

OAKLAND MUSEUM OF CALIFORNIA
(Oakland Museum)
1000 Oak Street
Oakland
Alameda County
California

HALS CA-20
CA-20

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN LANDSCAPES SURVEY
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN LANDSCAPES SURVEY

OAKLAND MUSEUM OF CALIFORNIA (Oakland Museum)

HALS NO. CA-20

Location: 1000 Oak Street, Oakland, Alameda County, CA
Lat: 37.79929 Long: -122.26509

Significance: Innovative and radically different design approach in the 1960s, museum design concept dropped a majority of the building below grade and created an overgrown villa with plants, maintaining a natural relationship between a site and its surroundings.

History: Occupying four city blocks, the current site of the Oakland Museum was initially a marshy inlet. In 1869, Oakland mayor, Dr. Samuel Merritt, proposed and funded construction of a dam at the 12th Street Bridge and turned the surrounding area from a tidal slough into a lake (Lake Merritt in Oakland, California). Inspired by the City Beautiful movement in the United States (1890s-1920s) and under the aegis of Oakland Mayor Frank K. Mott, the City of Oakland embarked on several city improvements, including new parks, libraries and museums, including the Oakland Public Museum (1910), Oakland Art Gallery (1916), and Snow Museum (1922), predecessors of today's Oakland Museum of California. The stock market crash of 1929 eliminated the idea of a new museum complex. All three museums struggled during the Great Depression and World War II.

In 1954, Paul Mills, then a part-time curator, proposed a new building to house new collections that would feature Californian art. Voters passed a \$6.6 million bond issue to construct a new museum. All three separate city-owned facilities would be combined to form the new Oakland Museum of California. Architect Eero Saarinen, who was commissioned originally to design the museum, unexpectedly died, and a competition was established to find a new architect. Architects Kevin Roche (surviving business partner of Saarinen) and John Dinkeloo won the contract out of 37 entrants in 1961 with an innovative design; they maintained a natural relationship with the site and its surroundings by setting much of the building below grade and creating a seven acre green city park its roofs. This design was part of the "mega block" thinking of the 1960s. Three basic materials were used in the architecture: concrete, plate glass, and wood.

Roche and Dinkeloo and Associates (Connecticut) and Reynolds and Chamberlain Associate Architects (Oakland, California) made up the architects' team. Landscape architect Dan Kiley (Charlotte, Vermont), local landscape architect Geraldine Knight Scott, and local horticultural advisor Mai Arbogast comprised the landscape architecture team; Heuttig & Schromm of Palo Alto was the landscape contractor. Kiley envisioned an overgrown villa with a primarily

evergreen and a color palate limited to red, white and blue/purple. Scott was hired as Mr. Kiley's consultant on design and knowledge of Californian plants. Together, they worked on the technical and aesthetic aspects of the planting design and the gardens showcase over thirty-five thousand native and exotic species, "suited to the dry climate and shallow concrete planters as extensions of the museum's exhibits". To achieve the overgrown villa appearance, plantings started in 1966 and were maintained and nurtured for three years before the museum's opening in 1969, after an extremely wet winter.

At the time, the Museum took radically different and ground-breaking design risks with its roof gardens. Technical information about roof gardens was scarce and post-war roof gardens were so new that their ultimate success or failure was still unknown. The Museum's roofs were waterproofed with the latest built-up asphaltic membrane, with a life expectancy of about 15 years. To prevent the soil from washing away, a filter barrier was crucial. Since polypropylene filter fabric would not be developed until the late 1960's, burlap was wrapped around perforated pipe which allowed water to flow and temporarily prevented soil from entering the drains. The irrigation was designed originally as a state-of-the-art galvanized system with fertilizer solution injected into the irrigation system. The roof's structural slab dictated the garden's load limitations. For soil, a UC Davis soil mix was used by nurseries starting plants in containers— 40% sand, 60% redwood sawdust and a mix of 50-50 peat moss and fir bark for acid-loving plants. The soil was easy to mix uniformly, drained well, yet retained enough moisture to promote growth.

While the museum was hailed for its pioneering design, a number of its techniques, innovative for the 1960s, were untested and proved to have flaws. Early after construction, leaks appeared due to poorly graded roofs and planters, and decayed burlap allowed sand to drain into pipes without sand traps or cleanouts. Since a protective concrete slab did not cover the waterproofing which was done at Oakland's Kaiser Center was in 1960, on warm days, the low melting point of the built-up tar membrane oozed from expansion joints, connections around wall light fixtures, and openings around steeling railings. Fertilizer in the irrigation system accelerated the corrosion of the pipes' interiors and loose corroded particles clogged the spray heads; fluctuations in the water pressure caused the irrigation reduced the throw of spray heads, and plants with different watering needs were grouped together on the same valve. Since the organic material in the UC Davis soil mix broke down and was not replaced regularly; soils shrank between 50-60% and in some planters, up to 12", leaving plantings stranded on insufficient depths of sand, a quick draining material low in organic matter.

Many Californian public gardens faced several major challenges: the freeze of 1972, the drought of 1977-1978, and Proposition 13. For the Oakland Museum,

the freeze of 1972 killed all of the tender plants, including bougainvillea, eugenia, and carissa which were either replaced with other species or not at all. Two years

of continuous drought in 1977 and 1978 destroyed other plants and required strict water rationing measures. Proposition 13 affected the personnel budget and reduced the full time garden staff from six to two people.

As the Museum's 20th anniversary loomed, renovation work became crucial. With the Museum's architectural complexity, a thorough investigation and analysis of its problems was needed first. Between 1989 and 1995, the Museum's landscaped areas underwent exploratory work and analysis and portions of the planting and irrigation plans were renovated.

The Oakland Museum was designated a City of Oakland landmark in... In December 2004, the California Cultural and Historical Endowment Board has specified \$2,887,500 for the Oakland of Museum Foundation.

- Sources:
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- Amphion Environmental Inc., "Oakland Museum Replanting - Schematic Design," September 11, 1995.
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- California State Library, "Endowment Board convenes, reserves funding for 33 grant finalists," December 20, 2004, www.library.ca.gov/PressReleases/pr_041215.cfm.
- Coates, Barrie D., Oakland Museum, Exploratory and Analysis of Outdoor Spaces Report, February 1989-1991.
- Cooper, Deborah, "Understanding California - The California Collections," Oakland Museum of California, October 2002.
- Covina, Gina "Raise High the Roof Garden," Express, March 31, 2000.
- Hamlin, Jessie, "Paul Mills—ex-director of Oakland Museum," SF Gate.com, October 29, 2004, page B-7.

Kiley, Dan and Amidon, Jane, Dan Kiley, The Complete Works of America's Master Landscape Architect, 1999, pages 60-65.

Kiley, Dan, December 1, 1995 letter to Dennis M. Power, Executive Director, Oakland Museum.

Osmundson, Theodore, Roof Gardens: History, Design and Construction, 1999, pages 92-95, 171-172, 186-189.

Future Research Recommendations:

- UCB Environmental Design Archives, Geraldine Knight Scott, local landscape architect
- Oakland Museum History Department
- California Register and City of Oakland landmark status

- Darnall, Peggy, "Roof Gardening on a Grand Scale," Pacific Horticulture, Summer 1991.
- Interviews with Robert La Rocca & Associates, Amphion Environmental, Inc., and PGAdesign, Inc.

Historian: Jennifer Liw and Chris Pattillo, April 26, 2005
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Figure 1. Museum terrace gardens (Jennifer Liw, PGAdesign).



Figure 2. The great lawn, main courtyard (Jennifer Liw, PGAdesign).

ADDENDUM TO:
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PHOTOGRAPHS

FIELD RECORDS

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