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Isabella Stewart Gardner Museum begins drilling for geothermal wells

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Bringing sustainable design to the historic museum palaceâ€”and to a new Renzo Piano-designed building it is preparing to constructâ€”the Isabella Stewart Gardner Museum has begun the excavation for the structure's foundations and drilling of an energy-efficient system of geothermal wells to complement its heating and cooling systems. Designed by Mike Zimmerman, of Allied Consulting, and Buro Happold, the geothermal wells will allow the Gardner Museum to become more energy-efficient and minimize its carbon footprint on the environment.

This green aspect of the project reflects the Gardner Museum's ongoing priorities and the importance of preservation as the driving force behind the new building design, as conceived by Pritzker Prize-winning architect Renzo Piano. By installing the geothermal wellsâ€”one of the first steps in preparing for construction of the new projectâ€”the Gardner will eventually realize a 28% reduction in energy use compared to a standard building.

Additional green aspects of the LEED-certified project include daylight harvesting, water-efficient landscaping techniques and the use of local and regional materials (which reduce the environmental impact associated with transport).

The new building project is essential to preserve Isabella Gardner's museum and legacy by reducing irreversible wear-and-tear on the historic collection and museum building and enriching the museum's legacy as a center for creativity.

"The use of this sustainable technology to increase the "greenness" of the Gardner, the construction of an efficient new on-site greenhouse, and the cultivation of additional garden space for the public to enjoy, are crucial to our current plans for a thoughtful and sensitive expansion of the Gardner Museum," said Anne Hawley, the Norma Jean Calderwood director of the Isabella Stewart Gardner Museum. "Landscape and preservation have always been an integral part of Isabella Stewart Gardner's legacy and remain a top priority in all that we do - including this expansion project. The importance of improving the visitor experience through landscape and gardens at the museum is paralleled only by the importance of ensuring that the work we do in constructing a new building will have environmental benefits to the museum, to our community, and to our world beyond."

Excavation work on the museum site began this past summer following the completion of a two-year regulatory review and approvals process. The drilling of geothermal wells began in August. The geothermal wells system will be online and operational in the historic museum and the new building in late 2011.

Geothermal Wells System project will utilize a hybrid HVAC system, designed by Buro Happold, which combines geothermal wells with conventional HVAC heating and cooling techniques. The geothermal well system, designed by Allied Conslting, will optimize the operation of the new

building's heating and cooling systems and will work in tandem with an existing system to provide cooling for the historic museum palace. The ground-source geothermal system will provide chilled and hot water to the new building and chilled water to the historic museum palace.

The geothermal well system will take advantage of the constant temperature of the water below bedrock (estimated to be 55 to 60 degrees Fahrenheit year-round) to heat and cool the museum. The system of eight standing column wells will extend 1,500 feet below the surface. The ground source heat pumps will be configured in parallel with a separate chilled water plant to meet peak cooling loads, which include the existing palace building. This hybrid configuration will allow the most efficient operation of the new building's heating and cooling systems. A condensing boiler sized to meet a peak heating load for the greenhouse is also available for main hydronic system backup.

The environmental benefits of the museum's geothermal system, resulting from a reduction in carbon emissions, will equate to planting approximately 150 acres of woodland.

Geothermal Project Team â˜ The geothermal well system at the Gardner Museum is desined by Mike Zimmerman at Allied Consulting. The hybrid HVAC system is designed by Buro Happold, mechanical engineers of New York, NY. SAK Environmental LLC, of North Andover, MA, is overseeing construction monitoring and permit compliance for the wells' installation, including expertise in construction inspection, aquifer testing, water quality, and system troubleshooting.

Isabella Stewart Gardner Museum â˜ 280 The Fenway Boston, MA 02115 617 566 1401 www.gardnermuseum.orgâ˜
Tue.-Sun., 11 am-5pm; plus Gardner After Hours third Thursdays 5:30-9:30pm â˜ $12 adults; $10 seniors; $5 students; $2 discount w/ same day Museum of Fine Arts admission; FREE for members, children under 18, and all named Isabella - and on your birthday â˜ A little more than 100 years ago, Isabella Stewart Gardner developed a new context for art in America by creating a museum where visitors experienced music, performance, the beauty of gardens, and historic and contemporary art, all in a highly personal setting. Modeled after a 15th-century Venetian palazzo and centered around a light- and flower-filled interior courtyard garden, the Isabella Stewart Gardner Museum is home to more than 5,000 art objects spanning 30 centuries and including works by Botticelli, Titian, Raphael, Rembrandt, Degas, and Sargent. Contemporary and historic special exhibitions, America's oldest museum concert series, lectures, special performances and events, an Artist-in-Residence program, and innovative school and community partnerships continue to enrich the permanent collection and provide ongoing inspiration for visitors the world over.

The new building, designed by Pritzker Prize-winning architect Renzo Piano and the Renzo Piano Building Workshop, will showcase and respect Isabella Gardner's historic museum palace. The glass- and light-filled new building will balance preservation of the Isabella Stewart Gardner Museum's world-renowned collection with its continuing legacy as a center for creativity, while creating new, state-of-the-art areas to accommodate exhibitions, programs, visitor services, classrooms, a new greenhouse, and staff offices. The project will include the restoration of several areas of the historic galleries to their original orientations from Isabella Gardner's lifetime. Sire

preparation and excavation work for the new building is underway. The museum remains in the quiet phase of fundraising for the project. The new building is expected to be completed in late 2011.

Anne Hawley is the Norma Jean Calderwood Director of the Isabella Stewart Gardner Museum. John Lowell Gardner is the Chairman of the Board of Trustees. Barbara Hostetter is the President of the Board of Trustees.

Additional information about the project will be available online via www.gardnermuseum.org in early 2010.

For additional information and a calendar of programming and events, visit the museum online at www.gardnermuseum.org