

BUILT TO LAST

By Cindy Sabato



Courtesy of Portsmouth Abbey School

Bringing Belluschi Back

THE CHURCH OF ST. GREGORY THE GREAT AT PORTSMOUTH ABBEY SCHOOL holds 48 years of memories for some 2,500 students and Benedictine monks who have passed through its massive, hand-inscribed copper doors. Symbolically, the church is the center of the Abbey campus, built on its highest point, overlooking the other buildings. Literally, it is central to the lives of the monks who live in the attached monastery and spend time daily inside the church. For students, says Headmaster James De Vecchi, “the church is central to the flow on campus. It provides a certain rhythm to the school that centers students, in that every time the bells ring, they know the monks are praying. That calls their attention daily to the core of the Abbey.” So highly regarded is the church by Abbey students, De Vecchi says, that it has never once fallen prey to the youthful hi-jinks typical of a boarding school.

The unassuming octagonal building is extraordinary as much for its physical qualities as for its spiritual ones. Built in 1960 by Pietro Belluschi, one of the world’s leaders in American modern architecture, the church is “one of the finest examples of modernistic architecture and art in Rhode Island today,” says James MacGuire, class of 1973, who returned to his alma mater a year ago as its major gifts officer. In the style of Pacific Northwest regionalism, which imparts an earthy palette, the building’s eight walls inside and out are a full two stories of indigenous fieldstone connected at eight corners by tall panels of dark redwood and stained glass. Inside, the nave is wide open, 90 feet from one wall to the opposite, floored in brick and supported by maple timber archways. High above the pews, another 28-foot

clerestory. Brother Joseph Byron stands atop the scaffolding in the chapel’s clerestory. The pinnacle of the clerestory. The Richard Lippold sculpture, “The Trinity.” Howard Newman works with the Lippold model. Anna Hattendorf of Newman’s Ltd. disassembles the 20,000 feet of gold-clad wire that supports the Lippold sculpture.

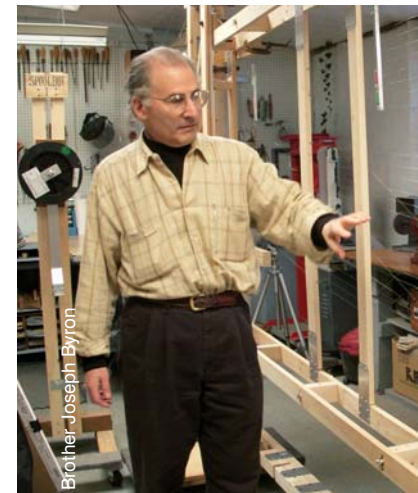


Courtesy of Portsmouth Abbey School

FROM TOP The Blessing Inauguration of the New Chapel, and the chapel’s exterior, 1960.



Jacqueline Marque



Brother Joseph Byron



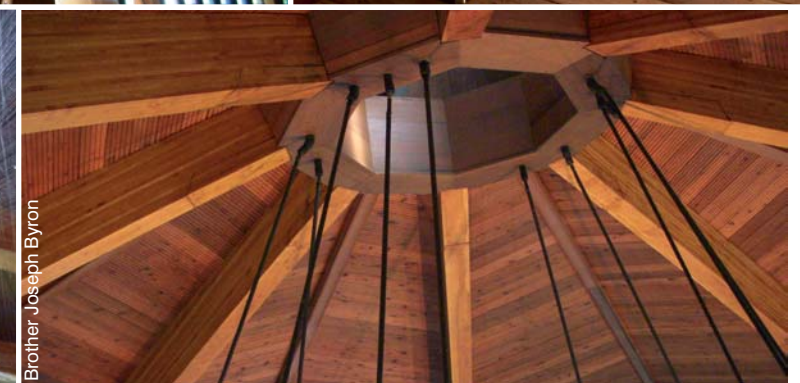
Brother Joseph Byron



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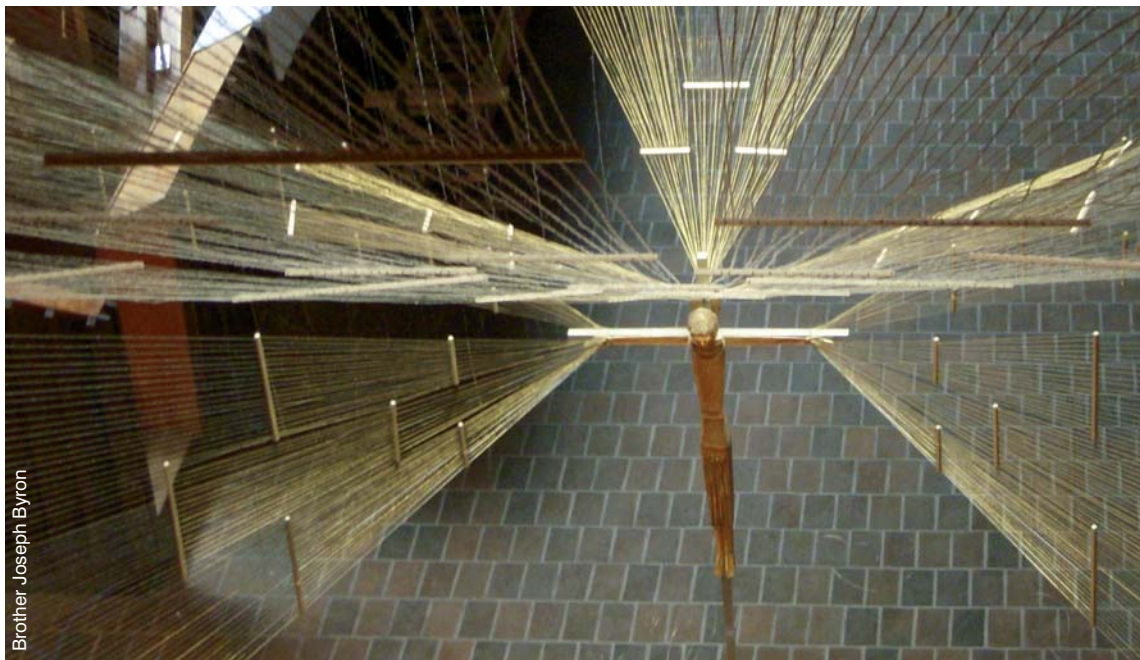


Brother Joseph Byron



Brother Joseph Byron

CLOCKWISE FROM TOP Scaffolding dominates the altar area beneath the lofty clerestory. Brother Joseph Byron stands atop the scaffolding in the chapel’s clerestory. The pinnacle of the clerestory. The Richard Lippold sculpture, “The Trinity.” Howard Newman works with the Lippold model. Anna Hattendorf of Newman’s Ltd. disassembles the 20,000 feet of gold-clad wire that supports the Lippold sculpture.



Brother Joseph Byron

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tall open octagonal structure called the clerestory towers like a crown, each wall a stunning array of 33 narrow vertical panels of alternating redwood beams and stained glass. Both the lower and upper roofs are aged copper, topped with a 60-foot steel and teak spire.

A half-century ago, Abbey monks sought out Belluschi to fulfill their vision for a new school campus that would complement the Monastic community's sense of place and prayer and preserve the site's beauty and serenity. The late Father Hillary Martin knew of Belluschi's preference for simplicity and humility in design, and of his penchant for inviting an ensemble of artists to contribute to his church buildings. Belluschi believed that "the basic elements in the quality of space are still light, the use of wood and indigenous simple materials, and the help of an artist doing stained glass and sculpture and art in general," he said in a 1983 interview for the Archives of American Art, Smithsonian Institute. "There isn't anything like a good work of art to inspire."

Inside the Abbey church, artwork is all around, from the furniture, tapestries, glass, doors, sculptures and silverwork, the most notable of which is "The Trinity," created by Richard Lippold, an important figure in the Abstract Expressionist movement. It is an expansive and delicate geometric canopy made of 20,000 feet of gold-clad

wire originating from 15 points all over the nave. From each point of origin, the wire is arranged to somewhat resemble the neck of a stringed instrument. All arrays extend toward and arrive simultaneously at a brass crucifix seeming to hover above the altar. The wires of each array are held taut as they pass through 23 aluminum bars, akin to frets on a guitar, ranging from five feet to three inches long. Each array joins and parts with others at multiple points, like chord progressions, along their journey to the cross. "The effect is breathtaking, and its purpose is immediately apparent. It is intended to focus your gaze on the most sacred object in a Catholic church," says Father Damian Kearney, a member of the class of 1945 and the Abbey's archivist and historian.

One year shy of earning historic status, the church seems too young to require a ground-up restoration. But, according to Mike DeMatteo of Newport Collaborative Architects, the firm leading the restoration, the eight walls of the clerestory were built without the lateral stability needed to protect the upper structure from strong coastal winds. The creaking and groaning students hear during church services is likely the sound of beams swaying and window glaze cracking. With the generous help of the Aletta Morris McBean Charitable Trust, the Abbey was able to evaluate the structural needs of the church and plan the \$4 million restoration project, which began

in April 2008.

The restoration has been a continual balance of form and function. "Our goal is to be true to the original as much as possible, but when it comes to improving structural issues, we have to consider when to improve versus when to replicate," says Glenn Gardiner of Newport Collaborative Architects. If the improvement will be hidden from view, the choice is an easy one, he says. For example, the redwood beams will be jointed in a way that keeps out water more effectively. But when an improvement might distract from the aesthetics of the building, decisions are more difficult.

"We looked at four different approaches to dealing with the building's structural issues," says Brother Joseph Byron, who began his service at the Abbey 27 years ago as a lay teacher before becoming a monastic brother. "It turned out that the least obtrusive solution was also the most rigid and stiffest."

The most challenging aspect of the project, according to John Brooks of Advanced Building Concepts, the construction management company on the project, is the clerestory. Because of the extent of water damage, all 136 of the 28-foot redwood beams must be replaced. To accomplish that, and to ensure the original glass pattern is not lost, the 2,960 pieces of stained glass mounted between the beams must be labeled, cataloged, removed,

cleaned and later reassembled. "The size and height of the building makes it logistically difficult to get to everything," Brooks says. "The exterior wall construction is unique, with the structural framing members exposed to view both inside and out. Each framing member needs to be cut, fit and finished as if it were a piece of casework."

Though the Lippold sculpture has no bearing on the building's stability, 48 years of dust and corrosion have caused "The Trinity" to lose its luster. It has to come down anyway, so it too will be restored. "One of the amazing things about the Abbey campus is the collaboration between architects, monks and other artisans, the most striking example of which is the work of Richard Lippold in the church," says Brother Joseph. "Its restoration will be the visual crown of this large project."

Years of searching for someone with both the engineering expertise and artistic ability to restore the piece led the monks to Howard and Mary Newman, owners of Newmans Ltd. in Newport. Howard Newman is all at once sculptor, painter, poet, engineer, jeweler, silversmith, restorer, designer and musician. As a high school student, Lippold's work resonated with him, so the restoration of this piece was personal. "Lippold was a true artist; he used his technology as a language to express his subject, which is music emanating from the choir and the cross," Newman says. "We've come across many musical references in the sculpture – the aluminum uprights are like frets on a stringed instrument and measure bars on sheets of music, and surprises in the way the wires are laid out, sometimes doubling or tripling, is suggestive of jazz-like improvisations."

The straightforward part of the sculpture restoration is the replacement of all 20,000 feet of wire. Though the new wire will be the same .016-inch diameter, its gold plating will be 10 times thicker to withstand stretching and permanent tension. Rather than copper and zinc, the new wire will be made of copper, nickel and silver, which should not corrode as did the original. Where the restoration seemed incomprehensible to other firms approached by the monks, including some that have restored other Lippold works, is in its disassembly and reassembly.



This camera records the activity in the chapel and displays it in real time on the Portsmouth Abbey's Website, PortsmouthAbbey.org.

Newman, on the other hand, found the project to be "entirely comprehensible. The way I conceptualize the restoration is by divergent thinking, by looking outside the problem for solutions," he says. Over six months of preparation, the Newmans considered how the sculpture was similar and dissimilar to the inside of a piano, a spider web, primitive looms, yacht rigging and knitting machines. To understand its composition and ensure identical reassembly, they took countless pictures, made maps, diagrams and negatives and documented the systems where wires pass through frets. To tackle disassembly and transport, they built a complete scaled model and a partial full-sized model, designed a complex foldable framing system, and practiced repetitively, modifying their approach with each failure. The most challenging part of the project, they say, was creating a new vocabulary identifying all the parts and actions of the process to prevent miscommunication.

Then, only when they began to disassemble the sculpture did they begin to understand how they would put it back together. "Restoration is a bit like forensics, history and archaeology all together. You work backwards until you find where something changed or broke down to understand it," Newman says. "For example,

we couldn't know why Lippold used a certain knot, or why 20 wires enter a joint but 40 come out, until we reached that point in the disassembly and could see how it fit together."

The Lippold sculpture will be the final piece of the church restoration, which will be complete this winter. The reinforced clerestory should withstand gusts up to 120 miles per hour and should last 100 years, DeMatteo says. "The church is a wonderful, really special place to pray," says Brother Joseph. "Of course you can pray anywhere, but in this church, when you are distracted, the beauty and elegance bring you back to prayer."

For many connected with the Abbey church's past and present, the restoration is of special importance. Alumni like James MacGuire realize its grandeur over time. "There was always an element of awe and mystery about the church to me as a student, but I didn't pay much attention until about 10 years after I left, and now I realize the precious pearl we have here," he says. "You can really see the beauty of God's creation here."

Brother Joseph speaks of what the church knows of its guests. "The church sees the really important events in the life of the monastery and school. It sees the individual monk from his monastic birth to his death. It sees the opening and closing of every school year and the special events within the year. It hears the private anguishes and joys of all of us, and of those alumni who return to pray here at significant moments in their lives."

Perhaps even Belluschi himself, if he were still alive, would be pleased. His son Anthony, a Chicago-based architect who was 20 and attending the Rhode Island School of Design when the church was built, says that "this small chapel, which is really monumental, epitomized what my father was all about as a human being, architecturally and spiritually. It was one of his favorite projects and one of his best for a combination of things – the exceptional site, the materials used, the master vision for the project, and he got along famously with the monks and they became good friends. It was the confluence of all these things, the harmony in it all, because very rarely do the perfect site, perfect client and perfect solution come along." ❧