Purpose: ☐ Affordable Housing
☑ Historic Preservation
☐ Conservation/Open Space
☐ Recreation

Town of Lincoln, Massachusetts
Community Preservation Committee
Project Submission Form

*Requests received by **October 11, 2006** will be considered for recommendation at the March 2007 Town Meeting.*

Project Name: Pierce House

Submitted by: Judith Gross - chairman **Submission Date:** 10/10/06

Address, Phone, E-mail: 230 Concord Rd, 781-259-8580 — Judith144@comcast.net

Town Committee or Organization (if applicable): Pierce House Committee

Brief description of the project:

Rehabilitation of key components of the house building envelope and structural frame work as identified by the Town's building needs analysis consultant, Mc Ginley, Kalsow and Associates as delineated in the stanched list.

Time frame for completion of the project:

See attached list

How does this project help preserve Lincoln's character or further its mission?

In order to continue to use the Pierce House for the intended purpose of a municipal and private function facility, we must ensure the building's general integrity and keep the building exterior free of rot and damage and with an adequate layer of paint protection.

What are your funding requirements for this project?

Fiscal Year	Implementation Costs	Maintenance Costs	Total Costs	Other Funding Sources (and $ amount)	CPC Funds Requested
2007					
2008			222,300		222,300
2009					
Total					

Continued on next page

For CPC Use:
Received on: __/__/__ Received by: _____ Determination: _____
Reviewed on: __/__/__

2006 v 5

Please provide information regarding anticipated future funding requests from the Community Preservation Fund

Proposed Project	FY2008 Funds	FY2009 Funds	FY2010 Funds	FY2011 Funds	FY2012 Funds
See attached		MKA report			
	Plus DMM	Contingency estimate			

PLEASE ATTACH SUPPORTING DOCUMENTS OR OTHER INFORMATION

GUIDELINES FOR SUBMISSION

1. Is the project consistent with Lincoln's vision, and its Housing, Open Space and Recreation Plans, and other planning documents that have received town-wide review and input.
2. Does the project have the support of relevant town committees or organizations. (e.g. Conservation Commission, Recreation Committee, Historic Commission, Housing Commission, etc.).
3. Does the project help preserve threatened resources or currently owned town assets.
4. Does the project serve multiple needs and populations.
5. Does the project serve a population that is currently underserved.
6. Feasibility: We will pay special attention to whether the project can realistically be accomplished within the time frame and budget that is proposed.
7. Urgency: We will be interested to know the impact of a delay in initiating this project.

Please keep in mind also that there are legal limitations on the uses of CPA funds. If you have any doubt about your project's eligibility, please submit it so we have the opportunity to review it. Thank you.

- The Community Preservation Committee

Please submit 10 copies of your application to Tim Higgins, Town Administrator, on or before October 11, 2006.

MISSION STATEMENT OF THE COMMUNITY PRESERVATION COMMITTEE

In alignment with the Town of Lincoln's Vision Statement, the Community Preservation Committee mission is to:

- *Preserve Lincoln's historic resources and structures;*
- *Preserve and enhance Lincoln's open space for both conservation and recreation; and*
- *Preserve and increase Lincoln's affordable housing in order to foster economic, racial/ethnic and age diversity among its citizenry.*

PIERCE HOUSE COMMUNITY PRESERVATION REQUEST LIST

ITEM NO.	DESCRIPTION	COST	EST TIME OF COMPLETION	CPC FUNDS REQUESTED
B-6	OK Selective repair or replace exterior elements including columns,pilasters, etc.	65,000	Spring 2008	65,000
B-7	OK Exterior Painting	50,000	Spring 2008	50,000
S-1	OK Replace deteriorated sections of sill, posts and studs	25,000	Fall 2007	25,000
S-2	OK NO Repoint interior stone basement walls	30,000	Winter 2007-08	30,000
S-3	OK Investigate soft spots-1st Floor	1,500	Fall 2007	1,500
S-3a	Reframing of floor	5,000	Winter 2007-08	5,000
S-4	OK Repairs to manager's bathroom	15,800	Fall 2007	15,800
PPC-1	NO Feasibility study *	30,000	Winter 2007-08	30,000

Where do these $ amounts come from

222,300
-60
167,300

* Items A-1,A-2,A-3, totaling $375,000 as well as items M-4,E-3 totaling $220,000 are being passed over at this time in order to assess building needs in relation to business needs. A-1,A-2,A-3, all require that the House be closed to business while they are a work in progress. It would seem to make sense to try to coordinate these projects along with any other structural and/or functional changes to the House. In order to develop this master plan,we are requesting up to $30,000 for consulting assistance.

2 1
65
50
25
15
15.8
162.3

DMM Carpentry
1 Forest Road
Acton, MA 01720
978-635-0491

ESTIMATE

DATE: 9/4/06

To: Pearce House

Job: Bathroom Replacement

DESCRIPTION		AMOUNT
LABOR & MATERIALS	New Bathroom	
	Board and plaster	2500 00
	All New Fixtures	1000 00
	New Floor Tile	800 00
	New plumbing	2000 00
	New paint	1000 00
	New Electrical	2200 00
	Labor and Finish carpentry	5500 00
	Repair Third Floor Bathroom	800 00
		$15,800 00
	Total :	$15,800 00

If you have any questions concerning this estimate please call

THANK YOU FOR YOUR BUSINESS!

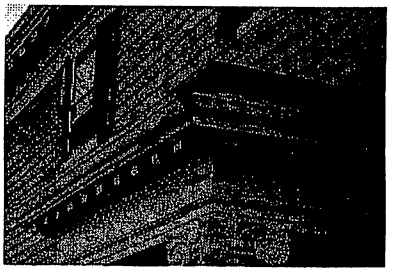
Dana Mahnken

032-46-2540

Pierce House

Description

The Pierce House is a large wood-framed, colonial revival-style home with two floors, a partial third floor and a full basement. The floor framing consists of dimensional lumber joists running east-west and supported at the first floor by the house's wet-laid stone foundation walls and a line of brick pier-supported steel beams running through the center of the house. The second and third floors are supported by the wood stud-framed exterior walls and an intermittent line of wood stud bearing walls and wood post-supported steel beams running through the center of the structure. The roof is constructed in typical tied-hip or gable fashion and the basement floor is a concrete slab grade.



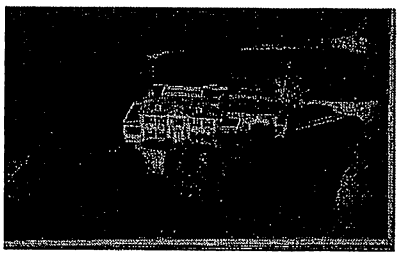
BUILDING ENVELOPE

B-1 The roof above the side entrance (kitchen entrance) including associated wood gutter, fascia and soffit is in poor condition and needs to be repaired and rebuilt.

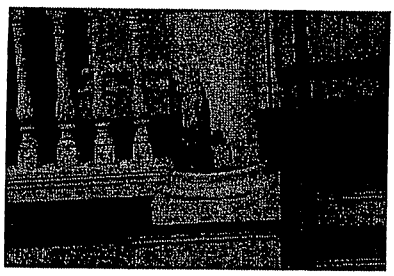
B-2 The wood gutters on the main roof are old and dried-out. They need to be cleaned and oiled every year.

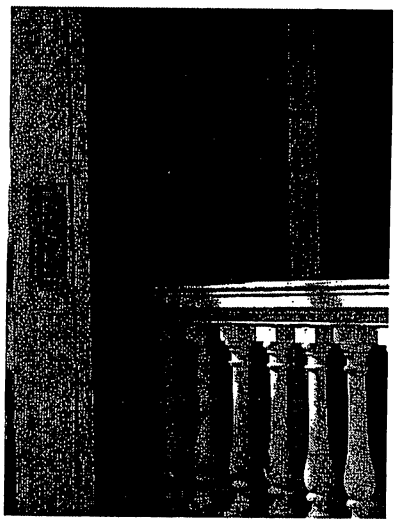
B-3 In a few years, these wood gutters will need to be replaced with new cedar gutters.

B-4 There is missing and eroded mortar on the center chimney. The chimney needs to be completely repointed and copper flashing added at both the top of the chimney and at the roofline. This work should have been completed before the recent roof was installed.



B-5 There are bees swarming at the soffit at the northwest corner of the house. An exterminator should remove or relocate these bees.





B-6 The following exposed elements were found to be rotted or damaged:

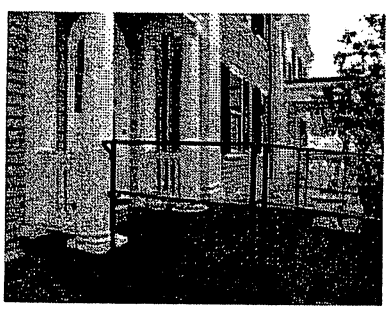
- The north eave rake on the west elevation's center entry bay, there is a rotted hole in the bottom in the northwest corner of the house's main section and the main west entry pediment pitches southward, suggesting rotted conditions below.
- The south column is split and the entablature is rotting at the north wing's west entrance.
- The bottoms of three columns at the north elevation are damaged- two have rotted and one has split.
- At the east elevation, the trim-work where the pilasters at each side of the central doorway step are rotted, along with the water-table at the northeast corner of the main section of the house, and the base of the northeast porch's corner column.
- One of the columns in the north porch is partially rotted and split and another has a rotted base.
- The widow's walk railing is in need of selective repairs.

The rotted wooden components should be replaced and all split columns should be replaced or repaired, depending upon the condition of the wood and the causes of the splits.

B-7 After the repairs noted above are completed, the exterior of the house will need to be repainted.

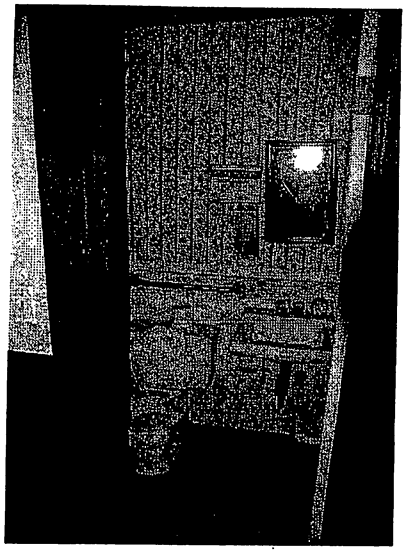
B-8 Existing wood windows require restoration work to improve operation and effectiveness and to repair deteriorated wood elements. Fortunately, the existing storm windows are in good condition and serve to protect the existing windows.

ACCESSIBILITY AND CODE COMPLIANCE



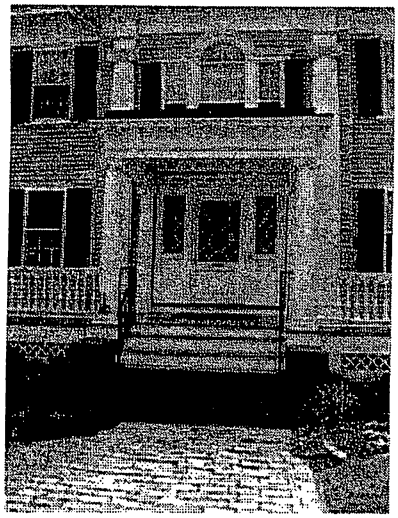
A-1 While there presently is a ramp on the main entry side of the building, it is not compliant with the Requirements of the Architectural Access Board. The ramp has railings in only one side. The ramp provides accessibility to the porch, but there is still a 6" high step, which prevents access to the main floor. We recommend that the wood porch be rebuilt to slope from the brick side entrance porch elevation to the first

floor elevation at the main door. The wood porch beyond the main door should also be raised to first floor elevation.



A-2 The kitchen at the Pierce House is used by caterers for preparation of food served at functions. The kitchen does not meet the standards required of a commercial kitchen. We feel that it is bad public policy for the Town of Lincoln not to follow the same regulations required of restaurants operating in Lincoln.

A-3 There is no accessible bathrooms located in the house. There is a very small half bath, which is located near the west porch, which can be accessed by going through the kitchen. Neither the size nor location of the bathroom is adequate. We recommend that first floor bathrooms be added to the house even if this might mean losing use of the left rear room of the house for function activities.

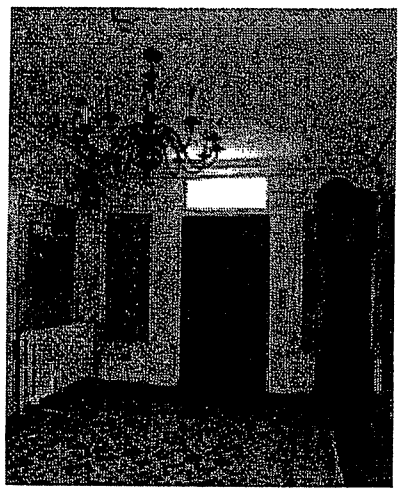


A-4 The brick paving at the main entry walk has settled causing an irregular walking surface, which can present a tripping hazard.

A-5 Entrance/ egress doors open into the house rather than swing in the direction of the engress. We recommend that the three main doors be re-hung and exit device hardware with accessible lever be added to these doors.

FY 07 Project

A-6 As part of an effort to make the house fully accessible we recommend the thresholds be reduced in height or illuminated, We also recommend that public activities be limited to the first floor unless an elevator is added.



A-7 The basement ceiling does not provide an adequate fire protection separation from boiler and the first floor. A new fire rated ceiling should be constructed.

FY 07 Project

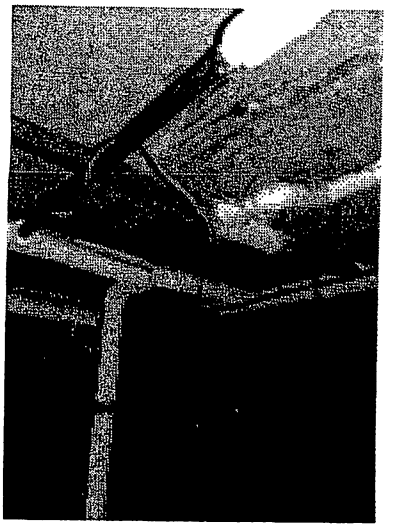
STRUCTURAL

Structural Conditions

Exterior

S-1 The west wall dips at each side of the center entry bay,

suggesting compressed downward onto the supporting wooden sill. The sill should be exposed and replaced along with the bottoms of studs and posts that bear on it if found to rotted.



- There appears to be a gentle crown at the roof level of the south elevation. This is an affect of the steel framing that runs along the center of the building and is not of structural concern.

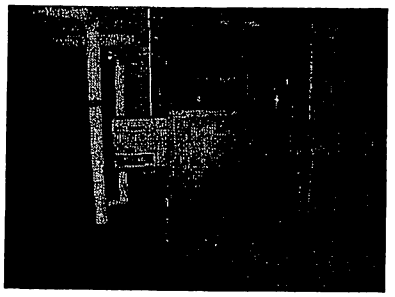
Interior/ Basement

S-2 Much of the exposed mortar pointing in the basement foundation walls is very powdery and has eroded. As a result, in the most extreme cases individual stones are becoming loose, especially below the curbed window bay near the northeast corner of the main section of the house. All loose and sandy mortar joints should be deeply raked clean of all friable material and any stones that are loose or become loose should be removed and re-set. The raked joints should then be re-packed with a compatible mortar.

- The basement was very damp at the time of our visit and a dehumidification system should be considered.

Interior/ First, Second and Third Floors

S-3 There is a soft spot in the first floor to the immediate south of the west entrance that should be investigated from below.



- There is a gentle but noticeable hump running longitudinally through the middle of the first, second and third floors, affecting the walls and doorways as well. This hump is created by the steel framing around which all of the wood construction differentially shrinks and is not of structural concern.

S-4 There is a plumbing leak at the 2nd floor bathroom and damage to the floor. The caretakers suite, if left un-repaired could result in further structural damage in that area.

Interior/ Attic

- The attic was not accessible during our visit.

MECHANICAL

Mechanical System Description

The heating system is a zoned two pipe hot water heating system and includes the following:

- Gas fired Weil McLain hot water heating boiler 660.0 MBH input, 560.0 MBH output, 438.0 MBH new IBR rating. The boiler was installed in 1979.
- The boiler is in good operating condition and has a normal life expectancy of approximately 45 years.
- Three (3) hot water heating zones. Each zone includes an in-line pump, piping and radiation.
- Gas fired domestic hot water heater 75-gallon capacity.
- Cast iron radiators. Each radiator includes a valved inlet and manual air vent. Some areas include cast iron baseboard radiation.
- There are cast iron grilles in the floor from an old warm air system. The grilles are not used.
- Certain areas of the house are air conditioned with through window type air conditioners.
- The hot water heating piping is insulated with asbestos insulation.
- The interior bathrooms include ceiling type exhaust fans. No fans for perimeter bathrooms.
- There is no combustion air intake for the boiler room.

Mechanical Recommendations

None of the items recommended below must be done since the existing building is grandfathered under the Massachusetts Building Code. However, these are recommended improvements:

M-1 Remove the asbestos pipe insulation and replace the insulation with fiberglass type pipe insulation.

M-2 Install ceiling type exhaust fans for the perimeter bathrooms per latest code requirements.

M-3 Install a combustion air intake louver with motorized damper behind the louver and high and low duct outlets to the boiler room per latest code requirements.

M-4 Consideration may be given to air conditioning the entire house with split systems; one system for the first floor and one system for the second floor. Each system shall include an outdoor condensing unit, indoor air handling unit, duct distribution up-feed through floor grilles for the first floor system and down-feed through ceiling diffusers for the second floor system. Existing through window air conditioning units will be removed with this system. Both air handling units will be located in the basement. Pricing does not include electrical work.

ELECTRICAL

Electrical System Description

The electrical system in the Pierce House is generally in good condition. The system is described as follows:

- Service – 200A, 1 phase, 120/240V, installed new in 1999.
- Exit Signs and Emergency Lighting – Presently no exit signs and emergency lighting is existing.
- General Lighting – General lighting is incandescent and in good condition.
- Fire Alarm System – Fire alarm system is generally in good

condition. Some upgrading could be done in attic and basement areas. The existing system is FCI, 12-zone main panel.

Electrical Recommendations

E-1 Add exit signs and emergency lighting fixtures as required by code.

E-2 Replace older fire alarm devices, old style button type heat detectors, with new heat detectors.

E-3 Provide electrical work, including new service, to support new central air conditioning system as mentioned in item M-4 above.

PIERCE HOUSE

Preliminary Cost Estimates

22-Aug-06

Item No.	Description	Urgent 2006	High Priority 2007	Normal Priority 2008-2009	Low Priority 2010-2011	Total
S-1	Expose and replace deteriorated sections of sill, posts and studs		$25,000			
S-2	Repoint interior stone basement walls			$30,000		
S-3	Expose and investigate soft spot in 1st floor to immediate south of west entrance		$1,500			
	a. Selective reframing of floor framing		$5,000			
S-4	Repairs at Caretakers Bathroom		$4,000			
	Structural Subtotal	**$0**	**$35,500**	**$30,000**	**$0**	**$61,500**
M-1	Installation of fiberglass type pipe insulation after asbestos insulation is removed by a professional asbestos removal company. The budget price does not include asbestos removal.			$4,000		
M-1a	Remove asbestos insulation (allowance)			$20,000		
M-2	Installation of ceiling type exhaust fans and related ductwork for perimeter bathrooms			$3,000		
M-3	New combustion air intake louver, motorized damper, and duct work for boiler room	$2,000				
M-4	New air conditioning system for the entire house				$120,000	
	Mechanical Subtotal	**$2,000**	**$0**	**$27,000**	**$120,000**	**$149,000**
E-1	Add exit signs and emergency lighting fixtures		$10,000			
E-2	Replace older style button type heat detectors with new heat detectors		$4,000			
E-3	Provide new service to support central A/C system. Provide wiring to new units.				$100,000	
	Electrical Subtotal	**$0**	**$14,000**	**$0**	**$100,000**	**$114,000**
	Pierce House Subtotal	**$6,500**	**$59,500**	**$584,000**	**$265,000**	**$911,000**
	Design & Construction Contingency (20%)	$975	$8,925	$87,600	$39,750	$136,650
	Subtotal	$7,475	$68,425	$671,600	$304,750	$1,047,650
	Architectural & Engineering Services (15%)	$1,121	$10,264	$100,740	$45,713	$157,148
	Total Estimated Project Costs	**$8,596**	**$78,689**	**$772,340**	**$350,463**	**$1,204,798**

Town of Lincoln

Building Needs Assessment

16 Lincoln Road
Lincoln, Massachusetts

July 24, 2006

Prepared By:

McGinley Kalsow & Associates LLP • *Architects and Preservation Planners*
324 Broadway, Somerville, MA 02145

Johnson Engineering and Design, Inc. • *Mechanical, Electrical and Plumbing Engineers*
5 Elm Street, Suite 14, Danvers, MA 0192

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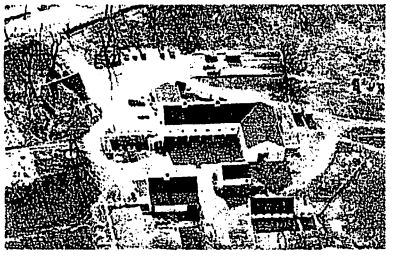
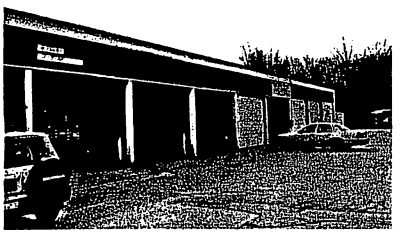




Executive Summary

The Town of Lincoln selected McGinley Kalsow & Associates, LLP (MK&A), Architects and Preservation Planners to conduct a building needs assessment of six town owned buildings. These buildings are: Bemis Hall at 15 Bedford Road, Lincoln Town Hall at 16 Lincoln Road, The Pierce House at 3 Weston Road, Public Safety Building at 169 Lincoln Road, The Houses & Barns on Codman Farm at 58 Codman Road, and the DPW Garage at Lewis Street. Independent of this work, the Town of Lincoln engaged Jackson Home Inspection to conduct an assessment to town owned houses at 65 and 75 Tower Road. As a convenience we have reprinted the Tower Road report as an appendix to this report.

MK&A was tasked with making a comprehensive assessment of the condition of the town's buildings, to assist the town in developing an investment plan for making necessary improvements and for predicting and planning for future improvements. For the purposes of this analysis, it was assumed that the town buildings will continue to be utilized as they are currently. It should be noted that this study did not include an assessment of the programmatic needs of the departments and the degree to which building enhancements may be required to in order to accommodate new programmatic requirements. Before any long-term investment plans are finalized, the town will need to evaluate evolving programmatic needs and determine where programmatic considerations are important factors in determining whether to pursue a particular investment and in what sequence.

The building needs assessment is organized as follows

- Building Envelope
- Structural
- Accessibility and Code Compliance
- Mechanical
- Electrical
- Preliminary Cost Estimate

The assessments also involved a review of all documentation of work previously performed on the buildings, meetings with various town officials associated with each structure to

understand known deficiencies, an on-site survey, and tests necessary to assess structural integrity, with provision of a report outlining the findings on each structure, including preliminary cost estimates and prioritization of any deficiencies or suggested improvements noted.

We wish to acknowledge and thank: Tim Higgins, Town Administrator, Anita Scheipers, Assistant Town Administrator and Earl Midgley, Town Building Inspector for their assistance during assignment. MK&A was assisted by Structures North Consulting Engineers Inc., Structural Engineers and Johnson Engineering and Design Inc., Mechanical electrical engineers.

These buildings span 200 years of design and building technology, however there is no correlation between a building's age and its condition. All of the buildings have numerous deficiencies, which need to be addressed with an organized program of repairs and restoration. There are a number of repairs identified as "urgent" and we recommend that they be addressed in 2006. These items are generally active or very likely leak or safety issues. "High priority" items are recommended to be repaired in 2007; "normal priority" items by 2008-2009 and "low priority" by 2010-2011. Simply following the prioritization of needed repairs will not result in very efficient design, bidding or construction. Sometimes it will be most efficient to group many repairs together at one or two buildings into a design and contracting package. Other times it may be best to group work needed at several buildings but of one trade together into a single design and contracting package. Other small items, which are basically routine maintenance but are beyond town staff capabilities, should be dealt with a simplified procurement process.

Bemis Hall, Town Hall, Pierce House and Codman Farm are all significant historic buildings. The repairs and renovations of these buildings should include restoration of character defining elements. All work on these buildings should follow the Secretary of the Interior's *Standards for Historic Preservation.*

Bemis Hall

Bemis Hall was constructed in 1892 and served as the town hall until the 1980's. The asphalt shingle roof, copper gutters, flashings and downspouts all need to be replaced. There are also numerous repairs to the cupola and masonry, which should be done at the same time as the building is staged for roofing. Consideration should be given to the decision on whether to replace the roof with another asphalt shingle roof or restore the original slate roof. Life cycle costing of slate roofs is often less expensive than asphalt shingle roofs. The lack of an accessible front door on a facility that serves the elderly is a significant deficiency.

Town Hall

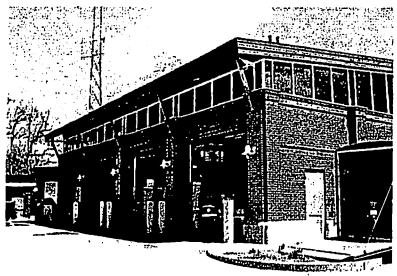
The Town Hall was constructed in 1908 as the Center School Building. It was used by the Lincoln School system until the 1980's, when town offices were moved into the building. Although the building does have some building envelope issues, its major deficiencies are functional. These deficiencies include: A non accessible second floor, open stairways that have no fire separation, a record storage room that does not meet the secretary of state requirements for a 6 hour rated vault and a clear need for a modern HVAC system. We believe that the open stairways present a fire hazard, which is not fully addressed by the exterior fire escapes. Rather than to approach these items individually, we recommend that consideration be given to a comprehensive renovation of the town hall. A significant increase in usable area on the ground floor could be gained.

Pierce House

The Pierce House was constructed in the late 19th century and serves as a meeting and function facility. There are selective but rather numerous repairs or replacement needed on exterior decorative wood elements of the house. The accessible brick ramp leads to a 6" step and kitchen side door, which is not normally used by the public. A fully accessible main entrance should be constructed by adding railings to the existing walk

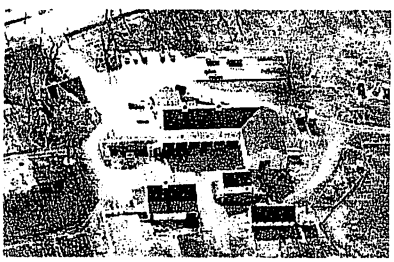
and modifying the existing porches. Food preparation for the public is taking place in a kitchen that does not meet commercial kitchen standards. There is also the need to construct accessible first floor men's and women's bathrooms.

Public Safety Building



The older section of the Public Safety B
uilding was built in 1966 with a major addition and remodeling in 1999. As one might expect with such a modern building, the list of deficiencies is fairly short. There is however, an active leak between the built-in gutters and the interior downspout, which should be fixed before this winter. After the two remaining "compact" 1999 roof top units are replaced with "standard" roof top unit; air balancing and remedial repairs are needed to make the HVAC system work properly. Consideration should be given to the installation of operable windows.

Codman Farm



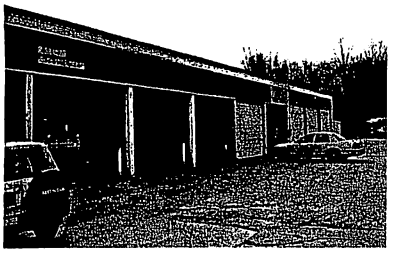
The Codman Farm is a complex of six buildings and the surrounding fields and community garden.
The six buildings are:
Farm House: Built in the 1860's and contain one residential unit used by the farmer hired by the Codman Farm Trust and one apartment unit.

Farmhouse: 3,254 Sq. ft
Barn A: Built 1792, 747 Sq. Ft.
Barn B: Built early 19th century, 2926 Sq. ft.
Barn C: Built ca. 1876, 2880 Sq. ft.
Barn D: Built 1998
Hen house: Built 2000

The only significant roofing work that is needed on the complex of buildings is on the farmhouse. There are numerous structural framing and stone masonry issues that need to be addressed at many of the barns. There has been great leadership demonstrated by the Codman Farm Trust and Town in correctly prioritizing and completing the most needed repairs over the last ten years and doing this with good workmanship and a remarkable economy. A connection between the Codman Farm and The North Bennett Street School preservation carpentry program might be advantageous

in securing high quality, low cost repairs to some of the smaller barns.

DPW Garage



The DPW Garage and office is a single level, somewhat sprawling facility that was constructed in multiple phases. There is the need for two additional passage doors for egress. There is the need for various structural, mechanical, electrical accessibility upgrades, which are modest in cost compared to a new facility. The existing DPW Garage is very utilitarian and should continue to be very serviceable. However, it is not a very energy efficient structure. Major upgrades to the existing building envelope are not recommended. At a certain point in the future, the building should simply be replaced with a more modern facility.

ACCESSIBILITY REGULATIONS AND DESIGN

The extent of compliance with the Massachusetts Architectural Access Board regulations that is required by any construction or repair project depends on the cost of repairs in relationship to the assessed value of the buildings. There is a 36-month window, which combines the cost of all repairs within any 36-month period. Some repairs are exempted if they total less than 30% of the assessed value of the building. It is important to review the impact of accessibility on each project as the specific scope is being defined and construction costs estimated.

Accessibility work is often required by code due to unrelated repairs and renovations to a building. According to the regulations of the Massachusetts Architectural Access Board (MAAB), the extent of compliance depends upon the "full and fair cash value" of the building without land. The "full and fair cash value" of the building is normally considered the assessed valuation of the building equalized at 100% valuation. The MAAB has established three levels of compliance that are based on the value of construction in relationship to the "full and fair cash value" of the building:

1. If the value of the work being performed **is less than 30% of the "full and fair cash value" and is less than $100,000,** only the work that is

being performed needs to conform with MAAB regulations.

2. If the value of the work being performed is **less than 30% of the "full and fair cash value" and is greater than $100,000,** the work being performed needs to conform with MAAB regulations. In addition, an accessible public entrance and an accessible public toilet must be provided. Furthermore, if the building has a public phone or a public drinking fountain, these too must also be accessible.
3. If the value of the work being performed **is greater than 30% of the "full and fair cash value",** the entire building must conform to the requirements for new construction.

There are several qualifications for these general requirements. Certain work such as roof repair or replacement, window repair or replacement, repointing and masonry repair work is exempt as long as the total cost of this work is less than 30% of the "full and fair cash value" of the building. In addition, alteration work that is limited solely to electrical, mechanical, or plumbing systems is also exempt provided that the total cost of this work is less than 30% of the "full and fair cash value" of the building.

ADA (Americans with Disabilities Act) is separate from the MAAB and focuses on making services available to those public and accommodation for employees. Compliance with Lincoln's ADA transition plan should be regularly reviewed.

When accessibility improvements are planned it is important that they be well designed, like the front entrance to the town hall, and not halfway measures like access to the Pierce House, or the ground floor of the Town Hall.

Other considerations:

The scope of this building assessment did not include lead paint, asbestos, or pest problems. We recommend that paint and asbestos tests be conducted before any major work is undertaken. Although not part of our scope or expertise, pest

problems were observed at several buildings and should be promptly addressed.

PRELIMINARY COST ESTIMATES
The preliminary cost estimates use 2006 construction costs. Budgets for future work should be increased by the anticipated cost of inflation. It is important that the selected designer thoroughly review site conditions and up to date estimated construction costs based on that information.

TOWER ROAD HOUSES
Jackson Home Inspection conducted a needs assessment of 65 Tower Road and 75 Tower Road, which has been reprinted in the appendix to this report.

BUILDING SYSTEMS CHECKLIST
The major categories are organized according to the "Town Owned Building Needs Analysis, Building Systems Checklist". See Appendix. While we did not use the identical subcategory organization as shown on the Building Systems Checklist since we had written significant portions of the report before receiving the checklist, we have addressed all the subcategory items.

EXECUTIVE SUMMARY

Preliminary Cost Estimates

22-Aug-06

Description	Urgent 2006	High Priority 2007	Normal Priority 2008-2009	Low Priority 2010-2011	Total
Bemis Hall	$32,534	$222,445	$727,243	$438,673	$1,361,382
Lincoln Town Hall	$12,828	$340,279	$1,062,629	$956,829	$2,372,565
Pierce House	$8,596	$78,689	$772,340	$350,463	$1,204,798
Public Safety Building	$6,613	$59,513	$48,271	$0	$122,993
Codman Farm House	$3,968	$54,510	$598,431	$56,868	$713,777
DPW Garage	$1,323	$145,475	$122,331	$59,513	$328,641
Total Cost	**$65,861**	**$895,415**	**$3,331,245**	**$1,862,346**	**$6,104,155**

Pierce House

Description

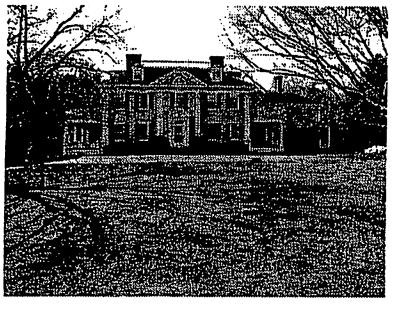
The Pierce House is a large wood-framed, colonial revival-style home with two floors, a partial third floor and a full basement. The floor framing consists of dimensional lumber joists running east-west and supported at the first floor by the house's wet-laid stone foundation walls and a line of brick pier-supported steel beams running through the center of the house. The second and third floors are supported by the wood stud-framed exterior walls and an intermittent line of wood stud bearing walls and wood post-supported steel beams running through the center of the structure. The roof is constructed in typical tied-hip or gable fashion and the basement floor is a concrete slab grade.

BUILDING ENVELOPE

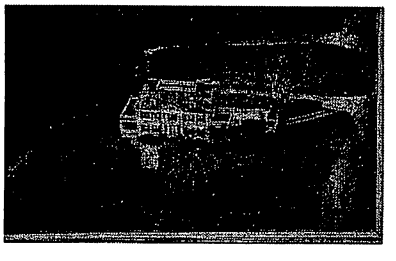
B-1 The roof above the side entrance (kitchen entrance) including associated wood gutter, fascia and soffit is in poor condition and needs to be repaired and rebuilt.

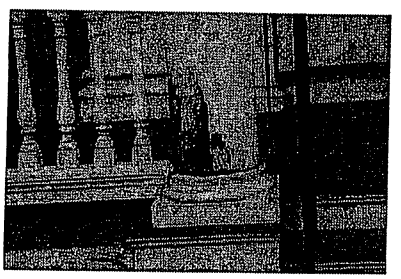
B-2 The wood gutters on the main roof are old and dried-out. They need to be cleaned and oiled every year.

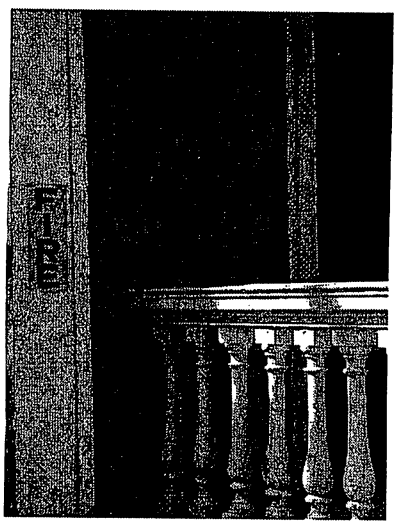
B-3 In a few years, these wood gutters will need to be replaced with new cedar gutters.



B-4 There is missing and eroded mortar on the center chimney. The chimney needs to be completely repointed and copper flashing added at both the top of the chimney and at the roofline. This work should have been completed before the recent roof was installed.







B-5 There are bees swarming at the soffit at the northwest corner of the house. An exterminator should remove or relocate these bees.

B-6 The following exposed elements were found to be rotted or damaged:

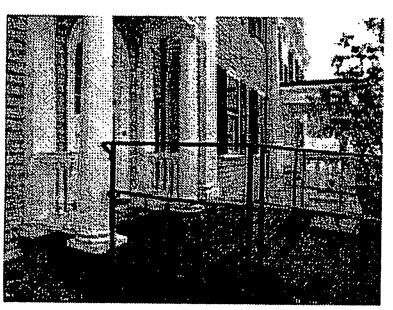
- The north eave rake on the west elevation's center entry bay, there is a rotted hole in the bottom in the northwest corner of the house's main section and the main west entry pediment pitches southward, suggesting rotted conditions below.
- The south column is split and the entablature is rotting at the north wing's west entrance.
- The bottoms of three columns at the north elevation are damaged- two have rotted and one has split.
- At the east elevation, the trim-work where the pilasters at each side of the central doorway step are rotted, along with the water-table at the northeast corner of the main section of the house, and the base of the northeast porch's corner column.
- One of the columns in the north porch is partially rotted and split and another has a rotted base.
- The widow's walk railing is in need of selective repairs.

The rotted wooden components should be replaced and all split columns should be replaced or repaired, depending upon the condition of the wood and the causes of the splits.

B-7 After the repairs noted above are completed, the exterior of the house will need to be repainted.

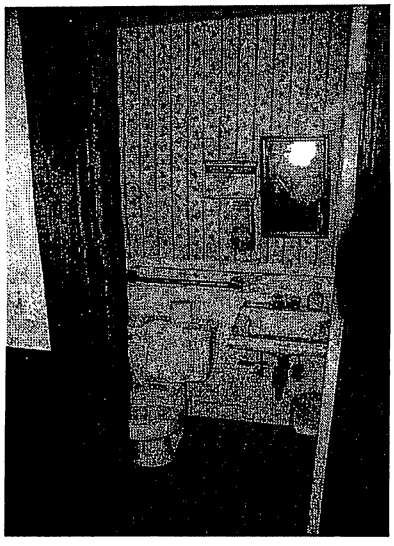
B-8 Existing wood windows require restoration work to improve operation and effectiveness and to repair deteriorated wood elements. Fortunately, the existing storm windows are in good condition and serve to protect the existing windows.

ACCESSIBILITY AND CODE COMPLIANCE



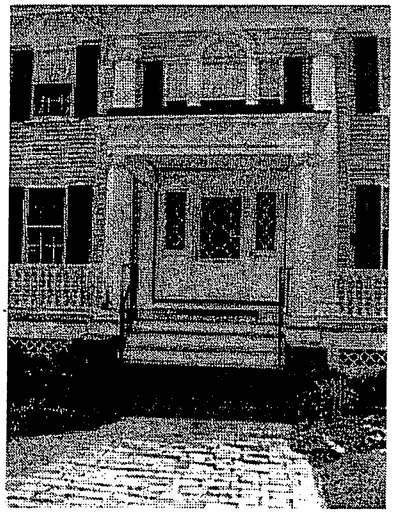
A-1 While there presently is a ramp on the main entry side of the building, it is not compliant with the Requirements of the Architectural Access Board. The ramp has railings in only one side. The ramp provides accessibility to the porch, but there is still a 6" high step, which prevents access to the main floor. We recommend that the wood porch be rebuilt to slope from the brick side entrance porch elevation to the first

floor elevation at the main door. The wood porch beyond the main door should also be raised to first floor elevation.



A-2 The kitchen at the Pierce House is used by caterers for preparation of food served at functions. The kitchen does not meet the standards required of a commercial kitchen. We feel that it is bad public policy for the Town of Lincoln not to follow the same regulations required of restaurants operating in Lincoln.

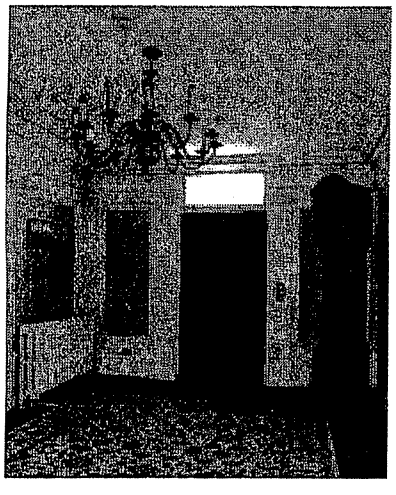
A-3 There is no accessible bathrooms located in the house. There is a very small half bath, which is located near the west porch, which can be accessed by going through the kitchen. Neither the size nor location of the bathroom is adequate. We recommend that first floor bathrooms be added to the house even if this might mean losing use of the left rear room of the house for function activities.



A-4 The brick paving at the main entry walk has settled causing an irregular walking surface, which can present a tripping hazard.

A-5 Entrance/ egress doors open into the house rather than swing in the direction of the engress. We recommend that the three main doors be re-hung and exit device hardware with accessible lever be added to these doors.

A-6 As part of an effort to make the house fully accessible we recommend the thresholds be reduced in height or illuminated, We also recommend that public activities be limited to the first floor unless an elevator is added.



A-7 The basement ceiling does not provide an adequate fire protection separation from boiler and the first floor. A new fire rated ceiling should be constructed.

STRUCTURAL

Structural Conditions

Exterior

S-1 The west wall dips at each side of the center entry bay,

suggesting compressed downward onto the supporting wooden sill. The sill should be exposed and replaced along with the bottoms of studs and posts that bear on it if found to rotted.

- There appears to be a gentle crown at the roof level of the south elevation. This is an affect of the steel framing that runs along the center of the building and is not of structural concern.

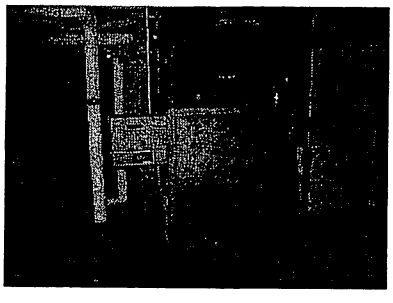
Interior/ Basement

S-2 Much of the exposed mortar pointing in the basement foundation walls is very powdery and has eroded. As a result, in the most extreme cases individual stones are becoming loose, especially below the curbed window bay near the northeast corner of the main section of the house. All loose and sandy mortar joints should be deeply raked clean of all friable material and any stones that are loose or become loose should be removed and re-set. The raked joints should then be re-packed with a compatible mortar.

- The basement was very damp at the time of our visit and a dehumidification system should be considered.

Interior/ First, Second and Third Floors

S-3 There is a soft spot in the first floor to the immediate south of the west entrance that should be investigated from below.



- There is a gentle but noticeable hump running longitudinally through the middle of the first, second and third floors, affecting the walls and doorways as well. This hump is created by the steel framing around which all of the wood construction differentially shrinks and is not of structural concern.

S-4 There is a plumbing leak at the 2nd floor bathroom and damage to the floor. The caretakers suite, if left un-repaired could result in further structural damage in that area.

Interior/ Attic

- The attic was not accessible during our visit.

MECHANICAL

Mechanical System Description

The heating system is a zoned two pipe hot water heating system and includes the following:

- Gas fired Weil McLain hot water heating boiler 660.0 MBH input, 560.0 MBH output, 438.0 MBH new IBR rating. The boiler was installed in 1979.
- The boiler is in good operating condition and has a normal life expectancy of approximately 45 years.
- Three (3) hot water heating zones. Each zone includes an in-line pump, piping and radiation.
- Gas fired domestic hot water heater 75-gallon capacity.
- Cast iron radiators. Each radiator includes a valved inlet and manual air vent. Some areas include cast iron baseboard radiation.
- There are cast iron grilles in the floor from an old warm air system. The grilles are not used.
- Certain areas of the house are air conditioned with through window type air conditioners.
- The hot water heating piping is insulated with asbestos insulation.
- The interior bathrooms include ceiling type exhaust fans. No fans for perimeter bathrooms.
- There is no combustion air intake for the boiler room.

Mechanical Recommendations

None of the items recommended below must be done since the existing building is grandfathered under the Massachusetts Building Code. However, these are recommended improvements:

M-1 Remove the asbestos pipe insulation and replace the insulation with fiberglass type pipe insulation.

M-2 Install ceiling type exhaust fans for the perimeter bathrooms per latest code requirements.

M-3 Install a combustion air intake louver with motorized damper behind the louver and high and low duct outlets to the boiler room per latest code requirements.

M-4 Consideration may be given to air conditioning the entire house with split systems; one system for the first floor and one system for the second floor. Each system shall include an outdoor condensing unit, indoor air handling unit, duct distribution up-feed through floor grilles for the first floor system and down-feed through ceiling diffusers for the second floor system. Existing through window air conditioning units will be removed with this system. Both air handling units will be located in the basement. Pricing does not include electrical work.

ELECTRICAL

Electrical System Description

The electrical system in the Pierce House is generally in good condition. The system is described as follows:

- Service – 200A, 1 phase, 120/240V, installed new in 1999.
- Exit Signs and Emergency Lighting – Presently no exit signs and emergency lighting is existing.
- General Lighting – General lighting is incandescent and in good condition.
- Fire Alarm System – Fire alarm system is generally in good

condition. Some upgrading could be done in attic and basement areas. The existing system is FCI, 12-zone main panel.

Electrical Recommendations

E-1 Add exit signs and emergency lighting fixtures as required by code.

E-2 Replace older fire alarm devices, old style button type heat detectors, with new heat detectors.

E-3 Provide electrical work, including new service, to support new central air conditioning system as mentioned in item M-4 above.

PIERCE HOUSE

Preliminary Cost Estimates

22-Aug-06

Item No.	Description	Urgent 2006	High Priority 2007	Normal Priority 2008-2009	Low Priority 2010-2011	Total
S-1	Expose and replace deteriorated sections of sill, posts and studs		$25,000			
S-2	Repoint interior stone basement walls			$30,000		
S-3	Expose and investigate soft spot in 1st floor to immediate south of west entrance		$1,500			
	a. Selective reframing of floor framing		$5,000			
S-4	Repairs at Caretakers Bathroom		$4,000			
	Structural Subtotal	**$0**	**$35,500**	**$30,000**	**$0**	**$61,500**
M-1	Installation of fiberglass type pipe insulation after asbestos insulation is removed by a professional asbestos removal company. The budget price does not include asbestos removal.			$4,000		
M-1a	Remove asbestos insulation (allowance)			$20,000		
M-2	Installation of ceiling type exhaust fans and related ductwork for perimeter bathrooms			$3,000		
M-3	New combustion air intake louver, motorized damper, and duct work for boiler room	$2,000				
M-4	New air conditioning system for the entire house				$120,000	
	Mechanical Subtotal	**$2,000**	**$0**	**$27,000**	**$120,000**	**$149,000**
E-1	Add exit signs and emergency lighting fixtures		$10,000			
E-2	Replace older style button type heat detectors with new heat detectors		$4,000			
E-3	Provide new service to support central A/C system. Provide wiring to new units.				$100,000	
	Electrical Subtotal	**$0**	**$14,000**	**$0**	**$100,000**	**$114,000**
	Pierce House Subtotal	**$6,500**	**$59,500**	**$584,000**	**$265,000**	**$911,000**
	Design & Construction Contingency (20%)	$975	$8,925	$87,600	$39,750	$136,650
	Subtotal	$7,475	$68,425	$671,600	$304,750	$1,047,650
	Architectural & Engineering Services (15%)	$1,121	$10,264	$100,740	$45,713	$157,148
	Total Estimated Project Costs	**$8,596**	**$78,689**	**$772,340**	**$350,463**	**$1,204,798**