

Trade magazine: *Dimensional Stone*

Putting Sandstone In A New Light: The Museum Of Contemporary Art, Los Angeles

Photo caption: Japanese architect Arata Isozaki incorporated a variety of geometric shapes in his design for the Museum of Contemporary Art's new building in downtown Los Angeles. Pyramids are right and far left are skylights over galleries; barrel-vaulted structure (left) houses museum library beneath which is rectangular main entranceway and cube-like ticket booth. Most of \$23 million building, which opens Dec. 10, is sheathed in blocks of warm-red sandstone quarried in India.

Photo caption: California Plaza walkway with fountains and reflecting pools (foreground) abuts the eastern approach to the Museum of Contemporary Art's 5,900 square foot outdoor sculpture court. Barrel-vaulted structure atop columns (center) houses the museums library which faces south from the square-shaped administration wing (right). Pyramid (left) is largest of 11 pyramid-shaped skylights over museum galleries.

Body: Nearly a decade ago, when a committee of prominent local collectors suggested to Los Angeles Mayor Tom Bradley that the city build a museum for contemporary art, the city's Community Redevelopment Agency happened to be drafting a preliminary plan for an 11.2-acre site downtown. When the CRA heard about the meeting between the mayor and the collectors, it put forth a unique proposal: as part of the approval for the mixed-use development to be built on the downtown site, the developers should set aside 1 1/2% of their budget for public art. Based on the CRA's fiscal projections, that would total over \$20 million, more than enough to build a much-needed museum. A few drafts later, The Museum of Contemporary Art (MOCA), a privately-maintained organization, was born.

After rejecting the preliminary design for the museum, as submitted by Arthur Erikson & Associates, the museum's trustees sought out their own architect. A search committee reviewed many well-known architects, including Richard Meier, finally giving the project to Arata Isozaki & Associates. The associate architect for the project was Gruen & Associates in Los Angeles.

Given the restrictions of the Plaza, Isozaki produced a design that was both functional (seven galleries with approximately 24,500 square feet of exhibition space), and esthetically pleasing, a complex split into two relatively low buildings around a sunken courtyard.

One of the most important features of The Museum of Contemporary Art (MOCA) is its unusual and innovative use building materials. As part of the environment of the California Plaza, MOCA had to stand out amid a landscape dominated by the standard glass-and-steel towers of downtown Los Angeles; to keep it from being lost amid the larger buildings, Isozaki set out to create a structure that attracted people's attention through its forms and building materials.

Subhead: Blending Light With Stone

Making note of the consistently strong sunlight at the Los Angeles site, Isozaki chose clef-finish Indian sandstone as the primary exterior finish. When it was completed in December of 1986, MOCA became the first major building in Los Angeles with sandstone cladding.

Photo caption: Block of warm red Indian sandstone sheathe much of the Museum of Contemporary Art's new \$23 million home in downtown Los Angeles. Cylindrical structure atop columns (left) houses museum library which extends from square-shaped administration wing, portions of which are faced with green aluminum paneling with pink cross-hatching. Outdoor sculpture court is at right foreground. Staircase (not shown) leads down to sunken court (foreground) which serves as entrance to museum cafe (lower left) and gallery lobby.

Currently there are only two other major buildings in Southern California whose designs call for Indian sandstone: the Comprehensive Cancer Center at Cedar-Sinai hospital and the proposed new Disney Corporation building in Burbank.

The 54,000 square feet of Baraula red sandstone that covers MOCA was quarried entirely by hand into slabs of approximately 40MM (± 5) thickness. The stone, which comes from the Dolpuh Stone quarry in the Indian state of Rajasthan, was hand-split and cut into the approximate sizes on-site. Since the Dolpuh stone quarry is unusable during the six months of the annual monsoon season, and shipping from India is very time-consuming, the excavation of stone began as soon as the final plans for the museum were approved to ensure the stone's arrival would not delay final construction.

There was some concern about shipping the fragile slabs directly to the United

States from India. To avoid damage to the stone, it was first sent to Japan, then machined into 1 1/2" to 2" thicknesses. The fabrication process emphasized the irregular fracture patterns of the warm-red sandstone. Some of the slabs were laser-cut and polished into 8" to 10" inch bands. All of the stone was then placed in special crates and shipped to Los Angeles.

Once it arrived, the sandstone was installed at MOCA against the exterior reinforced concrete walls. Strap-anchors with split-tail dowels anchor the sandstone directly to the concrete; fast-setting mortar holds the slabs in place.

The sandstone is anchored on four sides with a relieving angle of 13 feet. Where exceptional stress is placed on the sandstone, a thin liner of epoxy was employed as an additional anchor.

One of the concerns facing anyone who uses exterior stone surfaces is the possibility of damaging graffiti. "There was a lot of debate about graffiti," recalls Robert Barnett, the project architect for Gruen & Associates. "We wanted to protect the stone, but most graffiti covers would change the color (of the sandstone)." In the end, a transparent waterproof coating designed to help fight graffiti was used.

The smaller, polished strips of sandstone alternate with the rough, natural slabs in a pattern of one smooth strip for each three rough slabs, presenting a changing building face. This effect was accentuated by randomizing the slabs; most builders lay out exterior stone and look for patterns that can be matched during installation. "The common attitude toward stone is to match it all," Barnett explains. "In the case of MOCA, there was no attempt to control any patterns." Instead, the sandstone was installed in the order that it was uncrated. When Isozaki saw the finished product, he said it was exactly what he wanted.

Supporting the sandstone facade is a band of wide, polished "Lac du Bonnet" red granite that rings the perimeter of the building.

But sandstone is only one of the effective materials employed here. To provide contrast to the ruddy stone, four-foot-squares of dark-green aluminum were attached to the administration wing and ticket booth that sits in the entranceway under the MOCA library. The 3/16"-thick aluminum panels are coated with a special silicon-polyester finish to retard weathering. A diamond pattern was created by painting the cross-hatched joints in the aluminum bright pink. The remainder of the administrative wing is faced with "Fantasy" glass blocks measuring 290mm X 290mm X 95mm.

MOCA also represents the first use of neoparium in a major project in the United States. Neoparium is crystallized glass, a synthetic marble that is manufactured by

Nippon Electric Glass, which also crafted the glass blocks for the southern face of the administration building.

Finally, there is extensive use of copper in the barrel vault of the library and lower portions of the pyramidal skylights that provide two-thirds of MOCA's interior light. Copper was chosen for the exterior trim because its eventual weathering and green patina will complement the silicone finish of the aluminum panels.

The roof terrace above the bookstore is constructed from 2" precast concrete paver that was installed with open joints on pedestal mounting.

Another interesting use of the site is the Sculpture Court, which is reached by ascending a short flight of steps from upper Grand Avenue. The court measures approximately 5,900 square feet and serves as both an outdoor display and a primary pedestrian route from the underground parking facility. Two-inch, precast concrete paver, installed with mortar joints on pedestal mounting, forms the base of the Sculpture Court.

When you enter MOCA through the main entrance, you descend a two-flight stairway (covered with neoparium) to a 2,150-square-foot sunken courtyard. The museum's cafe, which is also faced with the same crystallized glass used in the stairwell, is located here. Paving for the courtyard, which fronts the cafe and main lobby, is accomplished with 2" red granite paver that was thermally finished and installed with open joints on pedestal mounting. This same paving is used for all the external areas of MOCA. Centered on the "split" of the building is a six-tier fountain made from the same red granite. There are also two oval pools on the same plane as the fountain; their raised edges of polished red granite double as benches. Facing them are a series of steel benches painted white. The entire walkway is shaded by regular tree plantings. On either side of the entrance, the museum's full name is spelled out in colored steel lettering set against a mirror-bright steel. These sheets are coated with a silicon-polyester finish.

The galleries themselves make ample use of natural light. In Gallery A, twin pyramids create more opportunities for sunlight than would be possible with a standard a standard flat skylight. Other galleries benefit from aluminum-framed saw tooth skylights that feature linear light baffles and Oka-lux light diffusing assemblies. Oka-lux is a mixture of glass and filters that manufactured in West Germany that diffuses sunlight to protect the artwork on display. Fluorescent tubes, concealed near these baffles, provide supplemental illumination when natural light is insufficient.

In the Library main room, located in the vaulted space over the landing at the top of the neoparium staircase, the reinforced concrete vault is exposed. Indoor lighting is

assisted by a double-glazed clear glass exterior window backed by interior onyx sheets. The Library roof is a combination of standing seam and flat seam copper roofing. The design for interior lighting was inspired by Jørgen Bo and Vilhelm Wolhert's system in the Louisiana Museum in Denmark.

Subhead: MOCA: A SPECIAL CHALLENGE ANSWERED

From its inception, the MOCA project has run a gauntlet of development and creative problems. The location itself presented a special challenge to the architect and contractor. The developers of the California Plaza declared that the museum could not block pedestrian access or sight-lines of the Plaza's future tenants. In addition, the outline of the museum had to blend in with the existing five-story parking structure. Finally, MOCA would eventually be surrounded on all sides by tall buildings—an office tower to the north, a hotel to the south, and residential condominiums on the other two sides. More than 30 different designs were proposed before finding one that balanced the needs of the developers and physical restrictions of the site.

This balance is achieved through the use of space, shape, and most important, light. Isozaki's unusual combination of exterior finishes (sandstone and aluminum) set MOCA apart, but the effect is heightened by splitting the building so that it conforms to the angles of upper and lower Grand Avenue. By scattering such distinctive forms as barrel vaults, cubes, and rooftop pyramids, the illusion of “a small village inside the valley created by the skyscrapers,” the illusion is maintained by the sheer amount of surface area that is available to hold sunlight. While there will be some diminishment of ambient light when the rest of the California Plaza is completed in approximately two years, the sandstone cladding will still stand out.