Exterior envelope saved time and money over brick

OUTSULATION® SYSTEMS

BY dryvit

Columbus, Ohio got a fanciful new addition to its downtown skyline late last year when the 13-story **Le Méridien Columbus, The Joseph** opened its doors for business.

The 135-room boutique hotel showcases several striking finishes from Dryvit, including 15,000 square feet of Custom Brick™, 12,000 square feet of Reflectit™ and 5,000 square feet of Lymestone™ – all acrylic-based finishes applied in shop to Dryvit's Fedderlite® panels.

Fedderlite panels were developed in the 1980s and are comprised of continuous insulation (CI), base coat, fiberglass reinforcing mesh, finish and an extruded aluminum channel. At Le Méridien Columbus, the panels were installed over 45,000 square feet of Dryvit's liquid applied, air/weather resistive barrier called Backstop® NT.

While Dryvit's Outsulation® Plus MD system proved to be a success on the new hotel, it wasn't design architect **Arquitectonica**'s first cladding choice for the hotel. A brick veneer accented with metal panels was specified but budget constraints resulted in several design revisions, one featuring conventional stucco from the third to 13th floor, explains Robert Aitcheson, the New York-based architectural firm's project manager for the boutique hotel in Columbus.

Project Summary:

- **32,000 sq. ft. of Custom Brick, Reflectit and Lymestone finishes on Fedderlite panels at new Le Meridien Columbus—135 room boutique hotel in the heart of Columbus, Ohio**
- **45,000 sq. ft. of liquid applied Backstop NT installed immediately after sheathing, allowing for interior work as the project rose 13 floors**
- **Panels installed over five months from mast climbers and swing stages**

John Powers, Dryvit regional sales manager for the region, made a strong case against stucco based on the fact that the stucco system did not meet the ASHRAE requirements for Ohio and there was no engineered method for connecting the stucco to the specified light gauge metal frame.

To persuade the developer to look at a Dryvit Outsulation system instead, Rob Little, vice-president, **Little Construction**, created a mock-up using three-by-three-foot Fedderlite panels featuring Custom Brick, Reflectit and Lymestone finishes. “We showed them (developer) how fast the panels went together and that they met all the requirements for continuous insulation.”

Furthermore, that panelized system met code requirements for the air/moisture barrier and it could be accommodated in a light gauge structural steel frame.

“There is a huge difference in the windload requirements of Dryvit’s Outsulation systems and the dead weight of the foam compared to the stucco,” Little says, adding that at about 2.5 pounds per square foot, Outsulation is upwards of 75 percent lighter than stucco.

Further rationale for selecting the panelized Outsulation Plus MD System for the cladding was the tight construction site – too small for field-applied cladding systems. “To the north and the south we were actually working over someone else’s building,” points out Little. Scaffolding was only an option in the back lane (closed for about two weeks) and at the front for a few days.

Interesting project quotes:

- **“We quickly came to see the advantage of (Fedderlite) panels for this job.”**
- **“We showed them (developer) how fast the panels went together and that they met all the requirements for the continuous insulation.”**
- **“It was a very fast job. It seemed slow in the beginning because they were getting measurements but then all of a sudden they would set 20 –30 panels a day.”**
- **“It would have taken a lot more time and been more difficult to do a brick veneer installation (off of scaffolding) and thus more expensive.”**

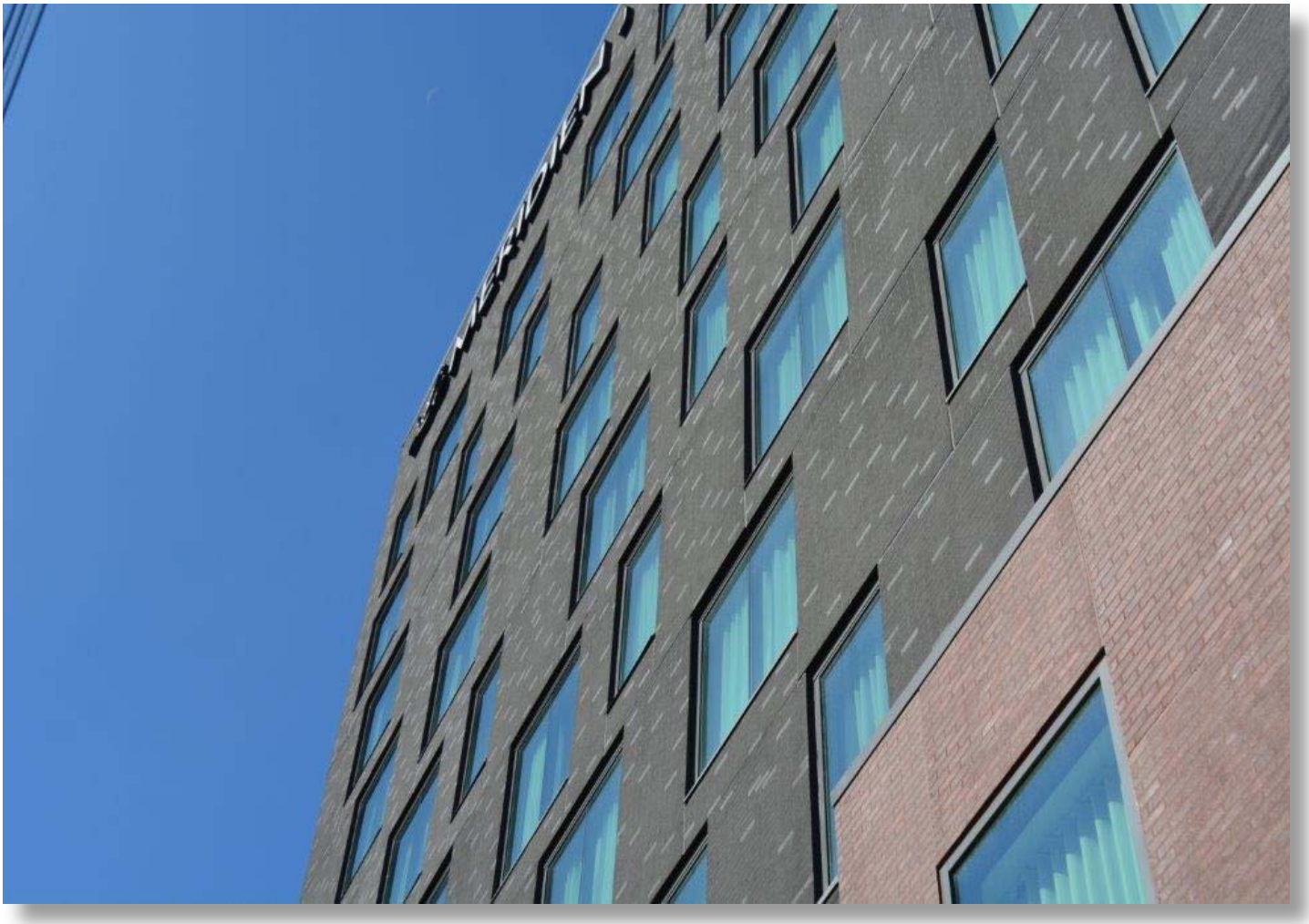
"The city wasn't going to allow us to close the two roads down for eight months which is how long it would have taken if we went with field applied EIFS."

Robert Sutton was the project manager of **Reitter Stucco**, the panel installer. Reitter, which had completed a smaller field-applied EIFS contract across the street, initially priced the hotel in field-applied EIFS. "We quickly came to see the advantage of (Fedderlite) panels for this job."

Sutton says panelized systems are preferable on any project where bad weather is inevitable or where the project is over four stories high because building scaffolding past four stories "is pretty difficult. You are better off using some kind of swing stage or mast climber (with panels) for the install."

Powers points out another reason the Fedderlite panels were a smart choice. "The number one thing that developers want to achieve is critical path shell dry-in (a weather-tight building) quickly so they can start work on the interior." With Fedderlite, the air/water resistive barrier is installed immediately after framing and sheathing is completed for each story. The windows are then set and the Fedderlite panels are ready to go up.

Powers says generally with other types of panelization or modular methods shell dry-in



happens after the last panel is set. “Let’s say we set the last (Fedderlite) panel in the fifth month, ultimately the interiors could already be up to 50 percent complete. It offers the ability to start interior work/finishes much earlier in the project schedule.”

The panels – upwards of nine by five-feet (some were more than 10 by 10-feet) set floor line to floor line – are comprised of three inches of rigid foam to achieve an energy rating of more than R-12. Code requirements are R-10. Once the windows were set, Little’s crew took field dimensions and commenced panel fabrication. Using Z-clip fasteners and Dryvit’s AP Adhesive™, the panels were glued and screwed to the walls – one elevation at a time. Weeping tubes were installed every second or third floor to allow for moisture drainage.

Weighing only about 90 pounds each, the large panels were easily installed by two workers. “We delivered a skid of panels every second or third day, and they would offload them by hand, take them up on swing stages and install them,” points out Reitter Stucco’s Sutton.

Installing the 1,250 or so panels took about three months. “It was a very fast job. It seemed slow in the beginning because they were getting measurements but then all of a sudden they would set 20-30 panels in a day,” says Little who spent time teaching Reitter’s two crew leaders on the installation process.

Of the three Dryvit finishes on the hotel, Lymestone was the easiest to install because it doesn’t require mortar joints to line up, says Sutton. Reitter had experience with Lymestone

Project Name:
Le Méridien Columbus
Columbus, OH

Design Architect:
Arquitectonica
New York, NY
www.arquitectonica.com

Developer:
Pizzuti
Columbus, OH
www.pizzuti.com

Architect:
ESG Architects
Minneapolis, MN
www.esgarch.com

General Contractor:
Brasfield & Gorrie
Birmingham, AL-
www.brasfieldgorrie.com

Panel Fabrication:
Little Construction
Greenfield, IN
www.littleconstruction.net

Panel Installer:
Reitter Stucco, Inc.
Columbus, OH
www.reitterstucco.com

and Custom Brick but had never applied Reflectit. That installation was more challenging. “We had to achieve an extremely smooth finish -- almost like the finish on a new automobile.” To meet that objective involved four to five steps, including two sanded base coats followed by two coats of Skimit™, Color Prime™ and then Reflectit.

“There’s a big advantage to panels versus field applied because you can’t install it (Reflectit) on just any day,” explains Little. “It has to be a nice, calm day and you have to do the job when there isn’t a lot of sun on the walls which could cause it to dry out too quick.”

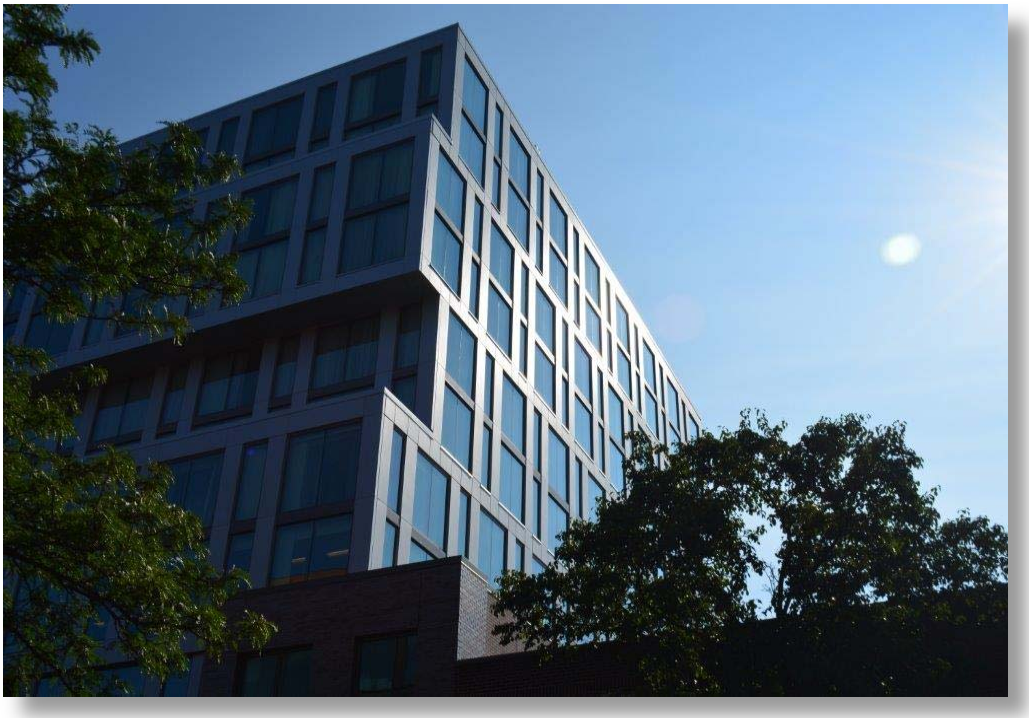
Reitter received and stored the Fedderlite panels at the site and at its shop in

Columbus. Little fabricated the panels at its shop in Greenfield, Indiana with aluminum extruded channels that were installed into routed joints in the insulation foam boards – sticking out about ¾-inch on either side to fasten to the substrate. “You do all the steps, the back wrap, base coats, primer and finish in your warehouse,” says Little.

Site measurements had to be precise – blueprint measurements were not accurate enough – to ensure the panels were sized correctly.

Little says applying the finishes in factory versus in the field saved time and assured quality control. “Speed wise, I can do a crown moulding twice as fast if I am doing it on the ground than if I’m up many stories on the side of a building.”

Prior to starting the project, Dryvit had to satisfy Arquitectonica that it could make a Custom Brick finish in keeping with the Endicott Bricks specified for the first two floors of the hotel.

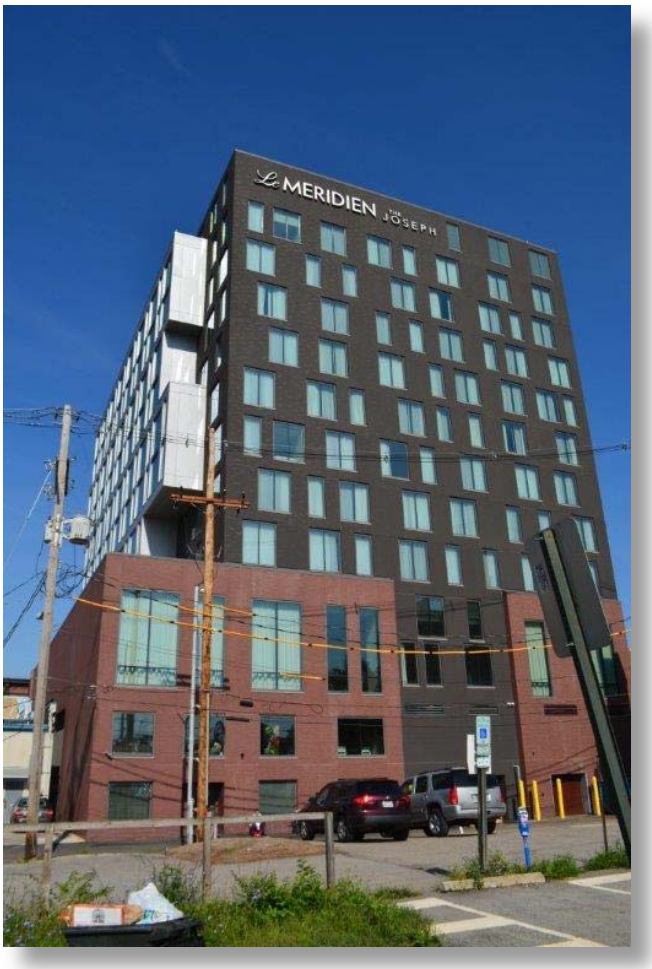


Choosing a manufacturer with a proven track record “is very important,” the architect adds. “It was clear from the outset that they (Dryvit) were there to provide samples etc., and then provide us the support in the field to get the job done properly.”

Based on specified samples of the brick and mortar that Arquitectonica sent to Dryvit, both the brick and the grout colors were matched perfectly, says Little. Mockups of the finishes also had to be approved by an esthetic review board for the City of Columbus. “There are many variations of colors and textures of the brick and grout that we can make up,” says Powers.

Arquitectonica’s Robert Aitcheson says compared to a brick facade, the Outsulation Plus MD panelized system saved time and money. “It (Outsulation) was a lot easier to install especially because they created large panels (up to 9 by 5-feet). It would have taken a lot more time and been more difficult to do a brick veneer installation (off of scaffolding) and thus more expensive.”

Aitcheson says when a project’s budget is tight but high thermal performance is required, Fedderlite panels with custom finishes can be a viable cladding option.



Compare Dryvit Outsulation Systems to Brick

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OUTSULATION® SYSTEMS

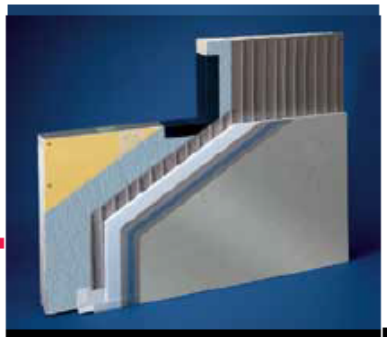
VS

	DRYVIT OUTSULATION SYSTEMS	BRICK
ATTRIBUTES		
Construction Method	Field Applied or Pre-Fabricated	Field Applied or Pre-Fabricated
Product Lead Times	Short	Medium
Construction Coordination	Simple	Challenging
Single Source Wall Assembly Warranty	Yes	No
Shop Drawings	Pre-Fabricated Only	Pre-Fabricated Only
Wall Attachment	Adhered - No Penetrations	Supported - Anchor Penetrations
Repairability	Easily Coordinated	Challenging
Life Expectancy	Design Life of the Building	Design Life of the Building
Weight - lbs /sq ft	1.0 - 2.0 lbs / sq ft	40 - 50 lbs / sq ft
Wall Height Limitation	No	Limited by Capacity of Building Structure
ENERGY CODE COMPLIANCE		
Integrated Continuous Insulation (CI)	Yes	No
Integrated Air Barrier*	Yes	No
Material Air Leakage*	Yes	Yes
Assembly Air Leakage*	Yes	No
Thermal Bridging	No Thermal Breaks	Thermal Bridging at Anchors
R-value Contribution	Yes	No
ARCHITECTURAL DIVERSITY		
Freedom for Architectural Style	Yes	Limited
Various Texture Options	Yes	Limited
Custom Color Program	Yes	Limited
High Performance Colorant Technology	Yes	No
PERFORMANCE TESTED		
Weatherability	Yes	No
Drainage Efficiency Tested	Yes	No
Water Penetration	Yes	No
DURABILITY TESTED		
Impact Resistance	Standard to Ultra-High	High
STRUCTURAL TESTED		
Florida NOA Hurricane Listed	Yes	No
Transverse Wind Load	Yes	No
FIRE TESTED**		
NFPA 285 "Material" Tested	Yes	N/A
NFPA 285 "Wall Assembly" Tested	Yes	No

*For Dryvit systems with secondary air/weather barriers **Applicable where continuous insulation is used

For complete system information and testing, call Dryvit's Technical Services at 1-800-556-7752 ext. 9, or visit us on the web at www.dryvit.com.

Compare Dryvit Outsulation Systems to Metal Panels



	DRYVIT OUTSULATION SYSTEMS	METAL PANELS
ATTRIBUTES		
Construction Method	Field Applied or Pre-Fabricated	Pre-Fabricated
Product Lead Times	Short	Long
Construction Coordination	Simple	Challenging
Single Source Wall Assembly Warranty	Yes	No
Shop Drawings	Pre-Fabricated Only	Yes
Wall Attachment	Adhered - No Penetrations	Mechanical - Framing System with Fastener Penetrations
Repairability	Easily Coordinated	Challenging
Life Expectancy	Design Life of the Building	Design Life of the Building
Weight - lbs /sq ft	1.0 - 2.0 lbs / sq ft	1.0 - 2.0 lbs / sq ft
Wall Height Limitation	No	Yes - Product / System / Construction Type Specific
ENERGY CODE COMPLIANCE		
Integrated Continuous Insulation (CI)	Yes	No
Integrated Air Barrier*	Yes	No
Material Air Leakage*	Yes	Yes
Assembly Air Leakage*	Yes	No
Thermal Bridging	No Thermal Breaks	Thermal Bridging at Joints / Edges and Attachments
R-value Contribution	Yes	Yes - Insulated - Does Not Meet Intent of Energy Code for CI
ARCHITECTURAL DIVERSITY		
Freedom for Architectural Style	Yes	No
Various Texture Options	Yes	Limited
Custom Color Program	Yes	Yes
High Performance Colorant Technology	Yes	Yes
PERFORMANCE TESTED		
Weatherability	Yes	Yes
Drainage Efficiency Tested	Yes	No
Water Penetration	Yes	Yes
DURABILITY TESTED		
Impact Resistance	Standard to Ultra-High	Low to High
STRUCTURAL TESTED		
Florida NOA Hurricane Listed	Yes	Yes
Transverse Wind Load	Yes	Yes
FIRE TESTED**		
NFPA 285 "Material" Tested	Yes	Yes - Certain Types / Verify Compliance
NFPA 285 "Wall Assembly" Tested	Yes	Yes - Certain Types / Verify Compliance

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