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BUILDING SYSTEMS  
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**DESIGN IDEAS**  
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## Diving in to creatively solve a problem roof

With its existing roof rusting and deteriorating, a natatorium owner wanted a new roof that would control sound, match the existing aesthetics, come with a warranty, and still be in-line with budgetary constraints. New Millennium dove right in to the project.



Located at the Howard M. Terpenning Recreation Complex, the Tualatin Hills Aquatic Center in Beaverton, Oregon, features a 50-meter pool that provides recreational and instructional programs for all ages. It's also an Olympic training pool.

The existing roof had deteriorated due to lack of proper sealcoating and New Millennium was called in, along with Opsis Architecture, to design a new warranted roof solution that would meet acoustical, aesthetic, and budgetary constraints.

"Longevity was one of the main concerns of the customer," says Gary MacArthur, District Sales Manager for New Millennium Building Systems. "Because the natatorium's existing roof needed to be replaced early, they really were concerned about making

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sure the new roof was warrantied, designed to last, and in line with all their acoustical and aesthetic concerns.”

### Humid, loud, and expensive

Natorium erections must address unique considerations. The humidity of the environment and the echoic noise level need to be ameliorated with the building system installed. And in this case, the replacement roof had to meet the aesthetic of the finished pool as well as the strict budgetary constraints of the customer.

“Because the customer wanted a 20-year warranty on the roof, they were running into some price issues,” says Gary. “We worked with the customer to come up with alternatives that would approximate their aesthetic vision and still provide the proper coatings to increase the longevity of the system.”

### Powder coating solution

It’s important in natatorium applications that the acoustical perforations be coated, otherwise the high humidity of the environment will cause them to rust prematurely. “In working with the architect, we wanted to make sure the perforations didn’t develop rust bleed-through. But we also wanted

to present the owner with a solution that would protect the installation, include a warranty, and meet their budgetary constraints. So, we searched for an established after-market powder coater,” says Gary.

Powder coating is a process by which the already-fabricated steel deck is electrically charged. A dry paint is then statically applied in a powder form and baked. It’s a more affordable option. Plus it is warrantied, which was a requirement of the customer.

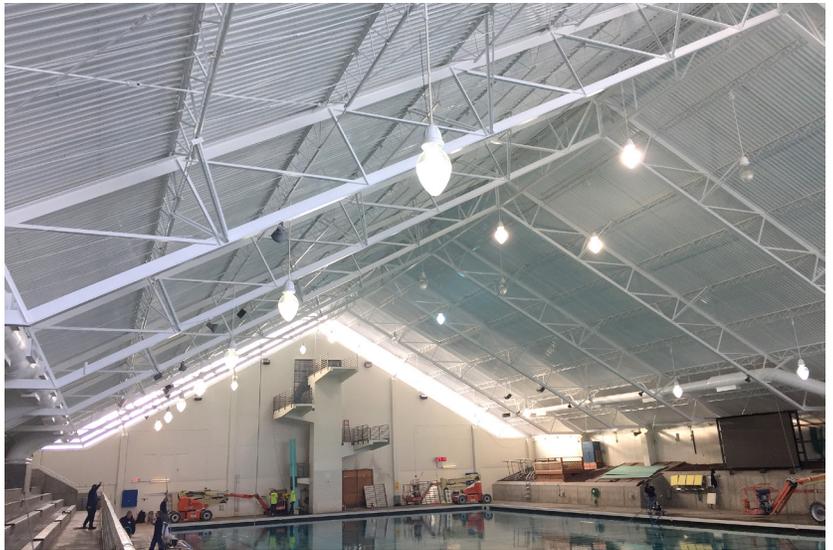
### Working together as partners

The team, including trusted partner IMETCO, ultimately decided on 1-½” profile deck, inverted, and powder coated by a reliable third-party provider. “By inverting the deck, we were able to provide both the acoustical control and the aesthetic definition of the lines they were looking for.

“It’s an example of how we can wipe the board clean after our initial recommendations and work hard to build a solution together — as a partner with the customer — to meet whatever requirements they prioritize as showstoppers,” Gary adds.



*Working together with the client to achieve a warrantied, powder coated roof, inverted B deck was ultimately selected as the best option.*



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