Brooks Free Library

739 Main Street Harwich, Massachusetts 02645

Exterior Assessment Report July 17, 2015





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TABLE OF CONTENTS

- Section 1 Executive Summary
- Section 2
 Architectural Assessment
 - Report
 - Photographs
- Section 3 Streetscape Assessment
- Section 4

Drawings

- Annotated Building Elevations
- Annotated Site Plan
- Section 5 Cost Estimate



EXECUTIVE SUMMARY

Brooks Free Library was founded in 1880 as the first public library in Harwich. It was built as part of the "Brooks Block" on Main Street, a building that housed three storefronts on the first floor, with the library and professional offices on the second. The block is an Italianate "stick style" building, a style characterized by vertical board trim ("sticks") that frame panelized siding treatments of clapboard and shingles. Beginning in 1936, the block housed the Second District Court of Barnstable on the first floor. By the late 1960's the Library grew to occupy the entire 2nd floor of the Brooks Block. In 1967 the town purchased the Greek Revival building (the former Cape Cod Savings Bank) on the corner of Main and Bank Streets, and in 1972 the block and the former bank were renovated for library use. In 1998 an addition and renovation designed by Boston architects Childs, Bertman and Tseckares was completed. This renovation was recognized with a preservation achievement award by the Massachusetts Historical Commission.

In 2014, the Town of Harwich commissioned preservation architects and planners McGinley Kalsow and Associates, Inc. to inspect the exterior of the Brooks Block building and the former bank to provide an assessment report of the building's condition, to prioritize repair recommendations, and establish budget pricing for the repairs. The scope was also to include assessment of the streetscape site conditions and recommended improvements, to be done by landscape architects Brown, Richardson & Rowe.

Architectural Assessment



ARCHITECTURAL ASSESSMENT

ROOFING, FLASHINGS, GUTTERS, AND DOWNSPOUTS

The existing roof is a fiberglass reinforced three-tab asphalt shingle roof that was installed as part of the 1998 renovation and addition to the Library. Details from the 1996 drawings indicate that the shingles were to be installed on asphalt felt, and that an underlayment membrane to aid in preventing ice dams was to be installed at the eaves. Destructive exploration was not conducted as part of this building assessment, but it is a reasonable assumption that the roof was installed per the contract documents. The roof is presently in good condition. The normal life expectancy of an asphalt shingle roof is 25-30 years, so there is still useful life remaining with the current roof. (See photo 1)

Gutters and downspouts are a residential quality aluminum with baked enamel (white) finish. The gutters are 5" Ogee-shaped, attached to building fascias via a spike-and-ferrule system. (see photo 2) The downspouts are 2" x 5" corrugated rectangle with aluminum mounting straps. Generally, these lightweight materials and fastening systems do not provide the long-term durability of other metals and systems, and we don't normally recommend them for our institutional clients. However, at the Brooks Library, the existing system is in good condition, and we see no reason for replacement at this time. There is a need for some minor repairs and adjustments, such as locations where the connection of downspout to gutter has slipped (see photo 3)

The upward facing parts of horizontal cornice projections are covered with lead coated copper flashings, as directed in the drawings for the 1998 renovation. (see photo 4) These flashings are in good condition. Their top leg was installed in a reglet that was cut in the existing flush board siding, also as directed in the drawings. The sealant joint at this reglet does require replacement on about a 15 year basis, so the sealant should be replaced soon. (see photo 5)

WOOD SIDING AND TRIM

The building features wood clapboard a mixture of siding and trim, each characteristic of the different building styles that make up the library. The 1880's Brooks block building has wood clapboards, but also features decorative wood shingles, and vertical and horizontal trim boards and brackets typical of the Italianate style. At the west end of the block, the former 1855 bank building features wood clapboards, and flush board siding, along with wider trim boards indicative of the Greek Revival style.

The most noticeable condition problem at the Library is cracked, peeling, and blistering paint at the siding and trim. (see photos 6-12) For the life of the historic block buildings, the approach taken in attempting to correct this condition, has been to scrape loose areas of paint and then repaint. During the 1998 renovation, this method of scraping and repainting was repeated, as that project focused mostly on interior renovation of the buildings of the historic block to function with the new addition. A close examination of the current paint condition shows that peeling is noticeably more prevalent at the older wood elements, while the paint at newer clapboard and trim replacements from 1998 is intact. (see photos 13 and 14). This is because the replacement wood currently has the appropriate thickness of paint layers, since the layering began anew. Paint failure at the older wood is due to the heavy build up of paint layers that has become inflexible and brittle, unable to move with the wood substrate. The maintenance approach of scraping and applying additional layers of paint does not solve the inherent problem. At about 100 years, the recommended long-term preservation solution is to chemically strip all existing paint, to bring the exterior wood to a nearly bare condition, apply a new prime coat of paint and 2 finish coats of paint. Chemical stripping and the required follow-up preparation of siding and trim are needed to provide a substrate that primer and paint can adhere to. Modern high-quality latex paints provide flexibility to allow the finish to move with seasonal and moisture related movements of the wood without cracking, crazing and peeling. This preservation approach has been shown to be the only effective way to begin anew the cycle of paint finish maintenance. This approach allows the sound historic wood siding and trim to remain in place and to continue as viable substrate while preserving the historic fabric of the structure.

3 McGinley Kalsow & Associates, Inc.

It should be noted that the existing paint is most likely lead containing, and therefore workmen will need to follow lead management procedures to protect the public and to prevent airborne dust upon removal, and removed paint will require documented disposal in compliance with lead-handling regulations. This procedure, when conducted properly will be able to be done without interrupting or adversely effecting the occupants of the building. When repainting, there is the opportunity to return to the original paint colors that would have been used and would be appropriate to the era of original construction. We recommend doing an analysis of the existing paint layers to determine what original colors were used. The possible return to the building's original colors will undoubtedly lead to an interesting preservation philosophy debate.

Detail drawings from the 1998 renovation called for the installation of insulation and a vapor barrier at the exterior walls of the existing building (see figure 15) and a photograph taken during the 1998 renovation shows that the interior finishes were removed to allow for this installation (photo 16). It can be assumed that the work was constructed as directed in the contract drawings from 1998, and that the paint failure is therefore not caused by a lack of vapor barrier in the wall construction.

When the wood siding and trim is stripped of paint, the true condition of the wood will be revealed and can be assessed. During our inspection we were able to identify some obvious locations of wood deterioration, splitting, and open joints (see photos 17-21), but the full extent of these conditions is presently concealed with the multiply coats of paint. With the wood condition fully revealed and assessed, loose wood should be re-nailed and deteriorated wood can be repaired by epoxy consolidation if deterioration is minor, or if the wood is too deteriorated for repair, it should be replaced with new decay-resistant wood (such as mahogany). When replacing wood trim it should be primed on all surfaces prior to installation, then finish coats of paint can be applied following installation of trim.

One item of particular concern is the condition of the four Corinthian columns at the portico on the north elevation of the former bank building (see photo 22) The wood column bases are severely deteriorated, particularly at the northwest column (see photo 23). At this column the base has compressed to the point that there is about a 3/4" gap between the fluted wood shaft and capital (see photo 24) The portico overhang should be shored, to allow for column base replacement at all four columns with new decay-resistant wood. We recommend

that temporary shoring be installed soon, since the roof framing condition is not known as it is concealed and was inaccessible for inspection without destructive exploratory methods.

At the wood floor of the portico there is paint failure and evidence of organic growth which would be expected on this shady side of the building (see photo 25). The porch should be power washed to remove the growth, cleaned with a fungicide, and then repainted when the wood is dry.

MASONRY

The building features an exposed brick foundation that varies in height around the building. On the south and west elevations, the brick has been painted. Overall the brick is in good condition on these elevations, with only some minor re-pointing required (see photo 26). The grade line has eroded somewhat, leaving a 2" high line at grade that is un-painted. The grade could be raised to correct this (probably by merely adding mulch). There are also areas of painted brick that have peeling paint and these areas should be scraped and painted. At the north elevation, mortar joints are in worse condition (see photo 27) and require pointing (see photo 28)

The existing brick chimney, when viewed from the ground, appears to be in good condition (see photo 29)

WINDOWS

All of the windows, except for the semi-circular window within the north pediment of the former bank building, were updated in the 1998 renovation. The semi-circular window is now in poor condition and its sash should be repaired and re-glazed.

In the 1998 renovation, the sashes of first floor windows at the south elevation of the former mercantile building and former bank building were replaced with 2" thick wood with insulated glazing, with authentic dividing muntins. The top sash at each window is fixed in place, while the bottom sash is a single hung operable unit, fitted with exterior screen. The sashes were installed within the original window frames of the building, and they are made quite air-tight by the addition of bronze weatherstripping at the jambs and sills, and meeting rails. The windows are energy efficient in that they exhibit very little air infiltration and the thermal conductance value of the insulated glass is good. However, one of the problems with the window renovation,

is that insulated glass in this large sized sash makes the sash very heavy. This sash is not only difficult to operate, but there is structural deflection at the window sills (see photo 30), and the bottom rail of the top sash has deflected to the point of causing seal failure in many of the insulated glass units in the bottom row of glazing in the top sash (see photo 31). The sill deflection is particularly noticeable at locations where the windows are ganged in groups of three. (see photo 32)

The renovation used a different approach with the windows along Main Street, at both the first and second floors. At these windows, the original single glazed sash was re-glazed as necessary. The sash is therefore the original 1 3/8" thick, and much lighter and easier to operate. Thermal performance was enhanced by adding aluminum combination single glazed storm windows that are triple tracked and finished in white baked enamel. The sash have bronze weatherstripping at the jambs and sills, and have interlocking weatherstripping at the meeting rails.

At the insulated glass windows, glazing units should be replaced wherever there is seal failure, and a method should be developed to add structural reinforcing to the sash to reduce further overloading and deflection. Ropes or chains to the sash weights should be replaced, and additional weight could be added to counterbalance the sash and make them easier to operate. Sash should be repainted.

At the single glazed windows, sash cords should be replaced, and sash should be repainted. Some glazing putty should be replaced selectively where loose or missing. The storm windows are in good condition, and may require only some selective screen repair.

DOORS

The original door at the Main Street façade of the former mercantile building was fixed in place and the hardware was removed to make it inoperable in the 1998 renovation. There is a crack in one of the bottom panels, and an evident air gap at the threshold. (see photo 33). The panel should be repaired and a door bottom weatherstrip should be added at the sill.

A new exit door on the Main Street façade from the 1998 renovation is in good condition, but its closer has been removed – reason unknown.

EXTERIOR VESTIBULE

At the Main Street façade of the former Cape Cod Savings Bank building, there is an exterior vestibule installed at the West end of the building (see photo 34) This vestibule is not original to the building, but most likely evolved from the tradition of adding a removable weather vestibule each winter until at some point it was decided that it was much easier to permanently install it. It may have been in place for 75 years. The vestibule was well designed and well constructed, fits within the character of the building, and due to its protected location on the porch it is in good condition. There are compelling arguments on both sides of the issue as to whether it should stay or go, and ultimately either decision would be a logical and defensible preservation approach. As an aside, it does offer some protection and comfort against air infiltration for Children's room during the winter.





Photo 1: Detail of existing asphalt roof.



Photo 2: Detail view of aluminum gutter with spike and ferrule attachment.



Photo 3: Detail shows gap at slipped downspout.



Photo 4: Detail shows lead coated copper flashing at cornice return, installed in 1998.



Photo 5: Detail shows reglet at cornice flashing.



Photo 6: Detail view of paint failure.



Photo 7: Typical paint condition.



Photo 8: Detail of paint failure at wood trim.



Photo 9: Detail of paint failure at shingles



Photo 10: Detail of paint failure at clapboards



Photo 11: Detail of paint failure at clapboards.



Photo 12: Detail of paint failure



Photo 13: Photo from 1989 renovation shows new clapboard installation.



Photo 14: Current photo shows good paint adhesion at new clapboard vs. poor condition at old clapboard.



and vapor barrier added to existing walls

Figure 15:



Photo 16: Photo from 1998 construction shows interior finishes stripped to add insulation and vapor barrier.



Photo 17: Detail of deteriorated wood trim.324 Broadway• PO Box 45248• Somerville, MA 02145• 617-625-8901• Fax 617-625-8902



Photo 18: Detail of deteriorated wood trim.



Photo 19: Detail of deteriorated wood at an exterior window casing.



Photo 20: Detail of deteriorated wood cornerboard.



Photo 21: Detail deteriorated wood cornerboard



Photo 22: View of column bases at former bank building.



Photo 23: Detail of northwest column base.



Photo 24: Detail shows separation at column capital and shaft.



Photo 25: Detail at wood portico deck.



Photo 26: Painted brick foundation, South Elevation.



Photo 27: Brick foundation, North Elevation



Photo 28: Detail at Brick foundation, North Elevation shows need for pointing.



Photo 29: Detail view of chimney



Photo 30: Detail at a south window, 1st floor shows deflection at sill.



Photo 31: Detail at a south window, 1st floor shows seal failure of insulated glazing unit (note condensation).



Photo 32: Sill deflection is prevalent at ganged windows on the south, 1st floor.



Photo 33: Stationary door at North elevation has a split panel and air gap at the threshold.



Photo 34: Detail view of exterior vestibule at the west end of the north elevation.

Streetscape Assessment

Brown, Richardson & Rowe, Inc.

Landscape Architects and Planners

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Brooks Library Streetscape Part I: Assessment March 18, 2015







The brick pavers along the Main Street frontage of the Library are showing signs of settling and uplifting. Most of this is due to the growth of the root systems of the two trees in this area. Other areas of settling are perhaps due to differential settlement of base materials, especially along the curb. The granite edging around the tree planters is also showing signs of settling and uplifting due to the growth of the trees.

In order to repair the issues and mitigate any further damage, the Town of Harwich may want to remove and replace these trees. New trees with deeper tap root systems, such as Oak, can be installed in the planters. If the Town elects to replace the trees, then the planting soil currently

in the planters should be removed and replaced with a structural soil that is more typical for a street tree installation. Drainage components can be installed around and between both planters which will ensure proper drainage. The areas of pavement that exhibit the most severe settling and uplifting should be removed and replaced. Base materials should be inspected and amended as needed. Any damaged or broken pavers should be replaced. Any difference in elevation between pavers of ¹/₄" or more require removal and resetting.

The brick paving 'ramp' at the building entrance off Main Street is, according to record drawings, installed on a concrete base and is in good condition. The pavement in this area does

not need to be repaired or replaced.

Other than the two existing street trees, there are no plants along the north side of the building. This leads the area to feel somewhat cold and sterile. While a few small patches of lawn may break up the monotony of the pavement, additional planting would aid in softening the feel of this portion of the building. There are many plants that are capable of surviving this shaded, northern location within the Cape Cod climate. The addition of plants will also create a visual harmony that will tie the building to its surroundings.

Upon closer inspection, there are small areas that are part of the north façade streetscape that feel and appear unkempt. Gravel pavement close to



the building has become scattered and there is no harmony to the site furnishings. The area along Main Street is not conducive to being used as a quiet reading area due to the noise of traffic and the shaded northern exposure. However, it would be in the best interest of the Library to provide seating for visitors or pedestrians. This site furniture should complement the exterior materials, styles and colors of the Library. Most commercially available site furnishings for installation at this type of facility can be secured to pavement or installed in the ground to prevent theft.





The bike rack that is currently located near the main entrance is undersized, given the Library's proximity to the Cape Cod Rail Trail. The bike rack should have a dedicated paved area that is closer to the door. If it is not located close to the door, bikers will not use it and simply store their bikes haphazardly against the building. The bike rack should be chosen to complement the other outdoor furniture and should have two points of contact for each bike. Similarly, the bike

rack at the parking lot entrance should be replaced with a rack to store more bikes. It should also match the rack installed near the north entrance so that all site furnishings are in harmony with each other.

The areas of gravel pavement adjacent to the main building entrance off Main Street are for drainage purposes and should contain perforated piping connected to an underground drainage system. All downspouts should be routed to an underground drainage system consisting of catch basins and dry wells. If left uncollected, roof runoff deposited at the base of the building can cause premature weathering of building materials. All areas of gravel pavement should be made tidier by the installation of ¹/₄" thick black steel edging. This edging will keep the gravel contained and separated from any adjacent materials. It is presumed that there is no plant material near the gas meter for clearance required by the utility company.



The landscape on the west side of the building is in poor condition. The two trees along this façade of the building are in poor health with a number of damaged limbs. Due to the safety risk and risk of damage to the building, these trees and their stumps should be removed. New plantings in this area should be low so as not to block views in and out of the windows. The new plantings should also include large evergreen shrubs that will provide a visual frame of the building, especially for travelers approaching from the west. The existing plants adjacent to the parking lot are in good shape and only require some minor trimming to remove portions of the shrubs that overhang the walkway and parking area.





Brown, Richardson & Rowe, Inc.

Landscape Architects and Planners

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Brooks Library Streetscape Part II: Recommendations April 23, 2015



As noted in the assessment report, many areas of the brick pavement along Main Street need to be repaired. Any difference in elevation between pavers of 1/4" or more require removal and resetting. The repair process involves removing the pavers and base materials from the affected area. The sub-base should be compacted followed by proper replacement and compaction of the base materials. The pavers should then be reset. Joints should be filled with a polymer modified joint filler. The pavers should be wire cut or extruded clay brick pavers similar to those manufactured by Glen Gery Brick. It is important to use wire cut bricks as their size and shape is very precise resulting in an even pavement surface. The brick pavers can be installed on either a stone dust or

asphalt base. In general, brick pavers on an asphalt base cost \$5-\$7 more per square foot than on a stone dust base.

In order to repair the majority of the settling issues and mitigate any further damage, the Town of Harwich may want to remove the two trees along Main Street and as much of the root systems as possible. If the Town elects to replace the trees, then the planting soil currently in the planters should be removed and replaced with a structural soil that is more typical for a street tree installation. Drainage components can be installed around and between both planters which will ensure proper drainage. A perforated drain pipe can be installed in a loop around the perimeter of the tree planting pits. A second perforated drain pipe can then be installed connecting the two loops to a water and aeration sump. All perforated drain pipe should be wrapped in filter fabric to prevent clogging.









There are many trees suited to surviving the harsh conditions found along a busy street. Factoring in the shady, northern exposure and the unique climate found on Cape Cod, a few trees come to mind. Shown in the photos, clockwise from the upper left are Ginkgo (Ginkgo biloba), Swamp White Oak (*Quercus bicolor*) and Red Oak (Quercus rubra). All three trees are hardy and long lived and will offer little to no disturbance of the surrounding pavement area. The mature size of the tree trunks should be considered when repairing the pavement areas. It was noted during the assessment that one of the existing trees has nearly reached the limit of the planting area yet the tree has not reached full maturity. New trees sized at 4" caliper can be individually selected at a

nursery and generally cost \$1,200-\$1,500 per tree, including installation. In order to allow for clearance under the trees as they mature, they should be limbed up to a height of 8' above grade.

New site furnishings located near the main entrance will enhance the look and feel of the space. It will also offer opportunity for reading and use by Library visitors. The existing wooden benches can be replaced with benches that are more aesthetically pleasing and more comfortable for seating. Backless benches are very conducive to various types of use including quiet reading or casual conversation. Because of the small scale of the overall space, small scaled bike racks can be installed near both the north and south entrances. The site furnishings should be black as black will most easily coordinate with whatever final building colors are chosen. The sign board located in front of the building is well located. The wooden posts and caps can be painted black so there is a visual harmony to all furnishings. It is important to remember that the combination of multiple furnishings can appear cluttered and detract from the simple historic appearance of the entrance areas of the Library.





The photos show various furnishings from Victor Stanley. Also shown is a typical detail for attaching single chairs to pavement. Securing chairs to the pavement would prevent theft or unwanted movement of furniture but allow for use of the furniture when the Library is closed. In

addition to Victor Stanley, furniture can also be acquired from Landscape Forms and DuMor.

The addition of plant material along the west and north sides of the building will help to soften the look and feel of the Library. Plant material should be kept small in scale so that it does not outgrow the space and simple in form in keeping with the simple style of the building. Inclusion of evergreen plant material is also important as it will create year round visual appeal. The unique microclimate present on Cape Cod can make plant selection a challenge, especially given the northern and western exposures. There are many shrubs, both evergreen and deciduous, that are tolerant of these conditions.



Hummingbird Summersweet Clethra alnifolia 'Hummingbird' Small Deciduous Shrub



Bonica Rose Rosa 'Bonica' Small – Medium Deciduous Shrub



Inkberry *Ilex glabra 'Compacta'* Small Evergreen Shrub



Meserve Holly Ilex x meservae Large Evergreen Shrub



Oakleaf Hydrangea *Hydrangea quercifolia* Large Deciduous Shrub



Halcyon Hosta Hosta 'Halcyon' Medium Perennial

A maximum mature size of 10 feet for shrubs can be considered when making final plant selections given the size of the building and the proximity of planting areas to pedestrian areas. Narrow, 5'-6' wide planting beds can be installed along the north exterior wall of the building, similar to that shown on the building renovation landscape plans. The plants presented are just a small sample of the plants tolerant of the conditions at the Library. Many are native to New England and are indicative of the landscapes of Cape Cod. Given the scope and scale of this project, costs for plants range between \$10 and \$15 per square foot.

As a supplement to the Streetscape documents, attached is a plan that augments what is dictated in the reports. It is included as a means to correlate the information in the report with a location on a plan.

Brown Richardson & Rowe, Inc	ESTIMATE OF PROBABLE COSTS					
Landscape Architects and Planners	Project Name:		Brooks Library Streetscape			
3 Post Office Square, Boston, MA 02109		<i>'</i> :	J. Pf	eiffer		•
	Date:		Mav	8, 2015		
617.542.8552	Description: Streetscape Improvements Cost Estimation				stimate	
	2000110110111		<u></u>			
	Total					
Item Description	Quantity	Unit	l	Unit Cost		Total
DEMOLITION AND REMOVALS.						
Pemoval & Salvane of Evisting Brick Pavement	275	sv	¢	4.00	¢	1 100 00
Demoval of Existing Trace and Stump	275	51 E A	¢ ¢	1 000 00	¢	4 000 00
Kenioval of Existing frees and stumps	4	LA	φ	1,000.00	φ	4,000.00
SITE PAVING						
Reinstall Brick Pavement on Bituminous Base	2,500	SF	\$	18.00	\$	45,000.00
Gravel Pavement Around Building	200	SF	\$	4.00	\$	800.00
Gravel Paving Edge - Steel	25	LF	\$	12.00	\$	300.00
SITE IMPROVEMENTS						
Bike Racks (2 bikes per rack)	6	EA	\$	400.00	\$	2.400.00
Decorative Bench	2	EA	\$	2.000.00	\$	4.000.00
			·	,		,
PLANTING						
Deciduous Street Tree Planting	2	EA	\$	1,500.00	\$	3,000.00
Deciduous Street Tree Planting Soil & Drainage	1	LS	\$	2,000.00	\$	2,000.00
Deciduous & Evergreen Shrub Planting	1,300	SF	\$	15.00	\$	19,500.00
				TOTAL:	\$	82,100.00

Drawings





	Brooks Public Library	Town of Harwich	739 Main St. Harwich, MA, 02645
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NT EXCEPT IN AREAS WHERE NOTED OTHERWISE. TICAL & HORIZONTAL WOOD TRIM, AND ORNAMENTAL COSE MOULDINGS. PROVIDE EPOXY CONSOLIDATION INGS. IF MOULDINGS ARE TOO DETERIORATED TO DO MOULDINGS. NEW WOOD MOULDINGS SHALL BE IF EXISTING ORIGINAL MOULDINGS. SCRIBED IN NOTE 1 ABOVE.	E No.	sout levat A2	н пом



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	McGinley Kalsow Associates, Inc. ACMTECTS & PRESENTION PLANNERS 324 Broadway, P.O. Box 45248 Somerville, MA 02145 617.625.8901 - www.mcginleykalsow.com
	No. A2.3





Cost Estimate



Brooks Free Library Harwich, MA Assessment Report Budget

In establishing a budget for the work items identified in this Assessment Report, it is assumed that the project would be publicly advertised and bid in conformance with M.G.L. 149, with the General Contractor and Sub-contractors being required to pay workers prevailing wages as established by the Massachusetts Office of Labor and Workforce Development.

The budget is based on an assumption that the work would be done during 2016.

Scope Items:		
Access to work, chemical stripping of pair	nt to a 90% removal level,	
miscellaneous repairs and selective replace	ement to wood clapboard	
and trim, provide prime and finish coats of	f paint to all wood.	
Includes repairs to wood columns, and miscellaneous flashings		\$455,500
Repairs to existing wood windows		15,000
Streetscape Improvements (see breakdown in Assessment)		82,100
	Subtotal	\$552,600
General Conditions		55,000
Project Contingency		60,000
Contractor Overhead & Profit		48,000
Architectural Services		64,000
Landscape Design Services		20,000

Project Cost

\$799,600



APPENDIX A

CASE STUDY FOR PAINT STRIPPING

The Architectural Assessment section of this report discusses the need for chemical stripping of the paint to a near bare wood substrate as the necessary preservation treatment when the existing paint layers have become so thickly built up that the paint surface is brittle and inflexible. McGinley Kalsow and Associates have specified paint stripping on a number of historic preservation projects, including the 1774 Edmund Fowle House in Watertown, the 1861 South Church Steeple in Andover, the 1844 Pleasant Street Congregational Church in Arlington, 1872 West Hall at Tufts University, and most recently the 1897 First Parish Church in Dorchester. In the case of particularly intricately carved woodwork, we specify that the Contractor remove paint to an approximately 90% level, as we have found that the labor effort involved with removal of the final 10% of paint for carved surfaces becomes extremely costly with diminishing added value. Chemically stripping paint from wood surfaces to a near bare condition is a considerably effort beyond normal paint preparation of scraping loose paint, but after over a hundred years of paint build up it is the most effective way to assure good performance of paint. There becomes a point at which the scrape and paint approach simply contributes more to the cause of paint failure, as even more layers are built up in some areas of the wood.

The following series of photographs show the "before", "during", and "after" condition of wood clapboard siding and trim at the First Parish Church in Dorchester. In this project, the paint failure was severe after nearly 120 years of paint build up. In the "during" photo, the building is shown with staging with tarpaulin protection to contain any airborne lead during paint removal. The "after" photo shows the restored exterior with a new prime coat and two finish coats of paint, along with wood trim repairs such as at the window heads.



"Before" condition of paint at the First Parish Church in Dorchester



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"During" photo shows staging and staging enclosure in place during chemical stripping

"After" view of painted exterior



McGinley Kalsow & Associates, Inc. *Architects & Preservation Planners*

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