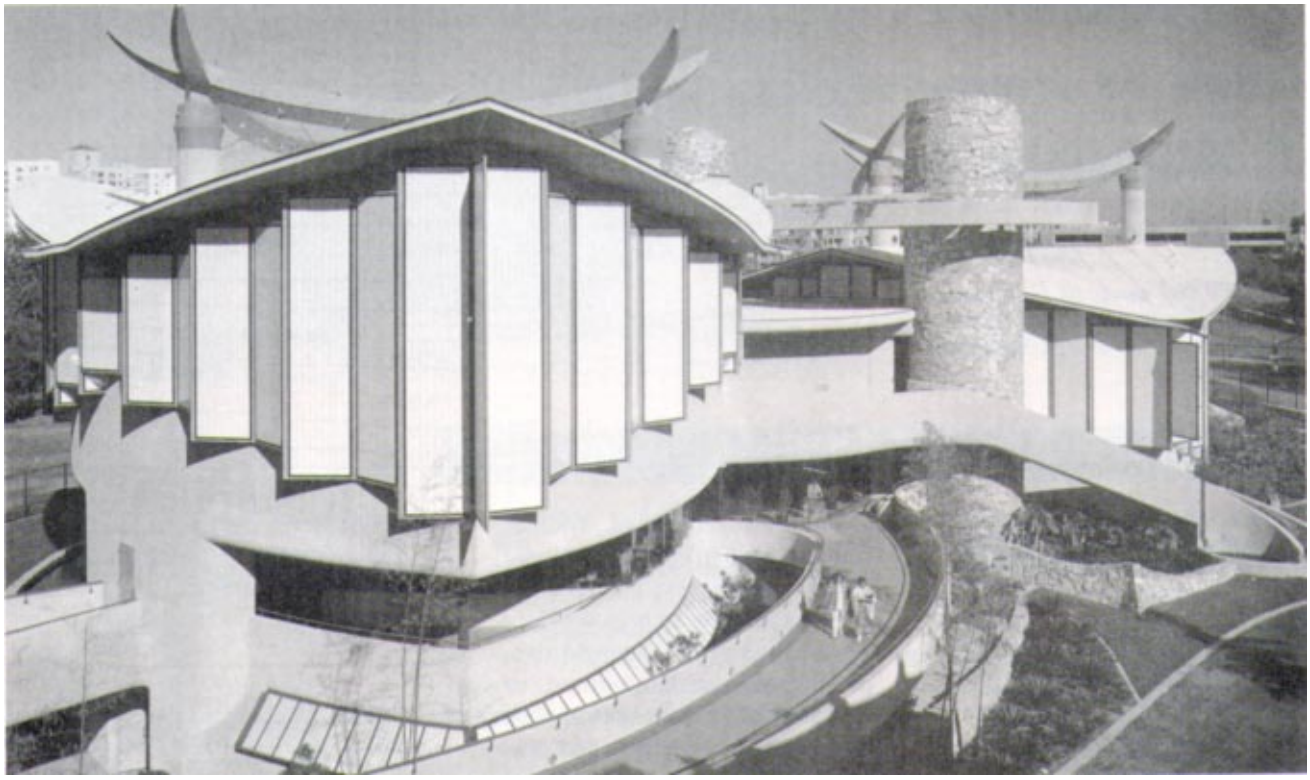
Traditional Plastering Rescues the Future



The futuristic Japanese Pavilion in Los Angeles made enormous demands on plastering skills, but the result is one of the most unique museums in the world.

From the beginning, it was apparent that construction of the futuristic styled Pavilion for Japanese Art at the Los Angeles County Art Museum, was not going to be an easy or ordinary run-of-the-mill plastering job. Especially for the plastering contractor, who, in this case was Mowery-Thomason, Inc., Los Angeles.

At hand were challenges not normally found in standard projects. Consider no right angle corners . . . no perimeter bearing walls . . . a mass of radii . . . even the stalls in the restrooms had to be custom-designed since standard stalls required a flatback wall and the restroom walls were curved . . . a multitude of compounded curves, concave and convex . . . unique rounded and trough shapes that required improvised tools for plastering since conventional tools-of-the-trade would not work. These included different sized rubber balls, pieces of plastic buckets, plastic stripping, flexible vinyl tubing, and flexible knives. The beat goes on.

It is no surprise that versatile exterior and interior lath and plaster systems played a prominent role in the building

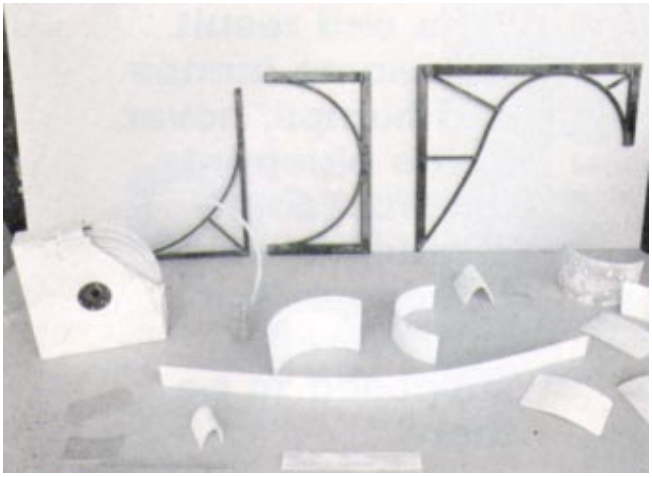


Photo A

Photo B

Photo C

Photo D

Photo E

***Photo** A: Some of the unique tools that were improvised on-site to form the many diffferent contours, compounded curves, concave and convex, troughs and rounded shapes in the Pavilion are shown above. They include various sizes of plastic bucket pieces, plastic strips, 1/2-inch vinyl tubing, rubber balls (not shown), and forming templets.*

***Photo B:** Pictured is one of the six tokonomas (display alcoves) that will house the Shin'enKan paintings at the Pavilion.*

***Photo C:** Interior view of the East Wing of the Pavilion for Japanese art shows some of the contoured plaster forms that necessitated the improvisation of special plastering tools to do the work.*

***Photo D:** The 30,000 sq. ft. Pavilion will eventually house the largest collection of Edo-period ink paintings and scrolls in the Western World, starts to take shape.*

***Photo** E: Plastering of the Shin'enKan Pavilion has been underway since July. Over 3,500 yards of exterior plaster dash coat will be applied over the steel stud system, cement blocks, and curved ramps. Over 6,500 yards of three coat, smooth finish plaster will be used on the exterior that will incorporate two elaborate contoured ceilings.*

of this spectacular showplace for Japanese art.

Completed in the fall of 1988, the 30,000 sq. ft. Pavilion houses the largest collection of Edo-period ink paintings and scrolls in the Western World. The Shin'enKan Collection that will be exhibited was acquired by the Museum in 1983 as a gift from Mr. and Mrs. Joe D. Price. The more than 300 screens and scrolls, dating from 1600 to 1850, are valued at approximately $40 million.

The three-level Pavilion is a free-standing building comprised of two wings with six tokonomas (display alcoves), a library, reception room, screen and scroll storage areas, and various service areas. It is linked to the present Museum complex by a curved walkway from the upper plaza. Suspended ramps inside hover above gardens and pools of water cascading into a grotto. These suspended ramps are lit in a way as to make the visitor feel as if he is floating.

Designed by the late Bruce Goff and constructed from working drawings developed by Bart Prince, a close associate of Goff, the Pavilion is built of reinforced concrete and steel, with the exterior walls of the two wings made of a translucent material that permits light to enter a room much in the

same way as a Shoji screen does—varying, according to the time of day, weather, and season, making the movement of the sun and clouds noticeable on the works as intended by the artists.

The translucent panel walls, however, were not strong enough to support a roof. Thus, the idea of using a cable suspended roof was utilized wherein cables hung from three banana-shaped steel girders (for each roof) carried the load. These girders were joined at their ends over three giant columns to form a triangle. The two roofs are made of a series of ribs radiating from a center compression ring. These ribs are covered with sheet metal decking and a layer of perlite fill. On top is liquid reinforced fiberglass base sheet which is covered with another perlite-type material to create a hard paintable finish.

Preparatory work to the actual lathing and plastering of this elaborate complex began in December, 1986, when a Mowery-Thomason management team composed of Bob Heimerl, president; Bob Roederer, chief estimator; Bill Craft, lathing superintendent; and Alan Swift, plastering superintendent, sat down with the original estimated takeoff on the project. They broke it down into components, each of which was individually priced by using a consensus of opinion.

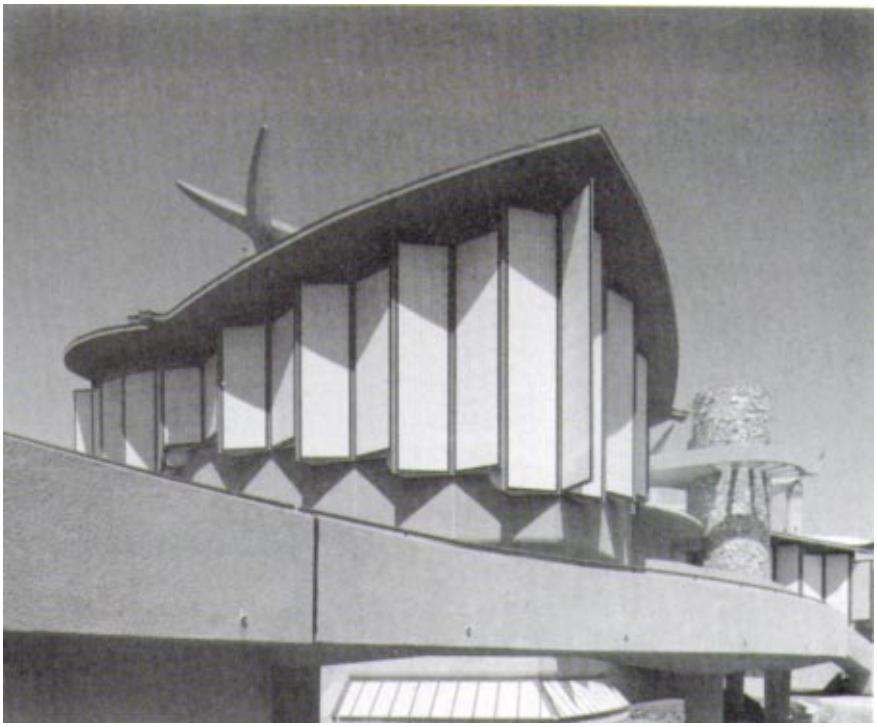
"The end result was some humps and bumps, never in the blueprints, that had to be blended in so as to appear that they were supposed to be there."

In January, 1987, preparation for lathing the Pavilion began. Lathing foreman Bill Davis spent over three weeks on the site before actual work began, mentally figuring out how the intricacies of the job could be accomplished and getting everything set up. Plastering work under the supervision of Jerry Hensel, plastering foreman, began in July, 1987.

Consistent communication with the architect and general contractor (Kajima International, Inc.), and their flexability and willingness to listen to suggestions and lend full cooperative assistance, was a major factor in the smooth running and ultimate success of the project. For example, there were times when the architect was not particularly clear on what he wanted. Personal dialogue and suggestions from Mower-y-Thomason supervisors and foremen, helped solve many a problem. On this job, if something didn't fit, you made it fit! In some cases where structural steel members were radii to form contours but the radii never met to form the desired dimension, then additional framing had to be set in.

The end result was some humps and bumps, never in the blueprints, that had

Pavilion for Japanese Art at the Los Angeles County Museum of Art.



to be blended in so as to appear that they were supposed to be there. There were times when the structural steel would come up in spots, turn over, and stick out past the radii. So, with the approval of the architect, you put a little knob around it. Looking at these necessity-bred innovations now, a person would never know they were not meant to be!

Plastering the interior of the Pavilion had its share of interesting moments. Plasterers would run into situations where the standard working tools would not work and improvisation was required.

In working on the tokonomas, different size pieces of plastic buckets were used to form and smooth the plaster on the many rounded and curved surfaces. Large pieces were used to obtain the basic contour and alleviate the hollows, then small pieces to do the final finish troweling.

The plasterers were pretty much on their own. They designed the particular tool which they thought would work best to cope with the areas and radii they were working in.

Plastic strips were used as a forming mechanism. These strips would be drawn over a contour surface, scraping the plaster with it. Smaller pieces were used for the final finish troweling and smoothing.

Another interesting innovation was the use of ½-inch flexible vinyl tubing (similar to a garden hose) as a screed on the ceilings. They were wire-tied to the metal lath and shimmed when necessary. The scratch coat was applied and then the brown coat, using the vinyl tubing as guides for plastering the intervals between them. After the plaster was hard, the tubing and wire were cut out, the areas patched in, and the finish coat applied.

Over 6500 yards of three coat, smooth finish plaster was used on the Pavilion interior, including two uniquely contoured ceilings.

On the exterior, 3500 yards of plaster dash coat was applied over the steel stud system and cement blocks. The three curved ramps leading up to the Pavilion were also plastered.