



A Second Chance

Memorial Healthcare System administrators were concerned. The management of MHS, a family of six hospitals based in South Broward County, Fla., knew they'd dodged a bullet. While Hurricane Wilma, one of the deadly Florida storms of 2005, struck hardest 150 to 200 miles away from their Memorial Hospital West (Hollywood) and Memorial Regional Hospital (Pembroke Pines) facilities, the latter did incur minor damage. MHS realized that shifting winds and the simple law of averages could just as easily put their facili-

Florida hospitals get a new system that enhances existing exteriors, leaving operations undisturbed

By Peter Bowerman

ties smack dab in the path of the next harsh storm.

"During a hurricane, patients' families ride out the storm in the hospital to be with their loved ones. So, they're all our responsibility. We have to do everything we can to ensure our facilities *and* everyone in them are protected," says Joe Alcure, head of construction for MHS.

They'd heard the stories of hospitals under siege from massive water intrusion—necessitating wholesale patient evacuations. Could MHS's hospitals with EIFS cladding withstand Category 4+ winds, administrators asked? MHS's first call was to its 20-year building contractor, Miramar, Fla.-based Universal Drywall Inc. UDI promptly initiated extensive testing through Construction Testing



Corp. in Miami, with Sto Corp. providing the testing materials.

WEAK LINKS REVEALED

According to Lance Ruble, then-owner of UDI, the company did thousands of hours of testing on different wall assemblies for about a year. The primary test conducted was for “negative pressure” (i.e., the “pulling” force a hurricane exerts if its powerful winds get behind an exterior wall), administered to ensure the existing EIFS stayed adhered to the substrate (i.e., concrete block or sheathing). Impact testing, which revealed serious vulnerabilities in the concrete block, was the clincher for MHS.

“A 2x4 went right through the block. We realized at that moment we needed to put some high-impact protection on these buildings,” Alcure says.

“When we got involved, Memorial Regional Hospital, the flagship facility of MHS, was the product of nearly 50 years of gradual construction, with different types of structures and finishes added onto the hospital over time, and often varying widely

within the same building,” says Bill Englebrecht, owner of UDI.

The industry knows and the other experts in building envelopes tend to agree that adhered EIFS will withstand higher and more sustained wind pressures than mechanically applied EIFS.

The proof came as testing on the facility revealed where the EIFS had been adhesively applied on top of concrete block. While those areas *passed* the negative pressure tests, MHS management still wanted the peace of mind an extra level of protection would provide.

Smaller, newer Memorial Hospital West was in better shape, and negative pressure testing revealed the vast majority of the existing EIFS cladding to be structurally sound.

“We knew MHW was solid and could withstand 120 mph winds, but with past storms clocking winds of 165-170 mph, we knew it needed to be strengthened,” says Alcure.

MAJOR OVERHAUL

While the desire for a strengthened hurricane-resistant perimeter wall





around both hospitals was straightforward, the logistics of executing major repairs on operational hospitals posed some daunting challenges.

“It’s not like we could shut down whole wings of the hospital to do a major overhaul,” says Englebrecht. “Normal operations had to remain undisturbed.”

Sto was called, with whom UDI has had a 25-year working relationship, to devise a creative solution that meets Missile level “E” standards (for “essential” structures). The result was its product StoTherm Storm Systems, a variation on EIFS.

“We’re talking about a system comprised of materials with a long and proven history. We’re simply creating something new and innovative with them, and in this case, the system showed extraordinary performance,” says John Edgar, Sto senior technical service manager while discussing the new system.

In the end, Sto created several variations on its StoTherm product, dubbing the new offerings “StoTherm Storm System AT-E for New Construction,” and “StoTherm Storm

System for ‘Encapsulation’ of Existing Structures.”

According to Sto, both systems featured water penetration resistance of up to two hours when tested ASTM E 331 at 6.24 psf (approximately 50 mph of sustained wind with 8 inches of rainfall per hour).

As for this particular scenario, Sto’s Edgar notes, “From time to time, we’re brought into situations where total demolition and reconstruction of a structure isn’t an option. Instead, we start with the existing structure, and through innovative use of our materials, we can often improve the performance and extend the life of that structure—with minimal disruption to the building or its ongoing operations. This was one of those cases.”

A SECOND SKIN

Work on Memorial West in Hollywood began in 2005. Because the hospital’s existing EIFS was in good shape, UDI began a process of “encapsulating” the fundamentally sound exterior walls installing, as Alcure



puts it, “a hurricane-resistant skin over an existing cladded building. It looked so good we did the same for Memorial Regional Hospital.”

Work on that second facility began in August 2006 and ran through November of 2007. In the end, the \$40 million project entailed 350,000 square feet of product to create an enhanced framework that met new hurricane standards.

TWO-WALL SYSTEM

Rick Kain, UDI contractor on the Memorial Regional project, explains the details of the StoTherm Storm System “Encapsulation” procedure: “Because of the varying conditions throughout the complex, the project entailed two repair scenarios. For roughly two-thirds of the facility, and to minimize the disruption to hospital operations, we reframed new walls in front of existing exterior walls. We then put in a second layer of windows—cre-

ating, in essence, a two-wall system. Then, later on, when we had more time, room by room, we’d take out the old windows from inside the building and seal the old wall to the new one.”

Englebrecht explains the intriguing procedure by which the exterior wall was left intact: “We opened up a 2-foot-high horizontal strip in the wall at slab level of each floor, installed a 14-gauge clip to the slab at each vertical 6-inch 16-gauge stud. The clips stuck out through the old wall, and we then sealed up that 2-foot hole with DensGlass. We then continued with the reframing, creating that second wall, complete with its own windows. And all without disturbing the existing perimeter wall.”

In the other one-third of the cases, where the existing EIFS cladding had been mechanically fastened onto the block (and which had failed the negative pressure test), Kain notes, “We

tore off the existing EIFS cladding down to the block, and put Sto’s second system (the StoTherm Storm System AT-E for New Construction) to work.”

The system was almost identical to the “Encapsulation” procedure except for the framing, added sheathing, and thicker EPS insulation board (i.e., 3 inch vs. 1½ inch).

“We enjoy challenges like these. Rather than just tear down a building and spend a whole lot of an owner’s money to start over, we like to ask, ‘Using the existing structure and our materials, what can we do, within reason, to extend the life of a building—and with minimal disruption?’” **W&C**

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The Top
Performer
in Las Vegas
Gets a
Standing
Ovation
Every Day.

So How Did Sto Grow to be the Top Performer in Las Vegas Construction?

The old-fashioned way. We earned it – with a potent combination of superior products, *StoMachine Technology (SMT)*, our state-of-the-art product delivery system, matchless service, and a talented distributor.

Sto Products Share the Spotlight with StoMachine Technology in Las Vegas.

Overwhelmingly, Sto's Vegas projects employ their *StoTherm® Classic EIFS* system: *Sto BTS® Silo* (used in both the *StoTherm* and *StoTherm NExT* systems), is the adhesive and base coat, followed by mesh and the finish.

Julian Leos was an early Sto product adopter, first using the products in Texas in 1979. He says, "I've tried all different products and BTS Silo's my favorite. It doesn't get tight so fast. You can leave the product in the pump, sitting out in 110-degree heat; take 30 minutes for lunch and it's ready to go when you get back. With other products, you get through half a pail and it's already drying up."

"I've been in this business for 18 years, and *Sto BTS Silo* is probably the best base coat I've ever used. It's just a phenomenal product. Spreads like butter. The quality of your finish is only as good as the quality of your basecoat. If you can make your basecoat as smooth as glass, like you can with this product, your finish is going to be good."

The Sto Service Edge

While great products and equipment make for a strong showing, add in superior service and you've got a tough act to follow. But, in Vegas, service isn't just a nice thing; it's essential, as Sto distributor Rich Sweetman notes: "You can't have 60 plasterers at \$50 bucks an hour sitting around waiting for product to show up or be mixed, or a machine to be fixed. You have to service the customer."

How does Sto stack up? Says Julian Leos, "If you have a problem, Sto – or Westside – always jumps right on it. In the past, the competition would miss a deadline and they always had some excuse – truck broke down, snowstorm in Utah, you name it. They were so big; I guess they figured we wouldn't go anywhere else. And when I switched to Sto, they came running back. But I told them, it's not just materials and price, it's the equipment, the knowledge of that equipment, and superior service that makes the difference. And they just weren't offering the whole package."

Sto's Personal Touch

Dave Ewell, with Raymond, says Sto makes him feel valued as a customer. "From time to time, Regi Mendoza (sales rep for Sto) will ask me what kind of products I'd like to see. It's not just, 'Here's our product line. Period.' It's a collaborative effort. They listen to me." On a personal note, Ewell adds, "With other companies, I may know the rep, period. But, I know all the Sto guys out here – and that's the case even with Westside (the distributor) between Sto and us. That says a lot about Sto. They're accessible."

Mark Lory, of Ford Contracting, echoes those sentiments, recalling product problems with the competition in the past and being unable to ever get someone from corporate to come meet with him to resolve it. With Sto, he says, "I have never once had that problem. Anytime I ask for the cavalry, they come. The local rep, regional manager, and even the VP from the company. It's amazing. That's what sold me on Sto, and that's what'll keep me with Sto."

Sweetman adds, "If there's ever a problem with a finish or a color not coming out quite right, Sto steps up 110 percent to fix it. They've never left me or one of my customers hanging out to dry. They always take responsibility, and I'll tell you what: that's a heck of a thing in this market."

Savings at Every Step

Sweetman sums it up, highlighting the formula that's brought Sto this far and providing a glimpse into the future: "Whether you have a four-man or 40-man crew, at every step of an EIFS application – Sto has a machine and products that'll save contractors money. And when they realize the cumulative project savings – 30 to 40 percent – and that they can get it all done with one company, they start stepping up to the big jobs they might have passed on before because now they can be profitable."

P.S. The Future is Bright

Vegas hasn't just been a great success story; it's been a proving ground for Sto products and *StoMachine Technology*, and the results bode well for future expansion into similar climates. As Sto's Regi Mendoza points out, "Vegas is one of the world's worst climates, and we've used the products and equipment under these extreme conditions for years and through millions of square feet, and they've performed incredibly well."

The Sto Vegas Lineup

Sto Distributor (Las Vegas): Westside Building Materials

Dennis Curry, General Manager/VP
Rich Sweetman, Sto Sales Specialist SMT

Ford Contracting:

Sto Projects:

Palazzo (at the Venetian; NExT)
Grandview Towers
Grand Chateau
Fairfield (Phase Three)
South Point Hotel
Panorama (Phase Two)

The Raymond Group

Sto Projects:

MGM Residence
The Wynn Hotel/Casino
Town Square (mixed use)
Signature at MGM Grand
World Market Center
Sands Convention Center (NExT)

M.J. Dean Construction

Sto Projects:

Mandalay Bay Convention Center
Sky Condos
Palms Towers and Concert Venue
Fairfield Inn and Resorts
Panorama (Phase One)
Fairfield (Phase Two)

Standard Drywall

Palazzo Lo-rise

THE PROBLEM

**EASTERN PANHANDLE TRANSIT AUTHORITY
(E.P.T.A.) – MARTINSBURG, WV
EPTAWV.COM**

E.P.T.A., a transportation entity based in Martinsburg, WV, provides bus service to Berkeley and Jefferson Counties, as well as Demand-Response service to citizens needing special transit services in select areas, by reservation.

Thanks largely to unavoidable errors when drivers manually count passengers, there was pervasive inaccuracy in passenger counting and significant challenges with voice announcements. Drivers were conducting passenger counting manually with paper and pencil. If two people boarded, one with a bike and one in a wheelchair, drivers had to log those details by hand. In order to stay ADA-compliant, they had to deliver stop announcements correctly, loud enough to be heard, and frequently enough on a given route.



THE SOLUTION

- Combining Passio and ParaPlan - E.P.T.A. was the first client to use both solutions together, creating the ideal service.
- Electronic Passenger Counting (EPC) - Allows vehicle operators to simply tap to count passenger boardings and off-boardings.
- Passio Navigator
 - Passenger Data - All data is securely sent to our system and available for download, exporting, and more.
 - Configuration - E.P.T.A. has full access to make all updates and adjustments to routes, stops, and announcements.
- Automated Voice Announcements (AVA) - Passio's AVA solution is simple to set up, robust in functionality, and easy for operators to use in the field.
- Passio Transit - Used to control passenger counting, and voice announcements, and more on-board.
- ParaPlan - A platform for serving the scheduling, tracking, and reporting needs NEMT & paratransit providers.

Elaine Bartoldson, Transit Director -

“Passengers were lodging regular complaints with us about both delays in services and unintelligible voice announcements.”

THE RESULTS

- An 11% increase in ridership since implementing EPC, which allowed E.P.T.A. to finally capture accurate ridership numbers.
- With accurate, easily accessible data in hand, E.P.T.A. can more confidently take steps to improve their system's routes and stops in order to serve their customers better.
- Riders report a more pleasant riding experience thanks to being able to better understand voice announcements.
- Drivers, who can now focus on driving the bus and keeping everyone safe—not handling multiple distracting tasks—report greater job satisfaction.
- Managers note full compliance to ADA regulations
- A 9% increase in “on-demand” rides due to improved scheduling efficiency.
- During the COVID period, E.P.T.A. was able to easily accommodate a sharply increased demand (8-10%) for paratransit rides.



Amanda Sink, Deputy Director -
“These systems allow us easy access to accurate data. Everything is at our fingertips.”

THE FUTURE

Over the next five years, the accurate ridership and routing reports that E.P.T.A. generates, thanks to Passio's solutions, will be analyzed by consultants to determine if and when to drop certain stops, add others, realign routes, and enhance the service they provide to the riders who depend on them.

E.P.T.A. Director Bartoldson, tremendously satisfied with the personal level of customer care Passio provided from the start, said, “Passio's customer service goes above and beyond, making this an easy transition for drivers and our clients.”

Who knows where it will all lead? Notes E.P.T.A. Deputy Director Sink, “We've barely scratched the surface of what Passio's solutions can do for us.”

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Helping Clients Succeed Helps Sto Succeed *How Sto Strategic Accounts Won Over CVS (and Effectively Eliminated the Competition...)*

By Peter Bowerman

How do you make your value proposition so attractive, your customers wouldn't think of going anywhere else?

On picturesque Pacific Coast Highway in Redondo Beach, California, stands a super-sized CVS pharmacy. Redondo Beach enforces a strict architectural uniformity for commercial structures, virtually all construction in the area is an adobe/stucco look, and the CVS fits nicely into the landscape.

Yet, this “drug store on steroids” sports a construction system rarely seen in southern California: a StoThermNEXT EIFS system – with, incidentally, a StoTique finish to match the prevailing look of the area, instead of the standard textured finish.

Locking Up CVS

So, what's an EIFS system doing in the heart of Stucco Central? Well, Sto *is* EIFS, and now, whenever and wherever a new CVS store goes up, it's Sto and only Sto products being specified. How did *that* come about? By devising an innovative way to build, retain and reinforce customer loyalty – in essence, by out-thinking the competition.

How Sto's Strategic Accounts Group earned the loyalty of CVS, and virtually all its business is a story that's compelling both for its ingenuity *and* its simplicity.

Sto's Strategic Accounts program (SA) came to be in 1999. At the time, Sto simply had a National Accounts program (NA), whose job it was to get established, along with three or four other bidding vendors, on national account projects.

Changing the Rules

But as Chris Lazowski, Manager, Sto Strategic/National Accounts (and the creator of SA) explains, “The SA Group, which pursues opportunities with national chains in retail, hospitality, healthcare, high-rise condos, etc. – came about from a desire to sidestep our competition completely by significantly raising the value-add bar for the customer.”

Lasowski recalls, “I took a look at our company and all the services we offered our customers that our competitors didn't.” Sto had provided these extras, piecemeal, for years, but now made the decision to turn them into a bargaining chip. Lazowski continues, “A ‘what-if’ came out of that: ‘What if I bundled some of these services together in such a way as to be exceptionally valuable to national chain accounts, and was bold enough to say, ‘Buy my products exclusively – at normal prices – and we'll provide all these services free of charge.’”

Sto made exactly such an offer to CVS, with a goal of having the company’s decision-makers in architecture and construction mandate Sto products be used no matter where they built. But, as it was, this wasn’t just a clever marketing strategy; it was precisely what it would take to get in the door of CVS.

Fact was, CVS had used EIFS systems in the past, but had lots of problems. “Callbacks” – necessary repairs due to installation problems – were common. When Sto came in the door, CVS – who builds 300 new stores annually – saw them as simply another EIFS manufacturer. They’d been there, done that, and had no interest in revisiting it.

Making It Easy to Buy

Sto’s response? Lazowski recalls, “By offering a no-charge, value-added service package that would ensure proper installation of our systems, we addressed their main issue. Plus, with four times as many people in the field as our next closest competitor, we could deliver a level of on-site service and responsiveness our rivals couldn’t touch.”

In the past, CVS would say to their general contractors: “This is how we want our building to look. As long as it looks like this, it doesn’t really matter what products you use.” Now, it mattered. From that point forward, CVS knew that as long as they used Sto products, they’d get a whole host of services that would effectively meet their two primary demands: eliminate callbacks during the construction process *and* give them a 10-year service life on their buildings.

Tipping the Balance

So, what were these services that so decisively tipped the scales in Sto’s favor?

Plan Review Process

Sto would take the company’s proposed building plans and specs, bring them in-house, have an architect do a complete plan review, and generate a book of recommendations. As Lazowski explains, “An architect can look at what the client is proposing for a particular part of the building, and can say, ‘If you follow this plan, according to these specs, here’s where I foresee problems.’ So, we fix those things right out of the gate.”

Color Cards

The integrity of “branded” colors (think Coca-Cola red, or in this case, CVS red) is crucial to a company. To address this hot-button issue, Sto created an 8 ½” x 11” “color card” with an artist’s rendering of the CVS store being built. At the bottom of the card are color chips of Sto’s different products – with arrows pointing from the chips to the corresponding places on the building where those colors went.

The color cards removed all the guesswork from the process by doing two things: 1) it showed the people who put product up on the building exactly what colors went where; and 2) it allowed construction managers (who have thousands of details to keep track of) to carry around these cards and physically match it against the colors going up on the building. As opposed to eyeballing it and saying, “looks about right,” which isn’t good

enough. Lazowski reflects, “It was a very simple idea, but it provided enormous value to CVS: by ensuring the integrity of their colors, it addressed a critical quality control issue for them.”

Simplified Installation Guide

Typically, building installation guides are thick – hundreds of pages of drawings and plans. Contractors rarely even read such cumbersome manuals. Instead, because they’ve done this cladding or that finish many times before, they assume they know how to do it. Not necessarily. The result? An unacceptable number of callbacks.

Sto simply took the most critical installation details of their EIFS wall system – the 8-10 areas they’d historically had the most callbacks on – drew them up in isometric detail (i.e., clearly showing all individual parts and colors), and compiled them in a small, exceptionally easy-to-follow, six-page glossy brochure. The message was simple: “Follow these simple instructions, and the system will deliver optimal performance and maximum service life – minus the callbacks.”

By simplifying complicated processes into an accessible product, Sto made sure it would get read – and that the installation would go as it should. The end result of offering these services? “Callbacks on these building have been reduced to virtually nothing,” says Lazowski proudly. “We’ve ‘un-commoditized’ our offering. We were a commodity, and now we’re not.

Design Support

Sto has stepped in to help CVS with design challenges as well. When CVS recently wrestled with how to construct a new fiberglass trellis for their stores, Sto worked with CVS’ fiberglass fabricators to craft a solution that used only their finish – minus the EIFS cladding – so the added trellis perfectly matched the rest of the building.

In another case, Sto teamed with their contractor (who was also their distributor) to design and manufacture a pre-fabbed decorative cornice light box assembly – 8’-10’ in length – that could easily attach to the top of CVS’ older buildings (which featured unsightly exposed neon bulbs). It was a quick, cost-effective way to update the building to a more contemporary image. And rather than simply designing the addition – while leaving the production itself to CVS – Sto handled the job from start-to-finish.

As Lazowski observes, “Now you’re getting into the design piece of the business with them, which further cements your already strong position as primary vendor.”

Lazowski is quick to remind that while the Strategic Accounts piece gets a lot of attention, they haven’t ignored their National Accounts (NA) program. NA, by definition, is more competitive because many of those accounts are franchise operations, and the parent company – while understandably excited about the value-added extras offered by SA – can’t dictate what vendors their franchisees use.

Stacking the Deck

So, Sto created a hybrid solution for these scenarios called National Account Plus (NAP). Lazowski explains, “In return for offering a partial service package, the company allows us to modify their specification in a way that leans toward Sto. Sto is listed first in the spec, our 800 number is listed, and we have our products – and *only* ours – sprinkled throughout the spec.”

This naturally gives Sto a huge advantage. Says Lazowski, “If a contractor who uses, say, Sto and a top competitor, sees Sto written through the whole spec, he’ll typically fall to the Sto side.” While on a typical national account, Sto’s market share might be 25%, the NAP strategy effectively bumps that up to 50%. And meanwhile, over in Strategic Accounts, we’ll be up in the 90’s.”

The Sto Strategic Accounts blueprint has become a true “game-changer.” Says Lazowski, “Often, after seeing our presentation, clients will say, ‘Sounds great, but we need to let at least one more company tell their story.’ And we say, fine, because we know how it’s going to turn out. They call us back, and say, ‘Okay, let’s get started.’ Our job is easy, but it’s easy because of how we’ve positioned ourselves. We’re in the right place with the right tools, and we’re offering a lot more. If you were them, why would you go anywhere else?”

About Sto Corp.

Sto Corp., based in Atlanta, Georgia, is an innovative world leader and producer of a broad range of versatile cladding and coating systems for building construction, maintenance and restoration. Sto Corp. is ISO 9001:2000 certified and operates production plants strategically located to serve more than 170 distributor locations across North America. At research and development laboratories in the U.S. and Europe, Sto continues to revolutionize the industry with the highest quality products and application technology.

For more information, visit www.stocorp.com or call toll free (800) 221-2397 or (404) 346-7055.