

**INNOVATIVE
HVAC
RETROFITS**

**INTERNALLY
FUND ENERGY
PROJECTS**

**DATA CENTER
ENERGY-REDUCTION
OPPORTUNITIES**

september-october 2016 / retrofitmagazine.com

retrofit

*Mission Accomplished:

**Fine Arts and Film Find a New
Home at the University of
California Berkeley**

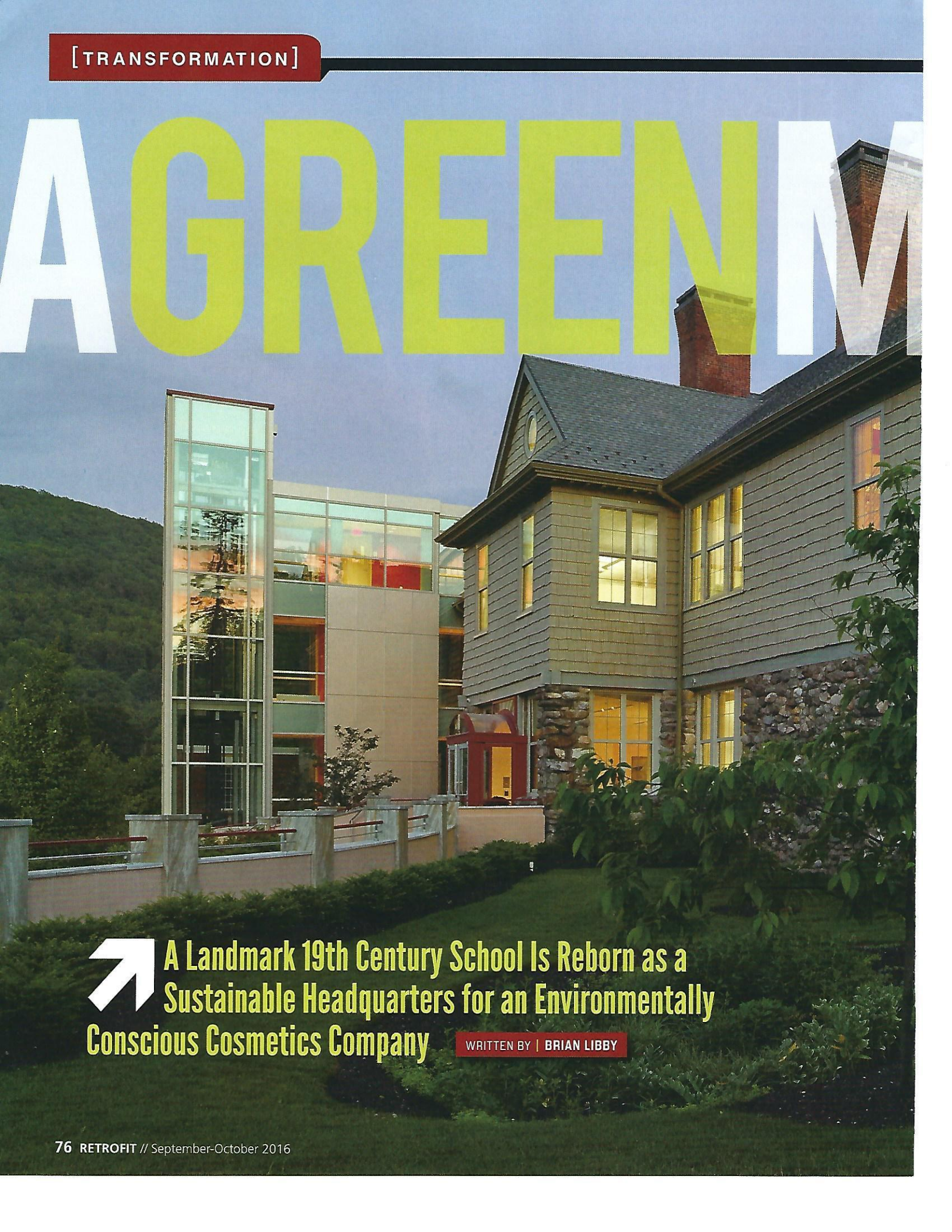
+ More Education Projects

***TREND ALERT:**
*changing LED
technology*

IMPROVING YESTERDAY FOR TODAY

[TRANSFORMATION]

A GREEN NEW



 **A Landmark 19th Century School Is Reborn as a Sustainable Headquarters for an Environmentally Conscious Cosmetics Company**

WRITTEN BY | BRIAN LIBBY

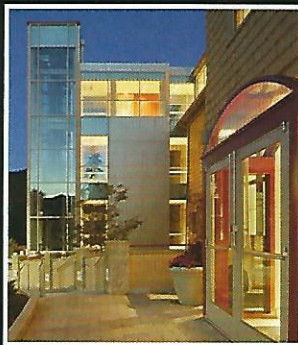
TAKEOVER



For more than 120 years, the William Cullen Bryant School has stood as a landmark of Great Barrington and the Berkshires region of western Massachusetts with its distinctive arts and crafts design and central location just off Main Street. When cosmetics magnate and preservationist Jane Iredale was seeking larger quarters for her locally based company—Iredale Mineral Cosmetics Ltd.—a few years ago, she zeroed in on the school as an unorthodox yet inventive solution.

New York-based Croxton Collaborative Architects (CCA) PC, known in green-building circles for designing landmark headquarters, including the Natural Resources Defense Council and the National Audubon Society, both in New York, was brought on board for the transformational project. “Bryant was beautifully put together—very sturdy in terms of the building technology of the time,” says CCA President Randolph Croxton. “There was this sense of pulling from nature, not doing very elaborate decorative treatment but being extremely straightforward, expressing the local materials being used: the wood shingles, the boulders forming its base and the local sourcing of all the materials. And it’s a very important touchstone for many of the people in Great Barrington. During the project, we’d constantly hear people saying, ‘This is where I went to third grade.’”

Following the construction of a new regional elementary school 5 miles outside the town in 2004, the Bryant school sat vacant for more than a decade despite being an official Massachusetts Cultural Resource. Its fate and that of the nearby Searles Middle School (also dating to the 1890s) were uncertain at best. Now, Bryant is not only enjoying new life as the Iredale Mineral Cosmetics headquarters, but also helping to revitalize the town beyond its center.



PHOTOS: TIM HURSLEY

Retrofit Team >>

OWNER // Iredale Mineral
Cosmetics Ltd., Great Barrington,
Mass., janeiredale.com

**ARCHITECT & INTERIOR
DESIGN** // Croxton Collaborative
Architects PC, New York,
croxtoncollaborative.com

STRUCTURAL ENGINEER //
Robert Silman Associates PC, New
York, www.silman.com

MEP/FP ENGINEER // Dagher
Engineering, New York,
www.dagherengineering.com

CIVIL ENGINEER // Forsight Land
Services, Pittsfield, Mass.,
www.forsightland.com

FF&E AND COLORIST // Carl
Black, Hudson, N.Y., (518) 929-3481

LANDSCAPE ARCHITECT //
Okerstrom Lang Ltd., Great
Barrington, okerstromlang.com

GENERAL CONTRACTOR //
Allegro Construction Co. Inc.,
Lenox, Mass., www.allegro.com

**MECHANICAL/HVAC
CONTRACTOR** // F.E. Moran,
Northbrook, Ill., www.femoran.com

ELECTRICAL CONTRACTOR //
Comalli Group, Pittsfield,
comalli.com

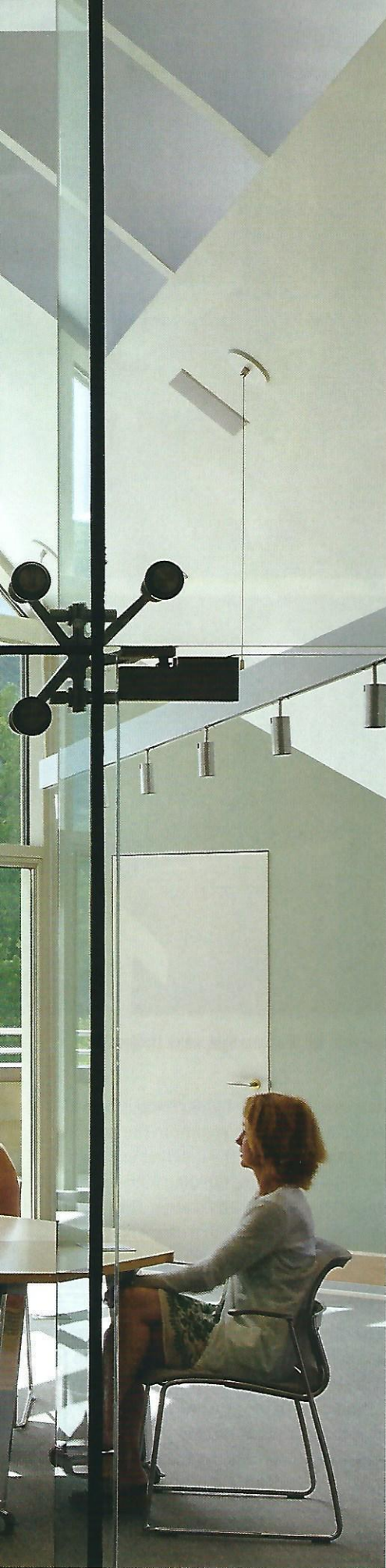
LANDSCAPER // Windy Hill Farm,
Great Barrington,
www.windyhillfarminc.com

**WOOD FLOORING
CONTRACTOR** // Shooks General
Floor Sanding, Stockbridge, Mass.,
(413) 232-7982

**TILE AND CARPET
CONTRACTOR** // Mercier
Carpet, West Springfield, Mass.,
merciercarpet.com

**FIRE-PROTECTION
CONTRACTOR** // Hampshire Fire
Protection LLC, Westfield, Mass.,
www.hampshirefirellc.com





"Great Barrington has a vibrant Main Street that's still thriving with local businesses. But when you get just off Main Street, you start to notice the empty buildings," explains Suzie Fowle, a wildlife biologist and longtime member of the Great Barrington Planning Board. "The Bryant school is part of a larger school complex of buildings, and it still feels quiet in that part of town, even though it's right by a public river walk. Seeing a building like this get revived and done beautifully and sensitively, it's wonderful, and it's also a beginning."

One with Nature

Iredale says the building and its restoration made an ideal statement for her company. "Our makeup brand always has been considered a natural brand. We use primarily minerals," she explains. "So we were interested in having something that was consistent with that image—something built out of natural materials, like the boulders around the building, the shingles, the wood floors. They all fit with the image of our brand, which is something natural but is well designed and works well. And we wanted a place that was unique, so when we brought people here from all over the world they would get what we were about as soon as they walk in the door."

The design couldn't just be a faithful historic restoration. Because the building is located less than 400 feet from the Housatonic River and part of the Housatonic River Watershed, a natural system that moves through several nearby towns, the site had to have optimal stormwater-runoff capabilities to ensure the building's resilience. CCA's design, therefore, includes a comprehensive rain-garden system integrated with a new stormwater detention tank. But the outside of the building is also a canvas for growing flowers and native plants, an Iredale Mineral Cosmetics tradition dating back to the days of including lavender from Jane Iredale's home garden in every package shipped to customers.

"The original project site was almost entirely asphalt, with no vegetation, and with enormous amounts of erosion and silt and particulates flowing directly into the river," Croxton explains. So the designer created what he calls "a necklace of rain gardens that are gravity fed as their pools fill up and overflow in sequence toward the river." Overall, the landscaping had two purposes. "On the one hand, it was a fundamental issue of sustainability and managing stormwater particulates and flooding, which are major issues adjacent to the river," he explains. "But they also turned out to be grace notes in Jane's expression of her gardens. It was a great combination."

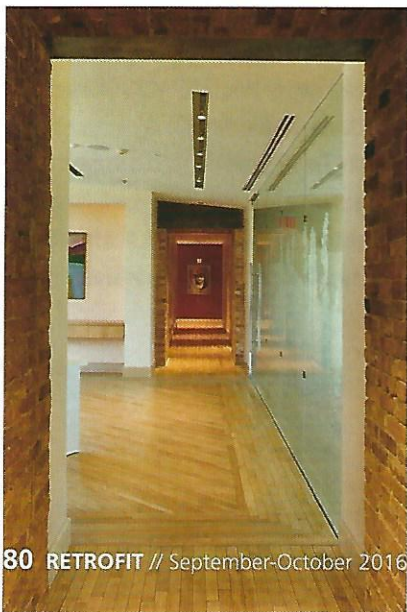
The extensive water-management plan was only a part of the sustainability drive that sets



Croxton Collaborative Architects was able to significantly increase the amount of usable interior square footage from 12,000 to 21,000 square feet without expanding the building's historic perimeter walls. The team carved habitable space out of the basement and the attic, which now is the most architecturally dramatic space. Massive skylights and a wall of new glass fill the attic with light.



The design retained and beautified the original maple flooring on the first and second floors. Jane Iredale also wanted the building to be full of natural light, which studies show makes employees more productive and aids in staff retention.



ambitious goals for a LEED Gold rating (but also goes beyond its requirements). The project diverted more than 90 percent of waste from landfills, for example. Thanks to added insulation and high-quality windows, the building uses 46 percent less energy than if it had been built by standard construction methods and materials and achieves a 27 percent cost reduction. The design retained and beautified some of the natural materials inside and out, such as original maple flooring on the first and second floors. And the client wanted the building to be full of natural light, which studies show makes employees more productive and aids in staff retention.

"It didn't seem conceivable to do a building that wasn't sustainable in some fashion,"

Iredale says. "It's much harder to do it with an existing building instead of from the ground up. Fortunately for us, the building was built very solidly. The people building it knew they were building it for their children. They put their hearts and souls into it. The whole thing fit into our philosophy."

21st Century Technology

The headquarters also makes ingenious use of a variable refrigerant mechanical system and heat exchanger, which uses condensers on the outside of the building to distribute air inside via fan units as needed, but in a much more efficient way than traditional HVAC ducts.

(continues on page 82)



THE ORIGINAL PROJECT SITE WAS ALMOST ENTIRELY ASPHALT WITH ENORMOUS AMOUNTS OF EROSION AND PARTICULATES FLOWING DIRECTLY INTO THE NEARBY HOUSATONIC RIVER. THEREFORE, CCA'S DESIGN INCLUDES A COMPREHENSIVE RAIN-GARDEN SYSTEM INTEGRATED WITH A NEW STORMWATER DETENTION TANK. THE OUTSIDE OF THE BUILDING IS ALSO A CANVAS FOR GROWING FLOWERS AND NATIVE PLANTS.



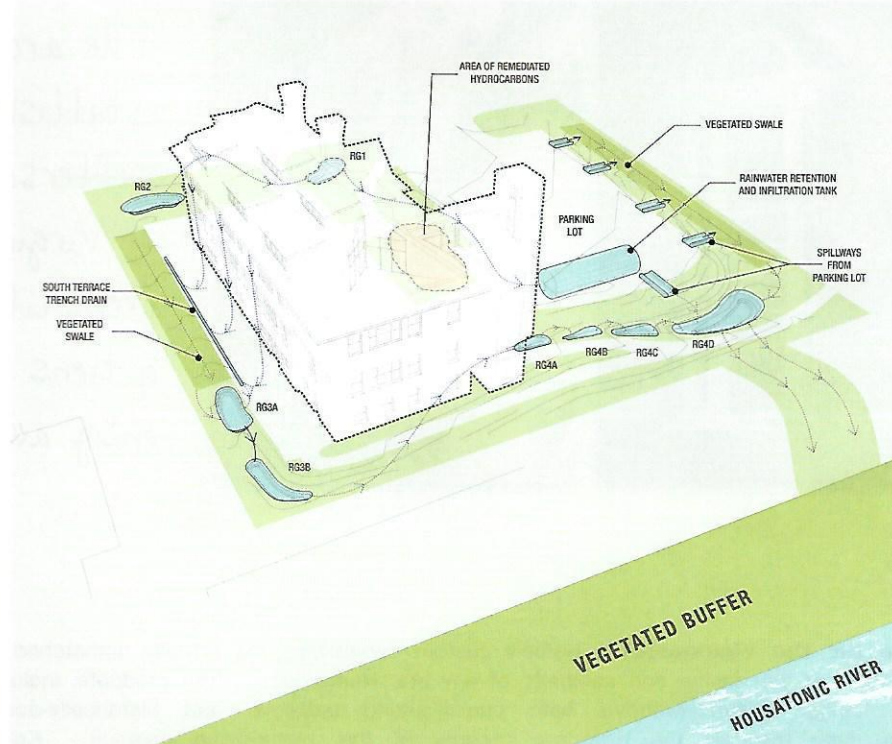
"There's no need to move large ducts and volumes of air through the space," Croxton explains. "Therefore, we were able to retain the original geometries of the ceilings and the spaces without intrusion."

The 19th century building also needed modern conveniences, including an elevator. But rather than trying to wedge the elevator or stairs into the old building, CCA created a new freestanding steel and glass circulation tower, comprising an elevator and staircases; the tower is connected to the original building

via a bridge. "With the glass elevator on the outside, the building looks like a mix of real authenticity with a modern flair," Iredale says.

Croxton argues there is no one correct approach for how to style an addition and that context is everything. He says: "We do a lot of renovation and restoration work. Sometimes it is much better to take the new element and make it visible by the way it's detailed and assembled, but to use a complementary material that doesn't call attention to itself, so that it still is clearly of its own time, but it doesn't

LAND USE & SITE ECOLOGY



become a strong contrast. In this case, the original building itself is so unique, with these enormous boulders for this whole first floor and then shifting to the large wood shingles and composition coming up to this very large eyebrow overhang, that there was no way—and we felt it would be completely inappropriate—to mimic that. We felt it was best to be as sort of spare and clean and, if anything, reflecting in the use of the glass, mirroring the natural setting and the building itself and really standing away from the building.”

The architects were also able to significantly increase the amount of usable interior square footage from 12,000 to 21,000 square feet without expanding its historic perimeter walls by carving habitable space out of the basement (digging out perimeter walls to allow windows) and the attic. “It’s really the most architecturally dramatic space,” Croxton says of the attic, where massive skylights and a wall of new glass fill the area with light.

New Bonds

Since moving in earlier this year, Iredale employees have been quite happy with the new space. “Overwhelmingly, when

outsiders and visitors come to the building, they’re just gobsmacked,” Jane Iredale says. “There are so many touches, from the lavender-etched glass walls to the way they were able to maintain the full height of the windows even with the infrastructure in the ceiling, and the way we were able to maintain the original floors. I don’t think there’s anybody in this experience that doesn’t love coming to work. Departments that weren’t interacting with each other are chatting and having fun. It’s a lovely bonding experience.”

What’s more, the company’s founder and namesake, a London native, believes historic building renovations, such as this one, have a value that can’t be fully assessed in terms of dollars or even LEED credits. “It just resonates with everything in my being, from the smell to the way the floors creak to the leaded windows,” Iredale says. “It puts things into perspective for you. The building has been standing for more than 100 hundred years. In Bryant, you know this was populated with kids. We left the marks to remind us there is history here and people grew up here. I love that feeling about a building, that I’m just a small part of a big picture. It keeps you humble.” 

Materials >>

METAL CLADDING // Alucobond, www.alucobondusa.com

ALUMINUM STOREFRONT AND CURTAIN-WALL // Kawneer, www.kawneer.com

ELEVATOR // Otis Gen2, www.otis.com

LIGHTING, DIMMING SYSTEM, LIGHTING CONTROLS // Lutron, www.lutron.com

WINDOW GLASS // PPG Solarban 70XL Glass, www.ppgideas.com

STRUCTURAL GLASS // ISG, www.structuralglass.com

DEMOUNTABLE PARTITIONS // Dirtt, www.dirtt.net

ETCHED GLASS // Skyline Design, www.skydesign.com

COUNTERTOPS // Solid Surface Silestone by Cosentino, www.silestoneusa.com

PAINTS AND STAINS // Liberty Paint Corp., libertyonthehudson.com

FLOOR AND WALL TILE // Lea Ceramiche, www.ceramichelea.it, and Ann Sacks, www.annsacks.com

MARBLE // Blue Cloud Marble, bluecloudmarble.com

WOOD FLOOR FINISH // Bona, us.bona.com

BRICK PAVER // Hanover, www.hanoverpavers.com

RETAINING WALL // Versa-Lok, www.versa-lok.com