

Case Study: Design Creating Long Term Value



Duroplex® Wall Finish System helps drive admissions of Saint Michael's College

As the population of young, post-secondary-aged people has steadily been declining in the northeast, schools like Saint Michael's College in Vermont have developed new strategies to attract first-year students. Administration there decided it was paramount to modernize the students' quad dorm public areas – including 16 long, dark and dreary corridors and stairwells.

Built in the 1950s when the school was open to males only, the corridors looked more "like prison halls" than the halls of a modern higher learning institute, says David Cutler, the college's Director of Facility Services.

Fast forward to the present and admission rates are up while the corridors and stairwells have a new look that sparkles. "If you didn't know better, you might think you were walking through a high-end hotel hallway now," says Cutler.

Credit the transformation to a well-thought-out renovation program which saw roughly 110,000 square feet of Duroplex, an acrylic finish system by Triarch, applied over the 60-year-old glazed concrete masonry units (CMU) wall. General contractor KJ Construction, of Essex Junction, VT, selected Finishes Etc., of Houston, TX, to apply a textured Duroplex finish.

Smart decision.

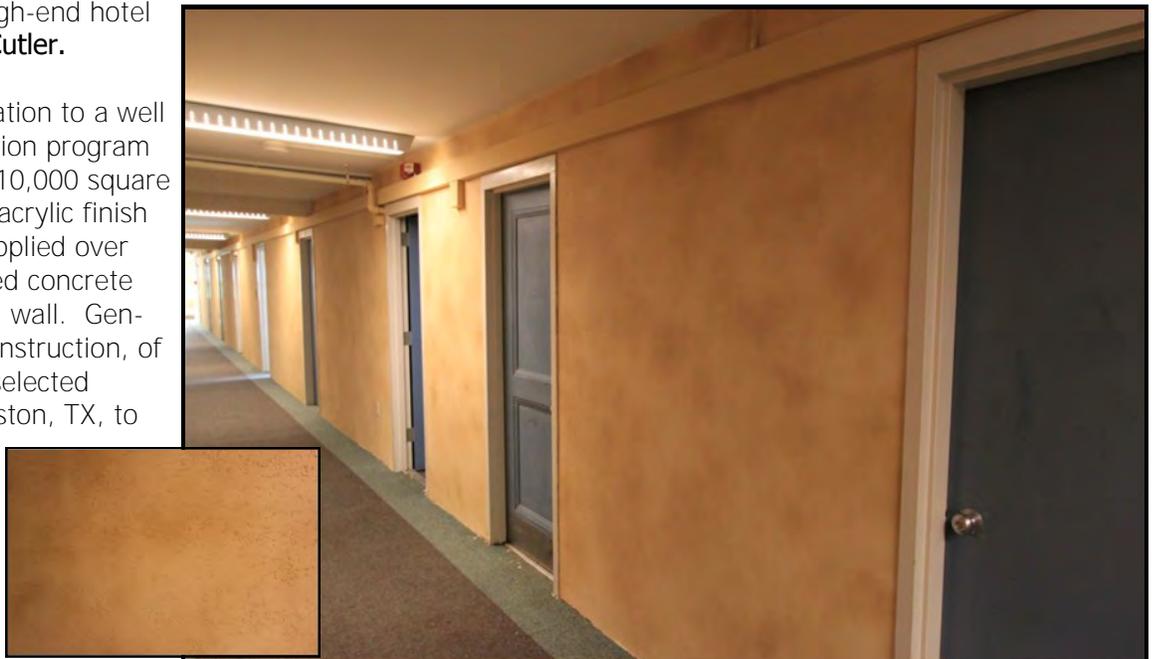
Duroplex was quicker to install than conventional drywall or plaster and at considerably less cost because it allowed the multitude of wire molds lining the 60-year-old cinderblock walls – installed to accommodate electrical wiring and information technology line upgrades – to remain in-situ.

"We simply painted the wire mold to look clean and butted the finish right up to it so everything looked new," explains Chuck Cates, President of Finishes Etc.

The job included 16 corridors, each about 400-feet long, and three stairwells. Work was done in two, 7-8-week phases through the summers of 2013 and 2014. "To do that in drywall, I think would be a 10-12 week turnaround each year," Cates points out. "And then, with drywall, you would have a high potential for on-going damage from the students."

Project Summary:

- **The job included 16 corridors, each about 400-feet long, and twelve stairwells.**
- **Substrate was glazed tile block**
- **Work was done in two, 7-8-week phases through the summers of 2013 and 2014, a 25-35% time savings over alternative approaches. "To do that in drywall, I think would be a 10-12 week turnaround each year,"**



Cutler says the contract price was probably 75 percent less than drywall or plaster because either conventional wall system would have required re-routing electrical and information technology lines.

Still, the job wasn't without its challenges.

Cates says unlike many scenarios in which a skim coat is applied directly to masonry block "to float the wall down" prior to applying the Duroplex System, at Saint Michael's, the glazed tile finish was so smooth that a traditional skim coat would not bond to it.

Cates' solution?

After washing the glazed tile surface, Finishes Etc.'s crew rolled on two coats of Duroplex Primer™ – each coat with 24-hour cure time. Next, two coats of SKIMM™ by Triarch were sprayed on 24 hours apart, and the surface was sanded to a Level 3 finish before a third coat of Primer was rolled on. The Finishes team installed the Duroplex texture in a light yellow color Tuscany pattern. It was sprayed on and knocked down, leaving a smooth but pitted surface, says Cates.

After letting the finish cure for 24 hours, the crew applied Triarch's Old World Stain™ in a darker color using an airless paint sprayer. "It went from looking like a prison interior to a four- or five-star hotel interior," the contractor points out.

The stain gives the walls a two-tone luster that "makes this place feel homier than one color would," adds the college's Cutler.

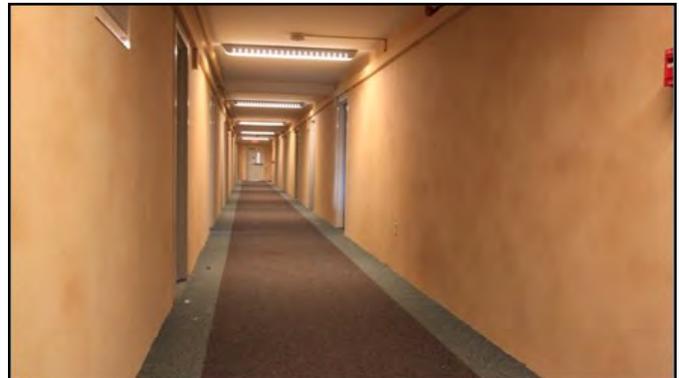
Cates says while three coats of primer might seem like a lot to ensure adhesion, the alternative was to sand and scarify the face of the block– not only a messy job but an expensive and time-consuming one. "The Duroplex bonding primer was the key and the only way to go with this kind of block, in my opinion."

Cutler says his interest in Duroplex piqued after a visit to Tennessee Tech University, a state college in Cookeville, TN, several years ago where he saw an attractive Duroplex finish (a job also done by Finishes Etc.) applied to an interior space at the southern university. In 2012, Finishes Etc. was retained to install a 6x8-foot test sample wall at Saint

Michael's that featured four of the 25 or so different textures available with the Duroplex System.



Long, Dark Corridor Before Renovation



Corridor with Duroplex System in a Tuscany Pattern

Interesting project quotes:

- **...the contract price was probably 75 percent less than drywall or plaster because either conventional wall system would have required rerouting electrical and information technology lines.**
- **...the glazed tile finish was so smooth that a traditional skim coat would not bond to it.**
- **"We couldn't damage it or get it off the glazed block so we were confident it was going to be a good product for us.**
- **"We tested other products but didn't find any as durable or any that met the high standards (of Duroplex)."**

While the test wall proved an attractive alternative to the existing glazed CMU walls, the college wanted to ensure it could take the everyday wear and tear of the first-year university students residing in the dorms.

Cutler says the Duroplex test wall passed the **toughness test**. **“You could rub an American quarter hard against it, and the quarter would be destroyed before the Duroplex System would wear down.”**

Moreover, after about eight months in place, the wall displayed no signs of stress cracks or fractures, delaminating or other problems. It met all of the **manufacturer’s abrasion- and impact-resistance specifications**. **“We couldn’t damage it or get it off the glazed block so we were confident it was going to be a good product for us.”**

Cutler says the textured finish **“is a bit more difficult to clean”** than the previous smooth glazed tile finish. A nylon brush – rather than a sponge – works with soap and water to remove common scuffs and stains. More troublesome dirt requires a 100 grit sandpaper, and oils can be removed with denatured alcohol. **“It’s been a little bit of a learning process for our custodians who have never had to use sandpaper before.”** Finishes Etc. provided general product maintenance training for the staff at the college and it also trained one of the facilities staff for simple wall repairs.

While it is not indestructible – **“even concrete is not indestructible”** – the finish has fared well since the first phase was installed in 2013, says Joe Brigante, owner of KJ Construction, general contractor for the corridor project.

Saying students can be **“brutal”** on the walls, Brigante notes that there are **“some small but straightforward repairs”** necessary. **“Anybody who has experience with a spray machine – a painter by trade, for instance – can do the touchups, no problem.”**

It was Brigante’s first experience with Duroplex. **“It is a high quality finish. I’m very impressed with it.”**

Prior to installing the Duroplex System, KJ Construction prepped the walls and stairwells.

Work included removing hand rails, bulletin boards and fire extinguisher cabinets to allow for an obstacle-free wall for Finishes Etc.

Finishes Etc. does specialty finishes and painting for schools, hospitality and military lodging throughout the U.S. Cates has been using the Duroplex System since **2001**. **“We tested other products but didn’t find any as durable or any that met the high standards (of Duroplex).”**

Project Name:

Saint Michael’s College
Colchester, VT

Triarch System:

Duroplex Wall Finish System
800-537-6111
www.triarchinc.com

General Contractor:

KJ Construction
Essex Junction, VT
802-879-2800
www.kjconstruction.net

Subcontractor/Applicator:

Finishes Etc. LLC
Houston, TX
936-372-1670
www.finishesetc.net



One of the “quad” dormitories to receive an interior renovation at St. Michael’s College

Performance Coatings Achieve High Grades

Like the Federal government, the educational construction marketplace seeks to build and renovate with long lasting, high performance materials. Durability in the form of abrasion and impact resistance are necessary product characteristics in the product selection criteria. Additional product features such as meeting LEED criteria, zero to low maintenance requirements are necessary product attributes for products used on busy campuses.

Key products from Triarch that support these fundamental educational construction requirements are: Duroplex[®], Plecture[®], Granite[®], and SKIMM[™].



Not Just a Masonry Finish

ABUSE RESISTANCE: The Duroplex system significantly improves the **abuse resistance** of 5/8" drywall with **substantial gains in abrasion, piercing and soft body impact resistance**. Additional performance results are achieved when Duroplex is placed over abuse or impact resistant wall board.

Triarch, a division of Dryvit Systems, Inc. collaborated with major wall board manufacturers to provide whole wall testing over a variety of wall board options.

A list of some of our testing on wall abuse is summarized:

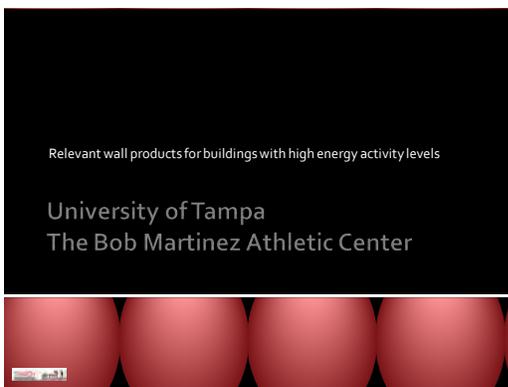
- ⇒ ASTM D4977 Abrasion test: weighted wire brush test.
- ⇒ ASTM D5420 Indentation test: weighted steel rod impacting wall assembly
- ⇒ ASTM E 694 Soft Body Impact: 60 lb bag impacting wall from 90 degree position

For more information about Duroplex, or any of the systems and products sold by Triarch, contact Customer Service at 1-800-537-6111 www.triarchinc.com

High Performance Wall Board Assembly

The University of Tampa Athletic Center employed a combination of abuse resistant wall board and 5/8" Type X wall board to achieve a balance between performance and budget.

High performance wall board was run from floor height to 48" above floor height, and traditional 5/8" Type X wall board was used above 48". All was finished with the Duroplex System. Read more and see project photos after 15 months of active use by visiting www.triarchinc.com and selecting [University of Tampa presentation](#).



Projects on this page utilizing Duroplex: (top) University of Tampa and (bottom) Tennessee Tech University.

