

Masonry expert says Belmont Mill fire damage is fixable

By TIM CAMERATO | Dec 09, 2014

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TIM CAMERATO/CITIZEN

MASONRY EXPERT Scott Whitaker, left, speaks before the Belmont Board of Selectmen on Monday.

BELMONT — The Belmont Mill might not be perfect, but there is a lot of life to it, according to Scott Whitaker, president of Building Envelope Specialists, Inc.



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Whitaker met with the Board of Selectmen on Monday to discuss his report on the building's brick work. He was hired through Bonnette, Page & Stone to inspect the mill's masonry after an Oct. 1 meeting, where former Selectmen Donna Cilley and Mark Mooney expressed concern about the structural integrity of the mill, in the wake of the 1992 fire.

Their conversation with the current selectmen led to a visual inspection from Bob Champagne of Summit Engineering and two visits from Whitaker. In a report to the town, Champagne said he didn't find any life/safety issues with the building.

Whitaker said the mill is a standard masonry constructed building, typical to New England mills. At the base, the brick is about 24 inches thick, which then decreases to 16 inches on the second floor and 14 inches above that.

"The typical aging patterns that we see in masonry buildings across this New England area is just what you see here," Whitaker said. "At various times you've got various maintenance jobs done on the building with different pointing recipes, which create different shades."

Whitaker said those varying mortar recipes could lead to it aging differently than one with a uniform mortar. He said that's because different mortars allow the bricks to absorb and dissipate water differently.

“You have different pointing recipes on the outside, and each square foot of that building will react a little bit differently to the adjacent square foot,” Whitaker said. “It’s not the end of the day, it’s easy to repair, but you guys have to understand that that’s a basic knowledge that you need.”

Whitaker said a good masonry wall has bright mortar, which rings when tapped with a hammer, and isn’t powdering.

“On the north wall, on the west and the east wall, we found many good examples of very solid masonry,” Whitaker said. “It just didn’t matter what floor you’re at.”

Whitaker did find some trouble where the 1992 fire touched the wall. He said white sheen seen on the interior bricks shows powdering. He said bricks are formed in a kiln and are used to heat. What they’re not used to is rapid cooling.

“I used to belong to a fire company. I have seen chimneys blow up on chimney fires because they laid water on it,” Whitaker said.

He said the masonry on the Belmont Mill did the same thing, only on a microscopic level. Whitaker also performed moisture readings. In most sections of the mill, the readings were normal. On the wall exposed to fire, readings were high.

“The lime (mortar) is so starved for moisture ... it’s trying to draw it in from everywhere,” Whitaker said. “Scientifically, what we have are large concentrations of moisture where the wall is a problem.”

Town Administrator Jeanne Beaudin said there have been a lot of moisture issues in that level of the building, and asked if the brick is to blame.

“It’s part of the equation,” Whitaker said, adding that human activity, condensation and dew points can also contribute.

Whitaker said there are solutions to the mill’s problems though. He said patchwork exterior mortar is easy to repair and is done all the time.

“We can make that building look as uniform as possible on the outside,” Whitaker said.

He said the fire damaged area can be stitched together to reestablish the structural integrity, without disassembling the entire wall.

“You do that in sections, so you don’t get into wholesale shoring up of the wall,” Whitaker said.

“This is a solid building. It has some problems. It can be reversed,” Whitaker said, “but this is a good candidate for keeping and not demoing.”

He added that his company has worked on “far worse buildings.”

Selectman Jon Pike said the board has to be able to look at their neighbors and tell them the building will be there for a long time.

“I don’t want to get in a position that, two years from now, we got to have another \$150,000,” said Chairman Ruth Mooney.

Whitaker said he understands and his company is often called in to help after other fixes fail. When Pike asked what it might cost to repair the damaged wall, Whitaker estimated about \$75 per square foot. He added that jobs can cost less though.

“We’re at a point with this building ... keep it, destroy it or fix it,” Pike said. “If we do this, we started a policy a long time ago ... if we’re going to do it, we’re only going to do it the right way.”

Pike said he's prepared to ask for a cost. BPS Vice President Keith McBey said it's time for a second estimate for the entire project, as progress has been made to lower some costs.

He agreed to meet with the board on Dec. 29, at 4:30 p.m., to present new numbers. After that, the board will present their plans to the Budget Committee on Jan 6.

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