



A Tight Budget Produces a
WATER-TIGHT
SOLUTION

A CASE STUDY

BY KIERAN FITZGIBBON

When you're in the business of maintaining and restoring condominiums, what you see is not always what you get. A condominium – even if it was built 50 years ago – may look fine on the outside, but beauty is often only skin deep. Behind the façade, the cavity wall may not be functioning properly. Brick may need to be repointed. Doors and windows may be leaking.

In the case of 16 Addington Road in Brookline, Mass., a 23-unit condominium built in 1969, moisture had been penetrating the building's roof and façade for decades. Residents on the lower floors learned that "trickle down" applies not only to wealth, but to water, as leaks on the fifth floor reached the first floor, as well as several areas in-between.

"The balconies, the windows, the sliders, the parapet walls, everything on the fifth floor was capturing the rain, and even units on the first floor were getting leaks," describes Annie Stefanelli, president of The Stefanelli Company, Inc. in West Roxbury, Mass., and manager of the property. "Water was leaching into the units."

Initially, the board retained Statewide Restoration Masonry to try stopping the leaks with inexpensive methods, such as flashing the window headers and sills and tuck pointing. These stopgap measures worked in some cases, but success was limited. Everyone soon found out why. In addition to budgeting \$60,000 toward Statewide Restoration Masonry's initial efforts, the board granted permission to remove a small area of the brick façade to look behind it. Looking in, it was discovered that the CMU block backup wall had no waterproofing and was very porous. In addition, the cavity wall was not functioning, as there was no cavity between the outer wythe of brick and the block backup wall.

REVIEWING THE ALTERNATIVES

The entire team recognized that there were localized roof and window leaks, but the fundamental problem was water infiltration through the brick veneer in driving rain. The building was not constructed with a satisfactory water barrier behind the brick veneer, so the best action would have been to remove and replace the exterior veneer with a system

that provided an air and moisture barrier consistent with today's standards.

However, with a cost of over \$5 million dollars, that highly desirable solution was not practical for the owners. According to Michael Nee of Gienapp Architects LLC, who designed the solution, "Consequently, we worked with the board to evaluate several options that would address the highest priorities with an affordable and practical scope of work."

Ultimately, the design team and the board collaborated on a solution and was able to fix the primary sources of water infiltration, replace the sunrooms, bring the building up to code, improve energy efficiency, and make the envelope more aesthetically pleasing – all for a lesser cost of \$1.5 million.

The project had a happy ending for everyone involved, but it provided important lessons that may be useful to any condominium board or property manager.

Typically, cutting corners to save money today

costs more tomorrow, and the building likely

will not look or function at its best.

● **Maintenance is cost effective.**

Condominium board members are understandably budget conscious and sometimes overlook routine maintenance. When repairs are needed, they are often handled on an *ad hoc* basis.

Ongoing maintenance costs significantly less and takes less time than repairing extensive damage. It also can keep a building looking its best and ensure that it is structurally sound. In addition, maintenance projects typically require little regulatory approval. A building permit will still be needed, but time-consuming hearings can be avoided.

- **Start with a plan.** It's important to have specific goals in mind and to detail the scope of the project as thoroughly as possible based on those goals. Of course, you'll need to determine what you can realistically accomplish with the amount of money allocated for the project.

Some projects can be divided into two or more phases, which helps stretch the cost over a longer period. Doing so can help associations live within an annual maintenance budget, but there may be a trade-off, as delay may cause property damage and ordering materials piecemeal can cost more than ordering everything at the same time.

- **Projects may be adjusted to fit the budget.** There is no doubt the best technical solution to make the building watertight was to replace the entire skin of the building with a new brick façade, as well as replacement of all doors and windows. Because of the costs as they pertained to 16 Addington Road, the board worked on a new plan, focusing on the fifth floor, which was the source of most of the leaks.

"It was a long-shot, but one worth taking," Stefanelli says.

The \$1,497,000 bid covered the replacement of all five sunrooms, as well as all windows, sliding doors, access doors, and the roof on the fifth-floor balconies; new metal siding on the fifth floor; replacement of all railings on the fifth floor; and all associated water-proofing.

"There was old, corrugated metal siding that was damaged," Nee says. "The walking surface of the balconies was a bare, stained membrane roof that looked dirty and, because of leaking situations, there were also messy layers of old sealant on most of the surfaces. It all had to be addressed."

"Aesthetics were not the primary driving factor," he adds, "but as part of the project we unified the colors. Premium-grade rubber pavers were put over the roof surface and existing windows on the fifth floor were replaced with energy-efficient fiberglass frame windows."

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● **Be prepared for the worst.** It is often impossible to know what's behind the exterior wall until you begin to demolish it. "There had been decades of water infiltration that could not be seen without invasive exploration prior to the onset of the project," Stefanelli says. "When you open a window, you don't see that you have to rebuild a new frame to install a new window."

"The most challenging conditions were uncovered during demolition," Nee added. "There was a lot of poor craftsmanship on modifications that have taken place since the late 60s. Doors and windows were not installed properly, causing water infiltration into wall cavities and damage to units on the floors below. Water had worked its way into the insulation and wood framing, so there was a significant amount of wood rot."

The project included a \$100,000 contingency fund. While \$73,000 of it was used, it could have easily cost twice that amount given the amount of damage found, according to Stefanelli.

● **Get owner buy-in.** Residents had to put up with many inconveniences until the project was completed. At times, some were without electricity or cable television, which was especially difficult for them to deal with during the pandemic. They even had to give up use of the parking lot.

In addition, much of the parking lot was taken up by a crane that was brought in to remove the existing sunrooms on the fifth floor and replace them with new ones. There was also staging around the entire building, Porta-Potties, worker vehicles and equipment, and a COVID-19 station for regular hand washing and sanitation.

Stefanelli obtained parking permits from the town of Brookline, but residents had to park on the street for four months and walk typically a quarter of a mile to their homes.



Fortunately, she says, the residents make 16 Addington Road "one of the best buildings I ever had the honor of managing. They are a phenomenal group of people and were very understanding throughout the project."

● **Regulatory requirements change over time.** Code compliance was a challenge, according to Stefanelli, because safety requirements are stricter today than they were in the 1960s, when the building was constructed.

"You have a unit looking out at the skyline of Boston and the contractor is obligated to replace your 36-inch railing with a 42-inch railing," Stefanelli says. "Where does your skyline go? The residents were very upset and challenged it. There was a great deal of discussion about what you have to do and what you don't have to do to satisfy current code obligations."

In the end, the owners accepted that rules are rules and taller, safer railings had to be installed.

● **Do it right.** Poor design and shoddy workmanship contributed to the problems at 16 Addington Road. A rubber membrane was installed over the parapet to keep moisture out, but it didn't fully cover the exposed area. Some joints were not chalked. Old sealant was not removed before new sealant was applied. Windows were not fitted properly. All of these issues, and others, ensured that the leaks in the building would continue and would cause further damage that would be expensive to repair.

Sometimes boards try to ignore leaks, because of the expense of repairing them properly. And, after all, buildings only leak when it's raining. But leaks can only be ignored for so long and, in the interim, they can cause a great deal of damage. It costs much less to do the job correctly the first time and to provide ongoing maintenance.

● **Schedule realistically.** The goal was to complete the project before the end of 2020. Construction was scheduled to begin in April 2020, but the pandemic delayed the start until mid-May. We weren't sure we'd be able to complete the entire project that quickly, so we tentatively planned to delay work on the southern elevation.

"Navigating around the ownership and keeping everyone safe during a global pandemic was difficult," Stefanelli says. "The project was held back by late delivery of materials and there were eight subcontractors standing on the streets saying, 'Let's roll.'"

Eventually, though, materials were delivered, the subcontractors came through, and the project moved forward. The entire project, including the southern elevation, was completed on time. The staging came down in mid-December.

● **Hire experienced, reputable contractors.** It is important that contractors don't cut corners, that they bring your building up to current code standards, and don't use inferior materials or otherwise make compromises to save money.

Typically, cutting corners to save money today costs more tomorrow, and the building likely will not look or function at its best.

While the approach initially favored was unaffordable, Statewide Restoration Masonry was still able to restore 16 Addington Road, bringing it up to code, improving its appearance and, most important, making it water-tight. There have been several major storms since the project was completed. No leaks have been reported to date. 



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