The Ice Arena That Almost Never Was!

The new Olympicview Ice Arena in Mountlake Terrace, Wash., which promises to attract major national and regional skating competitions and exhibitions to northern Washington state, almost never was. Budget constraints nearly forced the client, the Washington Ice Skating Association, to sacrifice several value-added features and amenities, if not the project itself. That is, until Garco Building Systems, a...
The players’ lounge at the Olympic-view Ice Arena.

Spokane-based metal building company, stepped in with a solution.

Assuming the role of an engineering consultant, Garco’s team e-engineered the original specifications and loading conditions for its system of built-up metal shapes and standing seam roof. “They worked with the builder (Seattle-based J.R. Abbott Construction Company) to present an alternative that solved the budget problems we saw coming down the road,” says Greg Blount of Driscoll Architects, also in Seattle. “We didn’t have to make the building smaller or sacrifice the features we and the client wanted.”

The new, 43,700-square-foot arena features an Olympic-size ice skating rink and amenities such as players’ lounges and a sports therapy room. The exterior of the building is finished with a detailed concrete masonry and stucco material. “A lot of new rinks look like fruit-packing warehouses,” Blount says. “This one doesn’t.” With these and other features, the public skating arena is expected to draw high-profile competitions to the area.

THE PROJECT

Initially, the project had been specified with custom engineered and conventionally fabricated steel components—often a costly choice, especially if design changes are encountered along the way. The suggested alternative was an engineered system with built-in cost efficiencies that combined the economies of factory production with custom engineering design services and steel fabrication. Every build-
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ing offered by the company is engineered independently—steel components are fabricated for the particular specifications of each project, not shoe-homed from an inventory of standard shapes. “The system allowed us to be

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flexible and was responsive to changes in design,” Blount says.

In particular, the client was concerned that heavy steel columns would intrude on the arena’s walkways, rink-level seating and exits, thus limiting accessibility and views. However, Garco designed a clearspan system of built-up shapes, which considers the best use and design of steel components for each load condition. The result: columns were held to a 24-inch depth at the base so as not to crowd athletes and
fans, then tapered out at the top to support the structure—and uphold the budget, as well. A proprietary standing seam roof system also was a more cost-effective alternative, meeting the same load-carrying values of a conventional roof design, but with a lower lifecycle cost.

The metal building company also coordinated with Driscoll Architects and other professionals on the project team on a high-tech level. “We were able to integrate with their computer system, which allowed us to quickly revise drawings for code approval and cut the turnaround to about five weeks, not months,” Blount says.

Marco also provided preliminary sizing and other design and load specifications to other members of the team, allowing them to develop drawings and specifications to match. “Most projects don’t have that kind of coordination, and it’s usually the point where most of them break down,” says Robert Fossatti, president of the structural engineering firm, Robert Fossatti Associates in Seattle.

REDEFINING METAL BUILDING

The Olympicview Ice Arena epitomizes Garco’s business philosophy—to provide what the company calls Maximum Building Value. “It is our commitment to serve our customers in a variety of ways and deliver the services and projects they want,” says Garco General Manager Steve Volk. “Maximum Building Value isn’t just a catch-phrase. It is a promise.”

The company’s level of quality—both in its people and its metal building components—has been certified by the American Institute of Steel Construction metal building certification program, one of only 16 metal building companies to achieve that status. It also is a member of the Metal Building Manufacturers Association. The 28 members of MBMA accounted for nearly 70 percent (or about 300 million square feet) of all low-rise, nonresidential building—and an additional 34 million square feet of industrial space—in 1993.