

# Classic church is duplicated with new stone

The Western Presbyterian Church is being unseated from its home of 60 years, but computers and the original quarry are re-creating its classic look

The expansion of government and business over the years has resulted in the loss of a number of landmark buildings throughout the U.S. But when the International Monetary Fund (IMF) in Washington, DC, announced plans for expansion, the administrators of the neighboring Western Presbyterian Church, which makes extensive use of limestone and rubble stone, had other plans in mind.

Although the Gothic structure will be dismantled this year, its design is being duplicated at the intersection of Virginia Avenue and 23rd Street. With careful coordination by the fabricators, construction crews and architect, existing rubble stone and newly quarried material will be combined to create a structure that is an exact replica of its predecessor.

"Fundamentally they liked the sanctuary the way it was, and they didn't want something new," Pastor John Wimberly said of the church's staff. "They decided they would move only if it would be kept the same."

Originally founded in 1854 and then moved to 19th and H Streets in 1928, the Western Presbyterian Church has been no stranger to change. Although it has primarily been a house of worship for the middle class, it has also been associated with some dignitaries in the

The limestone on the original church became "pretty beat up" over the years, according to Pastor John Wimberly.



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Cathedral Stoneworks is replicating a total of 34 Gothic-style limestone tracery windows.



nation's capital, including Jefferson Davis, who was involved in the church's founding.

"Although it wasn't large for downtown Washington, it did have a long and interesting history," explained architect David Cox during a tour of the site by STONE WORLD. Mr. Cox is a principal of KressCox Associates, PC, of Washington, the architectural firm for the project.

## Changing direction

The original plan was to dismantle the existing structure and move much of its

stone to the new site for construction. But because of time constraints imposed by the IMF — among other reasons — the decision was made to use new stone.

Another factor against using the old stone, according to Mr. Cox, was that the building would weather at an uneven rate. "A porous material like limestone would attract the dirt of the city at too fast a rate," he said.

Pastor Wimberly described the original limestone as "pretty beat up," both on the inside where smoke from the heaters had caused damage and on the outside where it was a victim of air pollu-

tion. In addition to intricate window patterns, new limestone is being used for the column bases inside the sanctuary and outside entrances to the church. "Actually, now looking at the limestone, it looks a whole lot better," Pastor Wimberly said of the new material, which was supplied by the Indiana Limestone Co. of Bedford, IN.

A total of 34 Gothic-style limestone tracery windows are being fabricated by Cathedral Stoneworks of New York, which is also providing the CAD/CAM drawings and engineering for the windows and coordinating the installation in a joint venture with Brisk Waterproofing Co., Inc. of Capitol Heights, MD. Cathedral Stoneworks' sister company, Alabama Limestone Co., is fabricating the other limestone features.

Because of the large number of companies involved, proper harmony among the participants has been a major factor in the rapid flow of the construction process, according to Mike Myers, the project coordinator for Cathedral Stoneworks. Mr. Myers described the construction as "piecemeal," with the small size of the job site allowing only half truckloads to be delivered at one time. "We have to send stone they can use right away," he said.

Mr. Myers added that to ensure that the stained glass for the windows will be precisely coordinated with the stone tracery, Cathedral Stoneworks sent the templates to Shenandoah Studios of Royal Front, VA, the glass cutter.

"Whenever you re-create something like this, you must remember the architect's original intent," said David Teitelbaum of Cathedral Stoneworks. This thought was kept in mind during the construction of a new administrative wing, which was funded by the IMF to make the move more attractive to the church's administrators.

Although brick is a featured element of the administrative wing's cladding,

setting it apart from the church, it also showcases approximately 2,500 cubic feet (71 cu.m) of limestone for its windows, entrance and base as well as a cladding pattern interwoven with the brick. Mr. Teitelbaum said his company supplied the limestone at the same price as precast material, which was originally specified. "I didn't want to see a landmark building like the church next to a building that was entirely precast," Mr. Teitelbaum said.

## Digging up the past

Although the task of finding new limestone was relatively easy, Mr. Cox explained that the process of locating new rubble stone was discouraging at first because they had difficulty finding a material to match the look of the original.

But after the stonecutters split the material from one particular supplier — the same quarry that supplied the original material — a match was achieved, according to Mr. Cox. "That really opened up the process of quarrying new stone," he said.

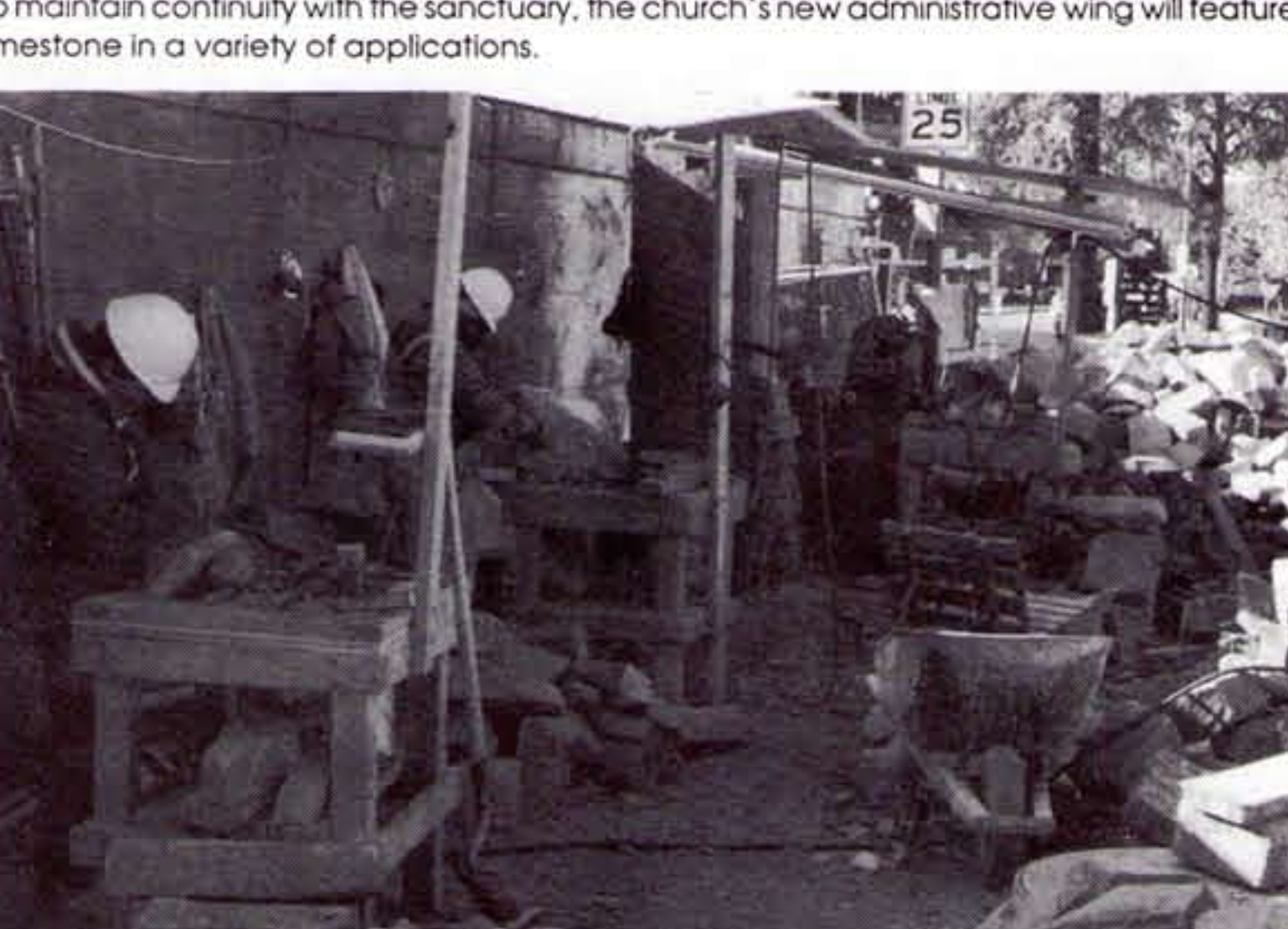
The mica schist rubble stone was quarried in Bethesda, MD, by Stoneyhurst Quarries, Inc. which markets the material under the Stoneyhurst trade name.

Using a combination of visualization techniques, CAD/CAM and handwork on the job site, each piece of existing stone is being measured and re-cut in new stone for use on the new site.

According to Ron Lee of Chas H. Tompkins, the general contractor for the project, the use of computers has greatly reduced the time spent — and consequently the cost — for the construction.

In addition to the new Stoneyhurst material, approximately 75 of the original rubble stones will be incorporated into the new design, interspersed throughout the new cladding. Mr. Cox said this will "satisfy nostalgia and give

To maintain continuity with the sanctuary, the church's new administrative wing will feature limestone in a variety of applications.



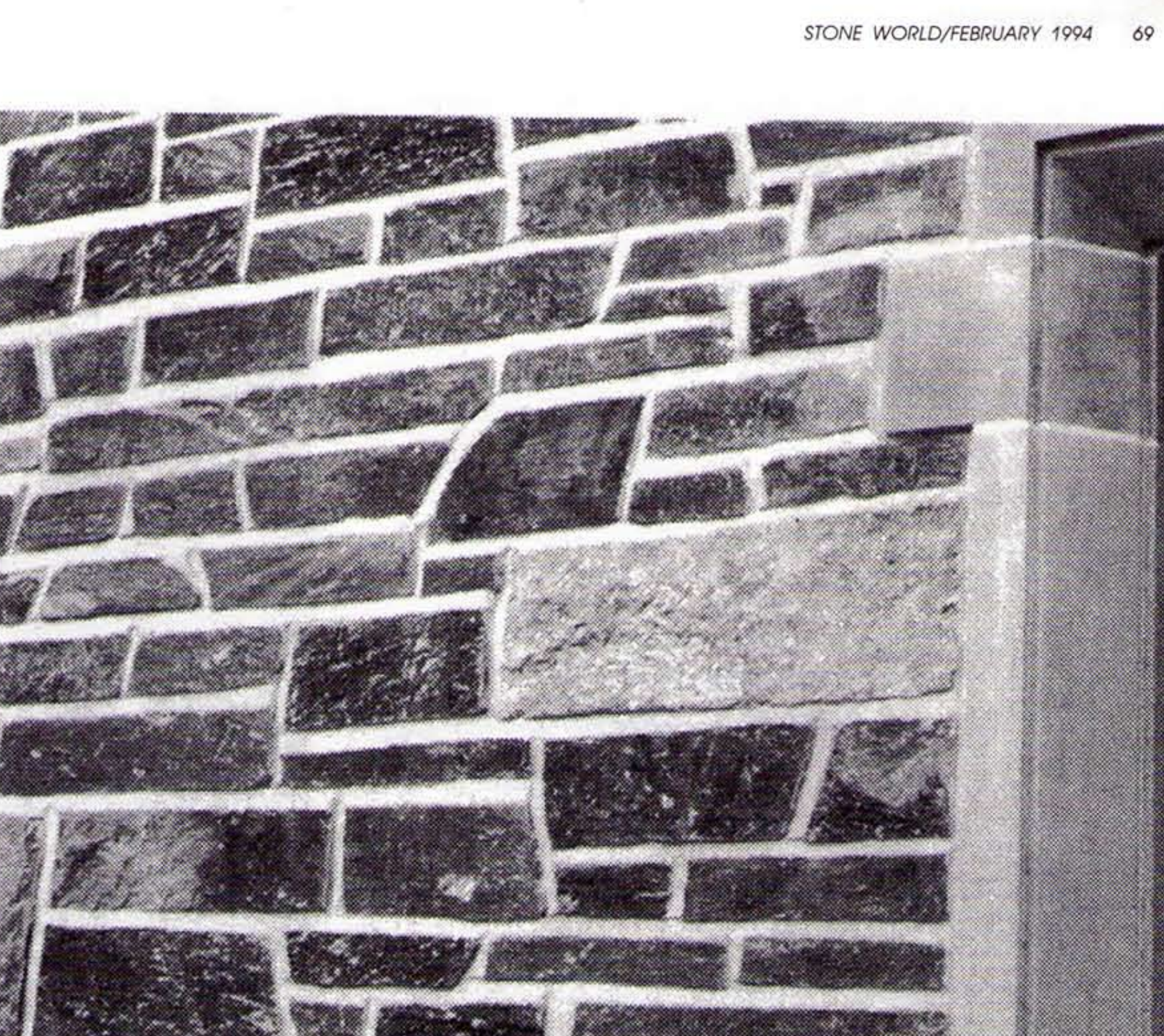
Much of the church's stone cladding is being handworked on the job site.

a feeling of strong continuity with the old building."

New stone is also being used to replicate a slate roof on the church, with Royal Purple, Variegated Purple, Ruyfing Green and Semi-Weathering Grey-Green varieties supplied by Evergreen Slate Co. Inc. of Granville, NY. "We considered reusing the old slate, but it was too brittle to try to remove," Mr. Cox said.

The slate roofing will be comple-

mented by bluestone paving that carries the same color range of grey-green and purple. The paving material, which is being used in the church's courtyards, entrances and plazas, ranges from 5 x 5 to 18 x 18 inches (12.7 x 12.7 to 45.7 x 45.7 cm) with a thickness of 1 1/2 inches (3.8 cm), according to Bill Mirch of Tompkins Bluestone Co., Inc. of Hancock, NY, which supplied the material. Using drawings from Cathedral Stoneworks, Tompkins Bluestone fabri-



The new church's cladding will include approximately 75 stones from the original facility.

cated approximately 3,000 square feet (280 sq.m) of the material, which is referred to as New York State Natural Cleft Bluestone.

Emphasizing the long-term preservation of the project, Brisk is placing copper flashing below the roof to avoid water damage. "You just don't see this type of construction any longer," said Michael Nagle of Brisk, adding that it has been especially impressive for long-time veterans of the stone industry.

Mr. Cox compared the process of combining the church's multiple design elements to "creating a Rolex watch," praising Cathedral Stoneworks, Brisk and Tompkins for their cooperation on the project. "Everybody played their role and we worked well together," he said.