



FEATURE



Aquatics Enhance the Architectural Experience

[By Aldo Coronado]

Good architecture appeals to more than just the eyes.

It floods the senses like a 17-story plume of water.

A list of the nation's most impressive architectural projects almost invariably includes an aquatic feature at every site, in a position of prominence, allowing visitors to hear, feel, and even smell the water. Spray gardens, pools, and water sculptures create a sense of drama, whimsy, serenity, and even melancholy, frequently generating returns on a developer's investment that he or she likely never imagined.

One of the nation's first developments to benefit from a stunning aquatic feature is the Old Faithful Inn in Yellowstone Park, designed by Robert Reamer and constructed in 1904 for \$140,000. It is situated conveniently on the grounds of a water attraction that today would cost tens of millions of dollars to reproduce. And it really wasn't the mirrored ceilings that made those honeymoon hotels in upstate New York so popular over the years. A natural phenomenon called Niagara Falls creates a sense of bliss guaranteed to endure at least through the weekend, if not wedded eternity.

Where Mother Nature hasn't been quite so generous, architects have intervened, creating such noteworthy projects as the waterfall at Millennium Park in Chicago and the world-famous fountain at the Bellagio Hotel in Las Vegas. The latter, a \$40 million project, set the standard for aquatic features

in architecture, with sprays of water set precisely to the rhythm of computerized music. So precise is the coordination that visitors hear the rap of a snare drum at the same time that they see the synchronized eruption of a plume of water, essentially negating the lag caused by the lower speed of sound waves.

Behind the scenes is a sophisticated labyrinth of pipes (five miles), valves, nozzles, wires (350 miles), and conduit hooked to pumps of up to 100 horsepower in strength, all designed to appeal to the visitor's most primitive awareness that this art, at its core, represents one of life's most basic elements of sustenance. At any one time, as much as 17,000 gallons of water may be suspended in air, equaling the height of a 17-story building during the five-minute show.

Architects understood the value of water features well before the discovery of Old Faithful or the invention of digital jet streams. As long ago as ancient Egyptian and Mesopotamian times, architects understood that water in or around a building can create a sense of relaxation, mask unwanted noise, or help cool the environment. As concrete and steel became the materials of choice for architects, they tended to use water as a "softening" device.

Modern aquatic architecture has evolved to include sophisticated filtration systems, create illusions of water running uphill, and

even disguise water to look like glass. The 30-year-old technology called a laminar stream of water makes an arc of water seem solid-anchored at both ends. It is prominently displayed at the Epcot Center in Orlando, FL, at McCormick Place in Chicago, and at the Bellagio, which seems never to be outdone in the realm of water innovations.

Displays come in all varieties, from the extravagance of the Bellagio to the modesty of a three-foot porcelain birdbath. But most commercial developers at some point will ponder the usefulness and the delight of a bit of running water.

Despite the relative simplicity of water, architects have been notably creative in the ways they have applied it to their designs. Las Vegas developers seem determined to outdo each other with every new project (think Caesar's fountains, Treasure Island's Pirate Cove, and the Bellagio). In fact, the producers of the NBC hit series *Las Vegas* turned to water when they had to create a fictional Montecito Casino that would leave the most lasting impression on viewers. The result: a 43-story waterfall that begins at the roof of the casino and cascades to the front door-or so it seems from the computer-generated aerial view.

How plausible is that kind of water feature? The industry has the pumps to handle it and the materials and engineering ability to contain it. The trick in this kind of feature



FEATURE

would be to install wind sensors that would keep the water from "breaking." A broken stream of water (interrupted by an object or a gust of wind) is a messy stream, liable to splash anywhere. Also, any design must contain the massive amounts of water and spray from the top to the bottom of the water feature. Conveniently, a waterfall in Las Vegas encounters no complications from cold weather, which could cause icing on the building windows and walls if the feature conditions were outdoors.

Cold-weather sites are increasingly turning to indoor water features. Resort clients in the Rocky Mountains wanted summer activities in the winter, supplementing their staple fare of skiing. We have designed indoor/outdoor pools, allowing swimmers

to connect from the warm indoors to the frigid outdoors, where the water is heated and steam creates the effect of a natural hot spring. The swim-through feature creates energy-conservation challenges that make these design projects especially rewarding.

A famous tourist destination, the Wisconsin Dells, 155 miles northwest of Milwaukee, has found a way to extend its limited, three-month outdoor summer season by building extravagant indoor water parks with tubing, wave pools, raft rides, etc., in many of the Dells' 20 hotels. Those hotel rooms that used to sit idle in the winter are now bustling with swimsuit-clad families.

It is no secret to architects and developers that water is more than an accessory-it

represents life through its movement and fluidity, in contrast to the unmoving building that towers above or beside it. Adding water to architecture or landscape design lends energy, dimension, and even emotion to a facility, park, or work of art.

About the Author:

Aldo Coronado is director of the aquatic division for OLC (Ohlson Lavoie Collaborative), which specializes in working with architects, landscape architects, and developers to design aquatic parks, water features, and pools for many different projects. OLC is a full-service architecture firm headquartered in Denver. For more information, go to www.olcdesigns.com.

EmploymentCrossing is the largest collection of active jobs in the world.

We continuously monitor the hiring needs of more than 250,000 employers, including virtually every corporation and organization in the United States. We do not charge employers to post their jobs and we aggressively contact and investigate thousands of employers each day to learn of new positions. No one works harder than EmploymentCrossing.

Let EmploymentCrossing go to work for you.