

Style Greek Revival

4. Map. Draw sketch of building location in relation to nearest cross streets and other buildings. Indicate north.



Architect _____

Exterior wall fabric Brick & Wood

Outbuildings (describe) Large Barn

Other features _____

Altered Ell addition Date ?

Moved _____ Date _____

5. Lot size:

One acre or less _____ Over one acre X

Approximate frontage over 200'

Approximate distance of building from street 50'

DO NOT WRITE IN THIS SPACE

USGS Quadrant _____

MHC Photo no. _____

6. Recorded by M. Breton

Organization Westford Historic District Study Committee

Date 8/75

(over)

483

MA-2-75-2061465 (20M-2476)



AUG 1975 Inventory Form

WSR.32

7. Original owner (if known) Town of Westford
 Original use Poor House
 Subsequent uses (if any) and dates Offices 0 1960's

8. Themes (check as many as applicable)

- | | | | | | |
|-----------------------|--------------------------|----------------------------|--------------------------|-------------------------|-------------------------------------|
| Aboriginal | <input type="checkbox"/> | Conservation | <input type="checkbox"/> | Recreation | <input type="checkbox"/> |
| Agricultural | <input type="checkbox"/> | Education | <input type="checkbox"/> | Religion | <input type="checkbox"/> |
| Architectural | <input type="checkbox"/> | Exploration/
settlement | <input type="checkbox"/> | Science/
invention | <input type="checkbox"/> |
| The Arts | <input type="checkbox"/> | Industry | <input type="checkbox"/> | Social/
humanitarian | <input checked="" type="checkbox"/> |
| Commerce | <input type="checkbox"/> | Military | <input type="checkbox"/> | Transportation | <input type="checkbox"/> |
| Communication | <input type="checkbox"/> | Political | <input type="checkbox"/> | | |
| Community development | <input type="checkbox"/> | | | | |

9. Historical significance (include explanation of themes checked above)

On Page 178 in the History of Westford it states: "April 5, 1824 - Voted that the town purchase John Reads farm for the sum of \$2500. The committee to purchase it were Eliaham Hutchings, Samuel Richardson, Zaccheus Read and John Abbot. They had been appointed at a previous meeting to divise the best means of maintaining the poor, and upon their recommendation the town passed the vote cited above and authorized them to buy the farm and stock it. The first master was Jonathan Hosmer and the second Otis Haywood.

April 3, 1837 - Voted to choose a building committee of five persons to superintend the building of a poor house. They recommend the erection of house 39' x 40' two stories high with buttery and well-room in the shed. It was built in the summer and autumn of 1837. The contractor was Daniel W. Hartwell and was built for the sum of \$3002.45. Mr. Parker was the master and between March 1839 and Feb. 1840 there were 55 people in the poor house. (P-181)

10. Bibliography and/or references (such as local histories, deeds, assessor's records, early maps, etc.)

1855 Map
 P. 178-181 History of Westford

484

AUG 1975 Inventory Form

Original yellow form: Eligibility file
Copies: Inventory form
Town file(w/corresp.)
Macris
NR director ____

Community: Westford

MHC OPINION: ELIGIBILITY FOR NATIONAL REGISTER

Date Received: 1/2/03 Date Due: Date Reviewed: 1/8/03
Type: Individual District (Attach map indicating boundaries)
Name: Westford Town Farm Inventory Form: WSR.32
Address: 35 Town Farm Road
Requested by: Westford Historical Commission
Action: Honor ITC Grant R & C Other:
Agency: Staff in charge of Review: AL

INDIVIDUAL PROPERTIES

DISTRICTS

Eligible
 Eligible, also in district
 Eligible only in district
 Ineligible
 More information needed

Eligible
 Ineligible
 More information needed

CRITERIA: A B C D
LEVEL: Local State National

STATEMENT OF SIGNIFICANCE:
The former Town Farm is eligible for listing in the National Register under criterion A at the local level for its associations with the history of public support and services to the indigent from the early 19th century into the 20th century. The property also meets criterion C at the local level as an example of 19th century masonry construction with Greek Revival elements and later, early 20th century additions.

AUG 1975 Inventory Form

NPS Form 10-900
(Rev. 10-90)

OMB No. 1024-0018

**United States Department of the Interior
National Park Service**

**National Register of Historic Places
Registration Form**

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in How to Complete the National Register of Historic Places Registration Form (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Westford Town Farm (preferred)

other names/site number Poor Farm, Westford Home, Westford Infirmary

2. Location

street & number 35 Town Farm Road not for publication

city or town Westford vicinity

state Massachusetts code MA county Middlesex code 017 zip code 01886

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally statewide locally. (See continuation sheet for additional comments.)

Signature of certifying official/Title Brona Simon January 24, 2008
Massachusetts Historical Commission, State Historic Preservation Officer Date

State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. (See continuation sheet for additional Comments.)

Signature of certifying official/Title Date

State or Federal agency and bureau

4. National Park Service Certification

I, hereby certify that this property is:	Signature of the Keeper	Date of Action
<input type="checkbox"/> entered in the National Register <input type="checkbox"/> See continuation sheet.		
<input type="checkbox"/> determined eligible for the National Register <input type="checkbox"/> See continuation sheet.		
<input type="checkbox"/> determined not eligible for the National Register		
<input type="checkbox"/> removed from the National Register		
<input type="checkbox"/> other (explain):		

JAN 2008: National Register of Historic Places Nomination Form

Westford Town Farm

Name of Property

Middlesex, MA

County and State

5. Classification

Ownership of Property

(Check as many boxes as apply)

(Check only one box)

- private
- public-local
- public-State
- public-Federal

- building(s)
- district
- site
- structure
- object

Number of Resources within Property

(Do not include previously listed resources in the count.)

Contributing	Noncontributing	
1		building
		sites
		structures
		objects
1		Total

Name of related multiple property listing

(Enter "N/A" if property is not part of a multiple property listing.)

N/A

Number of contributing resources previously listed in the National Register

0

6. Function or Use

Historic Functions

(Enter categories from instructions)

Domestic Institutional Housing

Agriculture

Current Functions

(Enter categories from instructions)

Vacant

7. Description

Architectural Classification

(Enter categories from instructions)

Greek Revival

Victorian Eclectic

Materials

(Enter categories from instructions)

foundation brick stone granite

walls brick wood

roof asphalt

other synthetics vinyl

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

NRHP Nomination Form (Continued)

Westford Town Farm
Name of Property

Middlesex, MA
County and State

8. Statement of Significance

Applicable National Register Criteria
(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A** Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B** Property is associated with the lives of persons significant in our past.
- C** Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D** Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations
(Mark "x" in all the boxes that apply.)

Property is:

- A** owned by religious institution or used for religious purposes.
- B** removed from its original location
- C** a birthplace or grave.
- D** a cemetery
- E** a reconstructed building, object, or structure.
- F** a commemorative property.
- G** less than 50 years of age or achieved significance within the past 50 years.

Narrative Statement of Significance
(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

Areas of Significance
(Enter categories from instructions)

- Agriculture
- Community Planning & Development
- Architecture
- Health/Medicine
- Social History

Period of Significance

1837-1958

Significant Dates

1893 1900 1903

Significant Person

(Complete if Criterion B is marked above)

Cultural Affiliation

N/A

Architect/Builder

Daniel W. Hartwell, builder
H.M. Francis, architect of 1900 block

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:
Fletcher Library, Westford

NRHP Nomination Form (Continued)

Westford Town Farm
Name of Property

Middlesex, MA
County, State

10. Geographical Data

Acreage of Property less than one acre

UTM References See continuation sheet.
(Place additional UTM references on a continuation sheet.)

1. 19 Zone	296580 Easting	4717660 Northing	3. Zone	Easting	Northing
2. Zone	Easting	Northing	4. Zone	Easting	Northing

See continuation sheet

Verbal Boundary Description
(Describe the boundaries of the property on a continuation sheet.)

Boundary Justification
(Explain why the boundaries were selected on a continuation sheet.)

11. Form Prepared By

name/title Sanford Johnson, consultant, with Betsy Friedberg, NR Director

organization Massachusetts Historical Commission date January 2008

street & number 220 Morrissey Boulevard telephone 617-727-8470

city or town Boston state MA zip code 02125

Additional Documentation

Submit the following items with the completed form:

Continuation Sheets

Maps

- A **USGS map** (7.5 or 15 minute series) indicating the property's location.
- A **sketch map** for historic districts and properties having large acreage or numerous resources.

Photographs

Representative **black and white photographs** of the property.

Additional items (Check with the SHPO or FPO for any additional items)

Property Owner

(Complete this item at the request of the SHPO or FPO.)

name Town of Westford, MA

street & number 55 Main Street telephone 978-692-5515

city or town Westford state MA zip code 01886

Paperwork Reduction Act Statement: This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

Estimated Burden Statement: Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reduction Project (1024-0018), Washington, DC 20503.

NRHP Nomination Form (Continued)

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Westford Town Farm
Westford (Middlesex), MA

Section number 7 Page 1

7. NARRATIVE DESCRIPTION

Setting

The Westford Town Farm, built in 1837 and enlarged ca. 1840 and ca. 1900, is in a rural section with fields, open land, and the former Boston & Maine Railroad right of way to the south. West of the building is a wooded hillside lined at the street by a dry laid granite slab retaining wall dating to the 19th century (this is no longer part of the property). Property adjacent to the building's north side is occupied by the Westford Fire Department, and contains a fire station, sheds, and a concrete building for fire suppression practice activities. These are not part of the Town Farm property. Land south of the Town Farm is wooded with Stony Brook traversing in a southwest to northeast direction.

Exterior

The former Town Farm, built in 1837, is a five by six-bay, 2½ story, gable-roofed brick building (Photo 1) with elements of the Greek Revival style, and a secondary block consisting of a Victorian Eclectic style wood-frame, vinyl-clad addition, attached to the north elevation (Photo 2). The vinyl siding does not compromise the overall integrity of the Town Farm. The main brick block has a split granite slab foundation and is oriented with the gable end to the road. The street elevation has five 6/9 double-hung windows and a door offset (Photo 12) to the south on the first story. Openings have plain trim with heavy split granite lintels and sills, while the six-panel door has a five-pane transom and simple hardware. The second story is lit by five 6/9 sash, also with plain trim and granite lintels and sills. The gable peak has two similar sash. Fenestration is symmetrically placed with the exception of the off-center door. The full width of the street elevation is covered on both stories by a wood-frame porch comprised of square posts with chamfered corners, turned balusters in the railing, and round finials at the lower level entrance in front of the off-center door. Probably designed as a fire escape, the porch has two integral stairways rising in opposite directions across the building. Access to the second story of the porch is through a central window. Granite piers support the porch at ground level, and a metal railing exists at the third level and was probably added after initial construction.

The symmetrical five-bay façade of the brick block is on the eave side and faces north. Partially covered by the Victorian wood-frame addition, the façade has a center entry (Photo 4) with a modern gabled hood and sidelights. Windows are similar to those on the west elevation with 6/9 sash, granite lintels, and sills. Eave trim on the façade is a molded cornice with the gable returns concealed by the second-story roof of the porch.

The south elevation (Photo 3) has five symmetrically placed windows on both stories, also with granite lintels and sills. A cellar window near the southwest corner of the granite foundation also has a granite lintel. The south elevation shares the molded cornice with the north side façade. Access to the cellar is through a bulkhead trimmed with split granite located near the southeast corner. Some openings contain air conditioners and storm windows. The broad gabled roof is clad in asphalt shingles and has a single gabled dormer with gable returns on either slope, and a brick chimney near the west end of the plan. The rear or east elevation (Photo 6) is enlarged by a modern, wood-frame, shed-roofed addition of one story.

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 7 Page 3**Archaeological Description**

No ancient Native American sites are located on the Westford Town Farm or in the general area (within one mile). Environmental characteristics of the property represent locational criteria (slope, soil drainage, proximity to wetlands) that are favorable for the presence of Native American sites. The Town Farm is located on a well drained, level to moderately sloping riverine/stream terrace bordering wetlands of Stony Brook. A number of aquatic and upland flora and fauna would have been available to Native Americans for subsistence and settlement activities in this area. Given the above information, the small size of the nominated property (0.9 acres), and the adverse effects of historic land use on the integrity of potential ancient resources, a low to moderate potential exists for the recovery of ancient Native American resources on the Westford Town Farm property.

A high potential exists for locating historic archaeological resources on the Town Farm property. Structural evidence may exist from buildings and occupational-related features (trash pits, privies, wells) from the John Read Farm, purchased by the town for the Town Farm in 1824. The wood-frame Read Farmhouse, said to date to the early to mid 18th century, was demolished in 1837 and replaced by a new brick structure on the same site. An outhouse, chambers, and an apartment for refractory subjects were reported on the Read Farm at the time of its purchase. Outbuildings associated with the agricultural activities at the farm also likely existed. Structural evidence from several outbuildings and occupational-related features (trash pits, privies, wells) related to the existing Town Farm building may also survive. Structural evidence from several outbuildings associated with domestic and agricultural operations at the Town Farm may also exist. Some of the outbuildings no longer extant may include a buttery, a shed containing a well room, a wood shed, and an ice house. Structural evidence may exist from two additions to the structure in 1839-40 and 1900. Structural evidence may also exist from barns built in 1893 and 1922, both of which are no longer extant. Archaeological evidence from earlier barns may also survive. The existence of an outhouse/privy well into the 20th century is indicated by the fact that a toilet was not installed in the Town Farm building until 1924. While it has been suggested that residents of the Town Farm were buried at the Westlawn Cemetery in Westford, an unmarked or overgrown burial ground may also exist on the grounds of the Westford Town Farm. Documentary research, combined with archaeological survey and testing, may also determine whether an earlier family burial ground associated with the John Read Farm also exists.

(end)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 7 Page 3**Archaeological Description**

No ancient Native American sites are located on the Westford Town Farm or in the general area (within one mile). Environmental characteristics of the property represent locational criteria (slope, soil drainage, proximity to wetlands) that are favorable for the presence of Native American sites. The Town Farm is located on a well drained, level to moderately sloping riverine/stream terrace bordering wetlands of Stony Brook. A number of aquatic and upland flora and fauna would have been available to Native Americans for subsistence and settlement activities in this area. Given the above information, the small size of the nominated property (0.9 acres), and the adverse effects of historic land use on the integrity of potential ancient resources, a low to moderate potential exists for the recovery of ancient Native American resources on the Westford Town Farm property.

A high potential exists for locating historic archaeological resources on the Town Farm property. Structural evidence may exist from buildings and occupational-related features (trash pits, privies, wells) from the John Read Farm, purchased by the town for the Town Farm in 1824. The wood-frame Read Farmhouse, said to date to the early to mid 18th century, was demolished in 1837 and replaced by a new brick structure on the same site. An outhouse, chambers, and an apartment for refractory subjects were reported on the Read Farm at the time of its purchase. Outbuildings associated with the agricultural activities at the farm also likely existed. Structural evidence from several outbuildings and occupational-related features (trash pits, privies, wells) related to the existing Town Farm building may also survive. Structural evidence from several outbuildings associated with domestic and agricultural operations at the Town Farm may also exist. Some of the outbuildings no longer extant may include a buttery, a shed containing a well room, a wood shed, and an ice house. Structural evidence may exist from two additions to the structure in 1839-40 and 1900. Structural evidence may also exist from barns built in 1893 and 1922, both of which are no longer extant. Archaeological evidence from earlier barns may also survive. The existence of an outhouse/privy well into the 20th century is indicated by the fact that a toilet was not installed in the Town Farm building until 1924. While it has been suggested that residents of the Town Farm were buried at the Westlawn Cemetery in Westford, an unmarked or overgrown burial ground may also exist on the grounds of the Westford Town Farm. Documentary research, combined with archaeological survey and testing, may also determine whether an earlier family burial ground associated with the John Read Farm also exists.

(end)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 1**8. STATEMENT OF SIGNIFICANCE****Introduction**

Westford's Town Farm retains sufficient integrity of setting, location, design, materials (partially), feeling, and association to merit designation in the National Register of Historic Places despite the vinyl siding on a secondary element of the property. The Westford Town Farm was in use until 1959, which is later than most others in the state and is eligible for the National Register under Criteria A and C at the local level as a prime example of the town's social safety net during the 19th and 20th centuries. The end date of 1959 for the period of significance extends beyond the 50-year cut-off due to the much later than average duration of the building's function as a town farm.

American efforts in public health and assistance to the poor were subject to English influence beginning in the Colonial Period. Britain's Queen Elizabeth I established "Poor Laws" in 1601 that provided municipalities and local governments with the power to determine a person's place of residence. This precaution was expressed in America by "warning out" potentially non-productive persons, by accepting responsibility for non-productive but established citizens to oversee treatment of the indigent and mentally ill, and to distinguish between able-bodied, disabled, and incarcerated inmates of almshouses. The poorhouse in Boston, one of the colony's first to be established in 1664, presumably operated under these principles.

Public oversight of the sick and poor increased in larger towns during the period and accelerated statewide after 1821, and following the efforts of Boston Mayor Josiah Quincy to create a system whereby those in need might be housed while simultaneously providing some useful service to themselves and to the community. The poor farms were thought to have the added benefit of reducing the costs to government of caring for the sick under the system involving multiple private homeowners, although this was not necessarily true over the long term. As a result of the combination of the 1821 economic depression and Mayor Quincy's reporting on the subject, the number of poor farms increased in Massachusetts from 83 in 1824 to a high of 223 after the Civil War. This and other information comes from the work of historian Heli Meltner who has performed extensive research on the subject at the statewide level. While these facilities were often built away from town centers and villages, possibly to prevent temptation of the intemperant, or perhaps to conceal the sickly from view, they represented the best early thinking on how to deal with some social problems. Indeed, the poor farm, almshouse, or town farm as it was variously known, remained in use across the state until the federally sponsored social programs of the early 20th century. Currently, 42 purpose-built town farms and 50 that were adapted for such use survive in Massachusetts, according to Meltner.

1729-1837

During the Colonial Period, non-productive citizens in smaller, more remote, communities such as Westford, which lacked public housing for the poor and indigent, were cared for at the expense of the town but in the private homes of those who made the lowest bid for the job of taking in, feeding, and clothing those unable to do so themselves, such as orphans, the mentally ill, physically disabled, debilitated or dissipated. Homeless people may or may not have been included in this category, depending upon whether they appeared to be vagrants, tramps, or wanderers. The Westford Overseers of the Poor, appointed in 1816 and reporting their expenses to the town for the first time in January 1817, would have been responsible for decisions about assigning poor people to the homes of different bidders.

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 2

The expenses of the Poor Farm operation were recorded annually in the town report by the elected or appointed Overseer of the Poor. With the dissemination in 1821 of reporting on the treatment of the poor by Josiah Quincy, made while he served in the Massachusetts House of Representatives, which suggested centralizing the process of relief for the poor in a way that would presage centralization of rural district schools in the late 19th and early 20th centuries, towns began to buy or build farms in order to provide work for, reduce public spending on, and possibly raise the standard of treatment of the poor. Consequently, according to Westford historian Reverend Edwin Hodgman, writing in 1883, voters of Westford approved on April 5, 1824, the purchase for \$2500 of the farm of John Read for use as a poor farm. The amount represents a farm of significant acreage (it comprised 170 acres), and a house of some size and in good condition, compared to valuations of others in the town at the time. While Westford Museum researcher Marilyn Day indicates the house was a rather large building with two stories and six rooms that slept between two and six people each, an outhouse, chambers, and apartment for "refractory subjects" (people who came for meals only), the "Report of the Committee Appointed by the House of Representatives on the Pauper System," printed in 1833 and quoted by Meltsner, states that "Immoralities have resulted from the impracticability of classifying inmates." Additional information in the report indicates that the house was nearly 100 years old, that some inmates are capable of a day's work, some a partial day, and still others totally incapable, and that in 1832, two inmates were committed for intemperance.

Previously appointed members of the committee to oversee the purchase of the Read farm were Eliakim Hutchins, Samuel Richardson, Zaccheus Read, and John Abbot who were also responsible for stocking the farm, for hiring a master and mistress, creating "Bye Laws[sic], or Orders and Regulations of Westford Workhouse" and for overseeing its operations. Selection of the first overseer was for Jonathan Hosmer who was succeeded by Otis Haywood. An original copy of the 1824 "Bye Laws" was recovered recently from the cellar of Town Hall by Westford Town Clerk Kaari Tari, they reveal that the overseers sought temperance, providence, and moral character in the residents; met at the workhouse on the first Saturday of every month, took responsibility, in addition to a justice of the peace, for determining who would be sent to the farm, insisted on schooling for children and that inmates keep the Lord's Day, prohibited liquor, determined hours of rising, eating and retiring, determined what appears to be a permanent, detailed, and inflexible weekly menu, and would leave punishment, apparel, labor, and maintenance decisions to the master. The Town Farm was the site of the deaths of 28 people between 1828 and 1838. The residents of the Town Farm who died here may have been buried in the Westlawn Cemetery (NRIND) on Concord Road, as the sextons there were reported to have buried paupers. The Town Farm was home to between 19 and 23 people at a time between 1828 and 1838 and was the birthplace of one person. Work done by inmates in 1820 included farming, repairing shoes, drawing of stone (probably in quarries of nearby Graniteville, NRDIS), and unspecified tasks at a forge, probably in nearby Forge Village (NRDIS). It is assumed the inmates were paid for their work and were encouraged to make their way in the world when possible. Stone walls across the road and no longer part of the property may have been built by inmates, given the description of their work in 1820.

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 3**1837-1931**

Due to its deteriorated condition, the Read farmhouse was replaced on the same site in 1837 with the current brick building, built by Daniel W. Hartwell. The building committee appointed at town meeting recommended a 2-story, 39' x 40' building, with a buttry and well-room in the shed. The total cost of the house and shed was \$3002.45, or \$600.45 over budget. A wood-framed addition was made in 1839-40, according to entries in town reports concerning a second Town Farm building committee. Meltsner, who has examined Town Farms across Massachusetts, suggests the placement of the 1840 ell, as well as the existing 1900 addition that replaced it, were oddly placed against the north facing façade, itself an oddity when considering that the southerly orientation was more common. She suggests the domestic form built at relatively large scale in masonry was a reaction to the increasing industrialization in Westford, where wage-earners had no land or other property of their own to rely on for income during instances of prolonged illness and extreme poverty. A purely agricultural town would have been more likely to build a residential-style town farm of smaller scale.

Produce and sales at the farm in 1850 consisted of 1,057 pounds of butter, plus pork, lard, cows, calves, potatoes, hay, poultry, cranberries, and more.

A detached gable-roofed barn was built north of the house in 1893 according to town reports. A woodshed and icehouse were built, mainly from lumber from the demolished 1840 ell, in 1900, and in conjunction with the current ell according to town reports (these no longer exist). Town reports also indicate the architect for the 1900 ell was H. M. Francis, architect of the J. V. Fletcher Library in Westford Center (NRDIS) as well as numerous important buildings in the city of Fitchburg, Massachusetts, and elsewhere. While construction on these improvements was done by the master of the Town Farm, Samuel H. Balch, it is not known if he was responsible for construction of the jail cells in the cellar that were installed at the same time. Town reports indicate that running water, steam heat, and a fire escape were added around the turn of the 20th century. The fire escape mentioned in the town report may be the existing porch based on physical examination and on a 1903 photo depicting it in place. Silos were built in 1913 and 1928, indicating the presence of cows and dairying operations. Poultry is also mentioned in the 1931 town report. The name of the facility was changed by vote at the 1919 town meeting from Town Farm or Poor Farm to Westford Home. This name change reflected not only a change from a mostly agricultural operation to a health-care facility in a semi-industrial town, but it also coincided with a change from a punitive institution to a nursing-based facility to care for the aging population after the Civil War. The 1893 barn burned as a result of arson in 1920 and was replaced in 1922 at a cost of \$3000 (this no longer survives). A small toilet was installed near the jail cells in the cellar in 1924. This appears to be the sole jail cell in town at the time, suggesting that it was used to hold both Town Farm inmates and other lawbreakers. A glass and chrome Dixie Cup holder that remains may date to this time as well, since the cup holders were produced by the Vortex Dixie Cup Company from 1924 to 1936.

By the late 19th century, increased industrialization led in part to the state's adoption of control over more of the process of caring for the poor, possibly because so many of the factory workers were from distant lands and therefore not the responsibility of the local communities under the old Pauper System. State-run poor farms were built in 1852 in Monson, Bridgewater, and Tewksbury to relieve the pressure on smaller towns. By 1926, there were 126 Town Farms in the state, down from 223 after the Civil War.

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 4**Residents**

Statistics gathered by Marilyn Day reveal that from 1838 to 1846, there was an average of just over 21 people spending time at the Town Farm each year. An average of approximately 3 people died here each year and there were two births during the period. Numbers of residents decreased between 1846 and 1910 to an average of over seven per year, with just under one death per year. Only a single birth was recorded during this time. Fourteen men served as master of the Town Farm between 1841 and 1883, resulting in an average of three years' tenure per master. This figure rose dramatically in the 20th century to near ten years per master's tenure in the 1930s-1950s.

While most of the information about the lives of those who spent time at the Town Farm has been lost, it is possible to assemble some scattered details by combining lists of names of some occupants and census data from the period. Since state law prohibited printing names of Town Farm residents after 1910, most information is from the previous period. State census records from 1855 and 1865 are readily available and provide a sketch of what might be some typical as well as some unusual people at the Westford Town Farm. The 1855 census, which lists Willis Wilder as a farmer and master of the Town Farm, also indicates he lived here with his wife Laura and two children. F. W. Howe was an 82-year-old occupant of the Town Farm in 1894 and was listed in the 1855 census as a 44-year-old farmer and head of his household. True Bean was a 79-year-old occupant in 1902 and was listed in 1855 as a 33-year-old shoemaker, and in 1865 as a wheelwright living at 14 Depot Street outside Westford Center. A veteran of the Civil War, Mr. Bean also worked as a laborer on the Stony Brook Railroad, a janitor of the town hall, sealer of weights and measures, and librarian. After spending time in the Groton Town Farm in 1900, Mr. Bean died here in 1905. Ellen McCarty was approximately 70 years old while living at the Town Farm in 1903, and was listed in the 1855 census as a 13-year old living in Westford with the Cowcick family but not her parents. Alice Jackson was 59 years old when she lived at the Town Farm in 1905, and was listed in 1855 as a 10-year-old daughter of the English immigrant and head of household Hannah Jackson in one of Westford's mill villages (the census does not state locations but occupations and nationalities of neighbors suggest the mill village location). Hiram Leland was 62 years old in 1910 when he lived at the farm, and was listed as an eight-year-old son of a farmer near Westford Center. Mr. Leland was also admitted twice to the Town Farm in 1909.

The 1865 census lists Tyngsborough native Ward Coburn as the Keeper of the Poor Farm along with his wife Sibyl and nine other people, all of whom were described as paupers, and one of whom was considered to be insane. (The 1913 Webster's Revised Unabridged Dictionary definitions of the words "insane"- "Exhibiting unsoundness or disordered of mind", "simple"- "Weak in intellect; not wise or sagacious; of but moderate understanding or attainments; hence, foolish; silly", "pauper"- "A poor person; especially, one dependent on private or public charity" and "idiot"- "A human being destitute of the ordinary intellectual powers", appear to coincide largely with our own.) Adults on this list ranged in age from 78 to 33 and were housed with two children of the female 33-year-old occupant, three and four years old. The 1869 list of occupants in the town report includes the brothers Charles F. and Frederick H. Peckins, ages 10 and eight. Patrick O'Toole, an 87 year old illiterate native of Ireland living in the Town Farm in 1894 was listed in 1865 as a head of household of four farming a piece of land near Texas Road in Westford. Edward E. Holt was an 80-year-old resident of the Town Farm in 1894, who had been working as a farmer and head of his household of three when he was 49 in 1855. Joseph D. Wilkinson lived here in 1900 when he was 81, had previously worked as a shoemaker and a laborer in 1865 and was the head of his household of three in a Westford neighborhood that was home to a number of other laborers at the

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 5

corner of Main Street and Providence Road near Westford Center. Mr. Wilkinson died at the age of 84 in 1903 as a result of a fall during an altercation with his roommate at the Town Farm, 70-year-old Varnum Fletcher. According to a contemporary newspaper account, "The two men occupied the same room but separate beds. The cause of the trouble was the lighting of a lamp in the night by Wilkinson, a proceeding not agreeable to Fletcher, who was known as mentally unbalanced and of a somewhat violent temper." Investigation into the incident by authorities determined the death was accidental and the funeral was paid for by the town. The above article was researched by Westford Museum employee Marilyn Day. Sarah J. Ingalls, 43 years old in 1906 when she occupied the Town Farm, had been a 16 year-old in the Westford village of Graniteville in 1865, where she lived in a house with her family headed by her father, a stonecutter, as well as nine other non-family members that included three soldiers.

Other peoples' stories have more details and as a result are the more touching. Westford native Louisa Leland was listed in the 1865 census as an illiterate and divorced (one of a very few so described) mother of three living near Westford Center and acting as the head of her household, although no occupation was given in the census. By 1904, she was 83 years old and living with no family members at the Town Farm. It may be that she had family nearby, since she was admitted here three times between 1903 and 1906, and so might have had some other refuge. Mary Elizabeth Cowdry and her sister Anna, at the ages of four and three, were not only residents of the Town Farm in 1865 along with their mother Elizabeth, a native of Scotland, but were either readmitted or had remained here until 1869, at which time their mother had gone elsewhere. Mary Elizabeth was readmitted in 1900 and remained at least until 1910, when state law prohibited the future printing of names of Town Farm occupants. Her funeral in 1929 was recorded with Town Farm information, suggesting the possibility that she lived here the rest of her life. Patrick O'Toole, mentioned above as an 1894 occupant, had either died or gone elsewhere by 1897, leaving behind his wife Catherine, who was admitted on December 14, 1893 and died here in 1902 at the age of 102. It appears that Mrs. O'Toole came not only with her husband but with another woman named Margaret O'Brien who was also admitted on December 14, 1893, and, after living with Mrs. O'Toole for 10 years, does not appear on lists of occupants after 1902. A man named Thomas Carney lived here until 1907 when he was 97 years old. He was one of the longest-term residents, having been admitted in 1877. It appears that the longest term of residence at the Westford Town Farm according to town reports (records that vary in detail and content over time) was John P. Green. Although he was listed in the 1855 census as a 31 year old hand at a nearby farm, Town Farm records indicate he was admitted in 1839, and was still living here in 1905 when he was listed as a 77-year-old man.

Perhaps the most notable occupant of the Town Farm was Betsy Hildreth, one of the least manageable residents and probably among those with the worst state of mental health. Miss Hildreth lived here from 1840 until her death in 1858 at the age of 62, but in the early 1840s she was visited by Dorothea L. Dix, the social reformer who focused on improving the treatment and living conditions of the mentally ill being held in public institutions, not only in Westford but across the country and in Europe, Canada, and Asia as well. Miss Dix visited the Westford Town Farm and witnessed the methods of restraint used in regard to Miss Betsy Hildreth. To quote her 1843 report to the Massachusetts legislature, she saw that in Westford, the keepers of the Town Farm "had 26 paupers, one idiot, one simple and one insane, an incurable case from Worcester Hospital...I was conducted above stairs into an apartment of decent size, pleasant aspect from abroad and tolerable comfortable...but the inmates, grant I never look upon another such scene! A young woman, whose person was partially covered with portions of a blanket, sat upon the floor; her hair disheveled; her naked arms crossed languidly over

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 6

the breast...About the waist was a chain, the extremity of which was fastened into a wall of the house." To quote historian Heli Meltner's 2004 talk to the Westford Historical Society, "Dix asked her if she wanted clothes and the woman said yes but the attendant retorted that she'd just tear them off. In fact, inmate Betsy Hildreth, held at the time, was insane and I believe you can find an account of the expense for buying calico for Betsy's dress in one of the many accounts retained in the wonderful Historical Society archives. Chaining her to the wall and letting her go nearly naked must have been the choice of an ignorant but hard pressed matron."

Miss Dix, starting in Cambridge in 1841, traversed the Commonwealth taking notes on dozens of similar institutions, eventually compiling her report to the legislature that was presented in 1843 by Dr. Samuel Gridley Howe, director of the Perkins School for the Blind. This method of performing field research and then employing a sympathetic political figure to present it to various state legislatures in order to effect change, obtain funding for hospitals, and enact legislation was successful in engendering much of the public health law and infrastructure we have today.

1931-1960

The Westford Town Farm, as the building is still known today, continued to operate in the 20th century, even as other towns ceased their operations and sent the sick and poor to state institutions. In order to reflect the social change from an agricultural society to a more industrialized and specialized one, the town voted to change the name from Westford Home, adopted in 1919, to the Westford Infirmary in 1931. At that time, people still worked for their board if they were capable, painted and papered the interior of the house, constructed a new poultry house, and cut brush and firewood, in addition to maintaining dairy operations despite declining milk profits. The name change again reflected a development in services provided by the town farm. The Westford Home might be characterized as a nursing home, while the Westford Infirmary became more like a hospital with nurses treating cases of illness and administering childbirth assistance to medically indigent residents. During the Great Depression in 1932, more than 80 families were served by the Town Farm and by donations from the Red Cross, according to Marilyn Day's research in the town reports. Regardless of the deteriorating economic circumstances, or perhaps because of them, the keepers of the Town Farm in the early to mid 20th century tended to remain for longer terms than their 19th century predecessors with Edson G. Boynton serving from 1906-1912, Bert G. Brown from 1930-1937, Leo J. Connell from 1938-1948, and Maurice B. Rooks from 1949 to 1959. The superintendents were men in all cases and had significant assistance from their wives in nearly all cases. One example, Charles S. Ripley, the former master of the Harvard Town Farm, worked at the Westford Town Farm from 1918-1922 with his wife Mary, and while there adopted a son, Edward, who came to the town farm with his mother who gave him up as a way of lessening the burden of her already numerous children.

The 1959 town report indicates: "On April 3, 1959, the last patient at the Westford Infirmary was transferred to the Tewksbury Hospital and the home was officially closed. The remaining cattle were disposed of in September. Until other arrangements are made, Mr. and Mrs. Maurice Rooks will remain at the home as caretakers." The town report from 1960 includes the following entry: "The Town Farm was painted this year and is being kept in good condition."

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 7**1960-2007**

The 1922 barn was demolished and burned ca. 1970. Subsequent occupants of the Town Farm house included the Police and the Fire Department. The Police Department may have been assigned this building as a base of operations because of the jail cells in the cellar. The Fire Department continues to occupy a modern facility next door to the north. The Town Farm was occupied by administrative staff of the School Department from the 1960s until 2003. This appears to have been the period when most interior modifications and alterations were carried out, including addition of paneling, carpet, removal of historic trim, and covering the fireplaces. Reductions in acreage of the original 170-acre Town Farm parcel to its present size resulted from divisions in the 1960s for the nearby Norman E. Day School and later for the George Rogers Fire Station.

Archaeological Significance

Since patterns of ancient Native American settlement in Westford are poorly understood, any surviving sites could be significant. Although numerous ancient sites have been identified for the neighboring Concord, Sudbury, and Assabet River drainages, fewer sites have been recorded in the Stony Brook drainage, possibly reflecting underreporting in this area or environmental differences in the drainages. Ancient Native American sites on the Town Farm property may contain information that identifies the range of functional and temporal variability between sites in the Stony Brook drainage and their relationship to Native settlements along the main corridor of the Merrimack River. Information may also be present that clarifies the relationship and regional importance of sites and resources along the Stony Brook drainage to other tributaries of the Merrimack River such as the Concord, Sudbury, and Assabet River drainages. Ancient sites located on the Town Farm and Stony Brook drainage may represent a seasonal /functional aspect of a settlement system that focuses on larger sites along the Merrimack River drainage and other tributaries listed above. Sites in this area can also contain evidence of exchange between more interior portions of the Merrimack River drainage and downstream coastal areas.

Historic archaeological resources described above may contribute important information related to Westford's early settlement, the agricultural history of the town, and the origins, operation, and social accomplishments of the town's poor farm, almshouse, or town farm over two centuries of use. Structural evidence from the farmhouse, barns, and outbuildings associated with the John Read Farm may contribute important evidence related to the early settlement of the town, the architecture of 18th century residential and agricultural buildings, and building patterns on early farmsteads in eastern Massachusetts. Detailed analysis of the contents of occupational-related features (trash pits, privies, wells) can also contribute information on the topics listed above in addition to social, cultural, and economic information associated with the farm's inhabitants and agricultural production on the farm. Information may also exist related to adaptive patterns of reuse, as the John Read farm buildings and occupational-related features were adapted from private use to an institutionalized poor farm or almshouse.

Additional historical research combined with archaeological survey and testing at the Westford Town Farm may contribute important information that indicated how the town as an institution thought and dealt with many of its social

(continued)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service**National Register of Historic Places
Continuation Sheet**Westford Town Farm
Westford (Middlesex), MASection number 8 Page 8

problems during the 19th and 20th century. Evidently, the results of this process were satisfactory since the Westford Town Farm was in use until 1959, later than most other town farms in Massachusetts. The late date that the town farm was in use is also given as a reason for its retention of architectural and historical integrity. A similar reason may also exist for the farm's retention of archaeological integrity.

The potential for information related to adaptive patterns of reuse of farm buildings is discussed above. The wood-framed Read farmhouse was replaced by the existing brick structure in 1837. Barns, outbuildings, and possibly occupational-related features were also replaced and added throughout the remainder of the 19th and first half of the 20th century. Identification and careful mapping of these structures may contribute important information that indicates how these building patterns changed from the private Read occupation to institutionalized use. Information may also exist that indicates the influence that changing public philosophies on the oversight of the sick and poor had on building patterns and the treatment of the farm's inhabitants.

Archaeological resources may contribute important information related to the social history of the farm and the daily lives of its inhabitants. Since most of the information about the lives of those who spent time at the Town farm has been lost, any social information derived from archaeological resources can be especially important. Archaeological evidence related to building function, patterns of distribution, and detailed analysis of the contents of occupational-related features may contribute information related to the division of the farm's inhabitants by sex, medical or social status, and occupation. Analysis of occupational-related features may also contribute social, cultural, and economic information for the inhabitants. Inmates were employed in a wide variety of trades and occupations including farming, shoe repair, quarrying, and unspecified tasks at a local forge. It is assumed the inmates were paid for their work at these occupations. Occupational-related features may contain information that indicates the extent these activities were conducted at the farm, and the types of agricultural products and goods that were exported and imported to the farm. The information described above may indicate the extent that the farm was self-sufficient. Similar information may also indicate the influence of a cash economy on inmates, the operation of the farm, and the extent that personal items were brought to the farm.

Lost or obscured burial grounds including unmarked graves may contribute important information related to the general health, pathologies, and social, cultural, and economic characteristics of inmates. While the operation of the Town Farm exemplifies how the town dealt with social problems of the sick and poor while alive, the methods of burial reflects town philosophies of the same people in death. Historical and archaeological information may indicate whether deceased individuals were buried in a burial ground at the Town Farm or were interred in other local cemeteries. Similar information may determine whether graves were marked, and the type of marking that was used. Analysis of the entire mortuary context may contribute social, cultural, and economic information of the deceased or possibly the local town population. Osteological analysis of skeletal remains may contribute important information related to the general stature, health, and pathologies that affected individuals, the Town Farm population, and possibly the Westford community.

(end)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Westford Town Farm
Westford (Middlesex), MA

Section number 9 Page 1

9. BIBLIOGRAPHY

Breton, M. Research on Town Farm conducted as part of Westford Historic District Study Committee, August, 1975

Day, Marilyn. Research in Town Reports concerning the Town Farm. No date.

Day, Marilyn. Westford Days. Boston: New England Historical and Genealogical Society, 1998.

Day Marilyn. Interview with former Westford Fire Chief George Rogers, 12/02;

Day, Quincy. Collection of Historic Photos of Westford buildings, ca. 1900-1910. Maintained by Marilyn Day.

Fletcher, J. V. Library newspaper collection. "ACCIDENTAL. Death of an Old Man at Westford Town Farm. NO MANS LAUGHTER." Untitled newspaper, February, 1903.

Hodgman, Rev. Edward R. History of the Town of Westford, in the County of Middlesex, Massachusetts, 1659-1883. Lowell: 1883.

Lainhart, Anne Compiler. Massachusetts census, 1855, 1865.

McGinnity, Pam. Interview, 5/06.

Meltsner, Heli. Notes from a speech given to the Westford Historical Society, containing information on Town Farms, Poor Houses and Almshouses across Massachusetts as well as information on the life and work of social reformer Dorothea Dix. March 24, 2004.

Meltsner, Heli. Notes from Town Farm By-Laws, dated 1 November 1824, located in Town Hall.

Oliphant, Robert. Research concerning Westford Town Farm employees and livestock. No date.

Town Records. Annual Town Reports, 1840-1950. Research compiled by Marilyn Day and Bob Oliphant.

Westford. Map. Edward Symmes. 1855.

Westford. Map. Atlas of Middlesex County, MA. New York: Beers, 1875.

Westford. Map. Atlas of Middlesex County, MA. Walker, 1889.

(end)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Westford Town Farm
Westford (Middlesex), MA

Section number 10 Page 1

10. GEOGRAPHICAL DATA

Verbal Boundary Description:

The former Westford Town Farm comprises all of the land within the boundaries of assessor parcel 24-23. It is bounded by Town Farm Road on the west and the former Stony Brook - Boston and Maine Railroad on the south. The Town Farm parcel encompasses .9 acres.

Boundary Justification:

Boundaries of the Town Farm property were determined by the Westford Historical Commission and by the consultant. Boundaries include all land within the specified assessor's parcel.

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Westford Town Farm
Westford (Middlesex), MA

Section number 10 Page 2

SKETCH MAP

NORTH TOWARD TOP



(end)

NRHP Nomination Form (Continued)

NPS Form 10-900
(Rev. 10-90)

OMB Approval No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Continuation Sheet

Westford Town Farm
Westford (Middlesex), MA

Section number photos Page 1

PHOTO LOG

- 1 Exterior, View to southeast
- 2 Exterior, View to southeast
- 3 Exterior, View to northeast
- 4 Exterior, View, front entries
- 5 Exterior, View, rear elevation, southwest view
- 6 Exterior, View, rear elevation, west view
- 7 Interior, first floor, brick block, staircase
- 8 Interior, third floor, rear, brick block
- 9 Interior, first floor, staircase, Victorian wood frame block
- 10 Interior, basement, jail cell, northeast corner, Victorian wood frame block
- 11 Interior, first floor, north end
- 12 Exterior, front door detail

NRHP Nomination Form (Continued)



NRHP Nomination Form (Continued)

Westford town farm
Middlesex Co. MA.
UTM Zone 19
E 0296580
N 4717660



NRHP Nomination Form (Continued)

Westford Town Farm, Westford (Middlesex Co.)



1. Exterior, View to southeast (Photographer: Sanford Johnson, October 2007)



2. Exterior, View to southeast (Photographer: Sanford Johnson, October 2007)

NRHP Nomination Form (Continued)

Westford Town Farm, Westford (Middlesex Co.)



3. Exterior, View to northeast (Photographer: Sanford Johnson, October 2007)



4. Exterior, View, front entries (Photographer: Sanford Johnson, October 2007)

NRHP Nomination Form (Continued)

Westford Town Farm, Westford (Middlesex Co.)



5. Exterior, View, rear elevation, southwest view
(Photographer: Sanford Johnson, October 2007)



6. Exterior, View, rear elevation, west view
(Photographer: Sanford Johnson, October 2007)

NRHP Nomination Form (Continued)

Westford Town Farm, Westford (Middlesex Co.)



7. Interior, first floor, brick block, staircase
(Photographer: Sanford Johnson, October 2007)



8. Interior, third floor, rear, brick block
(Photographer: Sanford Johnson, October 2007)

NRHP Nomination Form (Continued)

Westford Town Farm, Westford (Middlesex Co.)



9. Interior, first floor, staircase,
Victorian wood frame block
(Photographer: Sanford Johnson, October 2007)



10. Interior, basement, jail cell, northeast corner,
Victorian wood frame block
(Photographer: Sanford Johnson, October 2007)

NRHP Nomination Form (Continued)

Westford Town Farm, Westford (Middlesex Co.)



11. Interior, first floor, north end (Photographer: Sanford Johnson, October 2007)



12. Exterior, front door detail (Photographer: Sanford Johnson, October 2007)

NRHP Nomination Form (Continued)

Westford Town Farm – Adaptive Reuse Considerations
35 Town Farm Road
Westford, MA

APPENDIX B
CAPTIONED PHOTOGRAPHS OF EXISTING CONDITIONS

B.01 – B.04:	EXTERIOR / General Views
B.05 – B.06:	EXTERIOR / School Storage Barn
B.07:	EXTERIOR / Rogers Fire Storage Barn
B.08:	EXTERIOR / Rogers Fire Training Facility
B.09 – B.17:	EXTERIOR / 1837 Original Building
B.18 – B.20:	EXTERIOR / 1900 North Addition
B.20 – B.24:	BASEMENT LEVEL / 1837 Original Building
B.25 – B.28:	BASEMENT LEVEL / 1900 North Addition
B.29 – B.36:	FIRST FLOOR LEVEL / 1837 Original Building
B.37 – B.40:	FIRST FLOOR LEVEL / 1900 North Addition
B.41 – B.43:	SECOND FLOOR LEVEL / 1837 Original Building
B.43 – B.45:	SECOND FLOOR LEVEL / 1900 North Addition
B.46 – B.47:	THIRD FLOOR LEVEL / 1837 Original Building
B.48 – B.49:	THIRD FLOOR LEVEL / 1900 North Addition
B.50:	ROOF
B.51:	FOOD PANTRY

EXTERIOR

General Views

190910-IMG_3074.JPG



*Current Appearance of 1837 Original Building
(at Right) and 1900 Addition (at Left)*

EXTERIOR

General Views

190910-IMG_3075.JPG



*View of School Storage Barn (at Left) and
Rogers Fire Station Storage Barn (at Right)*

EXTERIOR

General Views

190910-IMG_3073.JPG



*Front Facade of Town Farm with Added (c 1900)
Fire Escape Balcony Porches at First & Second Floors*

EXTERIOR

General Views

190910-IMG_3072.JPG



View of Town Farm from Southwest

EXTERIOR

General Views

190910-IMG_2950.JPG



Intersection of 1837 Building at Right to 1900 Addition at Left; Wooden Ramp and Stairs

EXTERIOR

General Views

190910-IMG_2955.JPG



Wooden Wheelchair Ramp to Both Entrances

EXTERIOR

General Views

190910-IMG_2988.JPG



Parking and Driveway Toward Rear of Site with Rogers Fire Station Storage Barn at Left and Fire Training Facility in Background

EXTERIOR

General Views

190910-IMG_3021.JPG



Parking and Driveway Toward Back of Fire Station with Fire Storage Barn at Left and Training Facility at Right

EXTERIOR

General Views

190910-IMG_3033.JPG



Rear Parking Lot at East Side of Rogers Fire Station Accessed via Town Farm Driveway

EXTERIOR

General Views

190910-IMG_3032.JPG



Storm Water Manholes at Low East End of Site

EXTERIOR

General Views

190910-IMG_3024.JPG



*Looking West from Back of Site to Town Farm Road;
Town Farm at Left & Fire Storage Barn at Right*

EXTERIOR

General Views

190910-IMG_3069.JPG



School Bus Parking Across Town Farm Road from Site

EXTERIOR

School Storage Barn

190910-IMG_3037.JPG



Street Facade of School Storage Barn from Northwest at Town Farm Road

EXTERIOR

School Storage Barn

190910-IMG_3035.JPG13



Street Facade of School Storage Barn from Southwest at Town Farm Road

EXTERIOR

School Storage Barn

190910-IMG_3051.JPG



Foundation, Siding and Doorway Detail at Northwest Corner of School Storage Barn

EXTERIOR

School Storage Barn

190910-IMG_3048.JPG



Front Stairway to School Storage Barn

EXTERIOR

School Storage Barn

190910-IMG_2999.JPG



Southeast Corner of School Storage Barn with Rogers Fire Station Storage Building to Right

EXTERIOR

School Storage Barn

190910-IMG_3040.JPG



Northeast Corner of School Storage Barn from Rogers Fire Station Lot to North

EXTERIOR

School Storage Barn

190910-IMG_3044.JPG



Partially Concealed East Facade of School Storage Barn

EXTERIOR

School Storage Barn

190910-IMG_3042.JPG



North Facade of School Storage Barn Adjacent to Upper Parking Lot of Rogers Fire Station

EXTERIOR

Rogers Fire Station Storage Barn

190910-IMG_3016.JPG



*South End of Rogers Fire Station Barn
(Abandoned Building)*

EXTERIOR

Rogers Fire Station Storage Barn

190910-IMG_3047.JPG



*North End of Rogers Fire Station Barn
Viewed from Station's Upper Parking Lot*

EXTERIOR

Rogers Fire Station Storage Barn

190910-IMG_3002.JPG



*North End of West Facade of
Abandoned Fire Station Storage Barn*

EXTERIOR

Rogers Fire Station Storage Barn

190910-IMG_3004.JPG



*South End of West Facade of
Abandoned Fire Station Storage Barn*

EXTERIOR

Rogers Fire Training Facility

190910-IMG_3020.JPG



View of Fire Training Facility from West

EXTERIOR

Rogers Fire Training Facility

190910-IMG_3027.JPG



East Facade of Fire Training Facility

EXTERIOR

Rogers Fire Training Facility

190910-IMG_3029.JPG



Looking Toward Town Farm Road from Training Facility

EXTERIOR

Rogers Fire Training Facility

190910-IMG_3030.JPG



View Thru Training Facility Toward Fire Station Storage Barn

EXTERIOR

1837 Original Building

190910-IMG_2948.JPG



Canopied Entrance to North Facade with Wooden Entrance Steps and Ramp; 1910 Addition at Left

EXTERIOR

1837 Original Building

191003-IMG_3901.JPG



6-Panel Door with Sidelights at North Facade; Opening Location is Original but Current Door, Sidelights and Canopy are all Contemporary

EXTERIOR

1837 Original Building

191003-IMG_3928.JPG



Detail of Granite Window Lintels & Sills at North Facade Adjacent to Entrance Canopy; One of a Pair of Iron Anchor Plates with Concealed Tie Rods Thru Brick to Framing

EXTERIOR

1837 Original Building

191003-IMG_3935.JPG



Second Iron Anchor Plate Adjacent to Entrance Canopy at North Facade (One Pair per Facade to Floor Framing)

EXTERIOR

1837 Original Building

190910-IMG_2952.JPG



Fire Escape Balconies on Town Farm Facade Presumably Installed at Time of North Addition c. 1900

EXTERIOR

1837 Original Building

190910-IMG_2959.JPG



North End of Fire Floor Balcony with Pair of Granite Steps and Painted Wood Deck

EXTERIOR

1837 Original Building

190910-IMG_2965.JPG



Front Entrance Door at First Floor Balcony Appears to be Original Construction

EXTERIOR

1837 Original Building

191003-IMG_3898.JPG



Front Entrance Door at Town Farm Facade; Blocked by Shelving at Interior

EXTERIOR

1837 Original Building

190910-IMG_2984.JPG



Transom Bar and 5-Light Sash Above Front Facade Door

EXTERIOR

1837 Original Building

190910-IMG_2983.JPG



Corner Mending Plate to Reinforce Joint Between Hinge Stile and Upper Rail at Front Facade Door

EXTERIOR

1837 Original Building

190910-IMG_2985.JPG

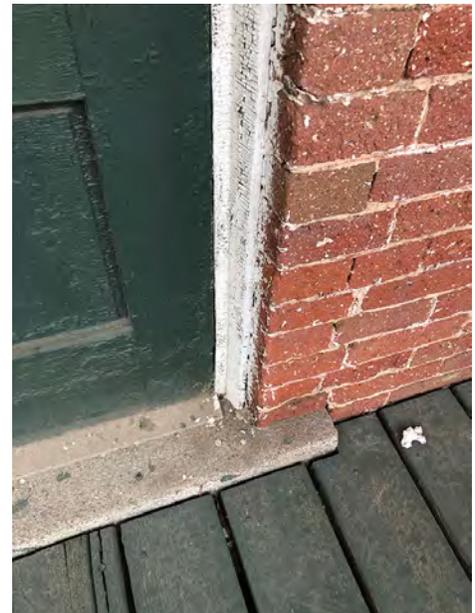


Original Woodwork, Multiple Paint Layers and Antique Door Knob Set at Front Facade Door

EXTERIOR

1837 Original Building

190910-IMG_2986.JPG



Original Wood Door, Wood Frame and Granite Sill at Front Facade Door

EXTERIOR

1837 Original Building

191003-IMG_3899.JPG



*Railing with Missing Baluster at North End of
Second Floor Fire Escape Balcony*

EXTERIOR

1837 Original Building

191003-IMG_3897.JPG



*South End of First Floor Fire Escape Balcony;
Railing and Chamfered Corner Post Intact*

EXTERIOR

1837 Original Building

190910-IMG_2966.JPG



*Escape Stairs at Landing on First Floor Deck;
Simple Newel Post with Ball Finial;
Tread Boards with Open Risers*

EXTERIOR

1837 Original Building

190910-IMG_2967.JPG



*Interior Side Railing with Balusters to Match Balconies;
Outside Rectangular Railing without Balusters*

EXTERIOR

1837 Original Building

190910-IMG_2975.JPG



*Flat Seamed Metal Deck at Second Floor Balcony;
Looking North Toward End Railing*

EXTERIOR

1837 Original Building

190910-IMG_2977.JPG



*Typical 6-over-9 Double Hung Windows in
Brick Openings with Granite Lintels & Sills*

EXTERIOR

1837 Original Building

190910-IMG_2978.JPG



*Second Floor Fire Escape Door in Original Window
Opening with Intact Frame and Brick Mouldings;
Door Matches 6-over-9 Window Muntin Pattern*

EXTERIOR

1837 Original Building

190910-IMG_2980.JPG



*Looking South at Second Floor Fire Escape Balcony;
Stairs Up to Closed Hatch at Third Floor*

EXTERIOR

1837 Original Building

190910-IMG_2961.JPG



Shutter Pintle in Window Frame Above Granite Sill

EXTERIOR

1837 Original Building

190910-IMG_2963.JPG



Shutter Pintle in Window Frame Below Granite Lintel

EXTERIOR

1837 Original Building

190910-IMG_2964.JPG



Detail of Shutter Pintle and Brick Moulding at Typical Window Opening

EXTERIOR

1837 Original Building

190910-IMG_2960.JPG



Rough Surface of Brick Resulting from Abrasive Sandblasting to Remove Paint; Remnants of Paint Still Embedded in Portions of Brick and Mortar

EXTERIOR

1837 Original Building

190910-IMG_2970.JPG



Detail at Southwest Corner of Second Floor Fire Balcony; Chamfered Post, Turned Balusters, Moulded Rails

EXTERIOR

1837 Original Building

190910-IMG_2972.JPG



Northerly View of Second Floor Fire Escape Balcony; Stairs Up to Third Floor Hatch; Guardrail at Stairs Down to First Floor Balcony and Exit to Grade

EXTERIOR

1837 Original Building

190910-IMG_2974.JPG



Closed Hatch at Roof Over Second Floor Balcony

EXTERIOR

1837 Original Building

190910-IMG_2881.JPG



EPDM Roofing at Third Floor Exit with Metal Railing to Hatch for Stair Access Below

EXTERIOR

1837 Original Building

191003-IMG_3900.JPG



Typical 6-over-9 Double Hung Window on South Facade of First Floor

EXTERIOR

1837 Original Building

191003-IMG_3931.JPG



Cellar Bulkhead Doors; Contemporary Addition at East Facade of Original Farm Building

EXTERIOR

1837 Original Building

191003-IMG_3912.JPG



Rake and Eave Transition at Southeast Corner; Lightning Arrester Cable Mounted on Brick

EXTERIOR

1837 Original Building

191003-IMG_3913.JPG



Northeast Corner at Intersection with 1900 Addition at Right

EXTERIOR

1837 Original Building

191003-IMG_3906.JPG



*6-over-9 Third Floor Window on East Facade;
Sandblasted Brick, Granite Lintel and Sill*

EXTERIOR

1837 Original Building

191003-IMG_3907.JPG



*East Facade of Second and Third Floors Above
Low Slope Roof of Contemporary East Addition;
Middle Pair of Windows Not Original (Post 1952)*

EXTERIOR

1837 Original Building

190910-IMG_3055.JPG



Deteriorating Enclosure of Crawl Space at East Addition

EXTERIOR

1837 Original Building

190910-IMG_3063.JPG



*Vent Hood and Missing Crawl Space Enclosure at
Southeast Corner of Contemporary Addition;
Concrete Sonotube Foundation Piers*

EXTERIOR

1900 North Addition

190910-IMG_2989.JPG



One-Story Addition at Side of 1900 North Addition

EXTERIOR

1900 North Addition

190910-IMG_2991.JPG



1900 Addition Replaced an Earlier Ell in Same Location

EXTERIOR

1900 North Addition

190910-IMG_2947.JPG



Entrance Deck Obscures Originally Intended Steps and Front Door to the Addition

EXTERIOR

1900 North Addition

190910-IMG_2860.JPG



Extension of Deck Serving Both Entrances

EXTERIOR

1900 North Addition

190910-IMG_2944.JPG



Side Approach to Canopied Entrance

EXTERIOR

1900 North Addition

191003-IMG_3902.JPG



Heavily Bracketed Original Canopy Intact

EXTERIOR

1900 North Addition

190910-IMG_2945.JPG



Detail of Carved Bracket and Canopy Ceiling

EXTERIOR

1900 North Addition

190910-IMG_2946.JPG

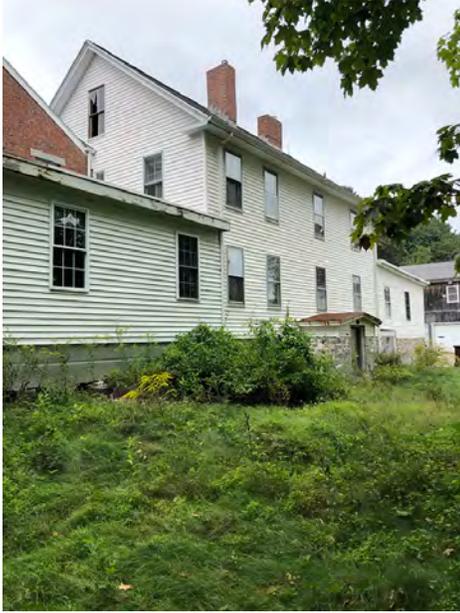


Bracket Retains Its Original Character and Integrity

EXTERIOR

1900 North Addition

190910-IMG_3056.JPG



Rear Facade (East) of North Addition

EXTERIOR

1900 North Addition

190910-IMG_3034.JPG



View to Southwest from Rear Lot Area

EXTERIOR

1900 North Addition

190910-IMG_3010.JPG



Rear Access to Basement at Left and to Crawl Space Under Addition at Right

EXTERIOR

1900 North Addition

190910-IMG_3008.JPG



One-Story Portion of Addition on c. 1840 Older Stone Foundation of Previous Ell

BASEMENT LEVEL

1837 Original Building

190910-IMG_2922.JPG

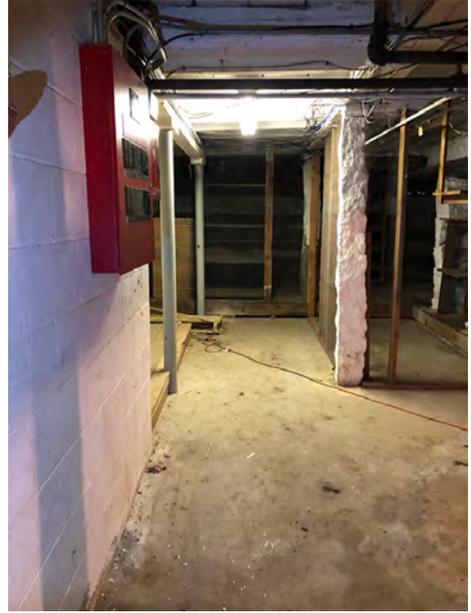


Basement Stairs to First Floor

BASEMENT LEVEL

1837 Original Building

190910-IMG_2924.JPG



*Looking South in Basement Area;
Fire Alarm Control Panel at Left*

BASEMENT LEVEL

1837 Original Building

190910-IMG_2928.JPG



Storage Cage Enclosures in Southwest Corner

BASEMENT LEVEL

1837 Original Building

190910-IMG_2925.JPG



Electrical Panels in Northwest Corner

BASEMENT LEVEL

1837 Original Building

190910-IMG_2930.JPG



Cast Iron Gas-Fired Two-Pipe Steam Boiler

BASEMENT LEVEL

1837 Original Building

190910-IMG_2929.JPG



Wooden Platforms and Storage Area Dividers

BASEMENT LEVEL

1837 Original Building

190910-IMG_2935.JPG



Pair of Log Posts with One on Stone Plinth

BASEMENT LEVEL

1837 Original Building

191003-IMG_3933.JPG



Bulkhead Door and Steps with Former Crisafulli School Sign as Inner Door

BASEMENT LEVEL

1837 Original Building

190910-IMG_2936.JPG



One of Several Painted Granite Posts

BASEMENT LEVEL

1837 Original Building

190910-IMG_2937.JPG



One of Several Painted Log Posts

BASEMENT LEVEL

1837 Original Building

190910-IMG_2938.JPG



*Base of Painted Log Post on Basement Slab;
Moisture Wicking into Lower Fibers Evident*

BASEMENT LEVEL

1837 Original Building

190910-IMG_2939.JPG



Base of Painted Log Post on Stone Plinth

BASEMENT LEVEL

1837 Original Building

190910-IMG_2941.JPG



Stacked Wood Capitals of Painted Granite Post

BASEMENT LEVEL

1837 Original Building

190910-IMG_2940.JPG



Wood Capital of Painted Steel Column

BASEMENT LEVEL

1837 Original Building

190910-IMG_2942.JPG



Base of Painted Granite Post

BASEMENT LEVEL

1837 Original Building

190910-IMG_2943.JPG



Base of Painted Steel Column

BASEMENT LEVEL

1900 North Addition

190910-IMG_2805.JPG



Stairs Down to Basement from First Floor

BASEMENT LEVEL

1900 North Addition

191003-IMG_3927.JPG



Newel Post and Balustrade at Basement

BASEMENT LEVEL

1900 North Addition

190910-IMG_2796.JPG



Looking North to Basement Stairway

BASEMENT LEVEL

1900 North Addition

190910-IMG_2791.JPG



Looking East at Door Leading to Jail Cells

BASEMENT LEVEL

1900 North Addition

190910-IMG_2804.JPG



Exterior Bulkhead Door from Jail Cells

BASEMENT LEVEL

1900 North Addition

190910-IMG_2797.JPG



Brick Fireplace in South Room of Basement

BASEMENT LEVEL

1900 North Addition

190910-IMG_2793.JPG



Sink Area and Brick Counter Adjacent to Fireplace

BASEMENT LEVEL

1900 North Addition

190910-IMG_2792.JPG



*Gas Fired Domestic Hot Water Heater
Between Fireplace and Sink Area*

BASEMENT LEVEL

1900 North Addition

190910-IMG_2799.JPG



Two Jail Cells with Missing Cell Doors

BASEMENT LEVEL

1900 North Addition

190910-IMG_2801.JPG



*Missing Bars at Basement Window
for Natural Light to Jail Cells*

BASEMENT LEVEL

1900 North Addition

190910-IMG_2802.JPG



One of Two Jail Cells

BASEMENT LEVEL

1900 North Addition

190910-IMG_2803.JPG



*Missing Brick at Former Cell Door
in Embedded Hinge Locations*

BASEMENT LEVEL

1900 North Addition

190910-IMG_2798.JPG



Toilet and Urinal Adjacent to Jail Cells

BASEMENT LEVEL

1900 North Addition

190910-IMG_2786.JPG



Gas-Fired Steam Boiler

BASEMENT LEVEL

1900 North Addition

190910-IMG_2787.JPG



*Door and Steps to Crawl Space
Below One-Story Addition to North*

BASEMENT LEVEL

1900 North Addition

190910-IMG_2782.JPG



*Older Stone Foundation and Contemporary
Lumber Framing at North Addition*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2887.JPG



Entrance Door at North Facade in Original Opening but Replacement Components

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2886.JPG



Central Stairway with Carpeted Wood Treads & Risers; Simple Square Newel Post and Balusters

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2888.JPG



Northwest Corner of First Floor Most Recently Served as Office Reception Area

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2889.JPG



Northwest Corner of First Floor; Painted Wood Plank Flooring

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2890.JPG



Looking South in Central Stair Hallway Toward Restroom

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2904.JPG



Looking North in Central Hallway Toward Entrance

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2895.JPG



*Middle Room Adjacent to Reception Area
with Blocked Fireplace at Intact Painted Mantle*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2896.JPG



*Middle Room with Wood Strip Flooring
Added to Cover Plank Flooring*

FIRST FLOOR LEVEL

1837 Original Building

191003-IMG_3920.JPG



*Former Front Facade Doorway
Concealed by Shelving in Former Foyer*

FIRST FLOOR LEVEL

1837 Original Building

191003-IMG_3919.JPG



Historic Knob and Mortise Lockset

FIRST FLOOR LEVEL

1837 Original Building

191003-IMG_3921.JPG



Blocked Fireplace with Intact Mantle in Southwest Room

FIRST FLOOR LEVEL

1837 Original Building

191003-IMG_3922.JPG



*Former Front Facade Doorway
Concealed by Shelving in Former Foyer*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2897.JPG



Lath & Plaster Removed at Interior Surface of Exterior Wall Showing Hewn Strapping on Brick

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2898.JPG



Lath & Plaster Removed at Interior Surface of Exterior Wall Showing Hewn Strapping on Brick

FIRST FLOOR LEVEL

1837 Original Building

191003-IMG_3917.JPG



Thumb Latch and Door Pull Hardware

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2903.JPG



Restroom at South Wall Off Central Hallway

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2902.JPG

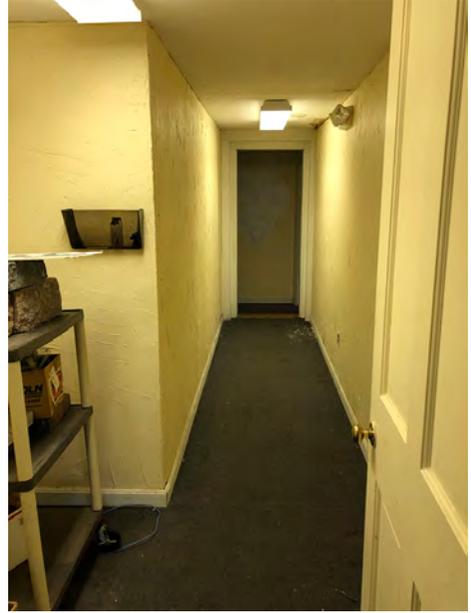


*Office in Southwest Corner of Original Brick Building;
Window in East Wall (at Left) Concealed by Addition*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2905.JPG



Looking East in Transverse Hallway to East Addition

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2907.JPG



*Door from Transverse Hallway into East Addition;
South Door to Exterior Beyond at Left*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2908.JPG



*Door to Exterior Adjacent to SE Corner of Brick Building;
Infilled Original Window Opening in East Facade*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2910.JPG



Looking North in Corridor Adjacent to East Facade; Original Brick Building at Left & East Addition at Right

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2912.JPG



East Window Infill Near SE Corner; East Addition Built After Paint was Sandblasted from Exterior Facades

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2914.JPG



Non-Original Brick Window Sill at First Floor Similar to Two Openings at Second Floor of East Facade (page B.17)

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2913.JPG



East Facade Window Added to Match Original Units

FIRST FLOOR LEVEL

1837 Original Building

191003-IMG_3924.JPG



*Hallway Adjacent to First Floor East Facade;
Wooden Porch at This Location Photographed in 1952*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2916.JPG



One of the Four Offices in East Addition

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2915.JPG



Another of the Four Offices in East Addition

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2911.JPG



*Vinyl Windows in East Facade of East Addition
With 6-over-6 Simulated Divided Light*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2891.JPG

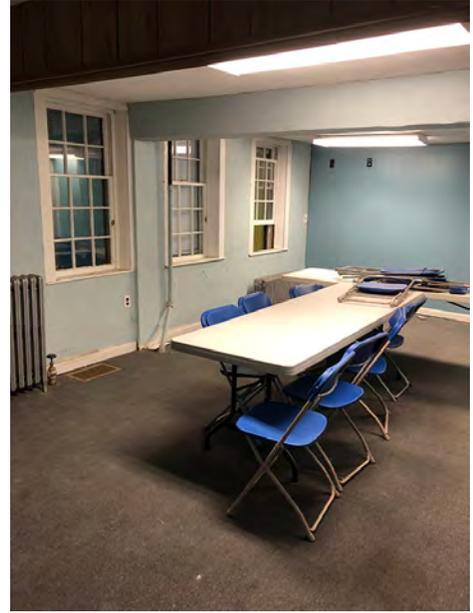


*Meeting Room in NE Corner of Brick Building;
6-over-9 Original Windows of East Facade*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2892.JPG



*Looking Southeast in First Floor Meeting Room;
Removal Date of Fireplace Matching West Side Unknown*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2894.JPG



*Looking Southwest in First Floor Meeting Room;
Ceiling Soffit in Middle of Room at Former Partition*

FIRST FLOOR LEVEL

1837 Original Building

190910-IMG_2893.JPG



Awkward Passage from Meeting Room to North Addition

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2814.JPG

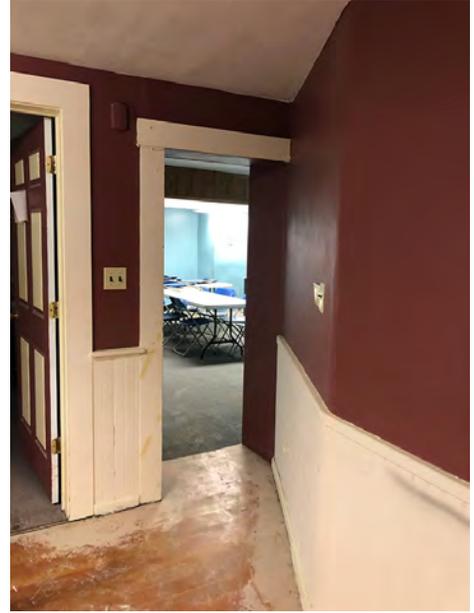


Looking South from North Addition Thru Hallway Adjacent to Original East Facade

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2813.JPG



Looking South Toward Meeting Room in 1837 Building

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2816.JPG

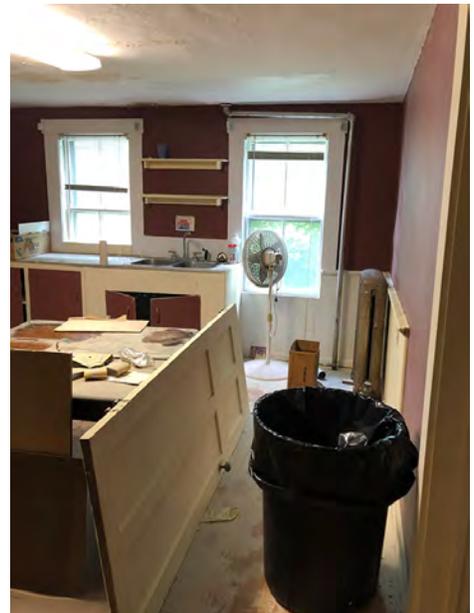


Kitchen in Southeast Portion of North Addition

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2815.JPG



Looking East in Kitchen at Pair of 2-over-2 Windows

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2817.JPG



View from Kitchen to Central Stair Hallway

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2920.JPG



Contemporary Entrance Door in Central Foyer

FIRST FLOOR LEVEL

1900 North Addition

191003-IMG_3934.JPG

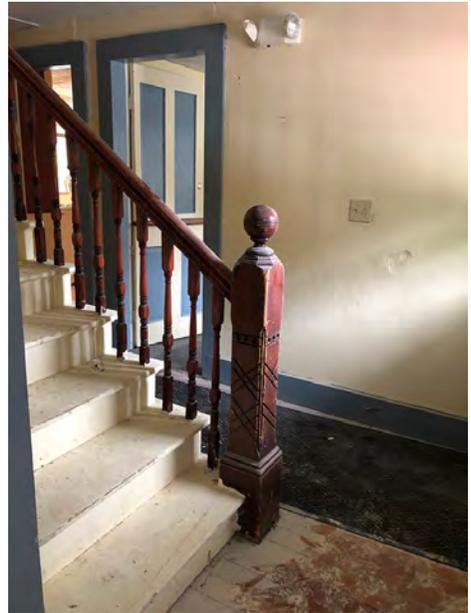


Original Newel Post, Railings and Balusters in Foyer

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2822.JPG



Stairway at Entry Foyer

FIRST FLOOR LEVEL

1900 North Addition

191003-IMG_3925.JPG



Historic Knob Set in Original Interior Door

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2919.JPG



Original 2-over-2 with Sash Lock and Added Triple Track Exterior Storm

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2820.JPG



Front Room to North of Entrance Foyer

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2821.JPG

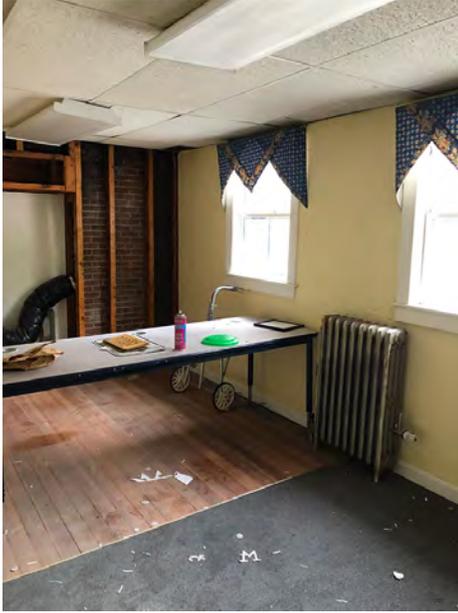


Fireplace and Surround in Front Room

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2811.JPG

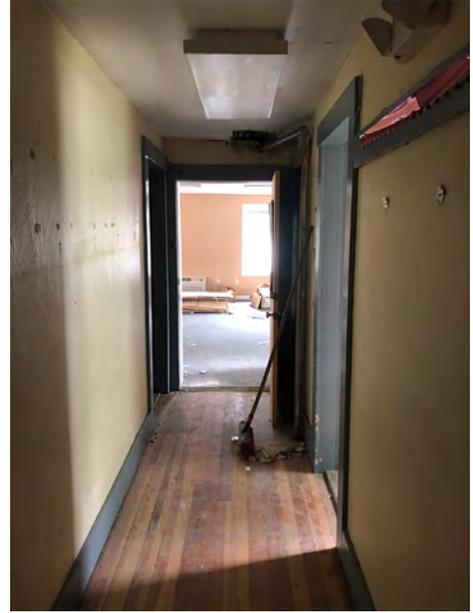


*Front Room to South of Entrance Foyer;
Brick of Original Building Visible Behind Studs*

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2806.JPG



Hallway to One-Story Portion of North Addition

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2808.JPG

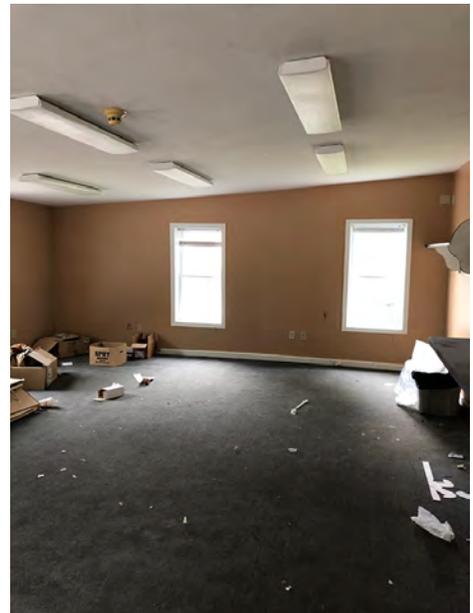


*Looking West Toward Front Facade and Exit in
One-Story North Addition*

FIRST FLOOR LEVEL

1900 North Addition

190910-IMG_2809.JPG

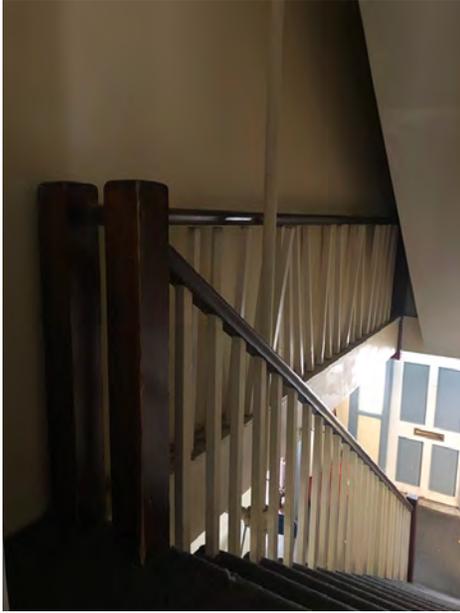


*Looking East Toward Rear Facade in
One-Story North Addition*

SECOND FLOOR LEVEL

1837 Original Building

191003-IMG_3918.JPG



*Balustrade and Guard Rail at Second Floor Stair;
Partition Added to Partially Enclose Stair at Hallway*

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2869.JPG



*Door at Stair Landing Swinging into Hallway;
Insufficient Landing Between Top Riser and Door*

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2861.JPG

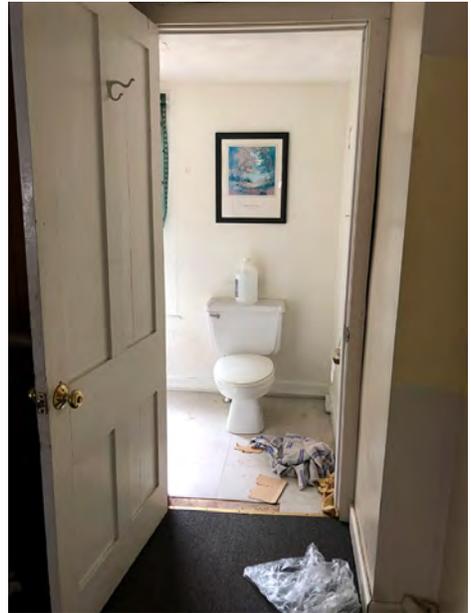


*Looking South in Central Hallway with Added
Metal Stud Partition Partially Enclosing Stairway*

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2867.JPG



Restroom at South End of Central Hallway

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2865.JPG



Masonite Paneling at Wall Surfaces in West Room

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2863.JPG



Steps Up to Fire Escape Door in Window Frame; Door Muntins Replicate 6-over-9 Sash Appearance

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2866.JPG

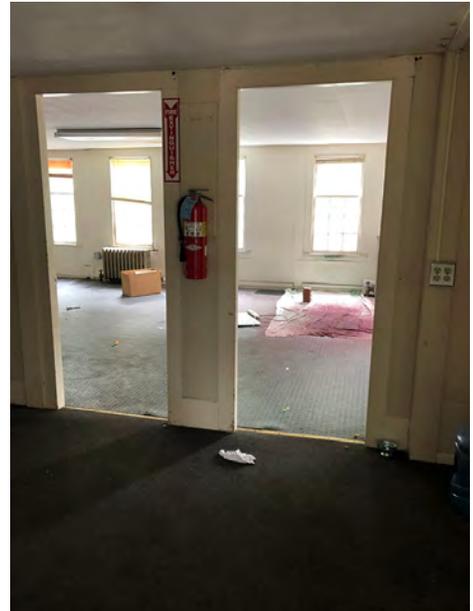


Southwest Room with Masonite Paneling Over Plaster

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2868.JPG



Adjacent Doors from Central Hall into Open East Room with Bedroom Partitions Previously Removed

SECOND FLOOR LEVEL

1837 Original Building

190910-IMG_2842.JPG



*Open Room in East Half of Second Floor
Used for Recreation and Exercise Activities*

SECOND FLOOR LEVEL

1837 Original Building

191003-IMG_3932.JPG



*Wall Repairs Added Thickness to Interior,
Bringing Surface Flush with Window Casings*

SECOND FLOOR LEVEL

1837 Original Building

191003-IMG_3914.JPG



Gate Latch Historical Door Hardware

SECOND FLOOR LEVEL

1837 Original Building

191003-IMG_3915.JPG



Turned Pull with Thumb Latch and Full Escutcheon Plate

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2819.JPG



Stairs Up to Second Floor from Entrance Foyer

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2833.JPG



Stair Down from Second Floor to Entrance Foyer

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2835.JPG



Wood Flooring and Stair Balustrade in Central Hallway at Second Floor

SECOND FLOOR LEVEL

1900 North Addition

191003-IMG_3916.JPG



Historic Knobs and Mortise Lockset

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2824.JPG



*Northeast Bedroom with Wood Flooring,
2-over-2 Windows and Cast Iron Radiator*

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2829.JPG



Looking from NE Bedroom into Central Stair Hallway

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2830.JPG



*2' x 4' Fissured Acoustical Panels Placed in
Ceiling Grid Slightly Below Flat Plaster Ceiling*

SECOND FLOOR LEVEL

1900 North Addition

190910-IMG_2834.JPG



Typical Bedroom Used More Recently as an Office

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2871.JPG



Stairs Up to Third Floor from Second Floor

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2883.JPG



North Facing Dormer Adjacent to Stairway

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2878.JPG



South Facing Dormer Opposite Stairway

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2885.JPG



Wide Plank Flooring in Former Bedrooms

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2879.JPG



Flat Plaster Walls and Wood Baseboard Trim

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2876.JPG



*Typical 6-over-9 Double Hung Window;
Head Aligned with Finished Ceiling*

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2874.JPG



*Northeast Bedroom at Third Floor;
Plywood Floor Surface (Carpet Underlayment)*

THIRD FLOOR LEVEL

1837 Original Building

190910-IMG_2875.JPG



*Southeast Bedroom at Third Floor;
Plywood Floor Surface (Carpet Underlayment)*

THIRD FLOOR LEVEL

1900 North Addition

190910-IMG_2836.JPG



Stairs Up from Second Floor to Attic Level

THIRD FLOOR LEVEL

1900 North Addition

190910-IMG_2843.JPG



Stairs Down from Attic to Second Floor

THIRD FLOOR LEVEL

1900 North Addition

190910-IMG_2844.JPG



Attic Dormer on Front Facade Facing Town Farm Road

THIRD FLOOR LEVEL

1900 North Addition

191003-IMG_3905.JPG



Detail of 2-over-2 Attic Dormer Sash

THIRD FLOOR LEVEL

1900 North Addition

190910-IMG_2845.JPG



*Looking South in Attic Toward Original Building;
2-over-2 Sash in Gable End*

THIRD FLOOR LEVEL

1900 North Addition

190910-IMG_2858.JPG



*Plastered Brick Chimney in Attic with Some Missing
Plaster Most Likely Due to Past Water Damage*

THIRD FLOOR LEVEL

1900 North Addition

190910-IMG_2857.JPG



*Attic View Toward Chimney and Water Storage Box;
Lower Half of Dutch Door Stored Next to Tricycle*

THIRD FLOOR LEVEL

1900 North Addition

191003-IMG_3903.JPG



*Metal Lined Water Storage Tank with Float
for Automatic Water Fill Shut Off*

ROOF

1837 Original Building

190910-IMG_2852.JPG



*North Slope of Eastern Gable Rake with
Lightning Arrestor at Ridge*

ROOF

1837 Original Building

190910-IMG_2848.JPG



*GAF Timberline 40-Year Shingles Installed in 2007;
Closed Valleys; Brick Chimney Beyond Ridge*

ROOF

1837 Original Building

190910-IMG_2853.JPG



*EPDM Roofing Membrane at Low Slope Locations:
East Addition + Upper Fire Escape*

ROOF

1900 North Addition

190910-IMG_2826.JPG



*EPDM Membrane Roofing at Shed Roof of
One-Story Portion of Addition*

FOOD PANTRY

Cameron Senior Center

190910-IMG_3076.JPG



1200 SF in Basement for Food Pantry

FOOD PANTRY

Cameron Senior Center

190910-IMG_3077.JPG



Refrigerator and Storage Shelving

FOOD PANTRY

Cameron Senior Center

190910-IMG_3078.JPG



Freezer and Storage Shelving

FOOD PANTRY

Cameron Senior Center

190910-IMG_3079.JPG



Stocked Supplies for Distribution

Westford Town Farm – Adaptive Reuse Considerations
35 Town Farm Road
Westford, MA

APPENDIX C
HISTORIC PHOTOGRAPHS 1893 to 1970s

C.01: Photo After Construction of 1893 Barn & Prior to 1900 Replacement of Ell

1903 Photograph from Northwest; Taken by Quincy Day

C.02: 1903 Photograph from West

Early 1970's Photograph Taken from Northwest



*Photograph Taken After Construction of 1893 Barn and Prior to Construction of Current 1900 Ell at North Side of 1837 Portion
(Source: Page 57 in the June 4, 1896 Dedication Booklet for the J.V. Fletcher Memorial Library)*



*1903 Photograph Taken by Quincy Day Three Years After North Ell Addition Construction;
All Buildings Painted to Match the 1837 Brick Portion, or Perhaps the Brick was also Painted*



1903 Photograph Taken by Quincy Day from the West Showing 1893 Barn, 1900 Ell and 1837 Original Building



Early 1970's Photograph from Northwest; Rear Chimney in 1837 Portion of the Building Removed; Complex Appears to be Painted White Prior to Sandblasting the Brick Portions

Westford Town Farm – Adaptive Reuse Considerations

35 Town Farm Road
Westford, MA

APPENDIX D PRIOR ASSESSMENTS OF TOWN FARM FACILITIES

- D.01:** 2014 Town Wide Building Assessments by DRA Architects
Table of Contents & Study Scope
Renovation or New Construction
Renovation Categories, Priorities & Swing Space
Cost Estimate Information & Considerations
- D.13:** Description & Priorities for Town Farm Building
- D.23:** Diagrammatic Floor Plans of Town Farm Building
- D.27:** Structural Summary of Town Farm Building
- D.29:** Matrix of Building Systems of Town Farm Building
Sprinkler, Plumbing, Electrical, HVAC
- D34:** Budget for Town Farm Building
- D.35:** Description & Priorities for School Storage Barn
- D.38:** Diagrammatic Floor Plans of School Storage Barn
- D.39:** Structural Summary of School Storage Barn
- D.41:** Description & Priorities for Roger’s Fire Station Storage Barn
- D.43:** Diagrammatic Floor Plans of Roger’s Fire Station Storage Barn
- D.44:** Structural Summary of Roger’s Fire Station Storage Barn
- D.46:** Matrix of Building Systems of School & Fire Storage Barns
Sprinkler, Plumbing, Electrical, HVAC
- D51:** Budget for School Storage Barn
- D52:** Budget for Roger’s Fire Station Storage Barn
- D53:** Ipswich Engineering’s 2011 Structural Study of Town Farm Building

WESTFORD TOWN BUILDINGS - FACILITY CONDITION ASSESSMENT - BINDER 1
Town of Westford, Massachusetts

TABLE OF CONTENTS

Section	Description
1	Introduction: Introduction Building Location Map
2	Recommendations: Ten Year Capital Plan Summary Spreadsheet by Priorities Summary Spreadsheet by Categories Individual Building Summary Sheets
3	General: Renovation or New Construction Report Categories Priority Rating System The Need for Swing Space
4	Use of Cost Estimate Information: Use of Cost Estimate Mark-up List

*Binder 1 Table of Contents from
2014 DRA Architects Town Wide Facilities Report*

Facilities Plan for Town Buildings Town of Westford, Massachusetts

Introduction

Buildings included in this study are as follows:

- Town Hall
- Town Farm Building (Recreation Offices)
- Police Station
- Center Fire Station
- Nabnasset Fire Station
- Rogers Fire Station
- Highway Facility
- Cameron Senior Center
- Museum Cottage
- Parkerville Schoolhouse
- Rogers Fire Station Storage/ School Storage Barn
- Colonel John Robinson School
- Nabnasset School
- Rita Miller School
- Abbot School
- Norman Day Elementary School
- Blanchard Middle School
- John A. Crisafulli School
- Stony Brook School
- Westford Academy
- Millennium School
- Beacon Street School Maintenance Facility
- Water Department Garage
- Water Department Offices and Treatment
- Nutting Road Treatment Plant
- Perchlorate Treatment Building
- J. V. Fletcher Library

In 2014 DRA Architects with its team of engineers performed visits to each of the buildings and evaluated them to determine the types of improvements that will be necessary. Conversations were held with department heads and those in charge of maintenance. These improvements included such topics as:

- General
- Life Safety
- Health
- Hazardous Materials
- American's with Disabilities Compliance
- Site Issues

*List of Buildings with Town Farm & Appurtenant Buildings Highlighted
(Source: 2014 DRA Architects Town Wide Facilities Report)*

- Exteriors
- Interiors
- Energy and Water Conservation
- Mechanical, Electrical, Plumbing And Fire Protection

With any renovation project it is necessary that International Existing Building Code be reviewed in light of the items of renovation work that are selected. In doing so it may be determined that other items of work will be necessary to achieve compliance.

Each of the improvements was then prioritized into the following categories:

- Current Critical
- Potentially Critical
- Necessary – Not yet Critical
- Recommended

A detailed description of criteria used for each of the categories is included in the report.

For each of the improvements an independent cost estimate was obtained. The estimates are a projection of the costs and include soft costs associated with each item. (Soft costs are the miscellaneous costs associated with professional fees, contingency, bonding costs, bidding expense, testing etc.). The estimator does not have the advantage of detailed drawings for each of the items so the intent is to provide an order of magnitude that, should the improvement move ahead, will be refined up to the bid date. For many of the like items it will be possible to group them together and save on the soft costs. Similarly, there may be items that can be bid without professional drawings and specifications and, again, the soft costs can be reduced. The cost should be used as an overall budget for each item. A more detailed explanation of the use of the estimates is included later in this report.

This report is organized with the recommendations presented in the first binder followed by the two larger binders covering Town Buildings and School Building respectively. These include detailed condition reports with supporting materials from the engineers and plans of each building.

* * *

*Continued List of Improvements and Study Report Criteria
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TOWN-WIDE FACILITY CONDITION ASSESSMENT Town of Westford, Massachusetts

Renovation or New Construction

In the analysis of the best use of town funds it is important to compare the costs of renovation to the cost of replacement. The rule-of thumb states that if the cost of renovation exceed 70% of the cost to replace the current building then there will be strong justification for the new construction approach.

The usability of the building is a key factor when considering whether or not it should be renovated. Questions that need to be asked include such items as:

- Does the current layout of the building reflect the needs of the users?
- Does the building provide a safe environment for the users?
- Can the interior layout be redesigned or are there structural elements that will prevent this?
- Can the building be made fully accessible without excessive cost?
- Is the building structurally sound?
- Does the envelop of the building provide a weather-tight enclosure?
- Does the building have historic significance that could be lost if its use is not continued?
- Does the building have a projected life expectancy that will require significant expense to length in order to justify the renovation costs?

Mechanical, plumbing, fire protection and electrical systems should also be evaluated but these can be upgraded if necessary.

The site and infrastructure also play an important role. The site needs to be of sufficient size to accommodate adequate parking, sidewalks and delivery areas with utilities that are adequate for the building.

Using the above criteria leads to an objective direction for the use of an existing building in the study.

* * *

*Narrative Regarding Renovation versus New Construction
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TOWN-WIDE FACILITY CONDITION ASSESSMENT
Town of Westford, Massachusetts

Report Categories

The summary reports for each of the buildings are broken into a series of categories. The following is a description of how each of these is used to record building conditions.

LIFE SAFETY

These tend to be high priority items as missing items such as exit signs could have a significant detrimental effect should a fire occur in the building. Similarly, if life safety elements are not fully functional or are not created safely a hazard is created. There may be other recommendations under MEP work that can be considered Life Safety

HEALTH

Items that are unsanitary or cannot be cleaned fall within this category. Any work to septic systems will also appear in this category. These tend to be high priority. Plumbing work also applies to this category with such items as backflow preventers.

HAZARDOUS MATERIALS

The report reflects only visual review of buildings and no testing was performed. An independent testing agency would need to be employed to examine, sample, test and prepare a detailed report on the existence of any hazardous materials in the buildings with a recommended cause of action.

The School buildings have AHERA reports that describe hazardous materials within the facilities. This is not the case for the town building where assumptions were made. Even with the schools there is much testing of materials that is necessary to determine if certain items contain hazardous materials and then a plan of abatement established. There were a number of instances where AHERA reports recommend that no action is required when potential hazardous material exist. We have followed those recommendations except where, from previous experience, a hazardous situation to building occupants is highly possible in which case we have recommended abatement

ADA

All existing buildings completed prior to 2012 need comply with 1991 ADA Standards. Any new construction required under this study will require compliance with the 2010 ADA Standards and the standards of the Massachusetts Architectural Access Board.

*Categories of Consideration in the Study
(Source: 2014 DRA Architects Town Wide Facilities Report)*

In basic terms, the review of buildings in this study for ADA compliance the primary issue is for clear access into and around the buildings floors, referred to as the "path of travel" so that occupants have access to the available resources. Resources include office and other work areas, classrooms, activity spaces, restrooms and other non-hazardous areas. The next issue is for use of those resources including access through doors, and use of furnishing and equipment and then, lastly, access to support spaces.

Most buildings have a duplication of resources, and within one building some may be accessible and others not. In evaluating priorities/scheduling of the work we have looked at whether or not the building provides reasonable accommodation for persons with disabilities. As an example, if we have a failing roof, and a non ADA compliant sink (with a compliant sink nearby) we have recommended the roof be repaired, but if the building is not ADA accessible then access would be given a higher priority.

EXTERIORS

Items exposed to the weather need to be durable to prevent water ingress and to prevent damage from the elements. Once a defect occurs on the exterior its increase in severity can grow rapidly due to the weather and ice exposure. Exterior defects will tend to have a higher priority than say an interior defect.

Items noted include roofs, walls and adjacent ground areas.

INTERIORS

Items will include floors, walls and ceilings and items mounted on those surfaces. Items located at exterior walls will have the potential for accelerated deterioration from sunlight passing through windows and water ingress around doors.

ENERGY AND WATER CONSERVATION

Listed in this section will be items that could be modified or replaced to reduce energy consumption. The reader should also refer to the following section as there is some overlap in the items.

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION.

Fire protection is listed first and highlights either deficiencies in the current sprinkler system or advocate for a system to be added to a building. Some smaller buildings are not required by code to have a fire sprinkler system but one has been recommended to protect the building occupants but also to preserve the Town's investment in the building. This is especially true for historic, wood framed structures.

*Continuation of Categories under Consideration in the Study
(Source: 2014 DRA Architects Town Wide Facilities Report)*

A lot of items in Plumbing will occur under the Health section such as adding backflow preventers to improve the protection of the water supply and eliminating any cross-connections. Condition of the plumbing systems include supply and waste piping and plumbing equipment are listed in this section. The ADA section should also be reviewed for other plumbing items.

HVAC explores the condition and operation of the mechanical systems of the building. Items in this section may also apply to energy conservation. Safety issues with the systems such as the lack of combustion air for appliances are also listed.

Electrical focuses on the condition of the electrical equipment and wiring, and code compliance issues some of which fall under Life Safety. Emergency systems including Fire Alarms, Emergency Lighting and Exit Signage are reviewed.

*Continuation of Categories under Consideration in the Study
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TOWN-WIDE FACILITY CONDITION ASSESSMENT
Town of Westford, Massachusetts

Priority Rating System

Priorities are listed to the left of each item:

- Priority 1** – Current Critical: Conditions in this category require immediate action to:
- Correct a cited safety hazard
 - Stop accelerated deterioration
 - Return a facility to operation
- Priority 2** – Potentially Critical: Conditions in this category if not corrected soon may result in:
- Intermittent Operations
 - Rapid Deterioration
 - Potential Safety Hazards
- Priority 3** – Necessary, not yet critical. Conditions in this category require appropriate attention to preclude a predictable deterioration or potential downtime and possible damage and higher costs.
- Priority 4** – Recommended. Conditions in this category include items that represent a sensible improvement to existing conditions. They are not required for the most basic function of the facility, but will improve overall usability and/or reduce long-term maintenance costs.
- Comment only.

*Color-Coded Priority Rating System for Addressing Facility Needs
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TOWN-WIDE FACILITY CONDITION ASSESSMENT
Town of Westford, Massachusetts

The Need For Swing Space

The sequence of the renovations and additions to the Town's building must consider how continuous operations of the Town functions can be maintained during the work. For most buildings the work can be accomplished without relocation but, for the Town Farm Building relocation will be necessary. Of the buildings studied Millennium School has a significant area that is not fully used and may be able to provide some of the needed swing space .

Phasing of work and consideration of timing the work at vacation periods(for schools) will also help in managing swing space needs in the buildings.

* * *

*Recognition of Ongoing Need for Activities for Current Operations Where Applicable
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TOWN-WIDE FACILITY CONDITION ASSESSMENT
Town of Westford, Massachusetts

Use of Cost Estimate Information

At this study phase we do not know how the Town might package contracts or combine items. Accordingly we price each item in the study as work performed by a General Contractor, requiring professionally designed bid documents and construction oversight & contract administration by a professional design team. These and other factors affect the study direct cost estimates as follows;

An item is added for General Conditions. This is a General Contractor item to cover the cost of all of the items stipulated in a typical construction contract and bid specification including such items as insurance, temporary utilities, site offices, OSHA requirements, and other non-direct costs of performing work that are required of a General Contractor. The percentage used is based on the size of the contract. The smaller the contract, the higher the percentages because fixed costs are spread over a smaller base figure.

An item is added for Overhead and Profit. Again, this is a General Contractor item. It covers the cost of the GC home office, estimating staff, admin staff, and other standard overhead items. It also includes a fair and reasonable profit margin in normal market conditions. Again, the smaller the contract, the higher the percentage is to meet the necessary expenses of doing business.

An item is added for Design & Price Reserve. It is important to note that actual designs put out to bid often vary from design solutions envisaged in studies. A study is conceptual in nature whereas bids are based on fully developed design documents. The full amount of money required will not be known until the contract is complete along with the cost of any extras. It is not uncommon for additional unforeseen work to be uncovered during further design investigation or during construction. Rotted roof deck, rock excavation, code changes requiring a different design solution are all examples of possible additional costs that may be incurred on the design side. On the price side this contingency guards against changing economic conditions and inflationary pressures beyond the norm as the economy improves.

Escalation covers the normal annual increases in union wages and normal annual material price increases. All prices indicated will need to be increased by 4% per annum to their projected bid date over the years covered in this report.

The cost of bonding the General Contractor and his subcontractors is added. The rate of this insurance varies with the size of the contract and the annual construction volume of the winning bidder.

*Limitations Relative to Cost Data in the Study
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Owner soft costs typically run 30% on public work projects. Soft costs include architectural, engineering, financing, and legal fees, and any other Town-paid pre- and post-construction expenses. Costs are included in each item for a professional design team to fully explore and develop a complete design solution through bid documents, manage the bid process and supervise & administer the construction contract.

The cumulative effect of all of these compounded percentages uplift the total Direct Cost estimates significantly to the total Project Cost estimate.

Whether items are bid to a GC or to a sub-contractor, whether an architectural team is involved, whether wage rates are applicable are examples of how these estimates may vary. It is very important to understand that the procurement method and contract packaging do have a considerable impact on budgeting for the construction, and that the soft cost portion of the estimates should not be allocated to the hard construction budget. Also that the construction bid price is not normally the final construction cost or the total cost of the project when all expenditures are tallied.

* * *

*Continuation of Cost Data Limitations
(Source: 2014 DRA Architects Town Wide Facilities Report)*

**Facilities Plan for Town Buildings
Town of Westford, Massachusetts**

Mark-Up List

The following are the mark-ups that have been included in the costs associated with each item of work.

Markups - To Be Calculated Cumulatively

General Conditions:

Project Value Less Than 200k	20.00%
Project Value 200k - 500k	16.00%
Project Value 500k - 1mil	14.00%
Project Value 1mil - 2mil	12.00%
Project Value 2mil - 5mil	10.00%

Overhead & Profit:

Project Value Less Than 200k	23.00%
Project Value 200k - 500k	18.00%
Project Value 500k - 1mil	16.00%
Project Value 1mil - 2mil	14.00%
Project Value 2mil - 5mil	12.00%

Design & Price Reserve 15.00%

Bond:

Project Value Less Than 100k	3.00%
Project Value 100k - 1mil	2.40%
Project Value 1mil - 2mil	2.00%
Project Value 2mil - 5mil	1.60%
Project Value 5mil - 10mil	1.34%

Soft Costs/Design Fees 30.00%

Escalation should be added to each item based upon the year the work is projected to be done:

Fiscal Year 2017	4.00%
Fiscal Year 2018	8.16%
Fiscal Year 2019	12.50%
Fiscal Year 2020	17.00%
Fiscal Year 2021	21.68%

* * *



*Continuation of Cost Issues and Markup Recommendations for Planning Purposes
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TOWN FARM BUILDING

35 Town Farm Road

Year Constructed: 1837
 Year of Renovation/Addition: Unknown
 Building Type: B
 Construction Type: VB
 Fire sprinklers: No
 Total Floor Area: 5,000 SF
 Floors: Basement, First, Second, and Third
 (Third floor unused. Building would need to be



ungraded with a fire sprinkler system or changed to construction Type VA to allow use of third floor. Other items such as accessibility and egress would also need to be addressed).

Documents used in this report:

Ipswich River Engineering, Inc. "Report Of Observations And Recommendations From The Visual Structural Condition Evaluation Of The Westford Town Farm Building" dated June 23, 2011.
 Roof Management Consultants, Inc "Roof Inspection and Evaluation Report" dated November 14, 2013

GENERAL:

There is definite value in retaining historic structures within the Town and in the case of the Town Farm building preserving the history associated with it. There are many questions associated with the structural integrity of the building that will need to be resolved should the building continue in its current use. Similarly, there are many challenges; making the building handicapped accessible, providing it with adequate and safe means of egress, repairing finishes, improving energy efficiency and replacing plumbing. Also, as a wood structure, integrating a fire sprinkler system into the building to improve life safety and to preserve the structure. The expense of the repairs is such that less expensive alternate solutions should be considered. Option 1 would be to gut the building and construct a new interior structure with interiors to suit the actual needs of the Recreation Department. This has the advantage of retaining the exterior of the building and certain interior features to preserve the historic structure. Option 2 would be to relocate the Recreation Department to an alternate facility or new building.

LIFE SAFETY:

2 Range in kitchen does not have an exhaust hood. If used for cooking an exhaust hood is required.



HEALTH:

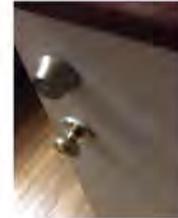
1 The waste disposal system is antiquated and needs to be replaced with an entirely new septic system in compliance with title V.

*Description & Priorities for Town Farm Building
 (Source: 2014 DRA Architects Town Wide Facilities Report)*

HAZARDOUS MATERIALS:

ADA COMPLIANCE:

- 3 There are no ADA accessible restrooms in the building. Both men's and women's rooms need to be constructed.
- 3 Loose wires run along floor at front of reception desk. These should be re-routed and secured.
- 3 Most doors have knob sets which need to be changed to lever hardware.
- 3 There is a 3" high step from copier area to hallway. It will be difficult to provide a ramp at this location as there is a door into an office that would be blocked. Currently there is a ramp at the other end of the hallway that provides access to these rooms. However, this ramp is uneven, has no handrails and a door swings into the ramp. Ramp needs to be modified to resolve this problems.
- 3 There are also a number of locations with high thresholds at doors. Most exterior doors have high thresholds. Thresholds need to be lowered or ramped.



- 3 In kitchen area, the sink is not ADA compliant and needs to be replaced and cabinetry modified.



- 3 Exterior exist stair is not ADA compliant. Landing is too small, stairs have nosings and there are no handrails.



*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

3 Remove projecting nosings at steps at front of building. Replace handrails to provide extensions.



3 Interior stairs have nosings and low guardrails with no handrails. Taper front of risers to eliminate lip and add ADA compliant handrails to both sides of stair. Alternatively a variance could be sought to waive compliance.



3 Interior stairs to third floor have only plywood treads. Replace with hardwood treads and taper risers to achieve a flush condition between riser and tread. Add handrails to both sides of stair.



SITE:

3 All wood sleeper retaining wall is failing and needs to be replaced.

EXTERIORS:

2 Windows on original brick building are severely deteriorated which much exposed wood that requires stripping of paint wood consolidation and filling, re-painting and sealant. Most storm panels are missing. Due to the labor intensity of repairs, replacement should be considered with historically sensitive energy efficient windows.



2 Basement windows have been blocked. These should be opened up, masonry inspected and repaired and new windows added.



2 Basement windows (5) to rear of west building are badly deteriorated and require replacement.

2 Replace windows on west wall of basement.



*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Masonry has been sandblasted destroying the original look of the building and the protective fire skin of the brick. This appears to be a hard water-struck brick that continues to be performing well despite the sand-blasting. For comparison on the interiors there is evidence of the original brick that has not been sand-blasted. Walls appear to be functioning satisfactorily. No action required but, it is recommended that should deterioration of the brick begin to occur additional action will be necessary.



Joints between stone blocks of foundation are cracked and deteriorating. Joints need to be cut out and re-pointed.



There is evidence that the original building had shutters. Consideration should be given to replacing these to reflect the original intent.

Crawl space is not properly enclosed to repel animals. Enclose crawl space with ventilated walls with insect screens. Provide a barrier between enclosure and grade.



Replace deteriorated trim and paint at rear of building.



Exterior door to Basement is badly deteriorated and appears to sit below grade. Re-grade and pave area at door. Restore door and frame.



There are a few cracks in the stone foundation of the west building that need to be cut out and re-pointed. Also some open joints need re-pointing.



*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

3

Basement door needs painting.



2

Replacement cornice trim at rear basement entrance.



3

Re-construct stone masonry retaining wall at north-west corner.



3

Scrape and re-paint cornice at entrance canopy.



3

Re-paint steps and ramps at front of building.



3

Re-point brickwork where some cracking and open joints occur. This is particularly evident beneath window sills.



If restoration of the building is contemplated consideration should be given to relocating wiring and conduits that run on the face of the walls.

General note regarding porches and fire escape:
The third floor of the building, as stated elsewhere in this report, cannot be used unless the building has a fire protection system. Both interior stairs are not code compliant as far as direct exiting and enclosure. It is recommended that a new stair and elevator/lift with enclosure be added to the rear of the building and that the stair in the late 1800's

*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

addition be enclosed in a one hour fire rated enclosure. In doing so the porch stairs would not be required for egress and could retain their current appearance, with repairs. If unused in such a way, the floor openings of the porch should be closed off to prevent use of the stairs. If the building is sprinklered and the new exterior stair extended to the third floor one exit would be acceptable provided the floor is used for office use and not as public space. The following recommendation apply to the porch/stairs not being used for egress.

3 Porches, floors and stairs need to be scraped and repainted. One missing baluster needs to be replaced to match existing.



3 Balusters are heavily coated with paint and in place are not vertical and are poorly spaced. Balusters should be removed and reinforced to meet code loading requirements. Design should be modified to increase height and to reuse repainted existing balusters.



3 Metal railings at roof need to be painted only if third floor is not occupied.



2 Steps from porch are loose laid stones that are uneven. Construct a concrete foundation and re-set stones to create even and level treads. Applies to front and side stair.



3 Fire egress stairs that run through porch do not have guardrails and handrails are uneven. Replace guardrails and handrails following review with Historic Commission. cover openings in porch floors to prevent use of stairs.

*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

As indicated in Roof Management Consultant, Inc's roof report dated November 14, 2013 various roof repairs are required including those for; EPDM roof, lightning rods, and gutters. The work was estimated at \$850.

INTERIORS:

Roof Framing:

2 Original Building: Due the fire and previous leaks roof members need to be examined to determine if there is any latent damage to the structure. This can be done when plaster is being removed and replaced as described below.

The sizes of roof members indicate that the structure is over over-stressed particularly at time of heavy snow loading. There is visual evidence of sagging roof members. Similarly the attic floor joists appear to be undersized. A full analysis of the roof framing should be performed and the structure reinforced to meet current code required roof loading.



2 Second floor framing in the late 1800's addition has been cut to accommodate new plumbing. The work done is structurally un-sound and it is recommended that shoring be added to support the floor framing until framing repairs can be achieved.

2 Second floor framing is not visible except at very limited locations, and, based upon the condition and sizes of the framing elsewhere in the building we anticipate that the load-bearing capacity is well below code required standards. A detailed structural analysis, removing ceilings, and wall plaster to exposed concealed conditions should be undertaken. We anticipate structural improvements will be necessary.

2 Support columns for the first floor framing, in some cases, bear directly on concrete slabs and as a result have absorbed water and become punky. Posts should be replaced with new pressure treated posts on concrete foundations raised above the floor with steel separating plates.



2 Floor connections to the posts have been over-stressed and, following structural analysis, will require hangers, reinforcement, additional support or replacement.

*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Similarly joists are tenoned to fit into mortises in floor beams. This further reduces the floor capacity. A complete assessment of the floors is necessary and repairs and replacement made to bring capacity to code standards.

- 2 Foundation have numerous gaps between stone. Re-point stone foundation walls.



- Large gaps in flooring up to 1/4" wide. Monitor and replace boards if situation worsens.



- 3 Plaster ceilings throughout building are uneven, cracked and in some locations detached from the structure. Generally, each crack needs to be cut out, bond with lath verified and crack repaired. If plaster is loose, re-secure to structure.



- 3 Like the ceilings plaster on walls is cracked and has pulled away from structure. Remove damaged wall plaster for entire wall surfaces, replace with level 5 finished wallboard and paint wall.



- 3 Third floor is basically unfinished. It requires repairs to walls, beyond that of the other floors including removal of areas of plaster and re-anchoring of wood lath, removal of high thresholds at doors, removal of wallpaper (some



*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

sections although deteriorated should be considered for retention as a historic record) and re-finishing all surfaces. The following photos indicate areas of plaster damage at sloped ceilings; low guardrail at top of stairs and unfinished walls; ceiling damage; typical plaster crazing.



Throughout the building are areas requiring repairs that are too numerous to describe in a report such as this. The following photographs show examples of these.

3

There are interior building defects too numerous to mention individually, but examples include:

Damaged door frame; exposed ceiling wiring; patched and damaged floor at radiator;; partitions removed but carpeting not repaired; make-shift wall repairs; damaged stair enclosure; broken window sash cords; baseboards missing (from fire); and exposed carpet padding.



ENERGY & WATER CONSERVATION:

A large number of windows are missing latches on the meeting rails and windows do not appear to have weather-stripping. Add latches and weather-stripping to windows.



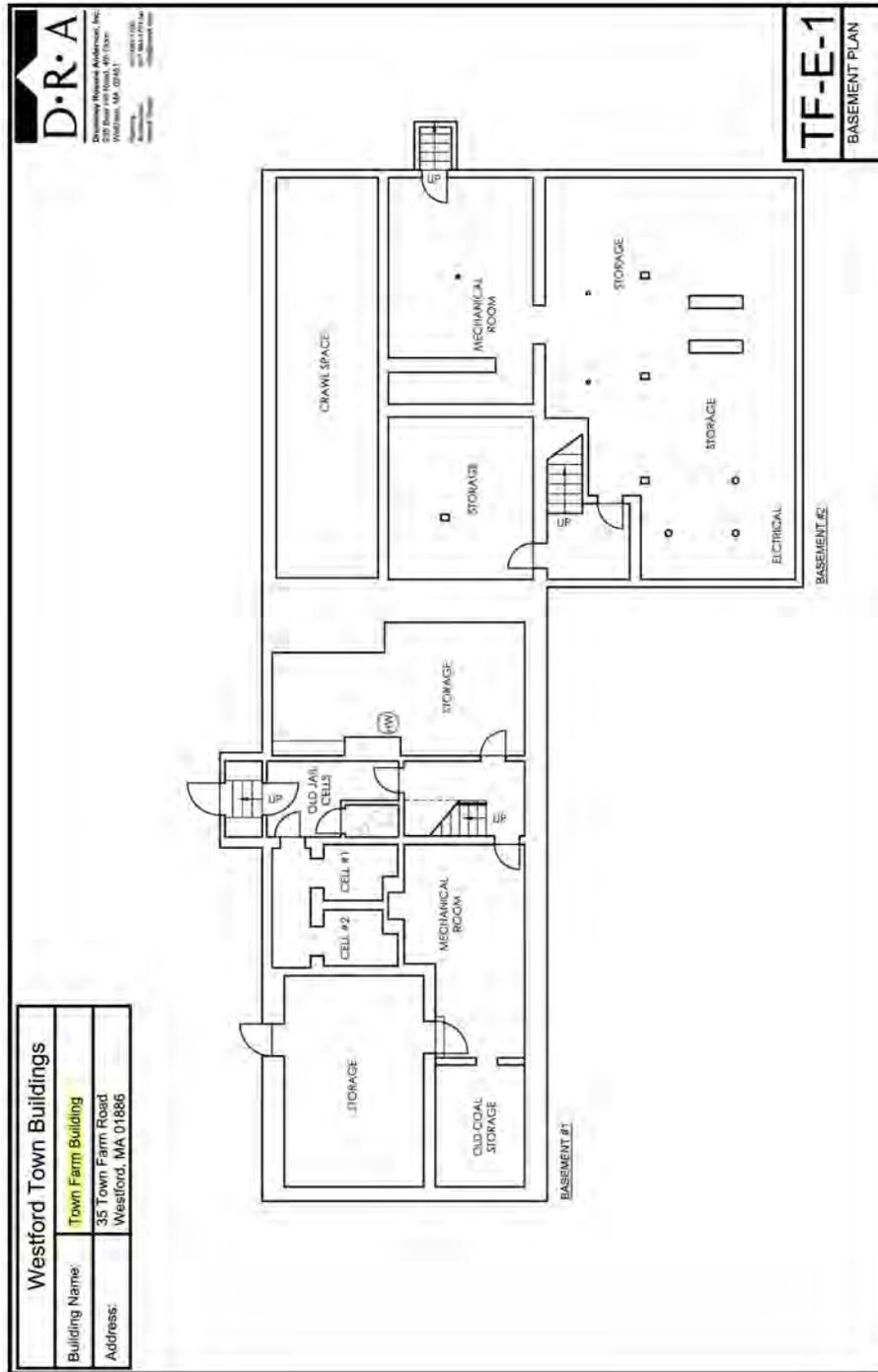
*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

- Some windows do not have storm panels. See notes above for window replacement

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION:
(see individual reports for detailed description):

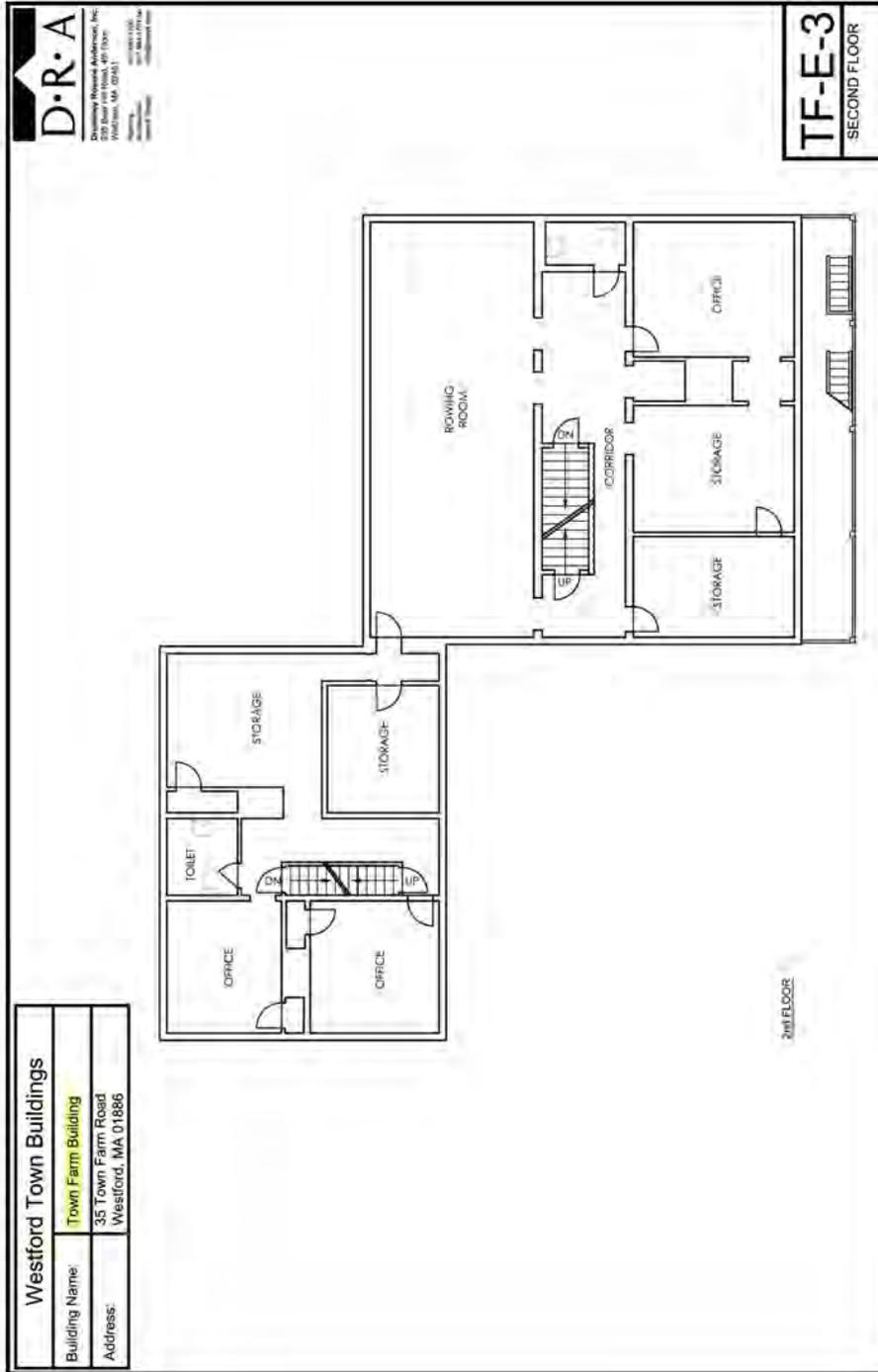
- 2 There is no fire sprinkler system for this wood framed building. It is recommended that one be added.
- 3 The domestic water supply throughout the building requires frequent repairs and should be replaced.
- 3 The waste and vent piping throughout the building requires frequent repairs and should be replaced.
- 3 The two hot water re-circulating pumps in the Basement cannot work as installed and should be removed.
- 3 The space housing the gas water heater has no combustion air. Add combustion air source to space.
- 3 The water services provides excessive water pressure to the building. A pressure reducing valve set at 70 PSIG needs to be added.
- 3 Lighting throughout Building have exceed their life expectancy. Replace lighting throughout.
- 2 Switches and receptacles throughout Building have exceed their life expectancy. Replace switches, receptacles and lighting throughout.
- The functioning of the packaged HVAC unit, mounted at grade, can be compromised by drifting snow. In winter months maintenance is required to remove snow surrounding unit.
- 3 Package HVAC unit has exposed ductwork in the crawl space. The ductwork insulation has been compromised and needs to be repaired.
- 3 Steel steam piping in Basement needs to be insulated to prevent premature condensing of steam in pipes.

*Description & Priorities for Town Farm Building
(Source: 2014 DRA Architects Town Wide Facilities Report)*

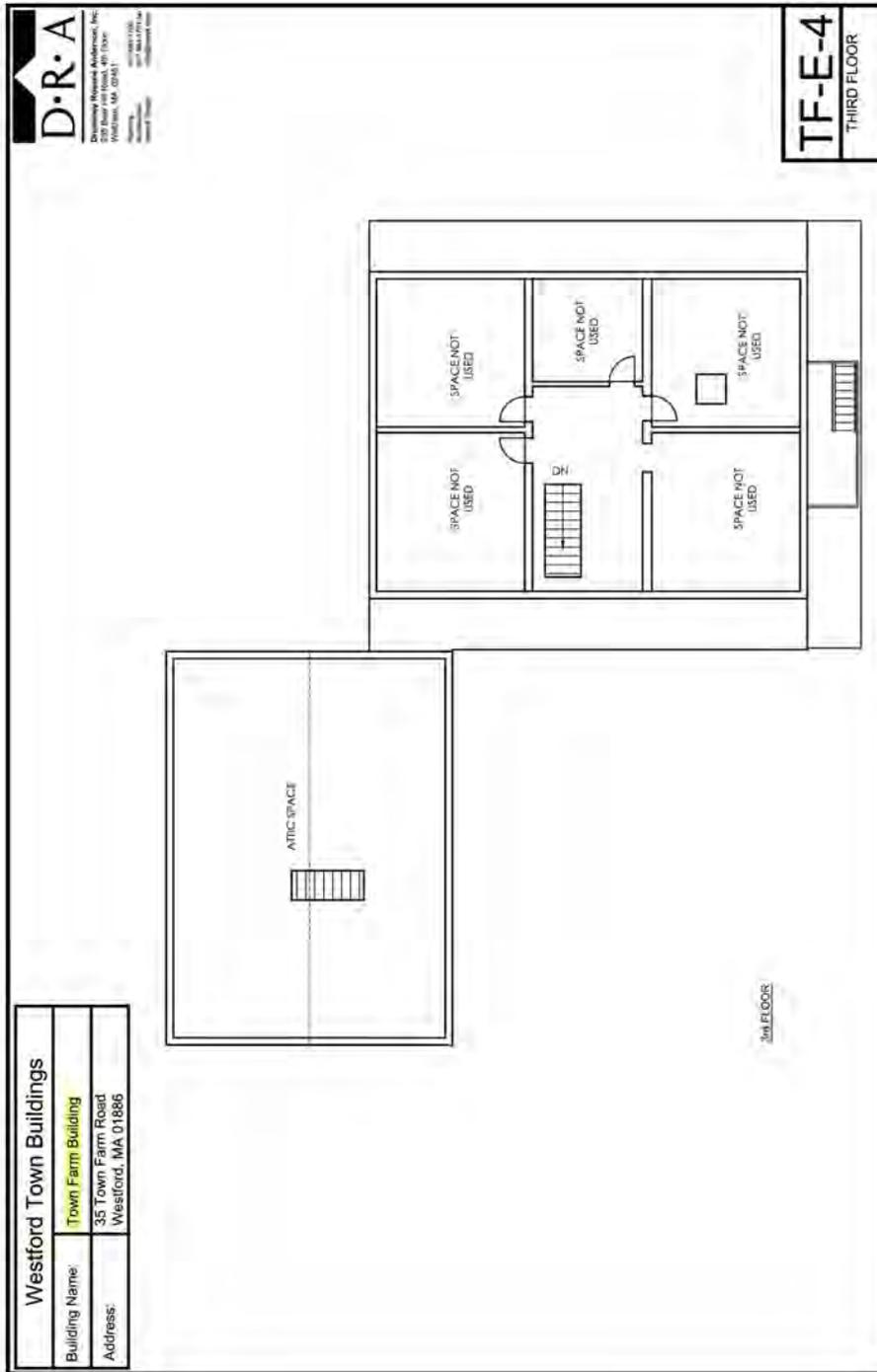


Westford Town Buildings	
Building Name:	Town Farm Building
Address:	35 Town Farm Road Westford, MA 01886

*Basement Level Diagrammatic Plan
(Source: 2014 DRA Architects Town Wide Facilities Report)*



Second Floor Level Diagrammatic Plan
(Source: 2014 DRA Architects Town Wide Facilities Report)



D·R·A
Design Research Architects, Inc.
200 Essex Street, 4th Floor
Westford, MA 02145
978.376.1234
www.dra.com

Westford Town Buildings	
Building Name:	Town Farm Building
Address:	35 Town Farm Road Westford, MA 01886

*Third Floor Level Diagrammatic Plan
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Westford Townwide Assessment | STRUCTURAL – Town Farm Building

STRUCTURAL – TOWN FARM BUILDING

The purpose of this report is to assess the structure of the existing building, comment on the existing structure, comment on the structural integrity of the building, and follow-up with previous reports.

Basis of the Report

This report is based on visual observations during our site visit on March 19, 2014. We referenced a previous structural report titled "Report Of Observations And Recommendations From The Visual Structural Condition Evaluation Of The Westford Town Farm Building", prepared by Ipswich River Engineering, Inc. and dated June 23, 2011. We also referenced a report titled "IR-0387 - Report Appendix A - Westford Town Farm - 06-23-20." During the visit we did not remove any finishes or take measurements; so, our understanding of the structure is limited.

Existing Conditions

The Town Farm Building was constructed in 1838. The building is a two-story gabled wood structure framed with wood joists, rafters, stud bearing walls and heavy timber beams. The beams are supported in the basement by an assortment of posts, including granite and timber posts.

This document is a follow-up to the aforementioned previous reports. We concur with the observations for the most part. We have the following comments:

We observed visible deflection in the roof framing. It appears that good detailing practices were not observed and the framing appears to be undersized. We would recommend reinforcing or rebuilding the roof structure. Please see previous report for further discussion.

The second story of the building did not appear to be in use and we noted various areas of scattered storage. The attic was not in use at the time of the visit and we observed debris on the floor including plaster, charred wood, and refuse. We observed evidence of past fire damage, including charred attic floor framing and partition walls, and smoke stained walls. We observed cracked, heavily damaged, and collapsed interior plaster ceilings and walls. Please see previous report for further discussion. Other attic spaces exhibited missing floorboards that should be replaced.

Our findings in the basement are in agreement with the previous reports. We did not observe any evidence of modern repairs. We would recommend installing hardware connections to stabilize framing and anchor the framing to resist uplift at exterior walls. We observed one location where the underside of first floor framing was not enclosed by a basement wall. We would recommend that the underside of structure be enclosed and protected from moisture and temperature fluctuations.

Engineers Design Group, Inc.

*Structural Summary of Town Farm
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Westford Townwide Assessment | STRUCTURAL – Town Farm Building

We observed the two story wood deck on the front of the building and noted that the framing in general is in fair to poor repair. We observed various railing members to be loose, failed and/or missing. The deck framing is not anchored to the foundation. The foundations appear to be undersized for a two story deck and noted that one concrete pier exhibited moderate weathering, evidenced by exposed aggregate.

We observed the two flights of exterior wood framed stairs between deck levels and noted that the stair treads are loose, weathered and deteriorating. The stair system as a whole is undersized and not engineered as evidenced by significant vibration of the framing due to footfall and horizontal deflection of the railings. The stair railings do not appear to be engineered, and are not code compliant. We did not observe balusters on the stair railings. The stair railings consists of single 2x4 wood members which are not well anchored. We would recommend that replacement of these stairs and railings be considered a priority.

We observed the brick façade and noted light weathering and open mortar joints. We would recommend that open mortar joints be repointed to resist water infiltration. We observed the outside face of the granite block foundation wall and noted open mortar joints. We would recommend that open mortar joints be repointed to resist water infiltration. We observed a vertical crack adjacent a wood door in the stone foundation at the north corner of the building. In the same area, we did not observe a downspout or gutter.

Various open mortar joints in the concrete masonry unit (CMU) foundation wall should also be repointed to resist water infiltration and freeze-thaw cycles. Please see previous report for further discussion.

Recommendations:

Our findings in the basement are in agreement with the previous reports for the most part. We did not observe any evidence of modern repairs. Please see previous report for further discussion. Repair of all railings on the wood deck should be considered a priority.

Engineers Design Group, Inc.

*Continuation of Structural Summary of Town Farm
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TWP CONSULTING ENGINEERS, INC.

Facility Contact: Bill Kenison

Construction Date:
Renovation Date:

Area: SF

Town of Westford
Facility Condition Assessment Surveys

Building: Town Farm Building
Systems: Sprinkler

Survey Date: 16 January 2014

Page 1 of 5

Item #	Component Name	Type	Server/Location	Life cycle Estimated age	Life cycle Expected life	Condition			Deficiencies			Recommendation	Priority (E)	Item #	
						Good	Fair	Poor	Functional	Accessibility	Code				Efficiency
1	Water Service	Fire Protection	W-4												
2	Sprinkler System	Water-type type	W-4												
3	Sprinkler System	Drop-type	W-4												
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
21															
22															
23															
24															

Notes:
(1)
(2)
(3)

(6)
(7)
(8)

Town Farm Sprinkler
(Source: 2014 DRA Architects Town Wide Facilities Report)

TWP CONSULTING ENGINEERS, INC.

Facility Contact: Bill Kowkon

Construction Date: 1857

Area: 12,476SF

Town of Westford
Facility Condition Assessment Surveys

Survey Date: 16 January 2014

Renovation Date: 1970

Building: Town Farm Building

System: PLUMBING

Page 7 of 7

Item #	System Component Name	Type	Area/Location	Estimated Age	Expected Life	Condition			Deficiencies			Recommendations			Priority (1)	Item #
						Good	Fair	Poor	Functional	Accessibility	Code	No Work	Maintenance	Repair		
1	Water Supply	Ceramic	Throughout building	50	50											
2	Water and Toilet	Sanitary	Throughout building	50	50											
3	Storm Drainage	Stone	N/A													
4	Down Hot Water System		Basement													
5	Water Heater	Gas fired, storage	Basement	4-10	Y											
6	Water Service	Ceramic	Basement													
7	Plumbing Fixtures		Throughout building													
8	Backflow preventors	Non-retroble	Boiler rooms (2)													
9	Septic system		Whole building													
10	Water Service	Ceramic	Basement													
11																
12																
13																
14																
15																
16																
17																
18																
19																
20																
21																
22																
23																
24																

Notes:

- (1) Systems include various ages and conditions of piping, and complete replacement is needed
- (2) Recirculation pump serves no purpose and cannot function as installed
- (3)
- (4)
- (5)
- (6)
- (7)
- (8)
- (9)
- (10)

Town Farm Plumbing
(Source: 2014 DRA Architects Town Wide Facilities Report)

TMP CONSULTING ENGINEERS, INC.

Survey Date: 16 January 2014

Page 1 of 2

Facility Contact: Bill Kenison
ELEC Plans Available No
of Personnel: 10 (20 or more below)

Construction Date: 1937
Renovation Date: 1970 +/-

Area: 12,765 SF

Town of Westford
Facility Condition Assessment Survey

Building: Town Farm Building (Recreation Office)

System: ELEC

Item #	System	Component Name	Type	Inventory Location	Inventory/Location	Life Cycle - Condition			Deficiencies			Recommendation			Priority Rating	
						Estimated Age	Expected Life	Item Good	Functional	Accessibility	Code	Deficiency	No Work	Maintenance		Replace
1	Service	Panel mounted transformers	Vertical													
2	Wiring	Conduit panel	Horizontal			43	40	X								
3	Equipment	Square D	Basement			43	40	X								
4	Main OCP Rating	200A 120/240V	Basement			43	40	X								
5	Ground Fault Protection	No														
6	Water barrier															
7	Panel	Square D	Basement 162			43	40	X								
8	Wiring	120	Through/out			43	40	X								
9	Transformer	None														
10																
11																
12																
13																
14																
15	Life Support															
16	Fire Alarm	PI7	Basement			43	40	X								
17	Emergency Egress	Battery Back up	Through/out			43	40	X								
18	Generator	None														
19	Humidity Transfer Switch	None														
20																
21																
22	Miscellaneous															
23	Lightning protection	100	Roof			43	40	X								

(1) Equipment should be tested to determine availability & lifespan.
 (2) N/C: n/a
 (3) lightning protection system has no apparent proof of testing or U.L. listing

Town Farm Electrical
 (Source: 2014 DRA Architects Town Wide Facilities Report)

TAP CONSULTING ENGINEERS, INC.

Facility Contact: Bill Krumboltz

Survey Date: 8 January 2014

Construction Date: 1857

Area: 12,476 SF

Building: Town Farm Building (Recreation Office)

System: ELEC

Renovation Date: 1970 +/-

(If in parentheses refer to notes below)

Item #	System Component Name	Type	Location	Estimated age	Life cycle expected life	Condition			Deficiencies			Priority Rating	
						Good	Fair	Poor	Functional	Accessibility	Code		
1	Lighting												
2	First Floor	(2)	Throughout	45-20									
3	Second Floor	(2)	Throughout	45-20									
4	Basements	(2)	Throughout	45-20									
5	Attic	(2)	Throughout	45-20									
6	Exterior	(2)	Throughout	45-20									
7													
8	Ductwork												
9	Receptacles		Throughout										
10	Switches	Standard Toggle	Throughout										
11													
12													
13	Phone service												
14	Type	Overhead	Exterior		45-20								
15													
16	Cable service												
17	Type	Overhead	Exterior		45-20								
18													
19	Internet service												
20	Type	Overhead	Exterior		45-20								
21													
22													
23													
24													

- Notes:
- (1) Equipment should be tested to determine functionality & lifespan
 - (2) Floorcraft, (recessing)
 - (3) Receptacle, Office, Receptacle is attached from wall & missing floorplan
 - (4)
 - (5)
 - (6)
 - (7)
 - (8)
 - (9)
 - (10)

Town Farm Electrical
 (Source: 2014 DRA Architects Town Wide Facilities Report)

TMP CONSULTING ENGINEERS, INC.

Facility Contact: Bill Kenison
HVAC Plans Available: No
Date of Preparation: 10/16/13 (Revised)

Construction Date: 1937
Renovation Date: 1970's

Area: 12,476 SF

Town of Westford
Facility Condition Assessment Survey
Building: Town Farm Building (Recreation Office)
System: HVAC

Survey Date: 16 January 2014
Page 2 of 11

Item #	System Component Name	Type	Service Location	Estimated Age	Expected Life	Condition	Deficiencies	Priority Rating
1	Boiler	Gas-Fired Steam	Basement (1)	20	20	3		2
2	Boiling (H ₂ O) unit	Unsealed Gas-Fired	At grade exterior of building	15	15	3		1
3	Control (H ₂ O) unit	At-grade Steam through wall unit	First floor addition	10	15	3		1
4	Modulator	Gas-fired	Throughout building	20	N/A	3		N/A
5	Piping	Steel (Liquid)	Throughout building	50	50	3		N/A
6	Air conditioners	Through wall	At windows	8	10	3		N/A
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								

Notes:
(1) There are two boilers, each located in separate basements.
(2) The furnace boiler is approximately ten years old, the Water-Heater boiler is approximately eight years old.
(3) There are no ventilation air provisions for either boiler.
(4) Unit is mounted at grade addition to building which can compromise operation due to drifting snow.

(5) Unit is connected with exposed ductwork located in the envelope of this building addition. Ductwork insulation has been compromised.
(6) The piping is not insulated (located in the pent) in this basement which will serve to heat the basement but will cause issues with the steam condensing in the piping over a heating the unit. This causes increased delays in heating response.
(7)
(8)

Town Farm HVAC
(Source: 2014 DRA Architects Town Wide Facilities Report)

Town Farm Building				
Order of Importance	Description	Value	Fiscal Year	Sequence
1	Add New Septic System	\$ 117,500.00		\$ 117,500.00
2	Replace/Repair Windows	\$ 219,196.00		
3	Replace Basement Windows	\$ 7,403.00		
4	New windows for Blocked Bsmt. Openings	\$ 24,558.00		
5	Crawl Space Enclosure to Repel Animals	\$ 25,043.00		
6	Replace cornice at Rear Basement Entrance	\$ 3,807.00		
7	Reconstruct Steps to Porch	\$ 4,465.00		
8	Add Exhaust Hood to Kitchen Range	\$ 764.00		
9	Reinforce Roof Structure	\$ 505,869.00		
10	Add Shoring/Repair damage Joist.	\$ 23,500.00		
11	Survey & Upgrade 2nd Floor Structure	\$ 417,089.00		
12	Add Basement Posts & Footings	\$ 72,709.00		
13	Add steel hangers to Framing Connections	\$ 505,869.00		
14	Re-Point Foundation Walls	\$ 4,041.00		
15	Add Fire Sprinkler System	\$ 180,749.00		
16	Replace Switches and Recepticles	\$ 27,808.00		\$ 2,022,870.00
17	Replace Ductwork Insulation in Crawl Space	\$ 2,961.00		
18	Repair/Replace Plaster Ceilings	\$ 117,500.00		
19	Repair/Replace Plaster Wall Finish	\$ 94,000.00		
20	Construct ADA Restrooms	\$ 64,113.00		
21	Secure Loose Wires	\$ 517.00		
22	Replace Knob Sets with Levers	\$ 68,225.00		
23	Modify Ramp to Comply with ADA	\$ 15,510.00		
24	Lower Threshold or install Ramp	\$ 7,058.00		
25	Replace Sink and Cabinetry	\$ 11,887.00		
26	Modify Stairs (interior & exterior) for ADA	\$ 96,770.00		
27	Replace Wood Sleeper at Retaining Wall	\$ 296.00		
28	Clean Joints and Re-point	\$ 53,391.00		
29	Replace Trim and Paint	\$ 4,688.00		
30	Restore door and Frame	\$ 9,929.00		
31	Scrape and Repaint Door	\$ 353.00		
32	Reconstruct masonry Retaining Wall	\$ 7,520.00		
33	Scrape and Repaint Porch, Steps and Ramps	\$ 39,175.00		
34	Scrape and Repaint Cornice	\$ 1,128.00		
35	Modify Balusters and Repaint	\$ 58,280.00		
36	Scrape and Repaint Metal Railings	\$ 776.00		
37	Modify Fire Egress Stairs	\$ 48,410.00		
38	Refinish Entire 3rd Floor	\$ 142,175.00		
39	Misc. Interior Defects	\$ 293,750.00		
40	Replce Domestic Water Supply	\$ 123,220.00		
41	Replace Waste and Vent Piping	\$ 82,150.00		
42	Remove Recirculating Pump	\$ 7,403.00		
43	Install Combustion Air to Space	\$ 35,250.00		
44	Install Presure Reducing Valve	\$ 7,579.00		
45	Replace lighting Throughout	\$ 145,990.00		
46	Add Insulation to Piping	\$ 7,271.00		\$ 1,547,275.00

Gut / Renovate Recommended

Town Farm Cost Summaries
 (Source: 2014 DRA Architects Town Wide Facilities Report)

RECREATION AND SCHOOL STORAGE BARN

39 Town Farm Road

Year Constructed:
 Year of Renovation/Addition:
 Building Type: S-2
 Construction Type: VB
 Fire sprinklers: No
 Total Floor Area: 3,500 SF
 Floors: Main, Basement/Garage .
 Assessor Lot # 024 0022 0000



GENERAL: The building appears to be used primarily for dead storage and is generally unoccupied. The buildings weaknesses are related to the exterior envelop and structural problems of the lower level. The envelop has openings that allow water and probably mice into the building. The first floor structure has columns that are too long and which have been slightly bent. These need to be replaced and other structural issues corrected. Being unoccupied it is recommended that a fire sprinkler system be added to protect the building and contents.

LIFE SAFETY:

2 Low headroom extends over the stair to the attic. Similarly, the overhead door track extends over the stair creating a headroom problem. Both of these situations are dangerous. The wide stair should be replaced with a narrow stair to avoid the low headroom areas.



HEALTH:

2 Wall and ceiling insulation is badly deteriorated and could be unhealthy. In its exposed condition is may be infested with rodents. Further investigation is required. If discovered insulation will need to be removed and walls sanitized. Also see "Energy and Water Conservation" below.



ADA COMPLIANCE:

The building is not accessible to persons with disabilities. However, as a pure storage facility we believe that this is not required. There are no offices and the public has no need to use this facility. Any work required by any of the items in this report should be constructed to be ADA and MAAB compliant.

*School Storage Barn
 (Source: 2014 DRA Architects Town Wide Facilities Report)*

SITE:

EXTERIORS:

2 The board and batten siding is split and damaged in locations and exposed unfinished wood is evident throughout. Replaced damaged and patched boards, battens, fill missing knots and repaint building. Also repaint soffits and fascia.



2 Overhead doors, and man doors are deteriorated. Wood overhead doors should be replaced with metal insulated doors. Man doors should be repainted.



3 Attic louvers are damaged. If building is re-insulated the louvers should be removed and wall patched.



2 Stair to first floor has only one handrail/guardrail. Add new railing with handrails on both sides. Add inverted clapboards to stair risers to eliminate projecting nosings and re-paint stair.



INTERIORS:

3 Dented overhead door and track on lower level. Replace damage sections of track and door panels.



3 Any missing studs in the bearing wall need to be added, and an additional stud be installed at the top plate splice location in the exterior bearing wall below the attic framing. Blocking needs to be installed between all rafter and joist bays at bearing points. The garage door header and jambs need to be analyzed when a renovation or addition is planned.

3 In general, the roof, attic, and first floor framing are not anchored well to the foundation. Hardware (Simpson Strong-Tie) needs to be installed to reinforce the connections and stabilize the wood girders.

*School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*

3 The first floor steel beams need to be stabilized to resist rotation, especially at post locations. This would entail cutting the steel beams at post locations, installing new structural steel posts, and reconnecting the steel beams to the steel posts. The column bases exhibit excessive corrosion due to water. Replacement of the columns, base plates, and anchors needs to be a priority.



3 Cracks and surface deterioration at the concrete slab on grade should be patched.

ENERGY & WATER CONSERVATION:

Wall insulation is exposed and badly deteriorated. Insulation should be inspected for mice. Insulation should be replaced with spray-foam insulation to achieve a minimum R=20. Refer to Health section above.



3 Roof is un-insulated. Add spray-foam insulation to rafter space to achieve a minimum of R=38. Note that attic floor is insulated but attic space is open to the first floor below. We recommend that the attic floor insulation be removed.



Add weather-stripping at overhead doors.



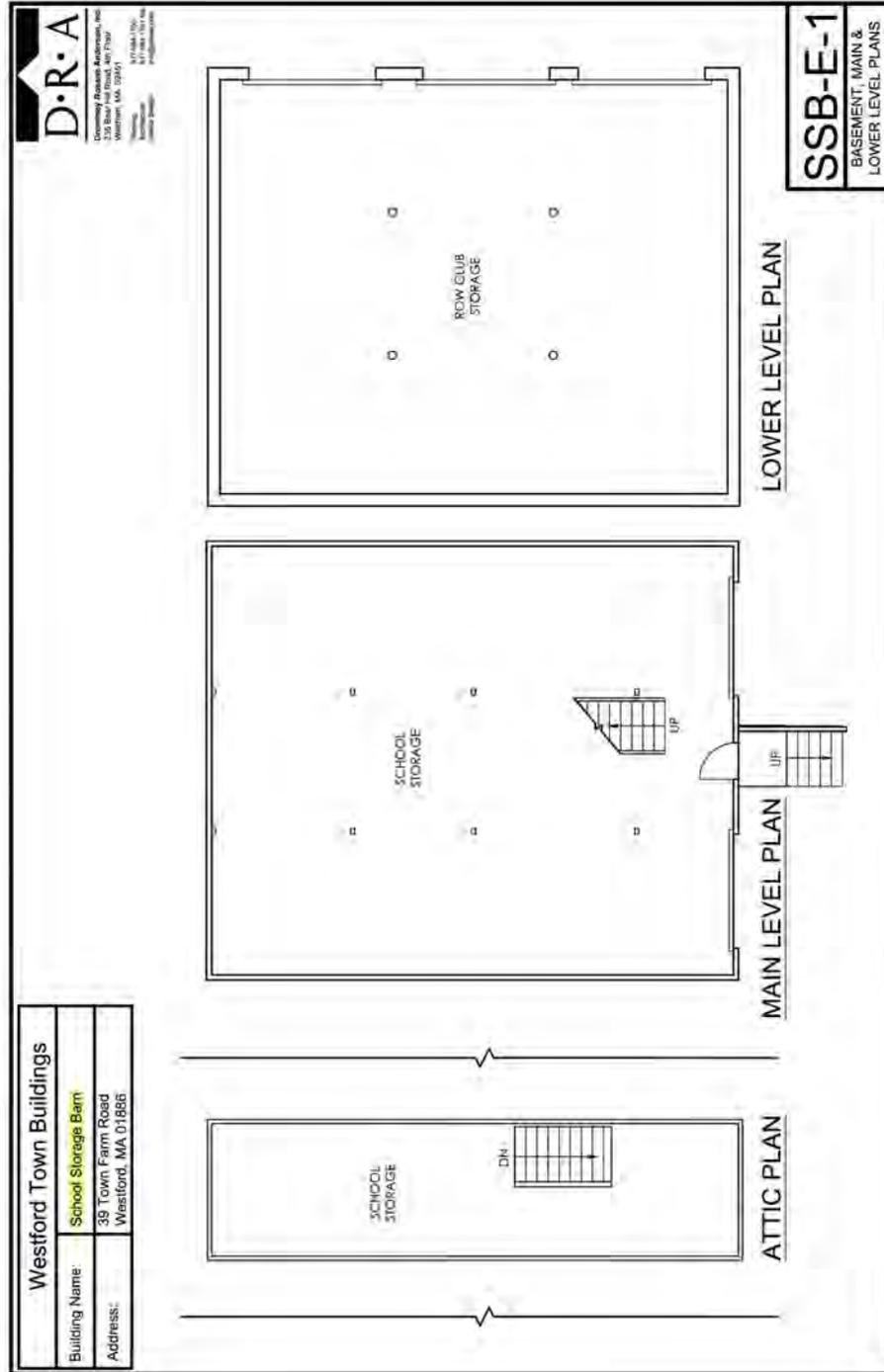
MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION:
(see individual reports for detailed description).

2 The building does not have a fire protection system. Add a fire sprinkler system.

2 The unit heaters for both levels were turned off at the time of the building review. If used it was noted that both vents exit building via side-wall fitting but do not extend upwards enough to confirm to code. Modify vents to extend 36" above the roof.

2 The fire alarm system is inoperable. System needs to be repaired or replaced.

School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)



School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)

Westford Townwide Assessment | STRUCTURAL – Recreation and School Storage Barn

STRUCTURAL – RECREATION AND SCHOOL STORAGE BARN

The purpose of this report is to assess the structure of the existing building, comment on the existing structure and comment on the structural integrity of the building.

Basis of the Report

This report is based on visual observations during our site visit on March 12, 2014. During the visit we did not remove any finishes or take measurements; so, our understanding of the structure is limited.

Existing Conditions

The recreation and school storage barn is a gabled wood structure framed with wood joists, modern wood girders, heavy timber posts, steel beams, lally columns, and a cast in place concrete foundation wall. The structure is performing adequately for the most part. Storage for the recreation department is located in the basement and storage for the school is located in the first floor and attic spaces.

We observed one location where the top plate on the exterior wall was spliced between studs. We would recommend that an additional stud be installed below this splice.

The roof construction consists of wood joists spanning between a traditional center ridge plate and the exterior walls. We observed two intermediate wood stud bearing walls in the attic. We observed evidence of past reconfiguration of the attic framing. The attic bearing walls stack on modern three-ply KD lumber girders, bolted in a staggered pattern with modern throughbolts. These girders span between timber posts which bear on steel beams in the first floor framing. The first floor is framed with wood joists, supported by the exterior wall and the central bearing lines on the aforementioned steel beams. These steel beams are supported by 10'-10" tall lally columns in the basement.

The roof rafters frame continuously over the top of the bearing walls, however we did not observe blocking between the rafter bays. We would recommend that blocking be installed between all rafter and joist bays at bearing points. We did not observe a stud in one location in the attic within the stud wall. We would recommend that a stud be installed in this location. The wood posts at the attic framing level are not anchored well to the modern girders. We would recommend installing hardware (Simpson Strong-Tie) to reinforce the connections and stabilize the wood girders. One end of the modern girders is supported by an undersized header over a garage door opening. We would recommend that the header size be analyzed when a renovation or addition is planned. In general, the roof, attic, and first floor framing are not anchored well to the foundation. We would recommend installing hardware (Simpson Strong-Tie) to reinforce the connections.

Engineers Design Group, Inc.

*School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Westford Townwide Assessment | STRUCTURAL – Recreation and School Storage Barn

The floor framing was performing adequately at the time of the visit, except for the columns, which are in a state of disrepair. The lally columns in the basement are slender, reaching 10'-10" in height and we observed that one of the four columns is bent near the top. Good detailing practices have not been observed in the structure, especially where the steel beams run over the tops of the columns. We would recommend that the steel beams be stabilized to resist rotation, especially at post locations. This would entail cutting the steel beams at post locations, installing new structural steel posts, and reconnecting the steel beams to the steel posts. The column bases exhibit excessive corrosion due to water. Replacement of these columns, base plates, and anchors should be considered a priority.

We observed cast in place concrete foundation walls supporting the exterior wood bearing walls. We noted some rust staining and vertical shrinkage cracks in the wall. We would recommend that the shrinkage cracks be caulked to prevent water infiltration deterioration of the wall due to freeze-thaw cycles. The exterior cladding is weathered.

We observed moderate surface damage and cracking at the concrete slab on grade in the basement. This slab should be cleaned and patched for serviceability.

Recommendations:

We would recommend that any missing studs in the bearing wall be added, and an additional stud be installed at the top plate splice location in the exterior bearing wall below the attic framing. We would also recommend that blocking be installed between all rafter and joist bays at bearing points. We would recommend that the garage door header and jambs be analyzed when a renovation or addition is planned.

In general, the roof, attic, and first floor framing are not anchored well to the foundation. We would recommend installing hardware (Simpson Strong-Tie) to reinforce the connections and stabilize the wood girders. We would recommend that the first floor steel beams be stabilized to resist rotation, especially at post locations. This would entail cutting the steel beams at post locations, installing new structural steel posts, and reconnecting the steel beams to the steel posts. The column bases exhibit excessive corrosion due to water. Replacement of the columns, base plates, and anchors should be a priority.

The exterior cladding should be replaced. We would recommend that the shrinkage cracks be caulked to prevent water infiltration deterioration of the wall due to freeze-thaw cycles. Cracks and surface deterioration at the concrete slab on grade should be patched.

Engineers Design Group, Inc.

*School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*

ROGER'S FIRE STATION STORAGE BARN

39 Town Farm Road

Year Constructed: 1920
Year of Renovation/Addition: None
Building Type: S-2
Construction Type: IV
Fire sprinklers: No
Total Floor Area: 3,500 SF
Floors: First.
Assessor Lot # 024 0022 0000



GENERAL: This is a historic structure whose exterior envelop is badly deteriorated and in need of much work. The wood structure will also need work to make this a viable building. Consideration should be given to replace this building with a new structure (if it's use is still required) or to demolish the building. From a historical standpoint, it does share the site with the Town Farm Building and make therefore be considered a contributing building to the complex.

LIFE SAFETY:

HEALTH:

SITE:

EXTERIORS:

2 The building is in a state of disrepair. The exterior cladding and roofing need to be replaced, along with other efforts to enclose the building. The windows, gutters and downspouts should be replaced. A concrete slab on grade should be placed at the first floor to resist pest infestation and water infiltration.



*Rogers Fire Station Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*

INTERIORS:

3 The voids in the CMU wall at the rear of the building need to be repaired and provided with positive attachment to the wood structure. This needs to include tie downs and bolts. Further investigation would be required to determine if the CMU is reinforced.



3 The unsupported joist in the attic framing should be sistered. Blocking needs to be installed between the joists to provide stability to the framing. The wood framing connections should be reinforced with metal plates (Simpson Strong-Tie) and anchored well to the foundation. The existing wood posts should be replaced with concrete filled steel lally posts that probably need new foundations. Further investigation is required to determine the condition of the foundations, which were not exposed to view at the time of this assessment.



2 The roof needs to be reinforced, including structural ridge beams, transfer beams, new concrete filled steel lally posts (see above) and spread footings.

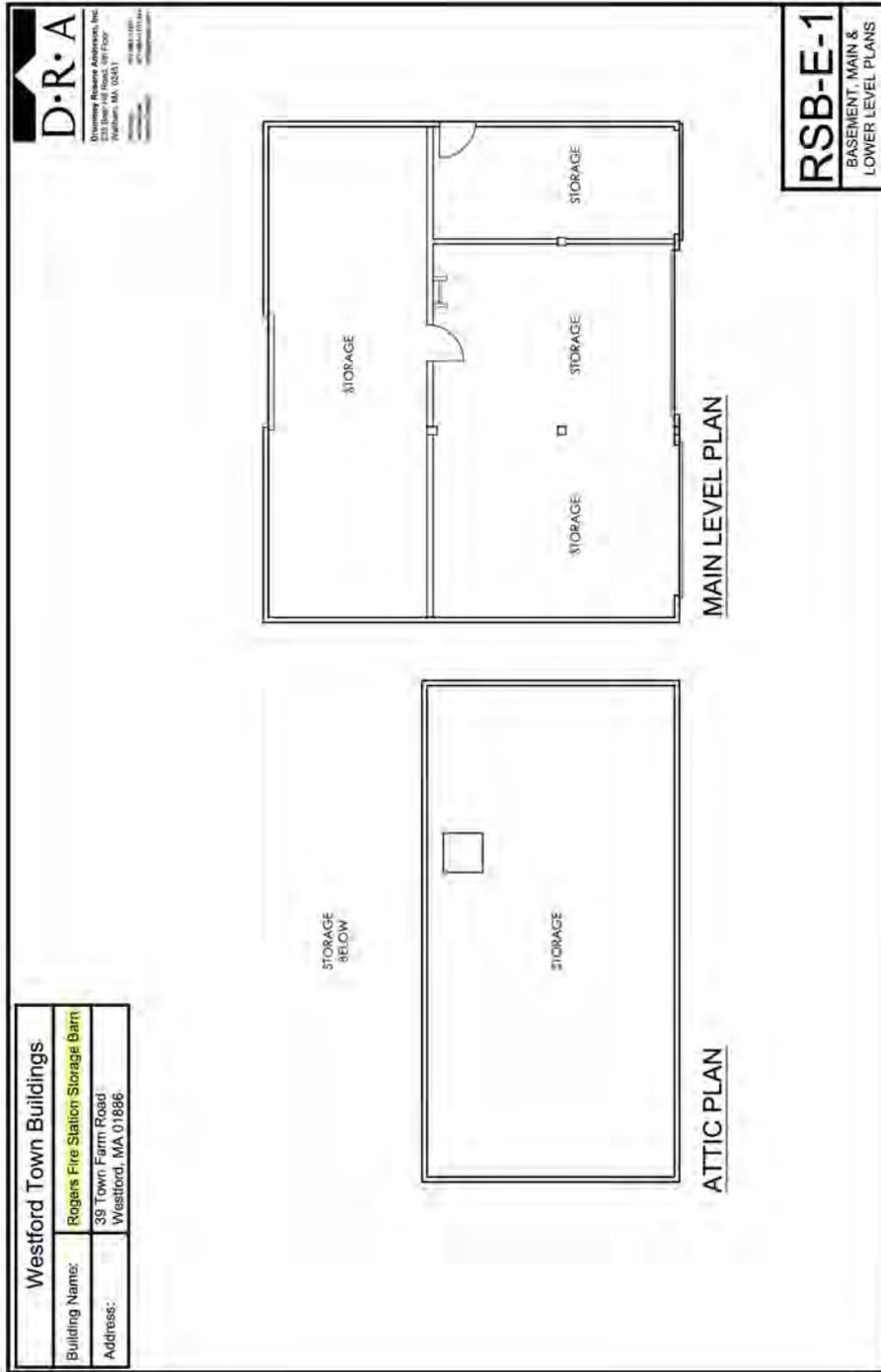


ENERGY & WATER CONSERVATION:

MECHANICAL, ELECTRICAL, PLUMBING AND FIRE PROTECTION:
(see individual reports for detailed description).

3 The building does not appear to have a mechanical or electrical system and is without plumbing. As a minimum general lighting, power and emergency lighting should be provided.

*Rogers Fire Station Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*



Rogers Fire Station Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)

Westford Townwide Assessment | STRUCTURAL – Rogers Fire Station Storage Barn

STRUCTURAL – ROGERS FIRE STATION STORAGE BARN

The purpose of this report is to assess the structure of the existing building, comment on the existing structure and comment on the structural integrity of the building.

Basis of the Report

This report is based on visual observations during our site visit on March 12, 2014. During the visit we did not remove any finishes or take measurements; so, our understanding of the structure is limited. Lighting was not available for illuminating the framing during our visit.

Existing Conditions

The Rogers Fire Station Storage Barn was constructed in 1920. The gabled structure is framed with wood joists and heavy timber posts and beams. The rear of the building is supported on concrete masonry units (CMU).

The structure is in a state of disrepair. The roofing shingles are significantly deteriorated and require replacement. The gutters are hanging off the building. The wood façade is heavily weathered and missing in some locations. We observed cracking in the CMU wall at the rear of the building. We were not able to determine whether the CMU wall was reinforced or not. The structure is not weather-tight, and moisture has deteriorated the cladding; the bottom of the cladding sits on the adjacent grade. Water staining is pervasive throughout the building and we observed ice on the floor at the time of the visit. The windows are broken.

We observed evidence of past reconfiguration of the structure in the attic framing. One notch in the center heavy timber beam had been patched with a nonstructural piece of wood. The wood joists supporting the 2nd floor are not blocked at their support points, or well anchored at either end. In one case, a joist is unsupported on one end and is not safe. The posts are not anchored well to the center heavy timber beam. We did not observe moisture resistant support in the first level; posts were wood, which is not a suitable material for basements.

We observed deflection in the roof framing, especially between intermittent collar ties. We would recommend that collar ties be installed at 32 inches on center at a minimum. We would also recommend that the roof be reinforced, which would include a structural ridge beam, supporting transfer beams, and new posts and spread footings.

The purlins at the rear of the building are supported by sloping compression members. We did not observe any connection hardware in addition to nailing. The members are not anchored well to the main structure.

Engineers Design Group, Inc.

*Rogers Fire Station Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Westford Townwide Assessment | STRUCTURAL – Rogers Fire Station Storage Barn

Recommendations:

The building is in a state of disrepair. We would recommend replacing the exterior cladding and roofing, along with other efforts to enclose the building. The windows, gutters and downspouts should be replaced. A concrete slab on grade should be placed at the first floor to resist pest infestation and water infiltration.

We would recommend repairing the voids in the CMU wall at the rear of the building and providing positive attachment to the wood structure, which would include tie downs and bolts. Further investigation would be required to determine if the CMU is reinforced.

The unsupported joist in the attic framing should be sistered. We would recommend installing blocking between the joists to provide stability to the framing. The wood framing connections should be reinforced with metal plates (Simpson Strong-Tie) and anchored well to the foundation. The existing wood posts should be replaced with concrete filled steel lally posts. Further investigation would be required to determine the condition of the foundations, which were not exposed to view at the time of this assessment.

We would also recommend that the roof be reinforced, which would include a structural ridge beams, transfer beams, new concrete filled steel lally posts and spread footings.

Engineers Design Group, Inc.

*Rogers Fire Station Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TWP CONSULTING ENGINEERS, INC.

Survey Date: 16 January 2014

Page 1 of 1

Facility Contact: Bill Kenison

(If in parentheses refer to notes below)

Construction Date:

Renovation Date:

Area: SF

Town of Westford
Facility Condition Assessment Surveys

Building: School, Recreation and Fire Storage Barns

Systems: Sprinkler

Item #	Component Name	Type	Server/Location	Estimated age	Life cycle expected the	Condition	Deficiencies	Efficiency	Recommendation	Quantity (E)	Priority
1	Fire Protection	Sprinkler	No sprinkler system			Good	Functional	No fire protection			
2							Accessibility				
3							Code				
4							Efficiency				
5							Functional				
6							Accessibility				
7							Code				
8							Efficiency				
9							Functional				
10							Accessibility				
11							Code				
12							Efficiency				
13							Functional				
14							Accessibility				
15							Code				
16							Efficiency				
17							Functional				
18							Accessibility				
19							Code				
20							Efficiency				
21							Functional				
22							Accessibility				
23							Code				
24							Efficiency				

Notes

(1)

School Storage & Rogers Fire Station Storage Barns
(Source: 2014 DRA Architects Town Wide Facilities Report)

TWP CONSULTING ENGINEERS, INC.

Survey Date: 28 January 2014
Page 1 of 1

Facility Contact: Bill Krubson
(If in parentheses refer to notes below)

Construction Date:
Renovation Date:

Area: 3,500 SF

Town of Westford
Facility Condition Assessment Surveys
Building: School, Recreation and Fire Storage Barns
System: PLUMBING

Item #	System	Type	Retention	Estimated age	Expected life	Area	Condition	Deficiencies	Recommendation	Priority	Notes
1	Plumbing System	Plumbing	NA								
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											

Notes:
(1)

*School Storage & Rogers Fire Station Storage Barns
(Source: 2014 DRA Architects Town Wide Facilities Report)*

TMP CONSULTING ENGINEERS, INC.

Survey Date: 28 January 2014

Facility Contact: Bill Kenyon

Construction Date: 1920

Area: 3,500 SQFT

Town of Westford
Facility Condition Assessment Surveys

Building: School Storage Barn

Systems: ELEC

Item #	System	Component Name	Type	Service/Location	Estimated age	Life cycle	Condition			Deficiencies			Priority Rating		
							Good	Fair	Poor	Functional	Accessibility	Efficiency		Planned work	Replace
1	Service		Pole-mounted Transformer	Overhead	40 (1)										
2	Wiring		Cable Main	Entrance	40 (1)										
3	Equipment		Square D	North west corner of Bld	40 (1)										
4	Main OCP Panel		ABB JFH 120-240T	North west corner of Bld	40 (1)										
5	Ground Fault Protection		No.	N/A											
6															
7	Distribution		Square D	North west corner of Bld	40 (1)										
8	Panel		(2)	Throughout	40 (1)										
9	Wiring		None												
10	Transformers		None												
11															
12															
13															
14															
15	Life Safety														
16	Fire Alarm		(1)		40 (1)										
17	Emergency Exit		None												
18	Generator		None												
19	Automatic Transfer Switch		None												
20															
21															
22															
23															
24															

Notes:

(1) Equipment should be tested to determine if equip

(2) NM cable, BX cable, MC-cable, EMT

(3) Fire alarm system appears to be non-pendic

(5)

School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)

TWP CONSULTING ENGINEERS, INC.

Survey Date: 28 January 2014

Page 2 of 2

Facility Contact: Bill Krubson

(If in parentheses refer to notes below)

Construction Date: 1920

Renovation Date: 7

Area: 3,500 sqft

Town of Westford
Facility Condition Assessment Surveys

Building: School Storage Barn

System: ELEC

Item #	System Component Name	Type	Description	Material	Estimated Age	Life Cycle	Condition	Deficiencies			Priority Rating
								Functional	Accessibility	Code	
1	Lighting										
2	Type	(4)			40	20					
3											
4											
5											
6											
7											
8	Device										
9	Receptacle				40	20					
10	Switch				40	20					
11											
12											
13	Phone service										
14	Type	None									
15											
16	Cable service										
17	Type	None									
18											
19	Internet service										
20	Type	None									
21											
22											
23											
24											

- Notes:
- (1)
 - (2)
 - (3)
 - (4) Fluorescent, maintenance
 - (5)
 - (6)
 - (7)
 - (8)
 - (9)
 - (10)

School Storage Barn
(Source: 2014 DRA Architects Town Wide Facilities Report)

TMP CONSULTING ENGINEERS, INC.

Survey Date: 28 January 2014

Page: 1 of 1

Facility Contact: Bill Kenyon
HVAC Plans Available: No
(If in parenthesis refer to notes below)

Construction Date: 7
Renovation Date:

Area: SF

Town of Westford
Facility Condition Assessment Surveys
Building: School Storage Barn
System: HVAC

Item #	Component Name	Type	Service/Location	Estimated age	Life cycle	Condition			Deficiencies			Priority Rating
						Good	Fair	Poor	Functional	Accessibility	Efficiency	
1	Unit heater	Gas/coal	One in upper and one in lower section	(1) / (5)					A	A	(2) / (3)	
2												
3	Ball fan	Propeller	Upper section wall	(1) / (5)					A	A	(2) / (2)	J
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												
24												

Notes:
 (1) Unknown
 (2) Work not completed when survey was performed (found off)
 (3) This note for ball unit cost building you make sure all fitting has do not extend upwards enough to confirm to code which required fittings to extend 3" above the roof.
 (4)
 (5)

School Storage Barn
 (Source: 2014 DRA Architects Town Wide Facilities Report)

School Storage Barn				
Order of Importance	Description	Value	Fiscal Year	Sequence
1	Repair/Replace Fire Alarm System	\$ 20,570.00	16	22
2	Replace Stair to Attic	\$ 35,367.00	16	42
3	Repair Exterior Cladding	\$ 40,000.00	19	169
4	Replace Wall Insulation	\$ 42,905.00	19	170
5	Door Repairs and O/H Door Replacement	\$ 24,710.00	19	171
6	Add Railings to Exterior Stair	\$ 11,928.00	19	172
7	Add Fire Sprinkler System	\$ 56,370.00	19	173
8	Add Extensions to Unit Heater Vents	\$ 5,640.00	19	174
9	Stabilize 1st Floor Steel Beams	\$ 66,270.00	19	258
10	Properly Anchor Roof & Floor Framing	\$ 43,534.00	19	259
11	Add Missing Studs and Blocking	\$ 17,414.00	19	260
12	Add Roof Insulation	\$ 32,797.00	19	261
13	Replace Wall Insulation	\$ 48,363.00	19	262
14	Replace Damaged O/Head Door Panel/Track	\$ 1,851.00	19	263
15	Add Weatherstripping to O/Head Doors	\$ 1,269.00	19	264
16	Remove Louvers and Patch Walls	\$ 3,876.00		480
17	Patch cracks in Concrete	\$ 18,506.00		481
18				
19				

\$ 237,490.00

\$ 233,880.00

*School Storage Barn Budget
(Source: 2014 DRA Architects Town Wide Facilities Report)*

Rogers Fire Station Storage Barn				
Order of Importance	Description	Value	Fiscal Year	Sequence
1	Re-construct Exterior of Building	\$ 897,431.00		
2	Reinforce Roof	\$ 277,594.00		\$ 1,175,025.00
3	Add Lighting, Power and Emer. Lighting	\$ 173,313.00		
4	Repair/Reinforce Attic Floor Structure	\$ 132,188.00		
5	Repair CMU Wall & Attach to Structure	\$ 45,238.00		\$ 350,739.00

Replacement Recommended

*Rogers Fire Station Storage Barn Budget
 (Source: 2014 DRA Architects Town Wide Facilities Report)*



June 23, 2011

Mr. John S. Mangiaratti, Assistant Town Manager
TOWN OF WESTFORD
 55 Main Street
 Westford, Massachusetts 01886

RE: **REPORT OF OBSERVATIONS AND RECOMMENDATIONS FROM THE
 VISUAL STRUCTURAL CONDITION EVALUATION OF THE
 WESTFORD TOWN FARM BUILDING**
 35 Town Farm Road - Westford, Massachusetts 01886
Ipswich River Engineering, Inc. Project No.: IR-0387

Dear John:

Ipswich River Engineering, Inc. (IREI) has been retained by the Town of Westford, hereafter referred to as the *Town* in this report, to perform a visual structural condition evaluation of the existing timber framed, two-story Westford Town Farm building located at 35 Town Farm Road in Westford, Massachusetts. In this report, the Westford Town Farm building, in its entirety, will be referred to as the *Town Farm Building*. Currently, the *Town Farm Building* appears to be used by the Town of Westford Parks and Recreation Department for their various offices, program spaces, and meeting space. In general, the purpose of this visual structural evaluation was to view the exposed portions of the existing timber floor, roof and wall framing and the existing foundation walls of the *Town Farm Building* and to look for visible structural issues, structural distress, and structural damage.

On March 14, 2011 IREI meet with you and Bill Kenison of the Westford Engineering Department at the *Cottage* to perform a initial preliminary walk-through of the *Town Farm Building* to get an initial viewing of the *Town Farm Building's* existing floor framing exposed to view, and to discuss the scope of services that the Town of Westford would like IREI to provide the Town in this visual structural evaluation. After this meeting, IREI prepared and issued their **Agreement for Structural Engineering Services No. IR11-PA294**, dated March 16, 2011, hereafter referred to as the *Agreement*, for the Town of Westford to authorize IREI to perform the requested structural engineering services. As discussed with the Town, and in accordance with the above referenced IREI *Agreement* between IREI and the Town of Westford, IREI's anticipated scope of structural engineering evaluation to be performed on the exposed portions of the existing timber framing and the exposed portions of the foundations of the *Town Farm Building* to determine, if possible, the following:

162 Park Street-Suite #203, North Reading, MA 01864
 t: 978.664.6925 f: 978.664.6926 www.ireengineering.com

The difference between the ordinary and the extraordinary is the extra client service we provide.

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 2 of 12

- Observe and review the physical condition of the exposed portions of the existing floor, wall and roof framing where it is exposed to view and evaluate areas and types of visible structural damage or deterioration in the existing timber framing members, components and systems, if any is visible.
- Observe and review the apparent physical structural condition of the portions of the existing foundation systems where they are exposed to view to look for areas and types of visible structural damage, distress, or deterioration in the existing foundation components and systems in the *Town Farm Building*, if any is observed.
- Where possible and exposed to view IREI will gather field data on the existing timber framing members and foundation system in this building for use by IREI in their survey and evaluation of the apparent structural conditions of the existing timber framing and building structure; and whether or not it appears there are issues associated with the at the existing *Town operations/uses of the Town Farm Building*.
- Look for areas of existing timber framing and/or the foundations systems where additional investigation and/or the removal of the existing finishes is recommended for follow-up and in-depth structural evaluation, review of the existing structural systems, and design of the recommended structural repairs to be performed under the next Phase of this project;
- IREI will prepare a written report outlining IREI's field observations and their professional opinions and recommendations; IREI's professional recommendations on areas of the building structure that appear to warrant further and more in-depth evaluation; and the general scope and intent of recommended structural repairs and future phase design work based on IREI's field observations and preliminary structural evaluation on the *Town Farm Building*.

On May 24 2011, IREI returned to the *Town Farm Building* to perform their visual structural evaluation and assessment of the existing *Town Farm Building* structure, including the timber framing systems and foundation wall systems exposed to view. In this report IREI will present and outline their field observations, findings and IREI's professional opinions and recommendations regarding the observed visible structural conditions of the existing *Town Farm Building* at the time of their field work. The professional opinions of IREI, as presented in this report, are based on visual observations and IREI's professional structural engineering experience only; with no destructive testing, demolition of interior or exterior finishes, or in-depth investigative exploration performed at this time. For clarity in this report, the various structural components of the various portions of the *Town Farm Building* will be presented and discussed separately.

For clarity in this report, the exterior wall of the *Town Farm Building* closest and parallel to Town Farm Road will be referred to as the *front* of the *Town Farm Building*. All references to *left*, *right*, and *rear* are when one is standing on Town Farm Road looking at the front wall of the *Town Farm Building*.

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 3 of 12

► **General Overview of the Westford Museum Cottage:**

The *Town Farm Building* is located adjacent to the railroad tracks on Town Farm Road. Based on IREI's field observations and discussions with the *Town*, the *Town Farm Building* appears to have been constructed in three phases consisting of the following three portions:

- The *original* two and one-half story front portion of the *Town Farm Building* is the right-most portion of the building and is located on the right side of the lot closest to the railroad tracks. The *Town Farm Building* is a brick masonry structure approximately 40 feet wide by 38 feet deep that has two full stories, with a Third floor level with short height exterior knee walls and sloped ceilings (i.e. the ceilings are the underside of the gable roof structure). This building was observed to have a full height Basement level. This portion of the building is a brick farmhouse style structure with timber framed floor framing and a timber framed gable roof. The *Town* advised IREI that this portion of the building was constructed in 1838 and was the original portion of the *Town Farm Building*. The gable roof on this portion of the building is oriented front to back (i.e. perpendicular to Town Farm Road), the gable end walls oriented parallel with Town Farm Road. In this report, this 1838 brick farmhouse portion of the *Town Farm Building* will be referred to as the *Farmhouse*. The *Farmhouse* is rectangular in plan and has a full Basement level, with the Basement headroom height being approximately 7'-0". The roof structure on the *Farmhouse* is a simple, timber framed gable roof system. In general, the existing perimeter walls of the *Farmhouse* appear to be multi-wythe non-reinforced brick walls. IREI observed that it appears that wood furring had been installed directly on the interior faces of the exterior brick walls; and the interior plaster finish is attached to the furring. It appears that some of the exterior brick walls serve as the bearing walls for the floor and roof structure. There is a single story shed roof portion of this building along the rear gable wall of the building. The roof structure of this portion of the building was concealed by finished and IREI could not gain access to the crawl space below the floor level to view the floor framing of this portion of the building.
- The second portion of the *Town Farm Building* appears to be a two-story timber framed structure with a timber framed gable roof structure that is located at, and attached to, and accessible from the *left* side of the *Farmhouse*. The *Town* advised IREI that this portion of the building was constructed in the late 1800's. Given the age of this portion of the building IREI would anticipate that the exterior timber framed walls of this portion of the building are balloon framed given the age and configuration of the building. This portion of the *Town Farm Building* is rectangular in shape with overall outside dimensions of approximately 35 feet (width) by 26 feet (depth); and has a full Basement level and a full walk-up Attic level. This portion of the building appears to have been constructed as the first addition to the original 1838 *Farmhouse* and in this report this portion of the building will be referred to as the *Late 1800's Addition*.
- The third portion of the *Town Farm Building* is the single-story shed roof configuration timber framed structure located at the left side of the lot. The *Town* advised IREI that this portion of the building was originally constructed in the early 1900's as an addition to the *Farmhouse* and the *First Addition*. In this report, this portion of the building will be referred to as the *Early 1900*

2011 Structural Comments on Town Farm Building
 (Note that "Westford Museum Cottage" is a Typo)

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 4 of 12

Addition. The roof framing at this section of the building was concealed by finishes and not exposed to view.

Attached to this report is **Appendix A – Figures and Photos** that includes representative photos taken by IREI that document some of the structural conditions and issues observed by IREI during their field work at the *Town Farm Building*. Figures from this **Appendix** will be referred to in this report.

► **Observations and Comments on the Roof & Attic Floor Structure of the *Farmhouse*:**

The following are IREI's observations, comments and recommendations based on their field observations of the timber framed roof and Attic Floor structure of the *Farmhouse*:

- The Attic space above the flat portion of the ceiling of the *Farmhouse* was able to be viewed from the existing small opening located in the ceiling framing. Given the physical size and apparent load capacity of the existing Attic Floor joists, IREI chose not to access this Attic space for safety; and IREI only viewed the portions of the underside of the existing roof structure and ceiling framing systems in this portion of the building that was able to be viewed from the hatch.
- The gable roof structure of the *Farmhouse* was observed to be framed with rough hewn timber rafters that appear to be framed into the sides of a rough hewn timber ridge board by means of mortise and tenon joints – refer to **Appendix A – Figure 1**. IREI anticipates that the bottom ends of these gable roof rafters bear on and are supported by the top of the brick masonry sidewall bearing walls along the left and right sidewalls of the *Farmhouse*. However, the bottom ends of these rafters could not be directly viewed because of the interior timber framed knee walls at the Third Floor level. IREI did observe a significant amount of damage and water staining to the interior plates finish at the underside of both the sloped and flat portion of the Third Floor level ceilings – refer to **Appendix A – Figure 2** and **Figure 3**. The observed plaster damage is significant and indicates apparent substantial amount of water leaking through the roof shingles. IREI is not sure whether the leak is currently leaking or whether this water damage occurred at some time in the past. IREI's concern is that there could be a significant potential of structural damage to the timber roof framing elements in these areas from long term water leakage and decay. IREI recommends that the *Town* have all of the existing damaged plaster finishes removed from all the walls and ceiling surfaces (both flat and sloped portions of the ceilings) at the Third Floor level so that the underlying timber roof structure can be closely reviewed and inspected for timber damage and determine whether the roof framing must be repaired and reinforced.
- When viewed from the exterior of the building, the gable roof framing of the *Farmhouse* was observed to have significant deflection and dishing from the apparent undersized timber roof framing for the snow loads that occur on the roof. Numerically, the existing gable roof rafters, at the observed sizes, configuration and spacing in the *Farmhouse* roof system, are minimal and appear structurally insufficient to support the current code required snow loads and the actual snow load magnitudes that occur on the roof based on current timber design standards and criteria (i.e. within allowable stress levels for the timber). However, this existing gable roof system

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 5 of 12

appears to have functioned for over 170 years in its current configuration. In fact, this past winter, and the recent winter of 1995-1996, saw near record snowfalls in the area and this existing gable roof system appears to have supported the roof snow loads without collapsing. However, number wise IREI cannot back this up performance within the allowable timber stress levels in the framing members. What this indicates is that under snow loads this existing roof structure and the various timber connections are well into the factors of safety for the allowable member strength and stress levels and the observed deflection and dishing of the roof system indicates insufficient stiffness of the roof members under the snow load. Therefore, from a structural engineering analysis point of view (i.e. numerically) IREI cannot confirm or certify that the existing gable roof framing of the *Farmhouse* is capable of supporting either the code required snow loads or the actual likely snow load magnitudes in its current configuration without significant reinforcement or replacement. Based on IREI's experience during last winter and the winter of 1995-1996, the magnitude of the snow loads on the roofs of buildings was very often near and in some instances exceeded the code required uniform snow loads. One option to reduce the magnitude of the snow loads able to collect on the roof system would be by replacing the existing asphalt shingle roof surface with a standing seam metal roof system. Metal roof surfaces, with no snow guards along the roof eaves to impede the snow from sliding off the metal roof panels, provide a smooth slippery roof surface that reduces the likelihood and magnitude of snow accumulation on the gable roofs. Metal roof surfaces are common on old farmhouses and barns in New England for that reason – in general, the metal roof surface reduces the snow loads on a roof. However, given IREI'S observations of the condition, configuration and sizes of the roof system IREI recommends reinforcing this roof framing.

> Observations & Comments on the Roof & Attic Floor Structure of the Late 1880's Addition:

The Attic Level of the *Late 1880's Addition* is a walk up Attic with a full stairway to gain access. The underside of the gable roof framing had no finish materials applied to it and was fully exposed to view. The Attic Floor was observed to not have any floor finishes; with the timber floor board sheathing exposed to view. The following are IREI's observations, comments, and recommendations based on field observations of the roof and Attic Floor framing structure of the *Late 1880's Addition*:

- IREI observed that the existing gable roof framing of the *Late 1880's Addition* appeared to be full 2 inch by 7 inch sloped gable rafters spaced at approximately 2'-0" on center in general - refer to **Appendix A - Figures 4 and 5**. Numerically, the existing gable roof rafters at the observed size and spacing in the *Late 1880's Addition* roof system is structurally insufficient to support the current code required snow loads and the actual snow load magnitudes based on current timber design standards and criteria (i.e. within allowable stress levels for the timber). However, this existing gable roof system appears to have functioned satisfactorily for over 100 years in its current configuration. In fact, this past winter, and the recent winter of 1995-1996, saw near record snowfalls in the area and this existing gable roof system appears to have supported the roof snow loads without collapsing. However, number wise IREI cannot back this up performance within allowable timber stress levels. What this indicates is that under snow loading this existing

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 6 of 12

roof structure and the various timber connections are well into the factors of safety for the allowable member strength and stress levels. Therefore, from a structural engineering analysis point of view (i.e. numerically) IREI cannot confirm or certify that the existing gable roof framing of the *Late 1800's Addition* is structurally capable of supporting either the code required snow loads or the actual likely snow load magnitudes in its current configuration without reinforcement or modifications.

- IREI observed that only a few of the rafters had existing Collar Ties between the top ends of these roof rafters within the top third of the rafter span. At a minimum, IREI would recommend installing new 2x8 *Spruce-Pine-Fir No. 2 or Better* grade timber Collar Ties within the top third of the rafter span to tie the top ends of the rafters together to increase the structural continuity of the roof framing system.
- IREI observed that the existing Attic Floor joists in the *Late 1800's Addition* appeared to be 1-3/4 inch by 5-1/2 inch timber floor joists spaced at approximately 2'-0" on center in general. Numerically, the existing Attic Floor joists at the observed size, spacing and apparent spans in the *Late 1800's Addition* appear to be structurally insufficient to support the current code required live load for any typical commercial use floor loading (typically the minimum commercial loading is 50 pounds per square foot for Office use loading) based on current timber design standards and criteria (i.e. within allowable stress levels for the timber) without reinforcing. Therefore, from a structural engineering analysis point of view (i.e. numerically) IREI cannot confirm or certify that the existing Attic Floor framing of the *Late 1800's Addition* is structurally capable of supporting any commercial use floor loading in its current configuration without significant reinforcement or modification.

► **Observations and Comments on the First and Second Floor Level Floor Structure of the *Late 1800's Addition*:**

The following are IREI's observations, comments, and recommendations based on field observations of the existing Second Floor level floor structure of the *Late 1800's Addition*:

- In general, the First and Second Floor level floor framing of the *Late 1800's Addition* was concealed by finishes by the finish ceilings and the floor finishes. However, IREI did not observe any significant signs of settlement or excessive deflection of the portions of these floors at the time of their visit and the Second Floor level floor framing in this section of the building appeared fairly stiff.
- IREI observed in the limited location below the Second Floor Bathroom the existing Second Floor framing appeared to be full size rough cut 2x8's at approximately 16 inches on center. These floor joists observed appeared to span parallel to the front and rear walls of the addition.
- IREI observed that at the existing Second Floor framing directly below the Second Floor Bathroom the plumbing contractor that installed the waste line for the toilet saw cut and removed large portions of the timber floor joists in this section of the floor system to install the waste line. This has resulted in significant structural damage and weakening of several floor joists in this portion of the floor structure in this area of the floor – refer to **Appendix A - Figure 6. This**

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 – Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 7 of 12

framing condition is structurally unacceptable and should be shored up as required immediately to prevent a localized structural collapse of the floor system – the shoring should remain in place until this section of the floor framing has been repaired/corrected.

► **Observations and Comments on the Second Floor Level Floor Structure of the Farmhouse:**

The following are IREI's observations, comments, and recommendations based on field observations of the existing Second Floor level floor structure of the *Farmhouse*:

- In general, the entire Second Floor level floor framing of the *Farmhouse* was concealed by finishes on both the top and bottom surfaces and therefore unable to be directly viewed or evaluated. However, IREI did not observe any significant signs of structural failure, excessive floor deflections, or noticeable distress at the time of their site visit.
- At the rear portion of the Second Floor of the *Farmhouse* the Parks and Recreation Department has installed several rowing machines on the floor for training. The floor framing under this section of the Second Floor level was concealed by finishes on both the top and bottom and therefore not exposed for viewing. In IREI's professional opinion this section of Second floor did not appear to be excessively bouncy and did not exhibit excessive deflection. However, in order to adequately review and evaluate the capacity of this portion of the floor framing would require removal of the existing finishes to expose the framing elements. IREI would not recommend putting any type of weight lifting equipments or weights or any type of aerobic activity or training on this floor system unless the framing is further investigated.
- In general, IREI would anticipate that given the age of the building and the general framing conditions that were able to be viewed that numerically, the existing Second Floor framing at this section of the *Farmhouse* would be found to be structurally insufficient to support the current workout/gymnasium use code required floor live loading based on current timber design standards and criteria (i.e. within allowable stress levels for the timber - number wise IREI cannot back this up within allowable timber stress levels). What this likely indicates is that under the current floor loading this existing floor structure and the various timber connections are likely into the factors of safety for the allowable member strength and stress levels. Therefore, from a structural engineering analysis point of view (i.e. numerically) without exposing a significant portion of the floor framing IREI cannot confirm or certify that this portion of the existing Second Floor framing in the *Farmhouse* is structurally capable of supporting the code required floor live load for the current use of the space .

► **Observations and Comments on the First Floor Level Floor Structure & Basement Level of the Farmhouse:**

The following are IREI's observations, comments, and recommendations based on IREI's field observations of the existing First Floor level timber floor structure and the Basement space of the *Farmhouse*:

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 8 of 12

- IREI observed several locations where the base of the non-preserved treated timber posts that support the timber First Floor level floor beams bear directly on the top of the concrete Basement Floor slab (refer to **Appendix A – Figure 7**) without any steel or iron bearing plates to isolate the timber from the concrete. The bases of these timber posts appeared to have deteriorated and punky from being in contact with the concrete slab and the moisture from the slab wicking up the posts over time. These damaged posts should be removed and replaced with either new preservative treated timber posts set on steel bearing plates or steel pipe of tube columns. However, prior to installing the replacement posts the existing footings (if any are present) must be investigated and replaced if not found to be sufficient to support the post loads. In addition, at several locations the timber floor beams that these posts support show significant signs of structural distress and need to be repaired, replaced, or reinforced. This work will require analysis of the existing structure to determine the post/footing loads.
- IREI observed that in general the majority of the existing First Floor level floor framing of the *Farmhouse* appeared to have been constructed with full size 3 inch wide by 4 inch depth timber floor joists spaced at approximately 20 to 24 inches on center – refer to **Appendix A – Figures 8, 9 and 10**. IREI observed these floor joists are flush framed into the sides of various sized timber floor beams that are supported on a combination of stone columns and timber posts. Some of the timber posts appeared to have been added at some time in the past and were likely not part of the original floor framing. These existing flush framed joist-to-beam connections are achieved by mortise and tenon type framing connections. The ends of these joists are notched at the bottom edge resulting in an approximately two (2) inch depth tenon that extend into rectangular mortises cut into the sides of the timber floor beams. The notched tenon ends of these floor joists at the face of the floor beam reduce the structural shear capacity of the joists by approximately 50% from the shear capacity of the joist if the joist ends were full depth. This shear strength reduction is the result of the concentration of tension and shear stresses in the joist occurring at the reentrant corner of the notch at the end of the joist. These mortise and tenon type timber framing connections were a very common framing connection in timber framed structures of this type and age. However, based on IREI's experience these mortise and tenon connections between the floor joists and beams are often problematic and are not capable of transferring the floor loads (for office and corridor occupancies) to the supporting beams. In general, numerically, the existing First Floor framing at this section of the *Farmhouse* appears to be structurally insufficient to support the current office and Corridor use code required floor live loading based on current timber design standards and criteria (i.e. within allowable stress levels for the timber). What this indicates is that under the current floor loading this existing floor structure and the various timber connections are likely well into the factors of safety for the allowable member strength and stress levels. Therefore, from a structural engineering analysis point of view (i.e. numerically) IREI cannot confirm or certify that this portion of the existing First Floor framing in the *Farmhouse* is structurally capable of supporting the code required floor live load for the current use of the space.
- IREI observed that someone has installed two supplementary timber floor beam lines supported on posts in an apparent attempt to reduce the span of some of the 3x4 floor joists in these two

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 9 of 12

floor areas. These beam lines appeared oriented perpendicular to the floor joists at approximately mid-span of the spans.

- Near the electric panel at the front left corner of the Basement, IREI observed an approximately 6 foot length cantilever on one of the First Floor beams. This cantilevered beam end is not structurally adequate and the end of the cantilevered beam should have a temporary shoring post installed immediately to prevent a structural failure of this beam. In addition, IREI observed significant horizontal shear cracks in the sides of this beam along its length indicating that the beam is in a state of failure - see **Appendix A - Figure 10**. These shear cracks are located at the bottom of the mortises cuts into the sides of the beams that support the ends of the floor joists. These horizontal cracks in the floor beam appear to be indicative of structural shear failure of the beams as a result of the stress concentrations occurring at the bottom corners of the mortises in combination with the apparent overloading of the beams which are undersized for the floor loads imparted on them and further reduced by the mortise cuts.
- **IREI observed numerous locations along the various timber First Floor beams in the Farmhouse where horizontal and sloping shear cracks (see Appendix A - Figure 8 and Figure 10) have developed. It is IREI's professional opinion that these damaged floor beams with the shear cracks are in a state of structural failure and must be repaired, reinforced or replaced. IREI strongly recommends that the Town install continuous temporary shoring lines parallel and below these damaged floor beams and the tenoned ends of the floor joists immediately. These temporary shoring lines must support the bottom of the failed floor beams as well as supporting the tenoned ends of the floor joists on each side of the floor beams to eliminate the loading on the tenoned ends. It is IREI's professional opinion that these lines of temporary shoring should be installed immediately to prevent a complete structural failure and collapse of the floor system. This temporary shoring should remain in place until these insufficient floor joist connections and damaged floor beams have been repaired, corrected, or replaced.**
- At the right rear portion of the First Floor framing IREI observed that the timber floor beam has excessive deflection at the mid-portion of the beam length. The beam deflection was significant enough that someone had installed wood shims (approximately ¼ inch thick shims) in the bottom of the mortise cuts in the sides of the beams (see **Appendix A - Figure 9**) that support the tenoned ends of the flush framed floor joists to fill the gap caused by the beam deflection. As noted above this beam is structurally deficient. **IREI strongly recommends that the Town install continuous temporary shoring lines parallel and below this damaged floor beam and the tenoned ends of the floor joists on each side of the beam immediately. This temporary shoring line must support the bottom of the failed floor beams itself as well as supporting the tenoned ends of the floor joists on each side of the floor beams to eliminate the loading on the tenoned ends. It is IREI's professional opinion that this line of temporary shoring should be installed immediately to prevent a complete structural failure and collapse of the floor system. This temporary shoring should remain in place until these insufficient floor joist connections and damaged floor beam have been repaired, corrected, or replaced.**

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 10 of 12

► **Observations and Comments on the Foundation Walls of the Town Farm Building:**

The following are IREI's observations, comments, and recommendations based on IREI's limited field observations of the existing Porch timber floor structure and the existing foundation walls of the *Porch Addition*:

- IREI observed numerous locations on the exposed portions of the existing stone foundation walls along exterior perimeter of the *Town Farm Building* where the mortar joints have deteriorated leaving wide open joints between the stones – refer to **Appendix A – Figure 14**. IREI recommends that all open and deteriorated mortar joints in the stone foundation walls be cleaned, prepared and repaired as soon as possible to prevent continued and further structural damage from ice riving of the joints by water freezing during the winter months. The continued repeated freeze-thaw cycles will likely cause structural damage to the stone work that will end up causing major damage that will be expensive to repair. Simple repair of the mortar joints now will likely be money well spent and should significantly reduce the potential for further decay and damage of these foundation walls.

► **Observations and Comments on the Roof, Floor and Stairway Structure of the Farmhouse Front Porches and Stairways:**

Along the front gable wall of the *Farmhouse*, closest to Town Farm Road, IREI observed that there is timber framed exterior porch structure at the First and Second Floor levels of the *Farmhouse*. There is a covered timber framed roof structure above the Second Floor level of the Porch that appears to serve as an emergency egress from the Third Floor level of the *Farmhouse*. The following are IREI's professional observations, opinions, and comment related to the existing front Porch structure:

- IREI observed that the timber railings/guards (see **Appendix A – Figure 12** and **Figure 13**) along the First and Second Floor levels of the Porch and the stairways at the First and Second Floor levels have numerous missing vertical members and areas of timber damage. This existing railing/guard systems in their current condition and configuration do not appear to be structurally sufficient to support the code required horizontal railing/guard loads. IREI recommends that these railings/guards be replaced with new railing/guard systems capable of meeting the structural and architectural requirements of the building code immediately because of the potential for someone leaning against these railings/guards causing a failure of the rail/guard resulting in personal injury or worse. IREI recommends that these flights of timber framed stairs be replaced with new railing/guard systems capable of meeting the structural loading (gravity and horizontal loads) and architectural requirements of the building code immediately because of the potential for someone being hurt by a structural failure of the existing stairways. IREI recommends that the *Town* retain an Architect as soon as possible to review the egress issues of the *Farmhouse*, these Porches/stairways and the *Town Farm* building in general, determine whether these existing Porches and Porch stairways at the front of the *Farmhouse* are means of egress for the current *Town* use and whether the porches and stairways meet the

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
 Report of Observations from the Visual Structural Evaluation
 June 23, 2011 - Page 11 of 12

dimensional requirements for the Porches, stairways, and means of egress, and provide the *Town* with their professional opinion on those issues.

- At the roof level of this front Porch structure IREI observed a single pipe railing/post system that appears to serve as a safety railing for the roof level Porch and Stairway. This existing pipe railing/guard system is structurally inadequate to support the code required horizontal loads on the railing/guard and the railing/guard system has only a horizontal top rail with no vertical members between the porch roof and the horizontal rail to prevent a small person or child from falling through the railing/guard. This existing pipe railing/guard system is both a structural issue and a huge safety issue and must be replaced immediately because of the potential for someone leaning against these railings/guards falling two stories to the ground. IREI recommends that the *Town* retain an Architect as soon as possible to review this issue and provide recommendations to the *Town*.
- The floor and roof structures of the front Porch floors and roof, and their connection to the face of the *Farmhouse* front brick wall could not be viewed or evaluated because they are concealed by existing finishes. When the existing finishes are removed, the framing and connections should be viewed and evaluated.

► **General Observations and Comments on the Exterior Brick Walls of the *Farmhouse***

The following are IREI's observations, comments, and recommendations based on IREI's field observations of the existing exterior brick walls of the *1838 Farmhouse*:

- IREI observed that it appears that the exterior faces of the brick surfaces of the *Farmhouse* exterior walls have been sandblasted at sometime in the past (refer to **Appendix A – Figure 11**). In general, it appears that this sandblasting has removed the protective finish surface on the brick that prevents moisture from migrating into the exposed interior portion of the brick. IREI recommends that the *Town* retain a qualified Architect or masonry/restoration specialist as soon as possible to visit the *Farmhouse*, view the sandblasted brick surfaces, and provide the *Town* with their professional recommendations for the repairing the mortar joints (i.e. tuckpointing) in the brick and options for applying some type of suitable masonry sealer material to seal the exterior of the brick to reduce moisture penetrating the brick. Sealing the exterior face of the brick appears to be in need to be applied to minimize the potential for additional and future damage due to ice riving from freeze-thaw cycles of water in any open or cracked mortar joints and the brick elements themselves. This is preventative maintenance which is money well spent by the *Town* to reduce the potential for future significant structural damage to these exterior brick walls.

In the Westford Town Farm building IREI observed significant structural inadequacies, distress, and damage of the First Floor framing that has resulted in visible signs of structural distress, damage and failure in numerous floor framing members (both floor joists and floor beams). It is the professional opinion of IREI that the observed structural failure of the noted components of the designated portions of the First Floor framing systems is the result of a combination of the age, configuration, and the mortise and tenon type flush framed framing connections used between the floor joists and the floor beams.

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
Report of Observations from the Visual Structural Evaluation
June 23, 2011 - Page 12 of 12

These mortise and tenon connections between floor joists and floor beams result in significant decreases in the structural capacities of both the joist and beam members because of the resulting stress concentrations at the reentrant corners of both the mortises and tenons. In IREI's professional opinion lines of temporary shoring beams and jack posts should be installed in the Basement level to support the damaged framing members until the design and installation of the properly designed permanent floor framing repairs, reinforcement and replacements have been completed. These temporary shoring systems should be installed immediately to prevent potential structural collapse of the timber floor framing. The railings on the front Porch floor and roof levels are an immediate safety concern and issue that should be replaced immediately because of the potential for personal injury or worse.

IREI trusts that this report satisfies the Town of Westford's needs at this time. If you or any members of the various *Town* departments, boards, and commissions have any questions and/or comments on this report please do not hesitate to call or email. IREI would like to thank you and the Town of Westford very much for retaining the firm to perform the above referenced structural engineering services for the Town.

Respectfully submitted,
IPSWICH RIVER ENGINEERING, INC.

Donald L. Peach, P.E., President

Donald L. Peach, P.E., President



2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building

APPENDIX A - FIGURES & PHOTOS

June 23, 2011 - Page 1 of 7

APPENDIX A - FIGURES & PHOTOS



Figure 1 - *Farmhouse* - Main Roof Framing & Ridge Board



Figure 2 - *Farmhouse* - Damaged Ceiling Finishes

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building

APPENDIX A - FIGURES & PHOTOS

June 23, 2011 - Page 2 of 7



Figure 3 – Farmhouse - Damaged Ceiling Finishes



Figure 4 – First Addition - Roof Framing

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building
APPENDIX A - FIGURES & PHOTOS
June 23, 2011 - Page 3 of 7



Figure 5 - *First Addition* - Roof Framing



Figure 6 - *First Addition* - Damaged 2nd Floor Framing by Plumbing

IREI Project No. IR-0387 - Westford Town Farm Building
APPENDIX A - FIGURES & PHOTOS
June 23, 2011 - Page 4 of 7



Figure 7 - *Farmhouse* - Timber Damage at Base of Basement Post



Figure 8 - *Farmhouse* - Apparent Shear Cracks in 1st Floor Timber Beam

IREI Project No. IR-0387 - Westford Town Farm Building

APPENDIX A - FIGURES & PHOTOS

June 23, 2011 - Page 5 of 7



Figure 9 - *Farmhouse* - Excessive Deflection in Timber 1st Floor Beam



Figure 10 - *Farmhouse* - Shear Cracks at Bottom of Beam Mortise Cuts

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building

APPENDIX A - FIGURES & PHOTOS

June 23, 2011 - Page 6 of 7



Figure 11 - *Farmhouse* - Sandblasted Brick Surface



Figure 12 - *Farmhouse* - Damaged Front Timber Railings

2011 Structural Comments on Town Farm Building

IREI Project No. IR-0387 - Westford Town Farm Building

APPENDIX A - FIGURES & PHOTOS

June 23, 2011 - Page 7 of 7



Figure 13 - *Farmhouse* - Structurally Deficient Exterior Stairway



Figure 14 - *Late 1800's Addition* - Open Mortar Joints in Foundation Wall

2011 Structural Comments on Town Farm Building