Construction Team Achieves Heavily Detailed Marble Look With EIFS

Aesthetics of Addition Replicate Adjoining 60-Year-Old Original

Atlanta: The campus of Georgia State University is located in the center of Atlanta, two blocks from the state capitol. Founded as a night school in 1913, it was elevated to university status in 1957 and has grown steadily since then. By 1990 GSU’s executive offices were at the top of the list of overcrowded office space whose situation had to be addressed.

The decision was made to alleviate some of the congestion by constructing additional offices for the president and vice presidents. With little available ground on the campus and surrounding real estate priced at a premium, expansion upward from one of the university’s buildings seemed to be the most logical and cost effective solution to the problem.

EIFS Solves Budget Concerns

The building which was selected to receive the additional floor was the Alumni Hall, a structure clad in a marble facade which had been constructed during the depression era and originally was the Atlanta city auditorium.

Tom Mottern, the university’s staff architect, was assigned the project. Although he originally wanted to use marble on the addition, he realized that the cost for the marble might exceed the funding available. In anticipation of this problem he inserted an exterior insulation and finish system as a deductive alternative on the bid. The figures submitted by the bidders underscored dramatic pricing differences; the cost of completing the 12,000 square foot job in EIFS was less than half the cost it would have been in marble.

He then approached three EIFS manufacturers with his situation. His previous experience with EIFS has caused him to believe at least in theory that EIFS could be used to replicate the marble look. However, more tangible proof was required, not just for himself—the university executives had to see beforehand that an alternative material would work.
Sample Aesthetics

Mottern needed samples of the manufacturers’ systems, finished in a color matched to the white with black veined marble on the existing structure. Their immediate response to his request was critical and had to be completed within days.

One of the manufacturers he contacted was Sto Industries. Kim Fox, Sto’s sales and technical representative, coordinated her company’s response. Mottern was impressed by the rapid turn-around within which Sto fulfilled the sample request—only two days. And most importantly, their sample closely replicated the look of the marble, both in color and detail.

To confirm that his perception of the sample was objective, Mottern conducted a test. He attached the 2’ x 2’ system sample complete with routed joints and grout to a wall on the existing building. He then accompanied one of the university’s vice presidents to a point within 50 feet of that sample and asked him to find it. The color of the sample’s finish, which had been developed with the aid of a color computer, was so precise that the executive could not distinguish it from the rest of the wall. This proved to Mottern that the EIFS system which Fox had given him was a very close replication of the original. He had no qualms about accepting EIFS as an alternative to marble.

The general contract went to Tieman and Patrylo of Atlanta. The subcontract for a Sto exterior insulation and finish system went to Adams Drywall and Acoustics. The decision to use Sto materials was based heavily upon their demonstrated willingness and ability to produce samples and submittals and to provide any necessary assistance which the applicator might need to recreate the original look on the addition.

System Delivers Promised Detail and Color

Although the job contained several critical considerations, there was also much about it which was fairly standard to EIFS projects. The walls were constructed using 1.5 inch EPS over exterior grade gypsum. The use of 1.5 inch boards permitted the applicators to rout 1/4” reveals while leaving 1-1/4” of insulation at every point on the wall. Since the architect had specified the use of 10” framing studs and 6” batts of fiberglass insulation for the wall cavities, the primary functions of the exterior insulation were to facilitate the later attainment of specified aesthetics and to absorb building stresses rather than to provide insulation. However, a benefit to using the EIFS was the insulation value of approximately R 5.7 it would provide as a barrier at points where cavity insulation has no impact—over the cold joints such as studs, headers and sill conditions.

The EPS boards were attached to the gypsum using Sto’s Dispersion Adhesive, a 100% acrylic copolymer adhesive. Using 3/16” u-notched trowels to cover the boards, horizontal to their attachment, the crews rapidly completed this stage. Brian Lefevre, who is the manager for Adams, spoke very favor-
ably about Dispersion Adhesive’s contribution to efficiency on the jobsite: “We like it because it’s ready to use and it’s extremely creamy and easy to spread. But from an economic standpoint, we just find that it goes farther than other products and so contributes to a lower materials cost.”

After sticking the boards the crew confronted the most critical aspects of the application—the extensive detailing which was required and the need for a perfect match of the color and appearance of the new wall surfaces with those of the old. The detailing required more than one mile of router jointing over the approximately 3000 square feet of wall surface.

Although on new construction the EPS which is to be routed for details is often processed at the board factory or before going on the wall, such preparation was not practical on this project because the reveals on the original building were not standardized in their relationship to each other. Some were eight inches on center, others were nine inches apart.

**The Applicator’s Attention to Detail**

In order to ensure that the reveals on the third floor would be cut directly above those on the first and second, Alain Fontaine, Adams’ foreman dropped plumb lines to mark the lines to be routed. Although routing on a vertical surface like this required more time and effort, it was the only realistic way to ensure quality on this step of the project.

The finish which would be used after the base coat was applied would be a fine .75 aggregate. A critical factor in the application of fine finishes is consideration of the fact that they do not hide surface variations as well as the larger aggregate finishes do. To address this characteristic and ensure the highest quality appearance of their work, the Adams Drywall crew applied a double ground coat of Sto BTS-B over all flat areas. Again the end justified their efforts; the joints are undetectable.

Before proceeding at full speed on the application of the finish, the crew took a precautionary measure. Although the two by two sample which helped secure the project for Sto had been an effective means of showing their capability to replicate color and appearance, the true test of Sto’s color matching ability would occur only when the job was completed. Rather than risk finding that the color was even slightly off after coating the entire building or just one wall, Alain Fontaine tested Sto’s match on a 10’ by 10’ section of the building which would be typical of other flat surfaces. His test, which was another example of his concern for quality, verified the accuracy of the manufacturer’s match.

The color and look of the finish were right on target which meant their customer would be satisfied. Craftsmanship is a large part of key to success, but Brian Lefever of Adams also described why his applicators prefer using the Sto finish. “They say it just spreads easier with less drag than other fine finishes dis-
play. The longer open time lets them cover out larger sections of the wall before they float: the Sto finish makes it easier for us to deliver consistent quality.

Getting the job right the first time is normally more profitable than having to address callbacks, and it certainly creates more good will which in turn improves the chances of securing more work. The Adams Drywall crew approached their work from the first day with this attitude. The quality they delivered met the architect’s high expectations and made the job of the general contractor a lot easier as a result.

According to Brian Lefevre his company “doesn’t need an owner’s punch list” to make sure they meet standards. He continued by stating, “our next job depends on the quality we provide today.”

**Quality So Good It’s Unnoticed**

Lefevre, who frequently takes prospective customers on tours of his company’s completed projects, stated that the expansion blends so convincingly with the original that when he drives by the building they cannot tell the third floor is not marble or that it was not built concurrently with the other floors.

The original plan had called for the break between the marble and EIFS to begin at a point which would have required the removal of approximately 18” of marble at the top of the existing walls. Tieman and Patrylo suggested that it would not only cost the school less if marble were left intact, but a more natural break would be achieved if the EIFS were to begin at a point even with the ledges of the new windowsills. Their suggestion was readily accepted and contributed greatly to the fact that most who observe the addition cannot distinguish between the original marble and the acrylic finishes.

Tom Mottern was tremendously impressed by the quality which Adams Drywall and Tieman and Patrylo delivered. When asked if he would consider using EIFS on future university projects, Mottern’s response was prefaced by praise for the applicator: “Adams Drywall performed like true craftsmen. Their foreman accepted each of the many challenges of this project and went the extra mile to ensure that everything was just right.”

He concluded that he would certainly consider using EIFS again because this experience had been so positive. Those who visit Atlanta can see for themselves what painstaking attention to detail means to the final results.