

Cities weigh green features vs. expense in new buildings

September 28 2009, By Mary Jane Smetanka

Should a city that's committed to environmentally friendly construction pay \$825,000 for a job that was expected to cost \$248,000?

No, Edina, Minn., officials decided when they got a bid that high for a new geothermal heating and cooling system for their new public works [building](#).

But they still hope to get the energy-saving system by bending a little on their construction schedule, delaying the building's opening from next spring to summer to reduce the cost of drilling and piping for the system.

That commitment makes Edina just the latest in a string of cities that are trying to balance costs with incorporating energy-saving and environmentally sensitive practices into new public buildings.

"There isn't a public building going up where you wouldn't take a look at these things," said Mike Eastling, director of public works in Richfield, Minn., where a \$12 million public works building with state-of-the-art green features opened last year.

"Are you being environmentally sensitive? Oh, absolutely. Are you being sustainable? What's the difference between being sustainable and common sense?"

"The question is, should you spend more up front if it saves money in the long term?" Eastling said.

With contractors desperate for work in a recession, bids on traditional jobs like laying [asphalt](#) and putting up fencing at Edina's new public works facility have come in at an average of 16 percent below the city's estimates. That made the single bid to drill and pipe 124 geothermal wells to help heat and cool the building even more of a shock.

But city officials said that the bid was sky-high -- and that the project attracted only one bidder -- because the city's 30-day window for getting the job done was so tight that only one contractor could accommodate it.

The job was rebid in September, with a months-long timeline for the work. Though nothing is certain until the City Council approves a bid, Director of Public Works Wayne Houle said he thinks a geothermal system is worth pursuing. The system would begin saving money within 12 to 15 years.

"It is absolutely worth it," Houle said. "Incorporating these items is more expensive up front, but the returns are better."

Like Richfield, Edina will not seek LEED certification, the gold standard for green design, for its new \$14 million building. LEED certification costs money to document those green features, and both cities decided to pass on the certification. They are not shy, however, about using such projects to test and demonstrate building methods that eventually could become standards for development.

"You do it with an eye on energy and what are the long-term implications of keeping current technology as opposed to being on the leading edge," said Gordon Hughes, Edina's city manager. "If you can use it as a showcase for the community, so much the better."

Edina's new public works building will be at an old ConAgra warehouse, which will be gutted and remodeled. The plan is to salvage items such as

insulated panels, towel racks and light fixtures. The builder also will crush the existing concrete floor and use that material as a gravel base for a new floor.

Skylights will illuminate the interior space with natural light, and sensors on lights will dim them on days when sunlight is strong enough to brighten the interior. A patio on one side of the building will be made of recycled plastic pavers that allow water to pass through them to prevent runoff.

Cost is a factor in the building's design, Houle said, and the city passed on some environmentally friendly ideas that cost too much. For example, solar panels were rejected because the payback period would be 60 to 80 years.

Richfield is pleased with its new public works building, Eastling said. Like Edina, Richfield weighed costs and benefits. Features such as a geothermal heating and cooling system that would begin saving money in a decade made the cut. Solar panels and a green roof did not.

Giant skylights have provided ample light even in equipment areas, reducing electricity costs. But one of two porous pavements that the city wanted to test on site is already showing wear.

The building's sophisticated automated controls have been a bit of a challenge, Eastling said. It has been an adjustment to walk into dark areas and have sensors turn on the lights.

"But all in all, we're very happy with the building," he said. "We came from a not-very-good place. Everybody is still thinking, 'Pinch me,' it's so nice to be here."

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