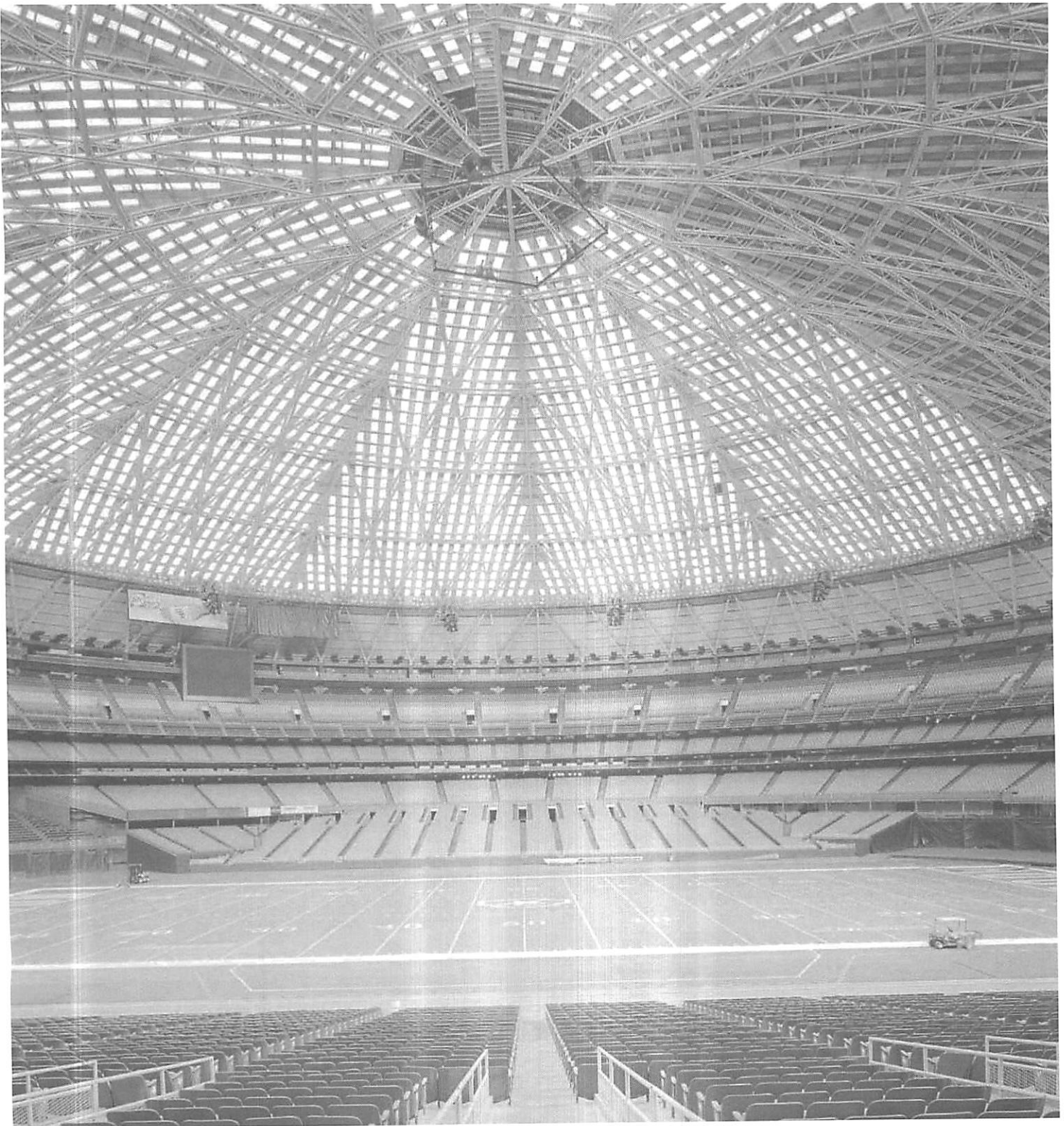


Chapter 6

Recent Past Recreation



Houston Astrodome, constructed 1964, Houston, Texas (HAER photograph by Jet Lowe, 2004)

Where Are They Now?

The History and Fate of Postwar Contemporary Vacation Homes

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The period between the mid-1950s and the mid-1960s saw the development and phenomenal growth of a vacation home market in the United States. Buoyed by postwar prosperity and with more free time than ever before, members of the American middle class sought their own private refuge from city or suburb—a luxury that had previously been restricted to the rich. Many of these homes were based upon forms traditional to wilderness settings—clapboarded cottages, utilitarian shacks, and log cabins—while avant-garde boxy designs with flat roofs and glass facades appealed to some high-end buyers. But for those wanting a place that was exciting yet warm, a place wholly suited to informal recreation lifestyles, a third alternative emerged. Beginning in the early 1950s, a new breed of contemporary vacation homes appeared that favored dynamic, unconventional roof shapes, simple, open plans, and creative glazing schemes. The development of these homes, their place in the architectural history of the period, and how these structures are faring forty and fifty years since their construction are the subjects of this paper.

Postwar contemporary vacation home designers sought to produce dramatic structures on limited budgets. They borrowed elements from traditional

construction, selected features of modern design, and introduced innovative forms to produce entirely new, playful structures that helped their owners “get away from it all.” Developed as both custom designs and precut kits intended for mass production, they were built coast to coast, a national phenomenon in which regional variation was subordinated to a shared view of leisure-time living.

These homes were designed for and were a product of a new postwar recreation culture. Magazine articles, advertisements, and plan books from the period show contemporary vacation homes as idealized backdrops for skiing, sailing, swimming, or sunbathing (Figure 1). Unencumbered by the requirements permanent homes must accommodate, they were uniquely suited for their function: escape from daily life and the enjoyment of free time in natural surroundings. As the magazine *Living for Young Homemakers* observed in 1961, “Vacation retreats are providing the ideal chance for designer and owner to unshackle all inhibitions.” According to the magazine, vacation homes were “becoming more and more adventurous in themselves, inspired by shapes and forms that stir the imagination and invite the spirit to get away from it all.”¹

Toward a Contemporary Style

Though by definition contemporary vacation homes exhibited significant originality and variation of form, a number of shared characteristics emerged. Most were between 400 and 1,000 square feet and cost between \$3,000 and \$10,000 at a time when new permanent homes averaged \$33,000. Almost invariably, they were of light wood frame construction, relying on plywood, laminated beams, boards, and panel products. Foundations were minimal, insulation was rare. Over time, a common vocabulary developed for the treatment of the contemporary vacation home's structural form, roof shape, and floor plan.

The design's exterior form defined it at first glance. Some were octagonal or round, others wedge-shaped or broken into connected pavilions. A large percentage, however, were based on a simple square or rectangle. These basic forms had inherent economies that few designers could resist. They made efficient use of space, were easier to heat, and readily expandable. Rectilinear shapes organized by the four by eight foot plywood module also reduced waste lumber and offered less complicated construction. The challenge was to make a box not look like a box.

An easy way to conceal the square form was to cap it with an unconventional roof.² *Life* magazine likened the result to "shoe boxes that had been stepped on."³ The playfulness of roof shapes set contemporary vacation homes apart from traditional year-round houses (Figure 2).⁴ Folded plates, cylindrical and spherical shells, batwings, and saddle roofs drew attention away from the basic square structure beneath while effectively spanning vacation home interiors that had few or no partitions. They also defined interior spaces, where structural beams, joists, and plank sheathing were left exposed to clearly articulate the roof shape on the inside, often with dramatic results.

Floor plans were laid out to complement the contours of these ceilings. In two-story structures the main living room was often open the full height with cooking and bathing facilities in the rear, beneath a bedroom loft space. Hallways were rare in most designs. Rooms opened into the main living area, with Japanese shoji screens or curtains sometimes forming the only partitions. An

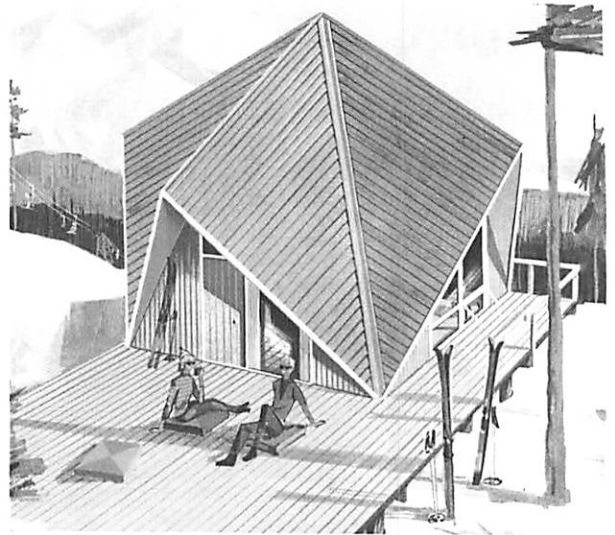


Figure 1. Advertisement and plan book imagery from the period showed how contemporary vacation homes complemented a range of popular recreation activities, especially skiing and boating. (Western Wood Products Association, 1960)

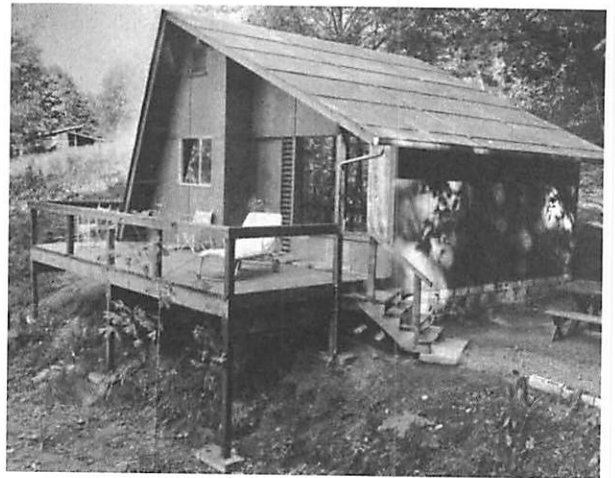


Figure 2. Unusual roof configurations set contemporary vacation homes apart from their more traditional and Modernist brethren. Note this design's use of exterior-grade plywood for roof and exterior wall sheathing. (Douglas Fir Plywood Association)

important tenet of modernism, the concept of the open plan was especially suited to vacation homes. They allowed views through the main glazed wall to be visible throughout the house, increased interior daylighting, and lent a feeling of spaciousness to what were in actuality quite small structures.

A-Frames

Designers and promoters of vacation home plans throughout the period sought forms that were attention-getting and comfortable, bold yet still acceptable to middle-class Americans. To many, the A-frame best matched this description. Because it was immediately recognizable, had both modern and traditional connotations, and was affordable, easy to assemble, and versatile, the A-frame rose above the other contemporary vacation home forms to become a symbol of postwar leisure living. Structural simplicity made it easy and cheap to build by professional and amateur alike. It was readily adapted by extending the length or adding additional gables or dormers, without compromising the intrinsic form. At a time when the emphasis was on low-cost designs that also “stirred the imagination,” A-frames delivered both.

San Francisco designer John Campbell’s 1951 version first sparked public interest in the A-frame form, and proved a model for contemporary vacation home promotion and marketing in the years that followed (Figure 3). His “Leisure House” was a stripped-down equilateral triangle, with unadorned pressed board roof/walls, a sleeping loft above a small kitchen and bathroom, and a glass gable end opening onto a spacious deck. Campbell presented full-scale models at area home shows and festivals and constructed one for his own use in Mill Valley, California. Requests for information were so numerous that Campbell began to sell plans out of his office, promote the design in newspapers and popular magazines, and develop a 400-square foot precut kit that was franchised and sold for less than \$1,000.⁵

Architects

Numerous architects, builders, and entrepreneurs working in the postwar vacation home industry launched their careers with A-frame designs. In many cases, they recognized the creative benefits of working on recreation architecture and continued to develop new playful forms. Their work lent legitimacy and cultural cachet to contemporary vacation homes and made the public more receptive to vacation houses that were unlike permanent houses. A discussion of two young designers who became known for their contemporary vacation homes will further illustrate the ways in which



Figure 3. The rear gable end of John Campbell’s Leisure House, constructed in Mill Valley, California (Fred Swartz, circa 1953)

characteristic structural shapes, roofs, plans, and materials were used to redefine vacation homes in the 1950s and 1960s.

In 1955 architect Andrew Geller was working in Raymond Loewy’s New York City office designing department stores when he came up with his first vacation home. Built in the Hamptons, the A-frame variation was featured in the *New York Times*, setting off a flood of requests for other Geller-designed homes on sites throughout eastern Long Island. Through these commissions, Geller gained a reputation for developing unusual, almost sculptural, forms that were playfully appropriate for recreation uses.⁶

Some like the Hunt House (1958) and the Pearlroth House (1959) literally tipped the modernist box on edge (Figure 4). The resulting diamond-shaped structures had small bedrooms pushed to the sides with main living areas set in the middle. Both houses were set above the dunes on wood piles. The unconventional structural forms of these, and other Geller designs, was carried inside with narrow planks running in opposing angles along the interior walls, providing visual interest and obscuring the box-like form. Open plans were arranged around central living areas that featured

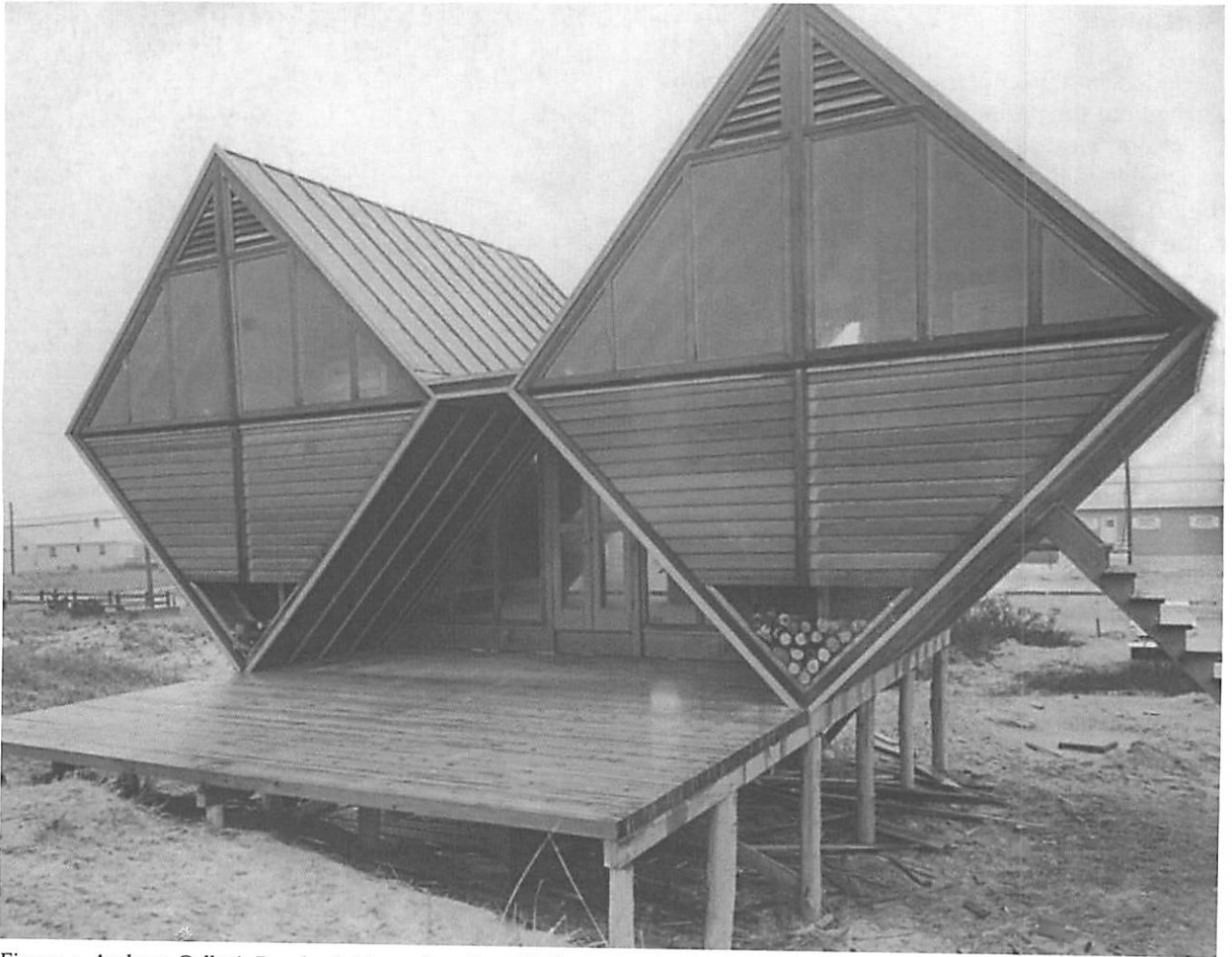


Figure 4. Andrew Geller's Pearlroth House (1959) at Westhampton Beach, Long Island, had a central living area set between two cube-shaped "pods" containing bedrooms and a bathroom. It was popularly known as the "square brassiere." (Andrew Geller, circa 1959)

full-height windows aimed at the view. Interiors revealed the simple construction, with two-by-fours and planks left unpainted.

Geller's more than twenty vacation homes on the East Coast were unusual but thoroughly functional. Within the seemingly restrictive vocabulary of low-cost rectilinear wood construction he was able to invent dramatic yet inviting vacation homes. Diminutive by today's standards, they provided just the right degree of short-term simplicity, and facilitated leisure living with an informal and whimsical antipode to the year-round tract home or Modernist office building.

Architect Henrik Bull grew up in Stowe, Vermont, and studied under Buckminster Fuller at the Massachusetts Institute of Technology. While still a student, Bull designed and built an A-frame ski cabin at Stowe. In the early 1950s, he moved to San

Francisco and briefly worked for Mario Corbett, a practitioner of the "Bay Area Style," a naturalistic and informal modernism that considerably influenced many vacation home designers. His first private commission, in 1954, was a modest vacation home for Peter Klaussen in Squaw Valley, California. When written up in *Sunset*, the article drew more inquiries than any other design in the magazine's history.⁷ As with Geller, the publicity led to additional commissions that led Bull into a career designing vacation homes and recreation architecture.

The Klaussen house was essentially a square with one corner jutting out, prow-like, over the mountain slope (Figure 5). By glazing this corner Bull broke up the exterior surface and aimed interior views out across the valley. To further counteract the basic structural form, the architect draped a pitched, "spent-wing" or "bat-wing" roof over a

large built-up ridgepole. This arrangement established what *Sunset* called, “an interesting succession of triangular planes and volumes.”⁸

In the Klaussen house and several other Bull designs, two-story windows infused the entire interior with sunlight and made the view visible from virtually every corner of the house. The feeling was open under the main living area but enclosed and intimate beneath the balcony and adjacent the hearth. Like many contemporary vacation homes, the exteriors were left unpainted while paneling or unfinished plywood sheets were used for the interior walls. Despite the unconventional shape, it blended with the surroundings and seemed a natural extension of the mountainous landscape. Bull’s later commissions further developed this design vocabulary while branching out into new shapes and treatments, from an extremely stripped down plywood home to a converted 40,000 gallon wine tank, all drawing inspiration from the site and striving for a distinctive, yet affordable, vacation home form.



Figure 5. The 1954 Klaussen House, designed by Henrik Bull, featured a glazed corner that infused the interior with light and focused the view outward to the ski slopes of Squaw Valley. Inside, this space had a loft overlooking a full-height living room. Both the glazing and loft treatments were common among postwar contemporary vacation home designs. (Henrik Bull, circa 1954)

Plan Books and Magazines

For those not able or willing to hire the services of an architect, contemporary vacation homes were still within reach. Magazines and plan books were common sources for working drawings that were taken to a local contractor or used by do-it-yourself enthusiasts to construct the home themselves. *Sunset: The Magazine of Western Living* was an enthusiastic supporter of contemporary vacation home designs offering plans in various issues and books throughout the 1950s and 60s. Building product companies and trade associations offered plans featuring materials that the organizations manufactured—plywood, Homasote panels, Masonite. Potential buyers also patronized lumberyards and hardware stores that sold precut or prefabricated kits ready for fitting out by the owner or a hired builder.

The Douglas Fir Plywood Association (DFPA) was among the earliest to tap the growing vacation home market. Their 1958 booklet, “Leisure-Time Homes of Fir Plywood,” presented five modest-sized designs that exhibited, to varying degrees, contemporary vacation home features and forms.⁹ In several, plywood served as an exterior sheathing, which the publisher optimistically claimed would “weather to the glistening caste of driftwood.”¹⁰

One of the most popular plans included in the book turned out to be an A-frame variation designed by a Tacoma, Washington, pediatrician and amateur builder, Dr. David Hellyer. Like Andrew Geller’s A-frame, the Hellyer design had entrances and glazed areas cut into the side of the structure rather than on the gable end. DFPA promoters offered Hellyer free plywood in exchange for his design, photographed it as it went up, and used it as a centerpiece of their vacation home initiative for years afterward.

Other trade associations followed the DFPA lead and along with home plan publishing companies and individual manufacturers offered their own contemporary vacation home designs. Though perhaps not as distinctive as some custom designs, these plans still adopted elements of the contemporary vacation home vocabulary extending the trend well into the 1960s.

Decline of the Postwar Contemporary Vacation Home

By the early 1970s, the modest contemporary vacation home had run its course. A-frames in particular lost their cultural novelty and became a tired cliché of ski resorts and recreation areas. The growing size of new vacation homes combined with an increasingly popular preference for traditional designs left little to distinguish vacation homes from year-round homes. Economic stagnation and the energy crisis further curtailed demand for remotely located, uninsulated vacation homes; condos and time-shares became a preferred alternative for those who a decade earlier may have chosen to build an A-frame or other contemporary vacation home.

As we have seen, many postwar vacation homes exhibited an informality of form that came to define the style. But they were not whimsical for whimsy's sake. The best designs offered a creative expression while meeting the functional needs of 1950s and '60s leisure seekers. Their open, flexible plans accommodated varying numbers of visitors and a range of uses over the course of a day or vacation. They exhibited a harmony with nature and blurred the distinction between interior and exterior through the creative use of glazing and natural, unfinished materials. The result was a home that embodied the postwar culture of leisure and recreation.

Where Are They Now?

How are these contemporary vacation homes faring forty of fifty years since construction? Many are gone, many have been altered to varying degrees, and some survive essentially unchanged. In a few exciting cases contemporary vacation homes have been rehabilitated for continued use.

Several factors are affecting the fate of postwar vacation houses. The current housing boom has made its way into vacation home markets, increasing prices and demand for recreation properties.¹¹ The land beneath postwar vacation homes has become disproportionately more valuable than the modest structure that sits above. This is particularly true of areas such as Squaw Valley, Lake Tahoe, Aspen, Stowe, and the Hamptons, places where contemporary vacation homes once proliferated.¹² Terms used to describe postwar contemporary vacation homes—playful, experimental,

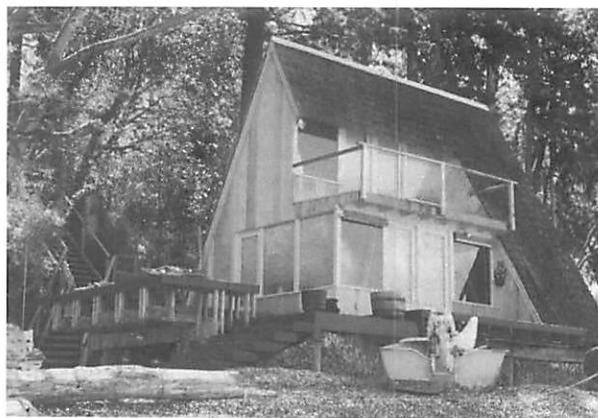


Figure 6. Though it has lost some of its distinctive exterior features, this 2003 photo shows David Hellyer's influential A-frame remains structurally sound. The Douglas Fir Playwood Association sold plans for this house by the tens of thousands. (C. Randl)



Figure 7. Henrik Bull's Klaussen House (in 2003) survives at Squaw Valley. Its addition, an identical twin of the original design, is obscured behind the trees. (C. Randl)

small—are hardly fashionable in the current real estate market. The more unconventional the design, the less appealing these structures are to today's vacation home buyers. Lastly, the original construction of many of these homes has affected their longevity. Often built with the amateur labor of "weekend carpenters" using plywood as an exterior finish and improvised foundations, occupied (and maintained) seasonally, many of these structures have not fared well physically.

Yet, some postwar vacation homes have survived these challenges. Dr. Hellyer's A-frame survives near Olympia, Washington (Figure 6). Its original roof of lapped plywood sheets did not perform

well and was subsequently covered with layers of asphalt and then wood shingles. Many of the building's distinctive historic details—the cross rafters that extended above the roof peak, the porch railing, and casement windows on the gable end—have been lost, diminishing somewhat the character of the property. However, these changes are minor compared to those made to the Leisure House, prototype for the first mass-marketed A-frame designed and built by John Campbell. Today, its location in Mill Valley, a bedroom community for San Francisco and Marin County, ranks the third wealthiest in the United States. Converted to a year-round home with a series of additions and alterations, the Leisure House's original form is now entirely unrecognizable. Only a single floor joist of the original structure seems to have survived.

It is common for postwar vacation homes to become subordinate to new additions that are often larger than the original structure.¹³ In such cases the original vacation home is often converted to a mudroom or entryway. Some additions are more sensitive, and are more successfully integrated with the original building, than others. Henrik Bull's Klaussen House in Squaw Valley has survived to the present, perhaps because a later owner expanded the house with an addition placed alongside the original building that mirrored Bull's original design (Figure 7). Though the overall size of the house was doubled, the historic section of the building remains intact. Only further research will show whether the number of extant, essentially intact, postwar vacation homes exceeds those remodeled beyond recognition or demolished outright. Unfortunately, cases of the latter are becoming more frequent.

Some losses, like that of Andrew Geller's first vacation home design, were due to fire or the forces of nature. His Long Island A-frame was washed out to sea by a 1962 northeaster storm leaving just the concrete block chimney and part of the garage foundation on the beach. Other Geller vacation homes have been replaced by new construction. The Levinson (1958) and Elkin (1966) houses have both been demolished and in spring 2005 his Pearlroth House had to be relocated to another lot to avoid the same fate.¹⁴ In recent years, two seminal postwar contemporary vacation homes have been lost. Henrik Bull's A-frame in Stowe, perhaps the first postwar triangular vacation home built in the eastern United States, was

demolished by a new owner in 2004, and replaced with a new, much larger, home. The 1957 tri-gable A-frame designed by George Rockrise in Squaw Valley survived in its original, unaltered condition until 2003. This building, which introduced the oft-repeated T-shaped A-frame house plan, was knocked down by a new owner that year and likewise replaced with a much larger structure.

Yet, with all things “mid-century modern” currently enjoying renewed interest, some contemporary vacation homes have been purchased and rehabilitated. Recently, the new owners of two different A-frames—one in Lake Tahoe, another in Idyllwild, California—rehabilitated the structures, returning them to their original appearance.¹⁵ It is hoped that these projects are not exceptional, that they suggest a growing appreciation for postwar vacation homes. This appreciation can be advanced by locating postwar contemporary vacation homes within twentieth century architectural and cultural history through surveys, theme studies, and other documentation projects. Only then can we know what is still out there, what we want to preserve, and how these buildings can further inform our understanding of postwar design, recreation, and Americans' continuing quest for the “good life.”

Chad Randl is an architectural historian with Heritage Preservation Services at the National Park Service in Washington, D.C. He has authored a dozen National Park Service publications including Preservation Tech Notes and Preservation Briefs. He has also written articles for magazines including *Old House Journal*, the *Engineered Wood Journal*, and the National Trust for Historic Preservation's *Forum Journal*. Princeton Architectural Press published his first book, *A-frame*, in 2004 and will publish his second book, *Revolutionary Architecture: A History of Buildings that Turn*, in 2007.

Notes

1. “Secrets of a Self Indulgent Summer: Vacation Shapes,” *Living for Young Homemakers*, July 1961, 41.
2. This phenomenon was not unique to vacation homes. Mid-century gas stations, such as Phillips 66, used canted display windows and sweeping V-shaped canopies to attract attention and obscure otherwise unexceptional rectilinear buildings. See: Chester H. Liebs, *Main Street to Miracle Mile: American Roadside Architecture* (Boston: Little, Brown and Company, 1985), 111.

3. "Life Guide. Cabin Craft." *Life*, 31 May 1963, p. 17.
4. Experimentation with unorthodox roof forms indicated the branch of modern architecture from which vacation homes drew their inspiration. The architecture of Frank Lloyd Wright and Rudolph Schindler, Eero Saarinen, and John Lautner similarly employed unusual and dynamic roof configurations out of a fascination with geometry, an appreciation of spatial variety and the search for a brand of Modernism that was more responsive to human needs and sensitive to the site.
5. "The Leisure House" a press release on Campbell and Wong letterhead, dated 30 July 1954, Files of the author.
6. Geller's A-frame was built for Betty Reese at Sagaponack, Long Island. Alastair Gordon, *Weekend Utopia: Modern Living in the Hamptons* (New York: Princeton Architectural Press, 2001), 107.
7. Henrik Bull, letter to the author, 11 December 2001.
8. "Idea Cabin," *Sunset*, May 1958, 80.
9. Five years later, DFPA issued a revised edition of the plan book with twenty-two designs, many with contemporary forms. By 1963, the association had received over 300,000 requests for drawings. *Builder's Guide to the Second Home Market* (Tacoma: Douglas Fir Plywood Association, 1964), 6.
10. *Leisure-Time Homes of Fir Plywood* (Tacoma: Douglas Fir Plywood Association, 1958), 5.
11. "Second-Home Market Surges, Bigger Than Shown in Earlier Studies - NAR," *Business Wire*, 1 March 2005.
12. For example, in 2004, the average sale price for a home in Pitkin County, Colorado (home of Aspen) was \$1.26 million, up 26% from the previous year. In such real estate markets surviving postwar vacation homes routinely sell for \$500,000. Many are torn down immediately after their sale. "\$1.6 Billion, New Record for Real Estate Sales," *Associated Press State and Local Wire*, 16 January 2005.
13. On the vacation home expansion trend, see: Denise L. Caringer, "Second Home Isn't Second Best," *Pittsburgh Post-Gazette*, sec. H, 4 July 2004.
14. Fortunately, Geller designed another A-frame identical to the Reese house, but with a reverse plan, several years after building the original A-frame. The Leonard Frisby house (1957) survives intact in Amagansett Long Island, providing an approximation of how the Reese house once looked. Jake Gorst, letter to the author, 13 April 2005.
15. The Lake Tahoe house is owned by Tony Russomanno, the Idyllwild house is owned by John Eng and Adriene Biondo.

Getting to "Go! Go! Go!"

Eero Saarinen's Yale Hockey Rink

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Very few places built for play are as exciting as the sports they house, but Eero Saarinen's David S. Ingalls Hockey Rink (1956–1959) at Yale University certainly is. Under President A. Whitney Griswold, the university modernized its architectural curriculum and started commissioning buildings from the most distinguished architects of the day. Saarinen was offered the first commission, for the Yale Art Gallery, but could not accept it because he was in the middle of designing the \$100 million, twenty-five building General Motors Technical Center (1948–1956) in Warren, Michigan, so the commission went to Louis I. Kahn and another great architectural career was launched.¹

The hockey rink is in many ways everything that Kahn's serene, self-effacing, plain-walled, flat-roofed art gallery is not—dynamic, assertive, sculptural, and vaguely figurative (Figure 1). Saarinen had always been interested in sculpture, even studying it for a year in Paris before he went to architecture school at Yale in the early 1930s. However, when he first started to practice, there were few opportunities to create sculptural forms in architecture, though he did explore them in his early furniture designs. In 1936, when he started practicing architecture with his father, the Finnish early modernist Eliel Saarinen, the dominant architectural style was a restrained, geometric, finely-crafted version of the International Style

which had developed in Europe in the 1920s. It was the architectural style practiced at Saarinen and Saarinen for the first fourteen years of Eero's career.

The GM Tech Center was the first major project that Eero Saarinen did on his own, and it was more International Style than anything he had done with his father. Saarinen found inspiration in Mies van der Rohe's Illinois Institute of Technology campus in Chicago, except that the Tech Center was larger in size and included numerous spectacular touches, such as bright colors, shiny materials, a reflective hemispherical Styling Dome, and a bulbous water tower.

As work on the Tech Center progressed, Eero Saarinen was offered another major commission—to design the campus for the new Brandeis University in Waltham, Massachusetts, outside Boston. During the design phase, a young Polish architect in his office, Mark Jaroszewicz, introduced Saarinen to his mentor, Matthew Nowicki, who shared Saarinen's interest in sculptural forms and the new structural systems to create them. The two collaborated on the campus project throughout the summer of 1949, dreaming up all the new buildings for Brandeis.² (Only a couple of modest structures were ever built).³ A few months later, Nowicki was killed in a plane crash coming back from

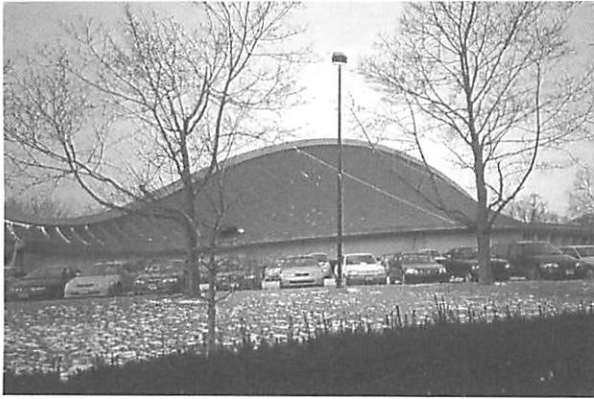


Figure 1. Eero Saarinen, *David S. Ingalls Hockey Rink*, Yale University, New Haven, Connecticut, view of exterior from east (J. Merkel)

Chandigarh, India, where he had been planning the new government buildings later taken over by Le Corbusier. Nowicki had designed one of the most important cable hung buildings of the mid-twentieth century, the North Carolina State Livestock Judging Pavilion (1950–1952), with two great interlocked parabolic arches supporting a huge suspended catenary roof. The pavilion not only inspired Saarinen but sparked a whole series of new cable hung structures in the mid-1950s by Frei Otto (who wrote a book on hung structures), Paul Rudolph and Ralph Twitchell (who designed a little tension structure house in Florida), Bill Irwin (an Olympic Swimming Stadium and a Music Bowl in Melbourne), Pier Luigi Nervi (the Sports Palace in Rome), Hugh Stubbins (the Congress Hall in Berlin), Edward Durell Stone (the U.S. Pavilion at the Brussels World's Fair), and others.⁴ Interest in experimenting with big bold slung roofs was in the air, partly because of the Monroe calculator (a new invention that made it easier to calculate loads), partly because of experimentation during World War II, and probably partly out of boredom with the box.⁵ But none of the other structures were quite as personally expressive as the hockey rink.

Saarinen hired Fred Severud, an engineer who had worked with him on the St. Louis Arch (1947–1965) and with Nowicki on the Livestock Judging Pavilion, to help him design the Ingalls Rink. But where Nowicki's pavilion had been a purer expression of structural forces, designed to utilize tension as economically as possible while still creating a dramatic interior space, Saarinen's rink was expressive in a more organic and sculptural way. This appealed to Severud, who not only liked a

challenge but also was interested in deriving structural forms from nature. He had even written on the subject.⁶

Saarinen, who had learned about lightweight concrete structures when he was designing the shell-domed Kresge Auditorium at the Massachusetts Institute of Technology (1950–1953), had recently recruited a young Canadian architect, David Powrie. Powrie had returned to Toronto after working for Eduardo Alfonso Reidy and Oscar Niemeyer in Brazil, where concrete construction was probably more advanced than anywhere in the world. Despite his interest in structural techniques and sculptural form, Saarinen began work on the hockey rink the same way he did all his buildings—with substantial research. Saarinen sent Powrie on a trip to see other college hockey rinks, their structural systems, sizes, numbers of seats, whether they were heated, how they cooled the ice, ventilated the space, and provided views from the stands—and to learn what worked and what did not from coaches, players, and university administrators.⁷

Despite President Griswold's interest in avant-garde architecture, Saarinen had to fight for support. The initial budget of \$600,000 was based on the cost of a simple bent wood and Masonite shed with a steel bent roof that Harvard University had recently built. As he had at other institutions, Saarinen told his clients at Yale that if that is what they wanted, they didn't want him. He said that a shed like Harvard's would cost more to build as prices were rising by about five percent a year at the time.⁸ The Yale administration was committed to innovative architecture, but the University's Hockey Committee (composed of alumni hockey fans) just wanted to build a rink; they fought the architect's ambitious plans every step of the way. However, it made sense to do something permanent-looking and interesting as the hockey rink was being built a few miles from the center of the campus, on the edge of a residential neighborhood into which the campus was expanding as part of a plan (that Saarinen had helped devise) to extend the university to the northeast.

Only after studying the building type and securing a commitment to ambitious design did Saarinen and his colleagues start to search for an appropriate form for the rink. His sketches show that some kind of multi-curved structure was under consideration from the beginning but that the specific

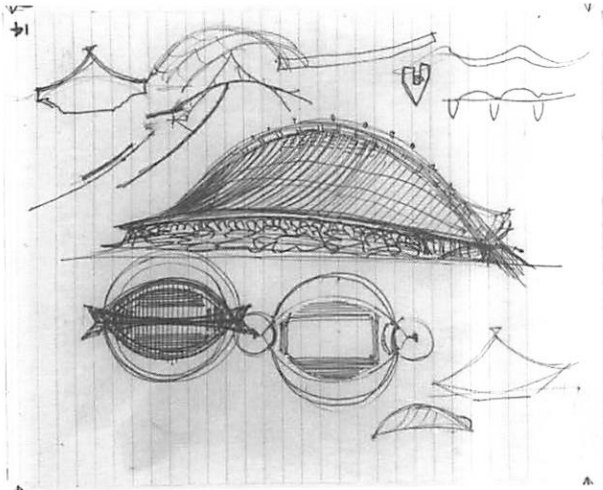


Figure 2. Eero Saarinen, David S. Ingalls Hockey Rink, Yale University, New Haven, Connecticut, sketches for the structure (Manuscripts and Archives, Yale University Library, Yale University)

shape evolved gradually, by trial and error (Figure 2). Saarinen made dozens of sketches as well as an elaborate model, plans, sections, and numerous studies. He always strove for perfection and continued to make design changes even after a building was underway. Since at that time a number of new structural systems were emerging, the rink provided Saarinen an opportunity to do something bolder and more expressive than he had ever done before.

From the great central hump of a spine, the roof is hung in a saddle shape and held in place by a grid of cables running parallel and perpendicular to the spine, forming a tensioned web. Saarinen explained:

The cables, which were suspended in catenary curves from the central arch, stretch down to their anchorage in the exterior walls on each side. These curved walls are counterparts to the arch—for they are in plan as the shape of the center arch is in section. These walls were also made to slope, both in order to increase structural efficiency and to enhance the visual expression of the stress flows. The nine-inch-thick walls slope out fifteen degrees.⁹

It would have been easier, as preservation engineer Robert Silman has pointed out, to have made the spine shorter and stretched the cables farther, but Saarinen wanted to bring people in on the southern campus side, and he wanted the processional route to be aligned with the movement of the skaters.¹⁰ Upon entering, visitors are swept up into



Figure 3. Eero Saarinen, David S. Ingalls Hockey Rink, Yale University, New Haven, Connecticut, interior (J. Merkel)

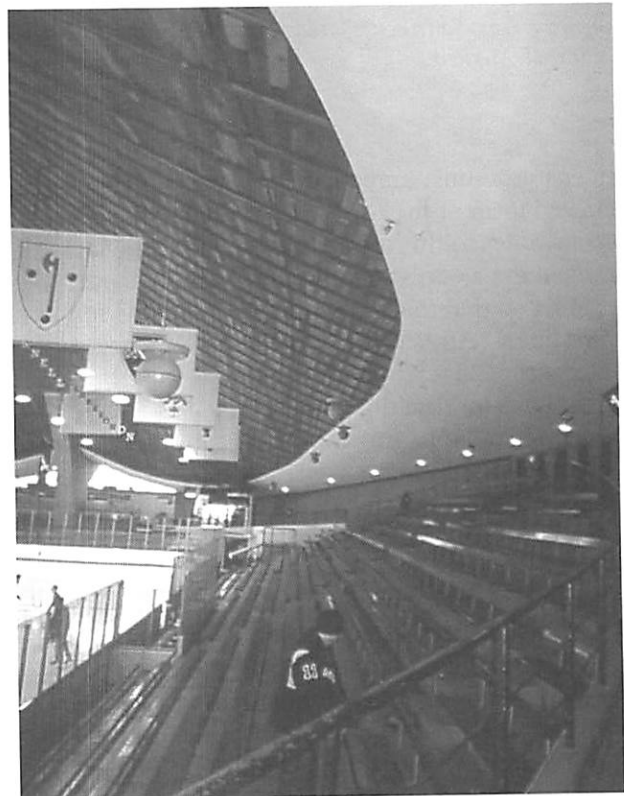


Figure 4. Eero Saarinen, David S. Ingalls Hockey Rink, Yale University, New Haven, Connecticut, interior of seating area with lining over ceiling (J. Merkel)



Figure 5. Eero Saarinen, David S. Ingalls Hockey Rink, Yale University, New Haven, Connecticut, entrance with lining over ceiling (J. Merkel)

the game almost immediately (Figure 3). The curved form of the roof's turtle shell shape also contributes to this effect. Saarinen said he, "arranged the 2,900 seats, stadium-fashion, in an oval . . . so that there are more 'seats on the fifty-yard line.'"¹¹ And, as the critic Walter McQuade later wrote, "Functionally the rink is superb . . . Sight lines [are] seldom blocked . . . Suspended fluorescent lamps throw 60 foot-candles of illumination on the ice—virtually the same kind of shadowless light under which the game of hockey evolved outdoors."¹²

Though the arch rises 75 feet, the roof seems fairly low, a sensation that makes fans feel a part of the game. The ceilings are lower now than they were intended to be as a plaster liner had to be added between the seats and the roof because of the fire code (Figure 4). The liner extends outdoors, covering the bare concrete surface that became pockmarked by rust spots from reinforcing pins (Figure 5). The wood slats on the roof do not have that problem and they work well with the concrete, which is imprinted with the pattern of its formwork. Though some ceiling boards have been replaced, most have survived.¹³ The spine is visible and dominant, inside and out. It not only supports the web of cables that holds up the roof but also

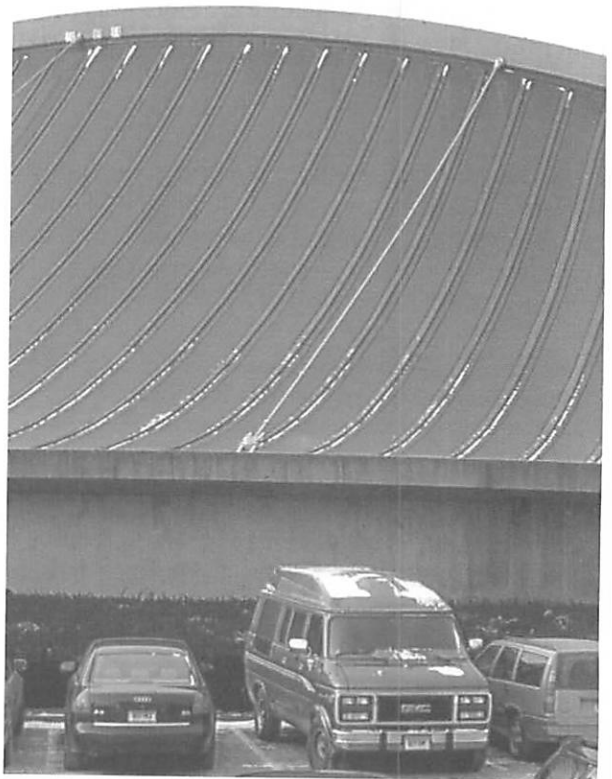


Figure 6. Eero Saarinen, David S. Ingalls Hockey Rink, Yale University, New Haven, Connecticut, guy wires on roof (J. Merkel)

visually connects inside and outside in the user's memory. And it emphasizes that movement down the ice, toward the goal. Saarinen loved the fact that one of the first players who used the rink said it made him feel, "Go, go, go!"¹⁴ That movement is also enhanced by the fact that the central arch sweeps up and cantilevers out forty feet on each end to support the roof over the entrances.

The exterior of the roof is sheathed with neoprene to prevent leaking. (Saarinen had first used neoprene gaskets at the GM Technical Center to hold curtain wall windows in place, the same way windshields were anchored.)¹⁵ On top of the roof, there are three guy wires (bracing cables 1-3/4 inches in diameter), which help the structure resist snow loads but offended some critics when the building first opened (Figure 6). Though the rink was an immediate popular success, its irrational qualities challenged architectural orthodoxies, so these obviously functional and barely visible elements struck some writers as evidence of structural impurity. Some even said they were an afterthought, though they were part of the structural concept from the beginning. No one knows if the structure would have remained as stable without them. (The ends of a few of the cables did need to be replaced in recent years, but the roof stayed in place even when they popped out.)¹⁶

The building's unconventional appearance made it not only difficult to build but difficult to get built. When the \$700,000 budget proved inadequate, there was pressure to fire the architect. President Griswold and Norman Buck, the head of university facilities, argued that costs had risen because of infighting in the Hockey Committee, engineering mistakes, and the underground water table found on the site.¹⁷ (The project's final cost was \$1.4 million.)

Another crisis erupted when the donor's wife, Louise Ingalls, first saw the model of the building (Figure 7). She despised it. President Griswold intervened by writing the Ingalls a long, self-deprecating letter explaining that he, too, had had a negative reaction to the model when he first saw it, until he realized that he was looking at it from a point of view that no one, except someone in a helicopter, would ever see it. He pointed out that Eero Saarinen was "by far the most distinguished architect Yale has graduated" and that "for all his

interest in modern architecture, he has shown the most lively appreciation of traditional forms already here."¹⁸

President Griswold also encouraged four esteemed Yale art historians to view the model and write a letter, which he sent to the Ingalls with his own. The Medievalist Sumner McKnight Crosby; George Heard Hamilton, who was both a professor and curator of modern art at the Yale Art Gallery; Renaissance art historian Charles Seymour, Jr.; and architectural historian Vincent Scully wrote to thank the president for "succeeding in drawing out from a man who stands at the top level of the country's architects what looks to be the best and most exciting design he has made." They said the design had "the essential principles of the Gothic construction," "the grandeur and unity of Roman architecture," "delicacy recalling Oriental qualities," and "the character and integrity" of the principles of modern architecture.¹⁹ After the letters were sent, Saarinen made a special trip to Connecticut to see Mrs. Ingalls. The campaign worked, and after the building was finished, the Ingalls were delighted. They had not just given the university a hockey rink. They had donated a work of art.

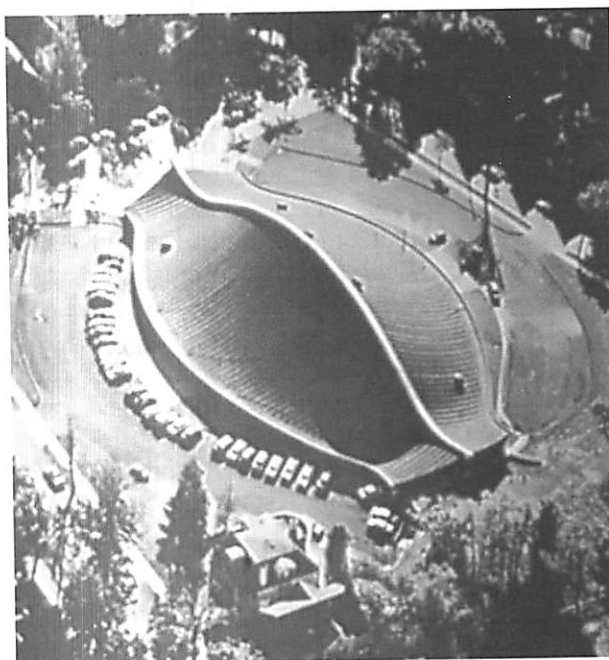


Figure 7. Eero Saarinen, David S. Ingalls Hockey Rink, Yale University, New Haven, Connecticut, model from above

From the outside, the hockey rink resembles a gigantic slithering beast, while from the inside it sweeps one up in a skating movement. Yet the inside and the outside work together as one. Like all of the architect's work, it is absolutely unique and totally intended for a specific set of circumstances, functionally and humanistically. It was not simply a structural exercise. What is important is the way it looks and feels and affects one on a conscious and subconscious level.

Saarinen was concerned with how his work would be received in the present as well as how it would be viewed by posterity. He could still joke about the design, though. At one point when the rink was under construction, he was asked to explain it and he said:

The David S. Ingalls Skating Rink is deliberately not an ordinary building. When it is finished, it will probably have many names, because people like to find names for extraordinary buildings. It may be called "the Roller Coaster," or "The Pregnant Whale," or "The Turtle," or "the giant boat upside-down." What intrigues me most, however, is to imagine archaeologists 5,000 years from now digging in New Haven and first coming across the prehistoric bones in the Peabody Museum, and then not so far away from there finding this huge, dinosaur-like skeleton. What kind of history will they reconstruct about what formidable creatures Yale men were in the mid-twentieth century!²⁰

Well, we are not quite there yet. But forty-eight years after it was completed, the rink is still standing, stretching, and hanging quite firmly, despite its daringly new and not completely rational structural system. Its neoprene-sheathed cable net hung roof has not leaked, though because it is not insulated, it does develop a cloud effect from condensed moisture from time to time. The preservation problems the building presents are not technical, but programmatic—standards for hockey rinks have changed since it was built. The preferred size has actually grown. The only way to enlarge a 333 by 183 foot building with a 200 by 85 foot rink is to eliminate seating. However, current demands call for more seating and more rest rooms for the fans rather than less. The rink fills up even for youth hockey, which along with recreational skating has become very popular since Ingalls was built.²¹

Saarinen was proud that the design had included extra exits and rest rooms so that it could also be used for purposes such as concerts and gradua-

tions. But the building is far too small for graduations now, too filled with skaters of all kinds, and the fan services are inadequate by contemporary standards. (When Yale became coed in 1969, women's locker rooms had to be added on the north end, where there are now also more restrooms for fans and concessions. Some of these additions block the light that once visually pulled the visitor through the space.) None of this could have been foreseen. But overall, the building has weathered the years very well. And that bodes well for experimentation, wit, and playfulness in sports architecture.

In January 1959, soon after the hockey rink was completed, Saarinen said, "[it] is, I believe, the best building we have done."²² Of course it was one of the few he lived to see completed. He died suddenly of a brain tumor at age 51 in 1961, while most of the works for which he is now known were still under construction.

Had Yale just built a Quonset hut out by the football stadium (as some of the people on the Hockey Committee hoped it would), the size of the rink would not have been a problem. It would not have been as accessible to skaters or spectators and today we would not be talking about it. It would probably have been torn down long ago.

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Notes

1. Charles H. Sawyer, the former Dean of the School of Fine Arts, in a letter to the author of 28 January 2003; also see Susan M. Matheson and Elise K. Kenney, "Prologue to Kahn: The Philip Goodwin Design," *Yale University Art Gallery Bulletin* 2000, 89-104.
2. Letter from Mark Jaroszewicz to Cranbrook Archivist Mark Coir, 14 September 1995, Cranbrook Archives.
3. The Ridgewood Quadrangle dormitories of 1949-1950, which were not a part of the original master plan, and the Hamilton Quadrangle dormitories of 1949-1952, which were part of the plan but were not built according to Saarinen's specifications or with the vigorous, three-dimensional elements that Saarinen and Nowicki had envisioned.

4. Robin Boyd, "Under Tension," *Architectural Review*, November 1963, 325-334.
5. Interview with Robert Silman at the site, 28 January 2003.
6. Fred N. Severud, "Turtles and Walnuts, Morning Glories and Grass," *Architectural Forum*, September 1945, 149-54, 162; Fred N. Severud and Raniero G. Corbellotti, "Hung Roofs," *Progressive Architecture*, March 1956, 99-107.
7. Telephone interview with David Powrie, 27 September 2004.
8. Unsigned letter, initialed JTT, to Charles D. Dickey, 10 December 1956, Griswold Papers, YR6 2A16, Box 36, Folder 332, Manuscripts and Archives, Yale University Library. Saarinen referred to the shed at Harvard that already existed, but the letter mentions the one about to be built at Cornell on the same model.
9. A typed speech in the Manuscript and Archives, Yale University Library, dated January 1959, Oversize Folio 13C, Folder 3 on the Hockey Rink; the text also appears in Aline Saarinen, ed. *Eero Saarinen on His Work* (London and New Haven: Yale University Press, 1962), 54.
10. Interview with Robert Silman.
11. "Yale's Hockey Rink," *Architectural Record*, October 1958, 152.
12. Walter McQuade, "Yale's Viking Vessel; Saarinen's Hockey Rink," *Architectural Forum*, December 1958, 106.
13. Interview with engineer Ralph Esposito and architect Arch Currie of the Yale University Facilities Department, 28 January 2003.
14. From a letter to a friend, quoted in *Eero Saarinen on His Work*, 54.
15. Peter C. Papademetriou, "Intentions in Tension, Eero Saarinen: David S. Ingalls Hockey Rink, Yale University, New Haven 1956-1959," *Casabella* 63, no. 673/674, December 1999/January 2000, 170.
16. Interview with Esposito and Currie.
17. A. Whitney Griswold, Letter to Yale provost Norman S. Buck, 30 July 1957, Griswold Papers, YR6 2A16, Box 200, Folder 1823, Manuscripts and Archives, Yale University Library.
18. A. Whitney Griswold, Letter to David S. Ingalls, 28 December 1956, Griswold Papers, YR6 2A16, Box 36, Folder 332, Manuscripts and Archives, Yale University Library.
19. Letter of 12 December 1956 to A. Whitney Griswold signed by Sumner McK. Crosby, George Heard Hamilton, Charles Seymour, Jr. Griswold Papers, YR6 2A16, Box 36, Folder 332, Manuscripts and Archives, Yale University Library.
20. A typed speech in the Manuscript and Archives, Yale University Library, of 19 November 1957, Oversize Folio 13C, Folder 3 on the Hockey Rink.
21. Interview with Esposito and Currie.
22. A typed speech in the Manuscript and Archives, Yale University Library, dated January 1959, Oversize Folio 13C, Folder 3 on the Hockey Rink. The text also appears in *Eero Saarinen on His Work*, 54, but the editor changed it to read, "one of the best buildings," presumably because she assumed that if he had lived to see more of his other buildings completed, it would only be one among several.

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De La Warr Pavilion

John McAslan
Chairman
John McAslan + Partners
London, United Kingdom

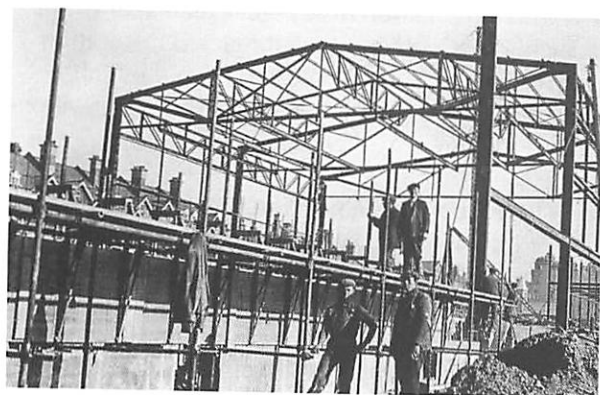
Well into the last century Bexhill-on-Sea, located on England's south coast, languished in the shadow of its more glamorous neighbours—Worthing, Eastbourne, Hastings and Brighton—each of which had developed a rich array of seaside leisure amenities since the Victorian era.

The decision to broaden Bexhill's appeal to its townsfolk and visitors by building the De La Warr Pavilion was taken by the town's executive council in the early 1930s, and a seafront site acquired. When the ninth Earl De La Warr was elected as mayor in 1932, he was instrumental in pushing forward and championing the project, taking personal charge and organizing an open competition for its design; Thomas Tait was appointed by the Royal Institute of British Architects as the project assessor. A victory for Modernism was effectively assured, given Tait's Modernist persuasions. And so in December 1935, following the rapid development of this remarkable project to the design of Erich Mendelsohn and Serge Chermeyeff, the citizens of cautious, conservative Bexhill took possession of one of the most striking Modern Movement buildings completed in Britain.

Mendelsohn fled Nazi Germany to Britain in 1933, and the pavilion was the key project in his brief sojourn in the United Kingdom. Although only part of the original competition-winning scheme

was constructed, what we see today is a fine example of Mendelsohn's work, matching the quality of what he had produced previously in Berlin. And today, with the German-born architect's reputation now higher than at any time since his death in 1953, the completed restoration and transformation scheme carried out by John McAslan + Partners demonstrates that the pavilion retains the power to startle and shock.

First listed in 1971, the pavilion was upgraded to Grade I in 1986. The listing system in the United Kingdom is a statutory method of protecting buildings and sites of significance, with Grade I being the highest level. The previous year had seen the fiftieth anniversary of the building's opening, an occasion that spurred the local government body, Rother Council, to address its declining condition. The west end of the pavilion had suffered some war damage, but repairs had been faithfully carried out under the direction of Mendelsohn's assistant, Johannes Schreiner, and Cyril Helsby who with his partner Felix Samuely, the German born engineer, had designed the building's innovative steel frame. But the interiors of the pavilion (largely the work of Chermeyeff) had become progressively degraded in the postwar years. Smooth plaster, steel bentwood furniture, and cork flooring had given way to flock wallpaper, vinyl upholstery, and wall-to-wall carpet.



Critical comments about the pavilion's condition tended to produce a defensive reaction from the local authority: the building, it argued, had to adapt to local taste. With more than 1,000 events a year and 70,000 meals served in the restaurant, it was clearly a well-used local resource, and the feelings of the pavilion's users had to be taken into account when proposals for restoration were drawn up.

The need for significant structural repairs to the building—which had also suffered the effects of weathering and salt water—was recognised by the local council which committed £1 million for the first phase of repair and refurbishment works in 1990–1994. This funding was followed by a further £500,000 commitment in 1998 and a significant £5 million Heritage Lottery grant in 2002, which has resulted in the project's recent completion.

McAslan was initially appointed in 1991 to prepare a report on the repair and future use of the pavilion. The client was the De La Warr Pavilion Trust, a body founded in 1989 to campaign and raise funds for the building's restoration. McAslan's January 1992 report, prepared in consultation with Rother Council and English Heritage, identified



the changes that had occurred to the building since 1935. These included significant alterations to the reading room, the infilling of the upper part of the first floor conference room to provide an office, the enclosure of the first-floor sun parlor to create storage, and alterations to the lobby, theatre foyer, and restaurant. Secondly, McAslan argued strongly for a strategic approach to refurbishment, embracing both the building's exterior and interior and incorporating work already begun by Rother Council to the south elevation. The architect argued that an overall strategy would make practical and economic sense. Looking ahead, the team foresaw that the reinstatement of the original internal layouts by removing later insertions would create space problems, and this would be resolved by forming extensions to the pavilion, a device first suggested by Maxwell Fry in the 1960s.

The outcome of McAslan's report to the Pavilion Trust was an invitation from Rother Council to comment on the work already in hand. The architect brought in F J Samuely and Partners Ltd. to provide advice on structural aspects of the work, to address concerns that insufficient attention was being given to the treatment of details. Proposed work to the south elevation carried out by the council included coating structural columns with intumescent paint as fireproofing, casing them with fibreglass, and applying ceramic tile on top. Samuely advised that the effects of heat and cold could cause the tiles to crack and fall off. Fireproofing, it was suggested, could be better achieved by pumping the hollow steel columns full of concrete. In this way the profile of the originals would be maintained and the necessary performance achieved.



McAslan was eventually fully commissioned, first to restore the curved external balconies, then to assume responsibility for the entire building. A detailed condition survey of the building prepared in 1992 involved not only Samuely but also Rybka Group as services consultant and Technical Planning International advising on the development of the 1,500-seat theatre/auditorium.

By mid-1993 the south elevation of the building had been completely restored, with balconies rebuilt, new paving laid, and the columns repaired and retiled. Badly corroded steel balustrades were replaced in exact replica. General repairs to the external render were completed and postwar window openings in the east elevation closed up. The ground floor external terraces were repaved with new tiles matching the originals. The crisp look so apparent in original photographs of the pavilion was therefore recaptured. The cost for this work was around £750,000, with English Heritage providing a 40 percent grant.

In the mid-1990s, McAslan also carried out smaller items of restoration undertaken as part of the overall strategy. The magnificent pendant light fitting that hangs in the south staircase was cleaned, rewired, and re-hung. The flagpole that stood above the north staircase and disappeared many years ago was replicated and re-erected. The stylish roundels that once adorned the east and south elevations were reinstated.

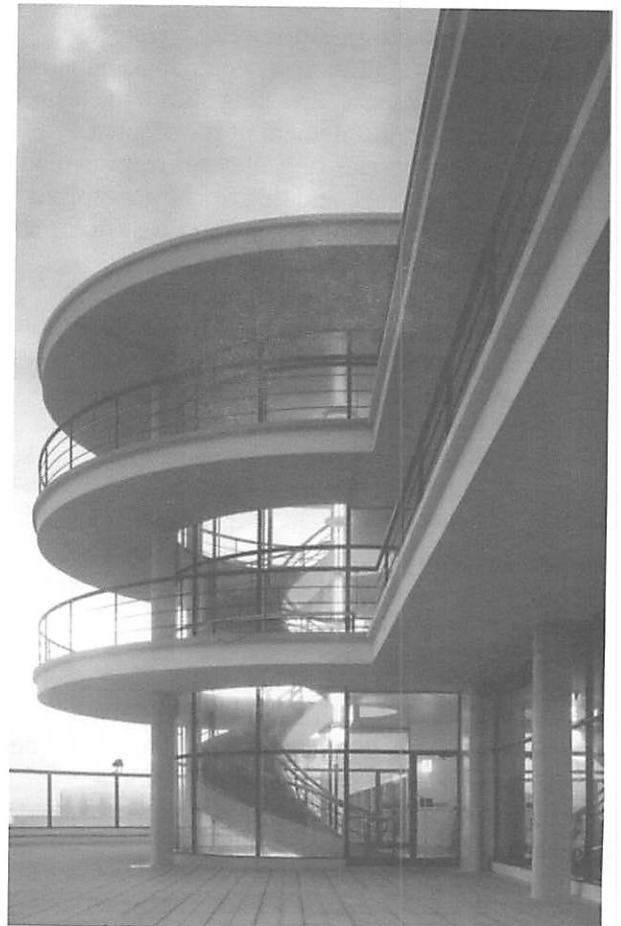
Then in 1996 McAslan produced a long-term plan for the building, the aim being to complete the restoration within a ten-year period. The full restoration of all external elevations was proposed, with original steel doors and windows reinstated.

The area around the building, including the car park to the north and the south terrace, also was to undergo radical reorganization. Internally, the entrance hall, restaurant and kitchens, auditorium bar, conference rooms, and sun parlour would be restored and improved. The extensions proposed were key to the plan, creating additional space to allow the pavilion's expanding usage to be fully accommodated.

Work on this final phase began on site in 2001 and has just been completed to cover all of the areas addressed in the 1996 plan. The foyer area has been restored, with a new reception area and bookshop. A spacious gallery has been developed on the ground floor facing the terrace. The auditorium and foyer and back of house areas have been comprehensively restored and re-equipped. Upstairs, the extended cafe/bar and sun parlour area, with its long lost external stair to the roof terrace, has been reinstated. A comprehensive package of external repairs has addressed failings to the roof, as well as the external walls and the glazing of the south elevation. Services have been extensively renewed. The flat roof, long closed for safety reasons, has also been brought back into public use. Finally, two new extensions to the north and south of the auditorium block have been added to provide theatre spaces, following the plans developed in 1996.

Though the budget for this project has been modest and the project's realization long, the restored pavilion has re-emerged as a landmark structure and the standard-bearer for new architecture that its founder and architects envisaged. The town is receiving significant and renewed attention with the gleaming De La Warr Pavilion at its heart, demonstrating the power of Modernism some seventy-five years after the original building was completed.

John McAslan is chairman of John McAslan + Partners in London. He established his architectural practice in 1996 and since then has developed an international portfolio of award-winning work.



Mitchell Park

Rehabilitation of a Modernist Community Play Area

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J. Pearce Mitchell Park was built in 1957 to serve a new neighborhood in Palo Alto, California. As one of the first examples of postwar park design, the twenty-two-acre community park and its playground served as a model for many other parks and playgrounds. Landscape architect Robert Royston created the plan for Mitchell Park, utilizing innovative design solutions that gave the park a special character through the integration of art, design, and contemporary architecture.

By 1998, many aspects of Royston's original design, particularly the tot play area, required renovation—the result of nearly fifty years of use by several generations of the neighboring community. This work also required adherence to more stringent design requirements such as playground safety codes, the Americans with Disabilities Act, and the accommodation of changed patterns in recreation and park maintenance. Given these constraints, it was not possible to preserve the existing playground without eliminating its use for children's play. In order for Mitchell Park and its playground to continue to serve the community, creative renovations had to be made.

Parks in the Postwar Period

In the optimistic years following the Great Depression and World War II, American family life shifted to a greater interest in recreation. Work weeks became shorter and weekends longer. The baby boom and a rising standard of living created demands for more parks. Although demand was high, the number and size of parks were limited, as those available in the late 1940s had originally been developed in the 1930s and before. The key purpose of these older parks was to provide a setting for healthful recreation, using simple, large-scale layouts of turf and trees and facilities such as exercise bars and playing fields. Most were located in the older areas of town, and were often limited in size.¹

The design of parks in the 1930s and 1940s tended to be devoid of aesthetic frills and conservative by today's standards. Deferred maintenance during the Depression and war years had stripped parks of non-essential planting and facilities that could not be maintained easily.² Although some parks provided play areas for children, these usually



Figure 1. Bob Royston in his garden, Mill Valley, California, April 2005. Note panel and bas-relief sculpture behind.

consisted of galvanized steel equipment and metal swings and slides. There was little development of age-specific play facilities or play environments for children.

The first priority for parks was to complete maintenance and other modest improvements that had been deferred during the long years of the Depression and World War II. The right conditions for parks—new neighborhoods and communities—were created after 1945, through the development of new housing areas and the new profession of planning.³

As early as 1936, landscape architects had begun to experiment with new design ideas for parks, drawing inspiration from architects such as Walter

Gropius and Marcel Breuer, who had fled Nazi Germany to teach at Harvard University. The impact of their work on young landscape architects such as Robert Royston and Garrett Eckbo was enormous, although new approaches to park design were not fully developed until the early 1950s.⁴ Most often the new parks were coupled with new suburban housing areas because older areas were built-up and had little room for new development. It was also necessary to develop new methods for financing park development, whether from developer funding or government programs. One planning model that proved popular was the linking of park and school sites into the “school park.” This permitted sharing of development and operating costs between two entities (community and school district).⁵ Mitchell Park, surrounded by three schools, was an example of this approach.

Precedents for Mitchell Park

Landscape architect Robert Royston became known for his designs in the years before and after World War II while working with Garret Eckbo and later with Asa Hanamoto. He had initially trained in the office of landscape architect Thomas Church, well known for his garden designs. The 1939 World’s Fair on Treasure Island had provided Royston an opportunity to work with Church on various garden spaces, experimenting with new and different materials such as concrete block and other “semi-industrial” materials. Although Royston initially pursued the innovative design of gardens, growing public demand for outdoor recreation drew him toward the design of public parks (Figure 1).⁶

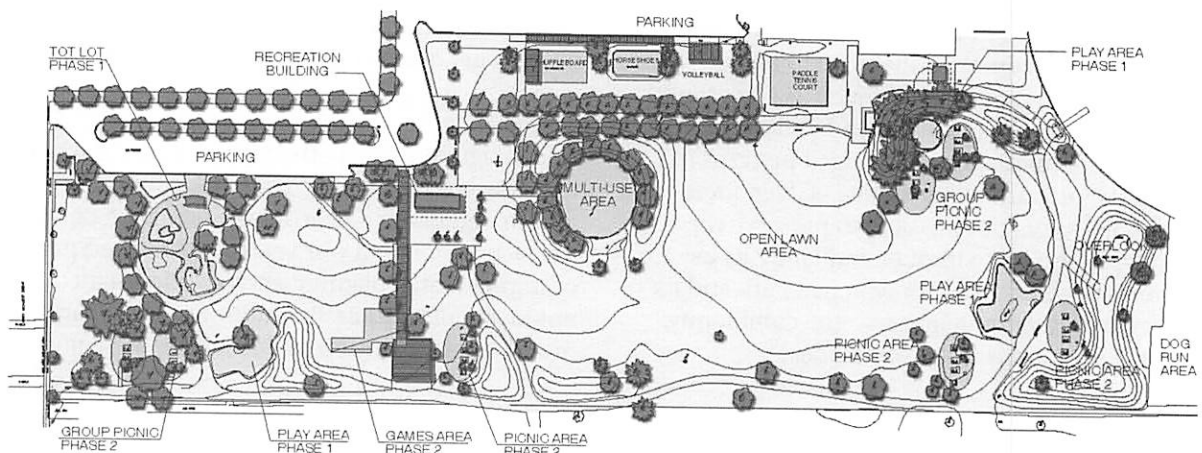


Figure 2. Plan of Mitchell Park, Palo Alto California. Tot play area is circle to left. Large arbor is dark vertical two-thirds distance to left. The Great Lawn is large open area to right.

Royston had completed three previous recreation projects prior to his commission for Mitchell Park. The Standard Oil Rod and Gun Club in Richmond, California, was a corporate recreation area that included a park-like setting and facilities. Second, Kruzi Park in the nearby town of Alameda, a larger community recreation area that featured a children's play and picnic area as well as sports fields. These two projects placed emphasis on providing for the "full family," meaning all members and ages of the family unit. A third project that formed one of the precedents specifically related to the play area at Mitchell Park was the Pixie Place, a small play area for younger children, located in larger garden exhibit grounds (Marin Art and Garden Center in Ross, California).⁷

Royston's design of Mitchell Park used patterns and ideas based on the work of twentieth century artists, such as Alexander Calder and Hans (Jean) Arp, to create forms that were more functional and less formulaic and symmetrical. In addition, he incorporated ideas about scale, space, and materials from Japanese gardens while paying special attention to the psychological, social, and physical needs of different user groups, particularly children.

The Design for Mitchell Park

Mitchell Park consists of a long rectangle of space with an essentially flat surface. The overall park space is divided by a large arbor stretching across the narrow dimension of the rectangle, creating two unequal areas. In the larger of the two areas, various activity spaces are clustered around a large panel of turf. The focus of the northern and smaller space is the tot play area. Other facilities in this area include picnic, parking, and an older children's play area. Royston made use of earth fill imported from a nearby sewer construction project, creating artificially constructed earth berms to define space and activity areas (Figure 2).⁸

The basic precedents for the design elements of Mitchell Park came from Royston's previous work with garden design. Although garden scale might seem inappropriate to a park of this size, the rationale for using this source was that gardens provide spatial models that are comfortable and welcoming (Figure 3). At Mitchell Park, Royston carefully manipulated scale in different parts of the park, creating spaces that ranged from broad to intimate. Most notably, the tot play area was



Figure 3. Bob Royston in his garden, Mill Valley, California, April 2005. Note paving, planting, and general scale of space.

developed using a smaller, child-appropriate scale, while other areas such as the Great Lawn had a significantly broader scale. The use of appropriately scaled spaces and warm materials such as wood helped to create comfortable public areas that visitors found attractive.

Visual inventiveness and design ingenuity have been among the hallmarks of Mitchell Park. The popular design vocabulary of that time emphasized flat, patterned ground planes and simple vertical lines. The tot-lot included a multi story "apartment house" and slide, a curvy wading pool, "gopher holes," and a "freeway" with a gas station and garages where kids could park their big-finned cars. Park light fixtures, inspired by the design of traditional Chinese paper lanterns, illuminated curving pathways. A sculpture of two bears in the tot play area, designed by sculptor Virginia Green, provided a specific and memorable symbol for the park—a touchstone.

Royston later extended the ideas that began at Mitchell in other parks such as Central Park in Santa Clara, Cuesta Park in Mountain View, and Bowden Park in Palo Alto. Shortly after the completion of Mitchell Park, other park and recreation professionals recognized that it represented a new model for a community recreation facility. Specifically, Mitchell Park used the traditional format of the English landscape park and integrated smaller scale areas and facilities within the larger space. The specific innovations found in the design for Mitchell Park were a) integration of garden elements into the park design in order to

accommodate changed living patterns that placed greater emphasis on the exterior environment and active recreation; b) integration of art, design, and contemporary architecture with park planning; c) playground design that was more closely based on a child-sized scale and play patterns; d) innovative use of materials and design elements.

The Renovation of Mitchell Park

The residents of Palo Alto immediately loved Mitchell Park and used it heavily for general recreation, special events, picnics, and children's play. Children who grew up with the park in the 1950s and 1960s returned to Mitchell as adults, with families of their own. The affection that the Palo Alto community has for Mitchell Park today stems from a long lasting loyalty, fostered by the wonderful qualities built into the original design. Despite such devotion, no public facility can survive for fifty years without some renovation. By the late 1990s the city came to view the play area as run-down, a huge liability, and nearly unusable. The full-time recreation supervision and maintenance personnel that had supported the original playground had disappeared over the years due to budget cuts and changing patterns of recreation and community life. Although the tot-lot had been renovated around 1973, the improvements were temporary and the park's long-term decline continued.

The city's initial concerns for rehabilitation of the park and play areas were practical. They needed to bring the park into compliance with current safety codes as well as provide new and better play equipment. A well-attended series of community meetings brought comments from more than 100 local residents. Many of the attendees were parents with an active interest in a new, state-of-the-art play area. The possibility of historic rehabilitation was not seriously considered, given all of the safety requirements, costs, and diverse public opinion. However, late in the public process one member of the community who was interested in historic preservation—architect Mark Marcinik—pointed out the historical value of the park and play areas. Based on previous public comments, the city was initially reluctant to change the design direction from new construction to historic rehabilitation. However, the movement for park preservation gradually took hold throughout the community due in part to the vigorous efforts of Marcinik. As the public came to understand the regional and

historic value of the park, they began to pressure the city to take on a project that balanced new design and preservation concerns. Once the city staff understood that there was a significant value to the park and that the community would support an effort to save it, they embraced the idea as well. The city's decision created a much more exciting and challenging project for everyone.

When the decision had been made to restore the tot area, no one was quite sure what that meant, as previous examples of historic playground renovation were not known. The various standards developed by the U.S. Department of the Interior regarding preservation, rehabilitation, restoration, and reconstruction were consulted. Based on these potential treatments three alternatives were considered: preservation and restoration of the original 1955 playground without retaining its actual play function; preservation and restoration of the original 1955 playground without its play function but with the development of a new play facility adjacent; or development of a functional play area in the style of the 1955 play area while retaining as many existing features as possible. The city decided to construct a new functional playground in the style of Royston's original design, one that retained or rebuilt as many features as possible. This alternative seemed to fit the Department of the Interior's definition of rehabilitation, which acknowledges the need to alter or add to a cultural landscape to meet continuing or new uses while retaining the landscape's historic character.⁹

Luckily, Royston was interested in contributing to the project, and was open to changes that would be necessary to meet current standards. He understood the current issues facing landscape architects, like safety zones, accessible routes, and head entrapment hazards. Royston was nostalgic about the old play structures—the apartment house, the Picasso Horse and the freeway—but short of being roped off in a museum, these elements could not comply with current safety standards for a public park. In the end, a number of resources were saved, including the gopher holes and the beloved bears, leaving opportunities to develop new elements like a reading circle, and a kitchenette for birthday parties at the tot-lot (Figure 4). Royston was able to clearly communicate the project's initial design intent. It became apparent that the key to his creative approach to the design of the play area was to focus on a child's perspective of the space, not the usual adult perspective. This meant ma-



Figure 4. Gopher holes in tot play area. View of gopher holes in original installation (1957) to right. Gopher holes after rehabilitation of 2002 to left.

nipulating the scale of the play area so that children, rather than adults, felt at ease. Understanding this basic concept was an important breakthrough for the rehabilitation project.

A major challenge in Mitchell Park's renovation was bringing the park up to current codes without disrupting the historic character. The basic approach was to enlarge elements while retaining the same shape and proportions. The original lantern style lights, for example, were intimately scaled, as if for a garden setting, but were too small to be refitted with an efficient light source. In addition, the lanterns were low and built of lightweight materials so that almost all of them had become vandalized or were no longer working. In re-creating the lights, they were enlarged 25 percent, provided with an efficient lamp, and constructed with stronger materials (Figure 5).

The layout of the new tot play area was the most complex task and required extensive planning. The point of origin for the new plan came from the elements that would be entirely retained, namely the gopher holes and the adjacent parking. Generally, the area was enlarged from that point outward, keeping the same shape but enlarging them to accommodate the increased areas necessary to comply with current safety distances. With some elements, like the water play area, the designers were able to retain the original shape of the wading

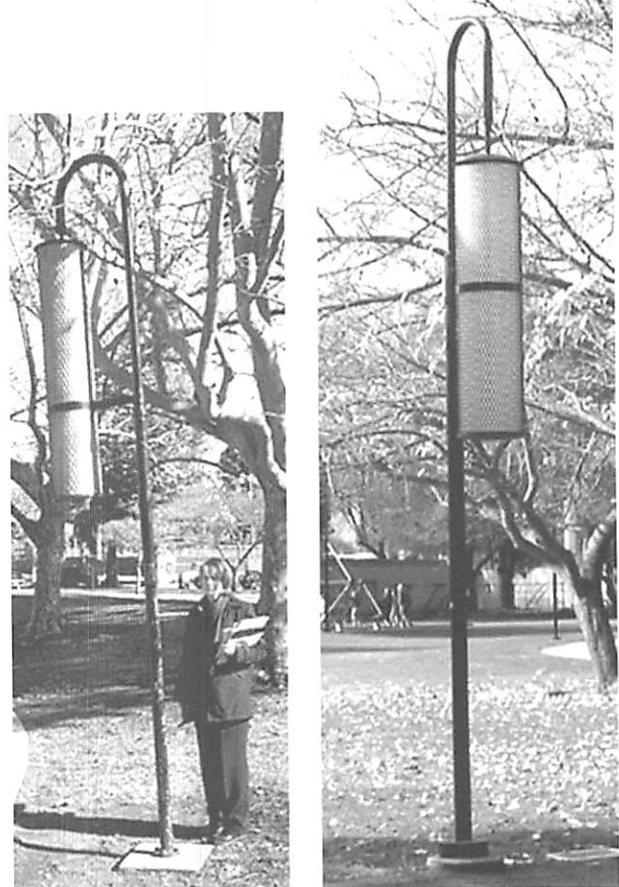


Figure 5. Original 1957 light is shown at left. New 2002 version of same light design is shown at right at same scale as 1957 light. Note how general design is retained while size is increased.

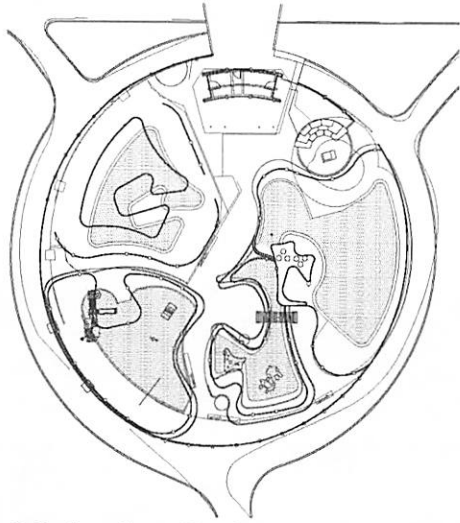


Figure 6. Design of 2002 Tot play area is superimposed in dark lines over plan at same scale of pre-existing play area (lighter lines). Note how general enlargement of areas increased the overall size of the Tot play area to the lower left (northwest).

pool although the position was modified slightly (Figure 6). The basic design vocabulary, characteristic of postwar park design, including the wild curvy shapes, subtle ground plane shadows, and thin elegant verticals were important design details that seemed somewhat foreign and almost counter-intuitive at first. It took time to understand the design vocabulary and resist the desire to add elements that did not belong. It was necessary to

fully question the reasoning behind the addition of each new element, and examine whether it would fit the park's historic character-defining features and materials. Although such restraint was crucial to the success of the project, it was also necessary to have fun with the design, especially in the case of the children's play areas. As noted, an exact copy of a historical design was neither possible nor desirable (Figure 7).

The final design and built form of the new play area has been successful within the goals established, namely rehabilitation rather than preservation. The tot area is extremely popular for small children and seems to have an almost constant user group of ten to twenty visitors. While it is hard to attribute specific reasons for this popularity, the timeless and playful character of the original design is certainly one strong factor.

Through the rehabilitation of Mitchell Park and the tot play area, we can see that it is possible to rehabilitate and restore an older park without losing its original concept and unique character. The key to a successful renovation is a clear understanding of the concept and vision of the original designer. While the size of the enlarged tot play area at Mitchell Park may not be as intimate as the original, the larger trees better define the space and help to achieve one of the original goals of the 1957 park—a place for children and families to play.

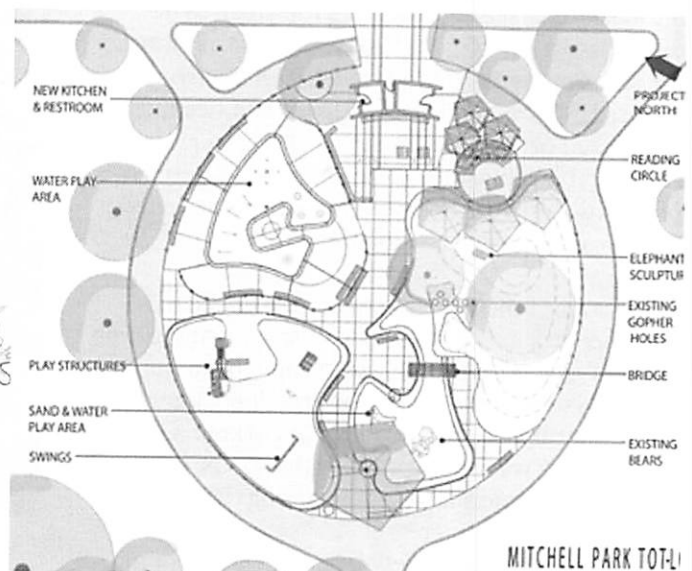
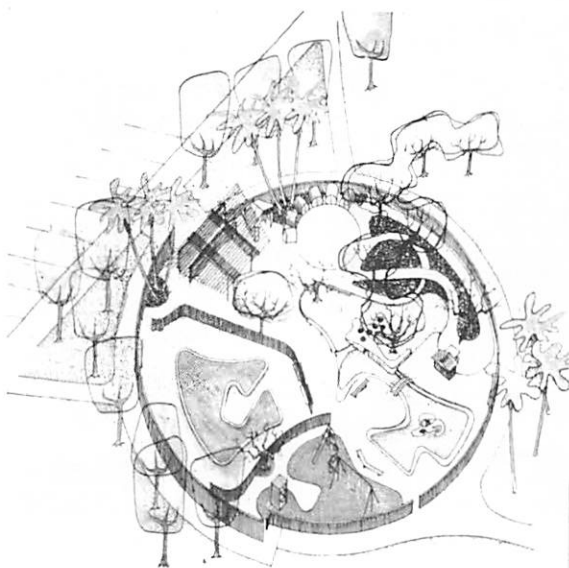


Figure 7. Isometric sketch of 1957 tot play area shown to left. Plan of 2002 tot play area rehabilitation shown to right. Note general retention of forms and plan arrangement.

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Notes

1. Galen Cranz, *The Politics of Park Design: A History of Urban Parks in America* (Cambridge, Massachusetts: The MIT Press, 1982), 103, 240.
2. Ibid., 122.
3. Robert Royston, Personal communication, April 2005.
4. John Ormsbee Simonds, *Landscape Architecture: The Shaping of Man's Natural Environment* (New York: F.W. Dodge, 1961), 221. Garrett Eckbo, *Landscape for Living* (New York: F.W. Dodge, 1950).
5. Cranz, 120.
6. Royston.
7. Ibid.
8. Ibid.
9. *The Secretary of the Interior's Standards for the Treatment of Historic Properties*. Washington, D.C.: U.S. Department of the Interior, 1995.