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January 23, 2006
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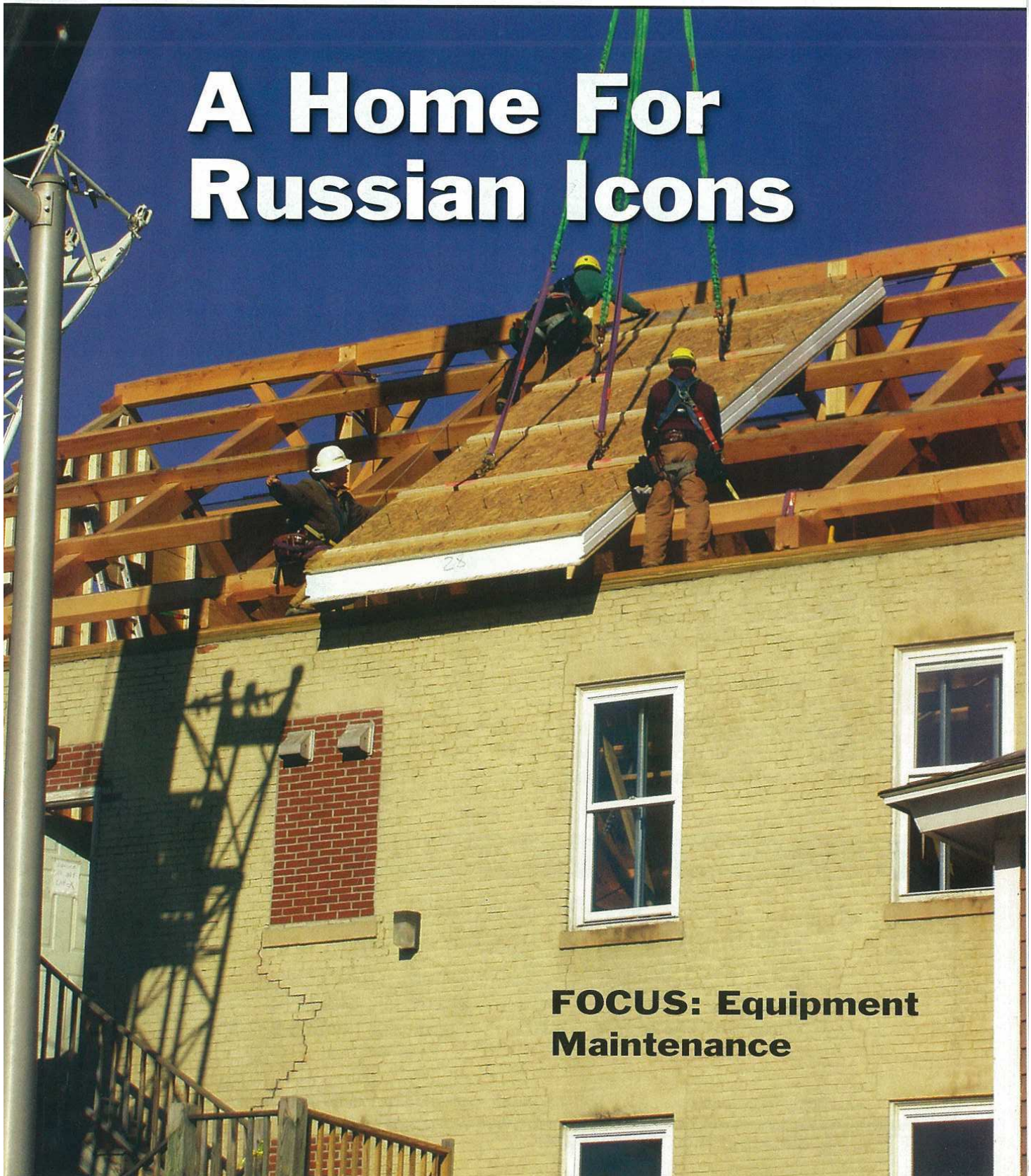


A Home For Russian Icons

FOCUS: Equipment Maintenance

New Home For Russian Icons

Historic building gutted and re-roofed to house unique museum in Clinton, Mass.

BY PAUL FOURNIER

Construction workers are transforming a 140-year-old mill building in Clinton, Mass., into a modern new home for a rare collection of ancient Russian icons.

General contractor T.H. Smith Building & Remodeling of Sterling, Mass., has teamed up with subcontractors Murray Brothers Construction Inc. of Leominster, Mass., and Benson Woodworking of Walpole, N.H., to gut, strengthen, re-roof, and refurbish the interior of the dilapidated three-story structure to house the non-profit, educational Museum of Russian Icons.

Museum owner Gordon Lankton, who is chairman of Nypro Inc., an international manufacturer of precision molded products, will display some of his huge collection of icons, figurines and artifacts in the building now undergoing sweeping alterations. Lankton's company has factories in 16 countries including the Russian Federation, and in his travels to Russia he began collecting artifacts. So far, his collection reportedly contains 230 icons dating from the 16th century to late 20th century.

Located on a narrow stretch of Route 62 (Union Street) in the heart of this old mill town, the building is being remodeled according to plans prepared by architect David Durrant of Durrant Designs, Harvard, Mass.

Smith workers will be finishing the interior of the new museum. According to Joyce Smith, project manager, the building's HVAC system must be humidity controlled to protect the delicate icons. A key interior feature will be a central spiral steel and wood stairway from the bottom to the top floor.

Most of the windows are being blocked up and artificial controlled light installed to enhance the artwork. In addition, to maintain the building's architectural integrity, exterior windows will be black glass panels that are glazed from the outside in the event replacement is necessary. Inside, windows are covered with gypsum blue board.

Subcontractor Murray Brothers is responsible for the demolition of all interior walls and partitions, and for reinforcing the building's existing frame. As part of this effort, they inserted steel I-beams between existing wood floor joists and supported them on new steel

Benson Woodworking crew employs a Krupp crane provided by Astro Crane to position roof panels for Museum of Russian Icons in Clinton, Mass.

Top left: Murray Brothers Construction workers demolish roof of old mill building being converted into museum.

Middle left: With roof demolished, workers reinforce existing wall frames and place new roof plate on walls.

Bottom left: Photo of front of building shows three trusses and one gable in place.

tube columns. The Leominster company also fabricated the two end gables, and installed new, 2-inch by 14-inch glued laminated timber roof plates on the perimeter bearing walls to support new roof trusses.

Benson Woodworking fabricated the structure's four new heavy timber trusses in their Walpole shop and erected the trusses together with prefabricated, insulated wood roof panels.

Trusses have a 38-foot span and a 9:12 pitch, and are set 8 feet 6 inches on center. They are made of solid 8-inch by 8-inch timbers that are free of heartwood to prevent checking. Benson's shop crew fabricated truss components and put them together at the Walpole yard to make sure everything fit perfectly. Then they disassembled the trusses and shipped the pieces to the job on common-carrier flatbeds. There, a Krupp truck crane provided by Astro Crane Co. of Stow, Mass., offloaded the trucks.

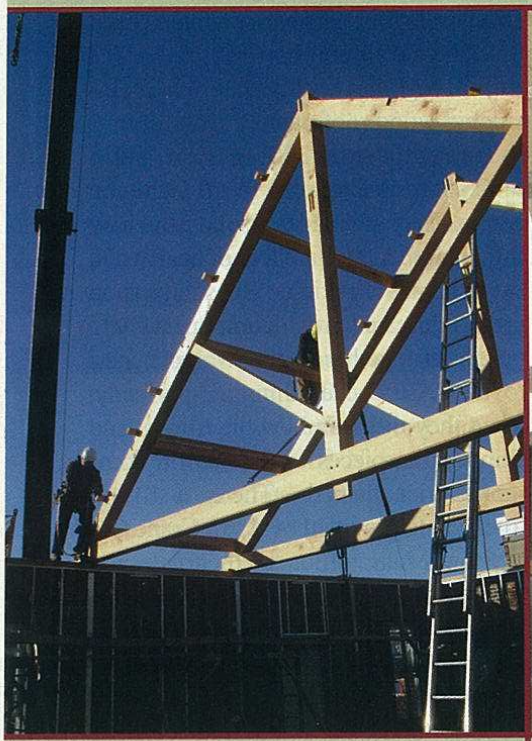
Erecting the trusses and the roof panels was demanding due to lack of working space. Too, contractors were under pressure because of a fast-closing window of opportunity – it was mid-December, bad weather was approaching, and the crew wanted to get the roof on as soon as possible.

"This is a very tight site," explained Ben Brungraber, professional engineer for Benson who designed the trusses and planned the construction procedure. "We have to have a police detail on the job while the crane is offloading and raising trusses and roof panels, because sometimes one lane of two-lane Route 62 has to be shut down."

Since there was not enough room at street level to assemble the trusses, the components had to be lifted to the third floor where workers assembled each truss. And the 38-foot by 44-foot floor area precluded doing more than one. Once assembled, each truss was lowered to the alleyway between the museum and neighboring buildings.

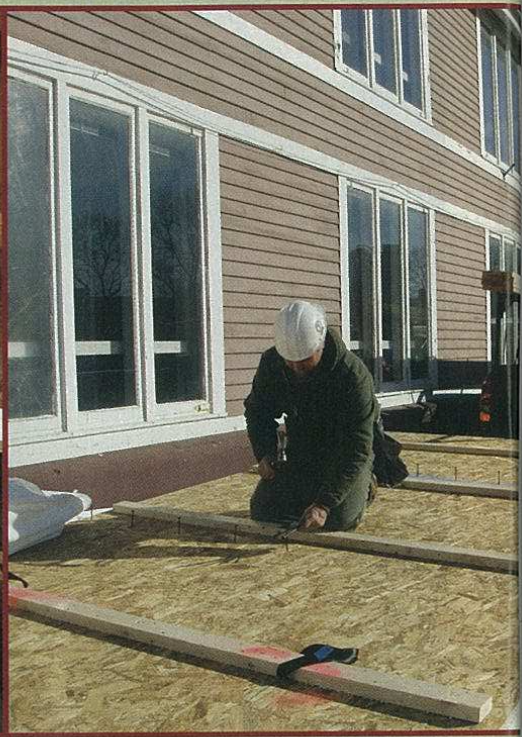
For lack of space, gable end walls were fabricated on third floor, then lowered to alleyway at street level until ready for final positioning.

Police detail closes off one-lane of narrow section of Route 62 as crane unloads pallet of prefabricated roof panels.



First two trusses are tied together with 8-inch by 8-inch purlins.

Workers guide an 8-foot by 24-foot roof panel into position on purlins.



Duane Beiler pre-installs extra-long screws that will later be driven to hold panels to purlins.

"The neighbors were very cooperative in this," said Joyce Smith.

"We appreciated this and we kept our neighbors informed of our construction plans and activities."

Murray Brothers faced the same challenge. For lack of space, they had to fabricate the two gable end walls one at a time on the third floor, then have the crane lower the gables to the alleyway until the trusses were in place.

Benson's crew initially raised two of the trusses to the third floor, placing them in the center bay and tying them together with 6-inch by 8-inch purlins. A third truss was hoisted in place and tied to the first pair with additional purlins. With this done, one of Murray's gables was raised, set in place and joined to the three trusses with more purlins. The fourth and final truss was then raised and tied to the others, followed by the hoisting and the attachment of the other gable. This completed the roof frame, which was now stable and strong enough to receive the prefabricated wood panels.

Roof panels, measuring 8 feet by 24 feet, are made of 1/2-inch-thick OSB wood skins that sandwich an 8-inch-thick expanded polystyrene foam insulation. Panels are rated at R-30. Gaskets plus OSB splines are wrapped around each panel ensuring air-tight seams. Extra long screws hold the 9-inch-thick panels to the roof purlins.

Workers began hoisting and assembling the trusses on Tuesday morning, December 13, with temperatures hovering in the teens. Roof panels arrived that afternoon, were offloaded and stacked in the only space available – next to the crane. By Wednesday they had finished the trusses and were putting roof panels in place. On Thursday, with an ice storm forecast for Friday morning, the race was on, as Benson and Murray workers joined forces to raise and attach the remaining roof panels, finishing the work by 7 p.m. that evening.

When the ice storm struck on Friday, the building was completely covered. ■