

Missouri Correctional Facility Builds Case For Hi-R Block

The Missouri State Correctional Facility at Potossi, now under construction is a mammoth project that required all the designers who bid on it to creatively combine low cost with high security and performance. The state of Missouri needs to keep its construction costs down, but security, energy efficiency for controlling ongoing costs, and efficient, quick construction were also primary concerns.

The design that won the bid uses a high performance masonry wall system that gives all the strength the state requires in a single-wythe wall—the system is NCMA's Hi-R Block, designed by Korfil, Inc. Cost comparisons of this job versus similar jobs in other regions may be misleading because masons in the St. Louis area are all unionized and labor costs are high. Still, David Owen of Hedrick Concrete Products Corp., Sikeston, Missouri, estimates that using Hi-R Block saved over 20% versus what the labor on this job would have cost if the double-wythe walls historically used in high-security construction had been constructed. Moreover, the R-12 thermal resistance value built into the Hi-R wall ensures low energy costs in the facility, which will keep the high cost of running the prison more manageable for the state.

package of advantages in this system is impressive indeed.

The winning plans Pierce Corp. came up with did not include a final design as this project is a "design/build" project with representatives of the architect and the state on-site at all times to approve design as they build. With all the special requirements needed in a high-security facility, there are plenty of design details getting special scrutiny.

Still, everyone on the site is happy about the way this job is going up. Even with the heavy reinforcing being placed in the wall, the mason contracting work is nearly 50% finished after a December 1986 start. Masons like the fact that the Hi-R block is insulated when it comes from the plant and easy to handle and reinforce. Architect Miller says everything is on track for completion in September 1988.

This facility is one of the largest building projects currently being built in the Midwest. David Owen admits that there were problems to solve in supplying this massive project. "Every block in the building is basically a specialty unit. It's all 4,000 psi block." Miller agrees, "We had to have some custom products made for design details, but our block supplier

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"We were intrigued by the product (Hi-R Block) because of the integral insulation. We knew integral color was a possibility as were different faces. And there's plenty of room for reinforcing these block."
—Architect Ken Miller

While the Hi-R Block system with all its advantages in construction time, energy savings, and high reinforced strength was primarily responsible for winning the bid, over 450,000 other concrete masonry units will be used in the project, against about 200,000 Hi-R Block. Total construction costs of the maximum security facility is expected to top \$50 million.

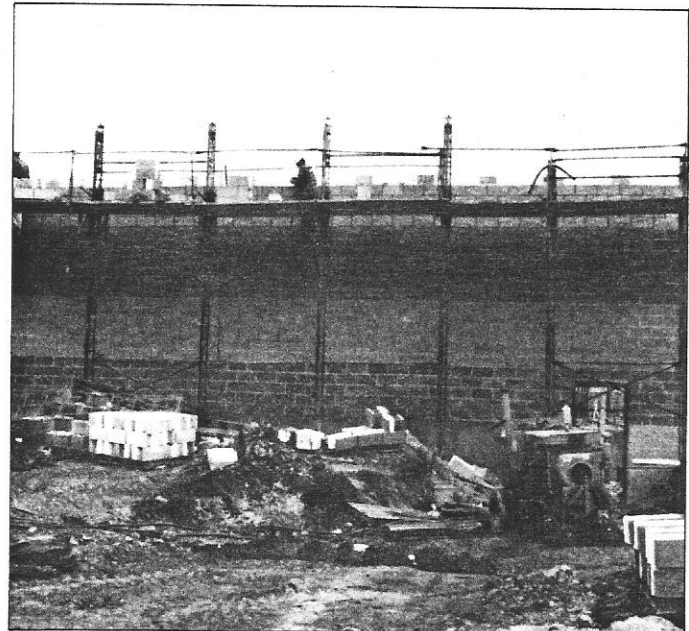
McCarthy Bros. contracting firm in St. Louis hired Pierce Corp. to submit a plan to the state. Pierce was aware of a prison in California built using the Hi-R system, and immediately set to work to get this system approved by the state's security consultants Walter McGuff Folk & Lyerla. Ken Miller of the architectural firm of Pierce Corp. in St. Louis comments, "We were intrigued with the product (Hi-R Block) because of the integral insulation. We knew integral color was a possibility as were different faces. And there's plenty of room for reinforcing these block." Add all that to single-wythe construction and the capacity for integral waterproofing, and the



Construction at the Potossi Correctional Facility is going well, thanks partly to the simplicity of NCMA's Hi-R Block system.

was helpful." He offered suggestions for making it easier to use Hi-R in the future, "We'd like to see more specialized shapes in this insulated unit, and more details for flashing and joints."

David Owen provides the final statement on the Hi-R system, however. He



says he is planning to build his new house in the St. Louis area with the product. Why? "I'm excited by the product. One block (single-wythe) that competes with metal buildings in in-wall cost, with fire resistance, energy efficiency, and sound resistance. I wouldn't

be surprised if in five years, Hi-R corners the block market."

Obviously, a system with this much flexibility—from high-security penitentiaries to new homes—has a future worth watching.

Missouri

State Government Joins Private Business To House Inmates

About the Author: Bruce Rich is president of Correctional Development Corporation, St. Louis, Missouri.

In an innovative approach, the state of Missouri joined with private business to meet the state's growing need for correctional housing. A lease/purchase agreement was developed and executed between the state and a private firm to lease a new 500-bed maximum security facility. As a result, the state obtained a much-needed facility without a major capital appropriation. In addition, because of the teamwork approach with the community, the usual lengthy struggle with residents was not only averted but transformed into a much-ballyhooed cooperative event.

The \$56 million project, which will be completed in the fall of 1988, owes much of its success to the careful preplanning done by the state. How did all the pieces fit together in this first privatized correctional facility project in Missouri?

It began two years ago when the Missouri Department of Corrections and Human Resources needed additional maximum security facilities and decided to try something different. Instead of the traditional approach to design and construction, which often results in traditional problems such as cost overruns and delays, the DOC asked that private developers submit bids to include everything from site selection to financing.

The responses were exceptional, and because site selection was left to each developer, a number of communities became involved. Six development teams submitted proposals, some with multiple sites, and 10 different sites were proposed.

Interested developers first assessed the department's needs: convenient transportation of materials and transfer of people from and to other correctional facilities; availability of people to staff the facility; and educational, recreational, and community services to support the staff.

Potosi, a community of approximately 2,500 people, located in the rolling foothills 55 miles southwest of St. Louis, qualified on all counts.



Booker Associates, Inc.

The \$56 million project at Potosi, Missouri, is slated for completion in the fall of 1988.

In late January 1986, one of the principals in a five-company consortium that ultimately won the project contacted James F. McCaul III, president of James F. McCaul & Associates, an engineering consulting firm in Potosi. "They asked whether we had any interest in having a state prison built here," says McCaul. "It was a good question because seven years ago there had been strong opposition."

That same day, McCaul contacted other community leaders, including the mayors of Potosi and neighboring Mineral Point, the head of the local chamber of commerce, and the county commissioner. He also contacted the head of the Industrial Development Authority, which owned a large, but inactive, industrial park. "Potosi is a more mature community today," says McCaul. "The big question from everybody wasn't whether or not to have a prison but where to put it. The industrial park seemed like a possible fit."

The park's lone tenant was also contacted that day, and managers there agreed to support the project. With the approval of the four owners involved, the decision was made to contribute the land to the prison project, and the title transfer was then arranged in a remarkable three weeks. "Without the owners' cooperation at the outset, we couldn't have gotten off the ground," said McCaul.

The key group, which included Mayor P. Russell Dessieux of Potosi; Mayor Martin Coleman of Mineral Point; Roger Bilderback, president of the Potosi Chamber of Commerce; Robert Reed, presiding commissioner for Washington County; and Al Britton, president of the Industrial Development Authority, continued to move quickly.

Within two days of the initial inquiry, they enlisted the support of the local media to discourage rumors and clear the channels of communication. The proposed prison was presented as a real opportunity, a chance for survival for the mining town.

Stability was part of the project's appeal. A prison is not affected by the prime rate or other fluctuating economic factors, and the 300 permanent jobs it promised were especially significant to the people of Potosi. Perhaps its most impor-

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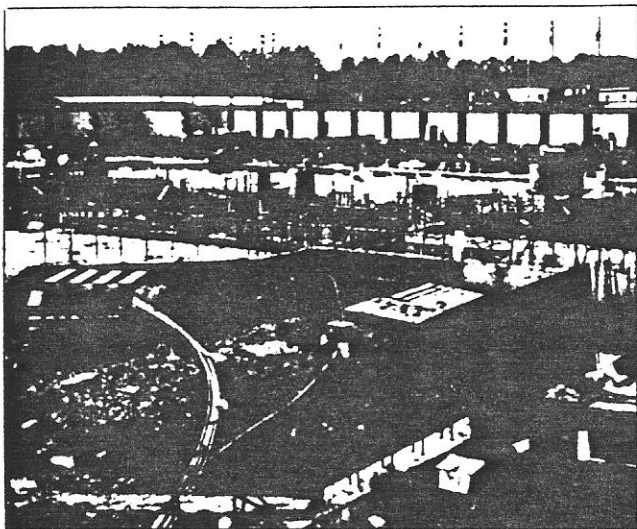
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tant function was that it served as a rallying point for the entire community. "People started cutting their grass who hadn't done it in two years," says McCaul. "Our local pride really began to show."

Despite the enthusiasm, several issues needed to be resolved before a proposal could be drafted. The people of Potosi wanted security and a final product they could be proud of. The state wanted a facility that would be efficient to operate and well located. The developer needed assurances that the community selected would support the project with land and necessary utilities.

How did they reach agreement? From the beginning, expectations were placed squarely on the table. Any hidden agendas were flushed out in the preliminary discussions. According to McCaul, "We tried to answer everybody's questions before they blew out of proportion. We met regularly and encouraged people to bring up their concerns."

In February 1986, a representative of the Missouri Depart-



Booker Associates, Inc.

The Potosi, Missouri facility will provide beds for 500 inmates.

ment of Corrections and Human Resources was brought in to address a town meeting attended by 367 concerned citizens. The presentation dealt candidly with the pros and cons of a correctional institution. The civic leaders wanted to do everything possible to provide answers to people's questions.

McCaul became the acknowledged sparkplug, the person who brought everyone together and acted as a central clearing house for any questions or concerns. There was ongoing dialogue between developer, community, and state as the plans were drawn up, and it continues today. "At no time did we feel a loss of control, even during the design/build and financing processes, two areas where it's easy to experience a lot of uncertainty," said McCaul.

Following a series of community meetings, on May 15, 1986, 500 enthusiastic citizens traveled to Jefferson City, the state capital, to demonstrate their interest in the project. A week later, the sites were narrowed to three, and Potosi was strong in the running. "The support of both mayors was a key factor in getting the two communities behind the project," McCaul said. "They deserve a tremendous amount of credit."

Privatization

In any privatization project—where private enterprise owns and/or operates a public service—it is the combination of quality product plus cost effectiveness that makes it beneficial.

The development package for Potosi offered precisely those benefits. By using value engineering, an approach that produces economical, top-quality solutions to design requirements, the design and construction team was able to come in under the budgeted amount and save the state money on future maintenance costs as well. For example, the approved design features a compact site development in which the inside fenced area (for maximum security) is less than 35 acres. With a smaller area to develop, patrol, and maintain, initial costs as well as operating costs are reduced.

According to McCaul, privatization is effective because "the state gets more for its dollar on time and with no surprises." With the Potosi project, approximately \$50 million in state money required for capital appropriations was freed for other uses. In addition, the time from planning to completion was reduced. Had the state chosen to do the job alone, the prison would have taken two years longer to complete.

In addition to the savings in design, a firm of investment bankers was able to create an innovative financing package and leasing structure that also made its proposal more attractive to the state: \$55.2 million in tax exempt, double-A rated revenue bonds were issued by Southeast Missouri Correctional Facility, Inc., a nonprofit organization. Missouri will make annual lease payments of \$4.5 million to the corporation until the state owns the prison.

On May 28, 1986, after an intense five month effort, the 127 acres at Potosi were selected as the site for Missouri's new 500-bed maximum security facility. When ground was broken on August 14, 1986, the governor of the state was in attendance, as well as top-ranking members of all the other organizations involved. Potosi became a symbol for the kind of cooperation that can exist between a state, a community, and a developer.

But had the state not done its part in the early stages of the project, none of this would have come about. The real key to ongoing successful execution of this project is the time spent in the early stages by the state formulating long-term needs and defining specific requirements for the facility. It was this planning that allowed the selected developer a quick start on construction activities (within one month after the contract award was made). Construction has to date proceeded successfully on a fast-track schedule toward completion in fall 1988.

Author's note: The development package for Potosi was created by Correctional Development Corporation (CDC), St. Louis, Missouri. The design and construction team for the prison at Potosi consisted of CDC; McCarthy, general contractors, St. Louis, Missouri; Pearce Corporation, architects, St. Louis, Missouri; Colton/Lester Corporation, engineers, Chesterfield, Missouri; and WMFL Justice Group, prison design experts, Spokane, Washington. The financing package was created by A.G. Edwards & Sons Inc., investment bankers, St. Louis, Missouri.