



To: Capital Planning Committee, Library Trustees
From: Barbara Myles
Date: December 6, 2005
Subject: Replies to Questions on Library Windows from the Capital Planning Committee Meeting on November 29, 2005

1. Discovery of Defects in the Gund Building's Marvin Windows

In the fall of 2003 the Library put the Gund building window replacement project on its capital plan for FY 2007. The Capital Planning Committee asked me to bring them pictures showing the extent of the window rot. The requested pictures were taken on November 7, 2003.

Later that month I spoke with Kathy Glick-Weil, who was the Library Director when the Gund addition was built. She is now the Director of the Newton Free Public Library. She was surprised and saddened to hear about the window problems. As I described the problems, it reminded her of one of her neighbors who had the same trouble with her Marvin windows. Her neighbor was able to get Marvin to replace all of her windows for free. She suggested I look through the submittals for the Gund addition and find out what kind of windows were installed in the Gund building.

I learned that Marvin Windows manufactured the defective windows in the Gund building. Furthermore, there was a class action lawsuit against Marvin for defective windows manufactured between 1985 and 1989. A defective wood preservative called PILT, manufactured by PPG Industries, caused the wood-rotting problem. The Gund addition was completed in 1989.

There are two groups for this class action settlement. The deadline for settlement group one was January 15, 2002 and the deadline for settlement group two was September 30, 2004. Free replacement windows were given to settlement group one but this was costing Marvin too much money. A second settlement group was created and this group only received a 30% discount on replacement windows. The owners would have to remove the defective windows and install the replacement windows. We were too late to benefit from either of these settlements; our capital plan budget request was already submitted for FY 2005. Unfortunately, there is no "lemon law" in the window industry so the library was not notified by Marvin that the windows were defective. We had to figure this out for ourselves.

2. Assessment of Window Rot Problem

a. Simpson, Gumpertz, and Heger (SGH)

In January 2004 the library hired Simpson, Gumpertz, and Heger, Inc., a company comprised of consulting engineers, to perform a condition site survey of the entire library. SGH's recommendation for dealing with the Gund building's defective windows was to replace them with mahogany windows. SGH's cost estimate for this project was \$235,000. The library used SGH's cost estimate in its capital plan budget that was submitted to the Capital Planning Committee in the fall of 2004. I took new pictures of the windows on October 19, 2004 and included them and the pictures taken on November 7, 2003 with the library's capital plan budget. The pictures showed that the rot was spreading.

b. Gorman Richardson Architects (GRA)

Gorman Richardson Architects concurred with SGH's recommendation that the library replace the defective Marvin windows. On January 26, 2005 GRA gave the library a price proposal in the amount of \$880 for pricing the various window options and making a recommendation for the type of window the library should purchase to replace the defective Marvin windows. The library did not hire GRA to perform this work.

c. PMC Associates

PMC Associates gave me an unsolicited price quote of \$2,100 on November 2004 for a study that would assess the defective Marvin windows and provide information for further action. Peter McCarthy told me that a repair plan would be developed after the survey was completed. The library did not hire PMC Associates to perform this work.

3. Budget Price Quotes

This fall I have contacted the Cheviot Corporation, Construction By Design, and Marvin Windows for budget price quotes for replacing the windows in the Gund building. Of course, the project must be put out to bid so we cannot have a definite price until the library receives bids from contractors. By law, the library cannot go out to bid for a building project unless the money has been appropriated at Town Meeting so these budget price quotes are the best information we can have at this time.

a. Construction By Design (CBD)

Dan Baker, a Project Manager with Construction By Design, sent me a price quote on November 1 for replacement windows made of mahogany with two options. The price quote for option one was \$375,000 and included everything except the window sashes. CBD warned me, however, that the old sashes might not fit into the new frames. Some of the windows in the Gund building fog up when it is cold outside, which is a sign that the seals have failed in the glass. Perhaps the defective preservative is causing this problem too. The price quote for the second option was \$485,000 and included the sashes.

The library used CBD's cost estimate in this year's capital plan budget. I took new pictures of the windows on October 18, 2005 and included them with the pictures taken on November 7, 2003 and October 19, 2004 for comparison. The newest pictures showed further rotting and holes growing in the windows.

b. Cheviot Corporation

Larry Wilcox, a Project Manager at the Cheviot Corporation, came to the library on November 29 to look at the window problem. Like SGH and CBD, Cheviot recommended replacing the defective Marvin windows with mahogany windows. When I spoke with Larry Wilcox on December 5, he told me that he would not have the price quote ready until later this week. I also asked him if he thought the windows were salvageable. He did not think this was a good solution and gave two reasons. First, the wood that the windows were made with (Ponderosa pine) is not a very good quality of wood plus the wood was treated with the defective PILT preservative. Second, repairs would have to be made every year as more rot became visible. In other words, the repairs will not solve the problem of the defective windows.

c. Marvin Windows

I have tried to reach a representative at Marvin Windows about replacement windows but have only received two catalogs to date. I will continue my efforts and will eventually speak with a representative.

4. Questions From Capital Planning Committee

Anita Scheipers faxed questions from Rob Jevon to me on December 1 concerning the window repairs made in 2000. I called Window Repair Systems, the company that repaired some of the Gund building windows in 2000, and found that this phone number was out of service. However, I was able to track down the former owner of WRS, Peter McCarthy. He has set up a new company called PMC Associates. I emailed him the pictures I took on November 29 so he could see the current condition of the windows and I met with him today. Below are his answers to Rob Jevon's questions.

- 1) Why were some of the repairs successful while others apparently were not?

"The worst part of the decay was addressed but not all of the decay was removed." Peter McCarthy used the term "aggressive band aid" to describe the work performed in 2000. The program was supposed to continue the following year but this did not happen.

- 2) Could the failed repairs be salvaged?

Yes. Peter McCarthy compared the salvage work to dentistry. A drill is used to remove wood rot. If any rot appears near the old epoxy from prior repairs, sometimes the old epoxy must be removed at least partially to eliminate rot growing around the old repair site.

- 3) If so what would it cost and how long would they last?

Without performing a complete inventory and defined scope of work, Peter McCarthy would not give me a cost estimate. The repairs could last ten years or longer if proper maintenance is performed on the proper schedule.

- 4) If existing repairs can be salvaged could they repair other deteriorating sills?

Yes.

- 5) Would it make sense to replace the entire sill rather than just currently rotted sections?
No. Only the decayed part of the sill should be removed. Peter McCarthy advises against getting under the frame of the window if possible because the entire window will shift down once the sill is removed.
- 6) Have they dealt with Marvin windows before?
Yes. Peter McCarthy used to own a Marvin Windows Design Center and his old company, Window Repair Systems, performed the repair work at the library in 2000.
- 7) If so is it primarily the sills that deteriorate because that is where water accumulates or does entire window eventually rot?
The impact of the problem is to the entire window, not just the sills. Any "up-facing" surfaces will get the majority of the water and water decay problems. Examples of these up-facing surfaces are the window sill rail and the top of the window muttons.
I asked him if he thought this could be the problem with the broken seals on some of the library's windows. He said it could be. He also explained that Marvin made a manufacturing error when painting the windows at their factories. The paint on the windows should cover a small portion of the glass to form a seal between the glass and the wood. Marvin Windows scraped the paint off of the glass which made it possible for water to get under the paint and cause rot that could damage the seals.
- 8) Are there any prophylactic paints that can be applied to prevent rot from occurring?
No. The key to preventing rot is proper ongoing maintenance. There is no special paint that prevents rot.



Request for Price Quotations

Description: Gund building window replacement project – budget price estimates

Construction Specifications
Institute Number: 08 01 52.82

Vendors	Notes	Price												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20%;">Company:</td><td>Cheviot Corporation</td></tr> <tr><td>Contact:</td><td>Larry Wilcox</td></tr> <tr><td>Address:</td><td>55 Fourth Ave.</td></tr> <tr><td>City / State:</td><td>Needham, MA 02494</td></tr> <tr><td>Telephone:</td><td>(617) 449-1100</td></tr> <tr><td>Date:</td><td>12/22/2005</td></tr> </table>	Company:	Cheviot Corporation	Contact:	Larry Wilcox	Address:	55 Fourth Ave.	City / State:	Needham, MA 02494	Telephone:	(617) 449-1100	Date:	12/22/2005	Price includes construction only. Need to add designer services fees and money for contingencies.	\$377,463
Company:	Cheviot Corporation													
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Company:	Littleton Lumber													
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Telephone:														
Date:														

Company Selected:
Date:

\$600 to study sills - destructive testing to make sure windows work in the jamb sills + headers

THE CHEVIOT CORPORATION

55 FOURTH AVENUE - NEEDHAM HEIGHTS - MASSACHUSETTS 02494-2723
TELEPHONE (781) 449-1100 - FAX (781) 449-1109

QUOTATION

TO: Town of Lincoln Public Library
3 Bedford Road
Lincoln, Ma. 01773

RE: Replacement Windows
Revised

Attn: Barbara Myles fax 781-259-1056

Subject to the terms and conditions stated on the reverse, we quote the amount of:

Three hundred and fifty seven thousand nine hundred and sixty three dollars \$ 357,963.00

To furnish material and/or labor as listed below:

TERMS: NET 30

We propose to furnish and install approximately 70 wood windows into existing openings and as follows:

- African mahogany wood windows, prime and finish painted inside and outside, one color only.
- Clear low E insulating glass with true muntins.
- Double hung windows replaced as single hung with weight and chain balanced lower sash.
- Roto operator and sash locks at casement and awning windows.
- New exterior brick moulding.
- Interior trim, only as needed.
- Exterior perimeter sealant.

We include: removal and disposal of existing windows, glass left clean after installation.

We exclude: removal or replacement of interior extension jambs, casings, stools, or aprons.

Add to the above for 2nd color interior..... \$3750.00

Add to the above for interior returns and new casing (and third color), the sum of...\$15,750.00

SUBMITTED BY:


L. A. Wilcox

ACCEPTED BY: Lincoln Public Library

BY:

Subject to the terms and conditions stated on the reverse

DATE ISSUED: December 22, 2005

DATE:



CONSTRUCTION BY DESIGN
CONSTRUCTION SERVICES
www.bakercbd.com

November 1, 2005

Lincoln Public Library
3 Bedford Road
Lincoln, MA 01773
Attn: Barbara Myles, Director

Re: Budgets Window Replacement

Dear Barbara:

We are pleased to provide you with budget estimates to replace existing Marvin windows in library addition. This is based on our site visit with you and discussion with Neil Rouleau of Gorman Richardson Architects, Building Envelope Services Division.

Option 1: Reuse Existing Sash

- A. Remove windows, complete
- B. Remove interior and exterior trim
- C. Remove HVAC grilles, as required
- D. Remove plastic laminate window sills and reuse
- E. Remove sash from existing jambs and reuse
- F. Supply and install new jambs with sills
- G. Supply and install new hardware and jamb liners
- H. Patch drywall, as needed
- I. Supply and install new Vycor Membrane Window rough opening flashing, before setting new jambs and sills
- J. Supply and install foam gap seal
- K. Supply and install new exterior casings and brick mold, back-primed before installing
- L. Supply and install urethane sealants with primer at exterior
- M. Supply and install new interior casing to match existing

- N. Reinstall salvaged sash
- O. Reinstall plastic laminate window sills
- P. Reinstall HVAC grilles
- Q. Painting interior and exterior one (1) coat primer and two (2) coats finish to match existing

Budget Estimate: \$375,000.00

Option 2:

- A. Same as option 1, A through Q
- B. Supply and install new sash

Budget Estimate: \$485,000.00

Construction by Design, Ltd., reserves its right to revise its contract price for material to be provided under the terms of this contract if the contract is not signed within thirty (30) days of the original proposal date and the work is not commenced within ninety (90) days thereafter.

We hope this is helpful.

Please feel free to contact us with any questions you may have.

Yours truly,



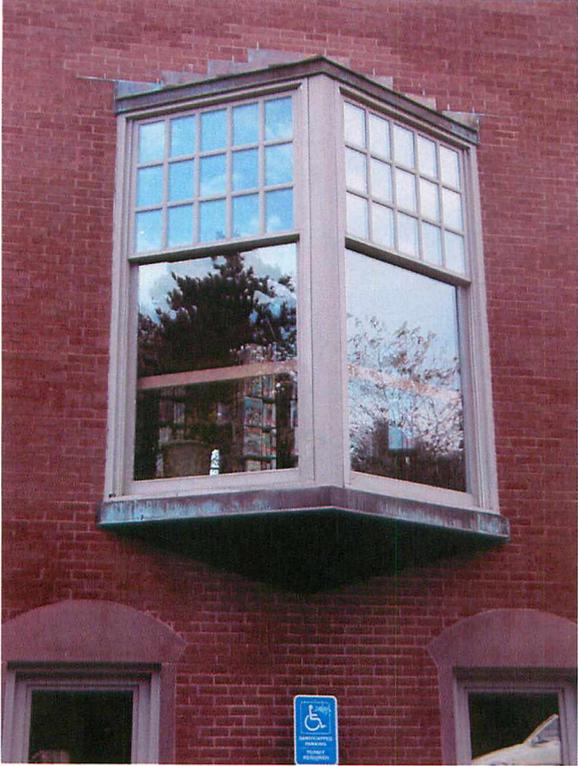
Daniel H. Baker

/dcl/4444c1

cc: Neil Rouleau, Budget Estimate only

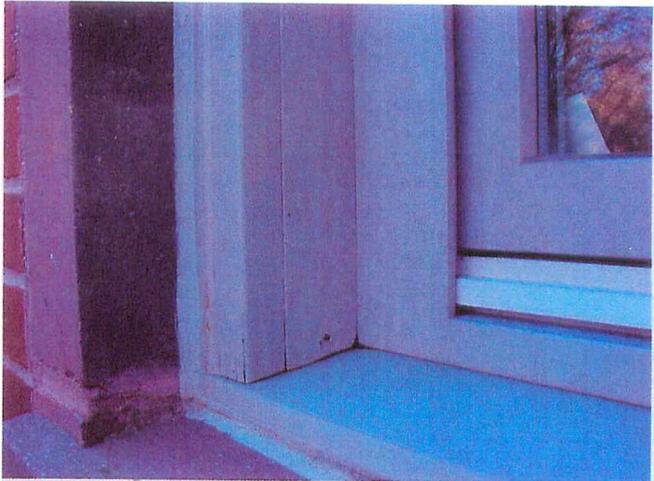
Encl: American Institute of Architects Contractor's Qualification Statement

The Children's Room floor to ceiling window above the handicapped parking area has visible rot at the lower left corner of the exterior of the window and peeling paint on its interior.

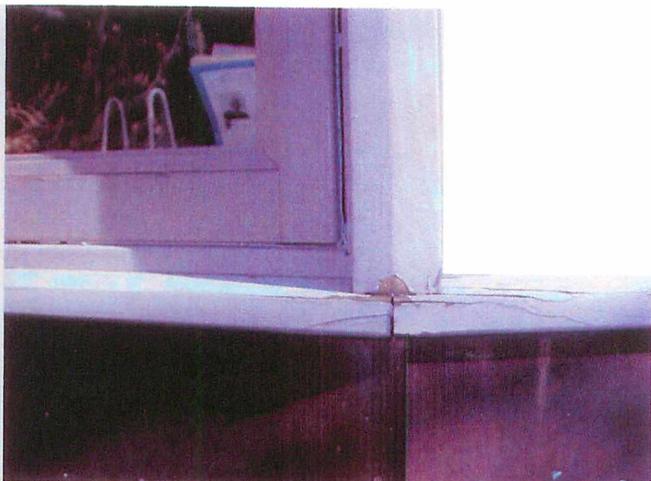
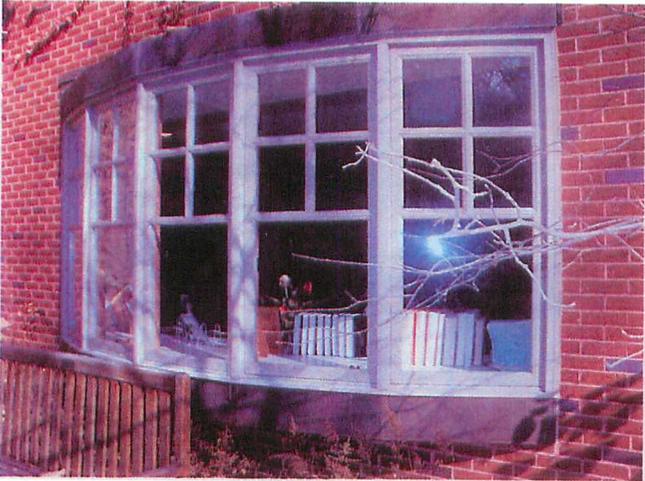


October 18, 2005

Office windows - rot is found in the lower comers



Reference Room bay window - the plastic coating is deteriorating and rot is found in the sill area.



November 7, 2003

Office windows – rot is found in lower corners



Reference Room bay window – the plastic coating is deteriorating and rot is found in the sill area.



October 18, 2004

Office windows – rot is found in the lower corners



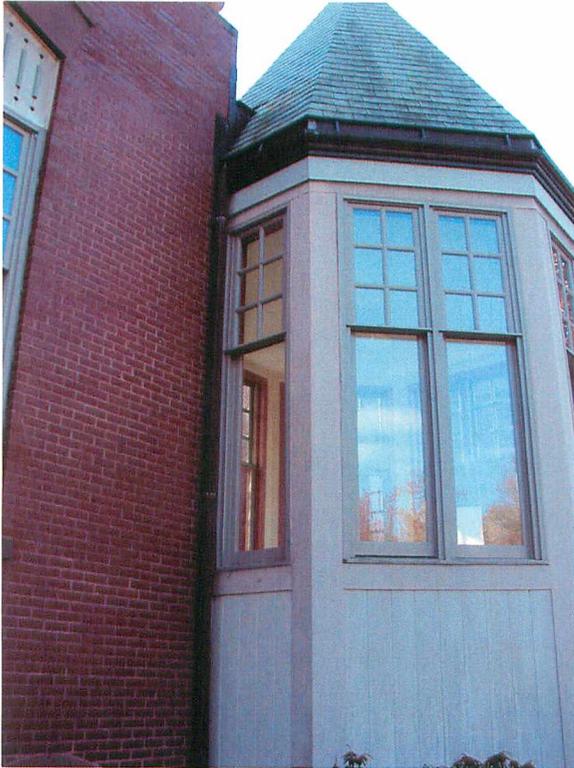
October 18, 2005

Reference Room bay window – the plastic coating is deteriorating and rot is found in the sill area.



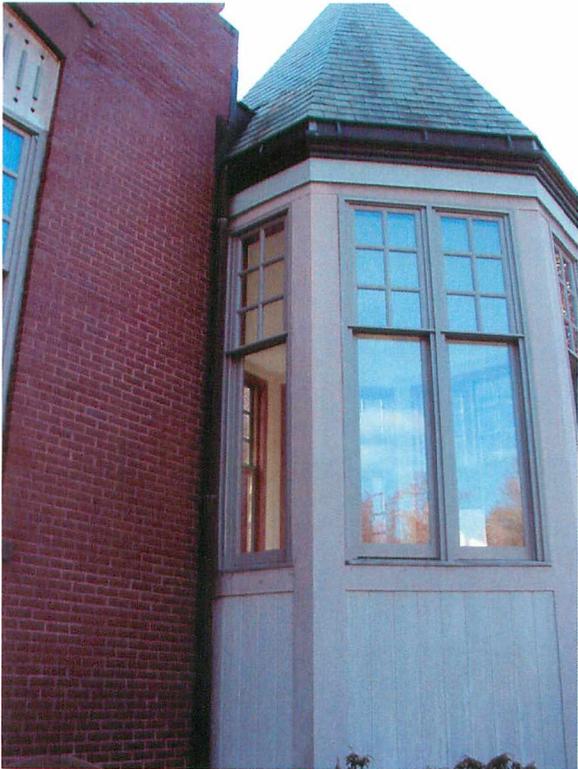
October 18, 2005

Children's Room turret – flashing problems causing paint to peel, plaster to crack on the inside of the turret, and mold to grow on the outside of the turret.



November 7, 2003

Children's Room turret – flashing problems causing paint to peel, plaster to crack on the inside of the turret, and mold to grow on the outside of the turret.



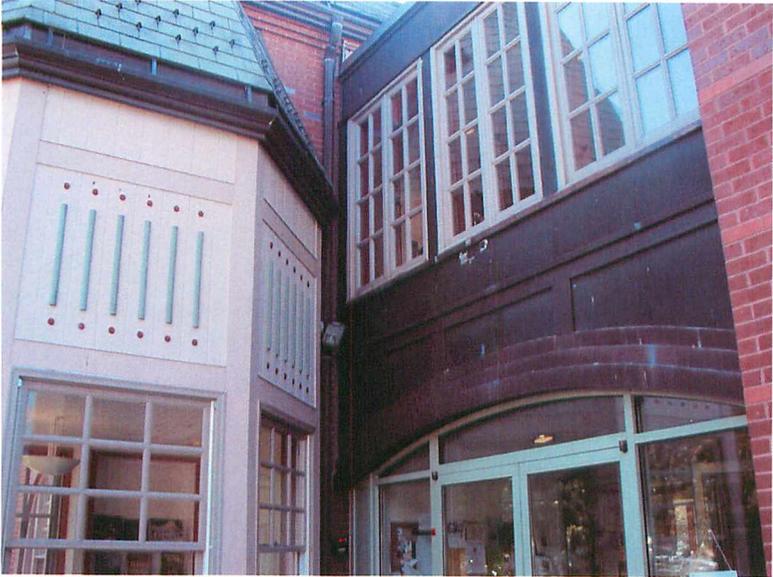
October 18, 2004

Children's Room turret – flashing problems causing paint to peel, plaster to crack on the inside of the turret, and mold to grow on the outside of the turret.



October 18, 2005

Children's Room above the library entrance – the design of the turret causes water to flow directly onto the windows above the library entrance.



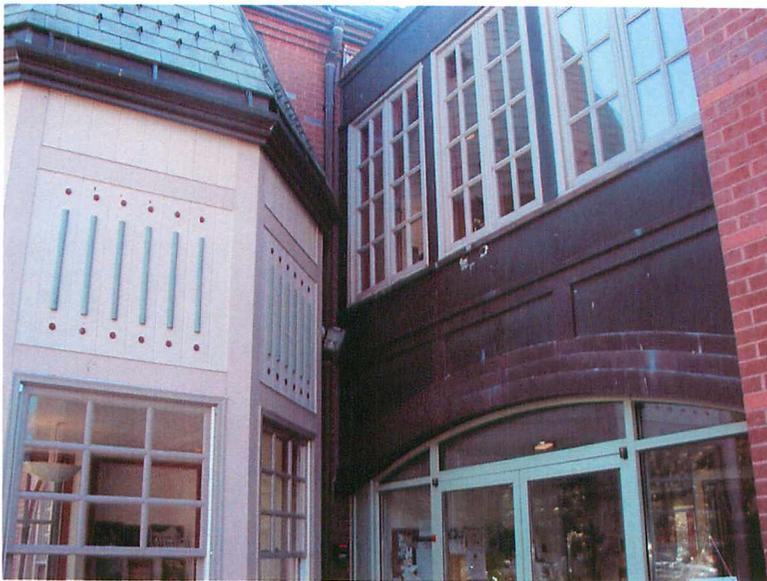
November 7, 2003

Children's Room above the library entrance – the design of the turret causes water to flow directly onto the windows above the library entrance.



October 18, 2004

Children's Room above the library entrance – the design of the turret causes water to flow directly onto the windows above the library entrance.



October 18, 2005