## 1. NAME OF PROPERTY

Historic Name: George Nakashima Woodworker Complex

Other Name/Site Number:

## 2. LOCATION

Street & Number: 1847 and 1858 Aquetong Road Not for publication:

City/Town: Solebury Township Vicinity:

State: Pennsylvania County: Bucks Code: 017 Zip Code: 18938

## 3. CLASSIFICATION

| Ownership of Property | | Category of Property | |
|---|---|---|---|
| Private: | X | Building(s): | X |
| Public-Local: | ___ | District: | ___ |
| Public-State: | ___ | Site: | ___ |
| Public-Federal: | ___ | Structure: | ___ |
| | | Object: | ___ |

Number of Resources within Property

| Contributing | Noncontributing |
|---|---|
| 17 | 2 buildings |
| ___ | ___ sites |
| 2 | ___ structures |
| ___ | ___ objects |
| 19 | 2 Total |

Number of Contributing Resources Previously Listed in the National Register: 19

Name of Related Multiple Property Listing: Nakashima, George, House, Studio & Workshop

Designated a
National Historic Landmark
APR 22 2014
by the
Secretary of the Interior

## 4. STATE/FEDERAL AGENCY CERTIFICATION

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this ____ nomination ____ request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property ____ meets ____ does not meet the National Register Criteria.

Signature of Certifying Official Date

State or Federal Agency and Bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

Signature of Commenting or Other Official Date

State or Federal Agency and Bureau

## 5. NATIONAL PARK SERVICE CERTIFICATION

I hereby certify that this property is:

__ Entered in the National Register
___ Determined eligible for the National Register
___ Determined not eligible for the National Register
___ Removed from the National Register
___ Other (explain):

Signature of Keeper Date of Action

## 6. FUNCTION OR USE

| | | |
|---|---|---|
| Historic: | Domestic-single dwelling<br>Commercial/Trade-professional<br>Industrial/Processing/Extraction-manufacturing facility<br>Recreation and Culture-museum | Sub: |
| Current: | Domestic-single dwelling<br>Commercial/Trade-professional<br>Industrial/Processing/Extraction-manufacturing facility<br>Recreation and Culture-museum | Sub: |

## 7. DESCRIPTION

ARCHITECTURAL CLASSIFICATION: Modern Movement (Japanese-influenced International Style)

MATERIALS:

| | |
|---|---|
| Foundation: | concrete |
| Walls: | concrete, concrete block, stucco, stone, wood, glass |
| Roof: | wood, Transite, reinforced concrete, warped plywood shells |
| Other: | |

## Summary

George Nakashima is one of America's most eminent furniture designer-craftsmen and a significant force within the American Craft movement of the mid-twentieth century, a seminal period for woodworking in the United States. Nakashima and others within the new movement rejected the mass-production brought on by the machine age and industrialization while at the same time embracing Modern stylistic influences and ideas that were international in scope. Often defined as "organic naturalism," his timeless pieces defy stylistic categorization. Believing in the spiritual qualities of wood, Nakashima's signature features incorporated techniques intended to enhance the impact of the wood's natural beauty, such as the "free-edge" and the use of butterfly inlays. His success as an artisan propelled him briefly into the arena of mass-production; from 1945 to 1954 internationally recognized modern furniture manufacturers Hans and Florence Knoll produced a selection of Nakashima's designs, which appeared alongside other noted modernists including: Franco Albini, Harry Bertoia, Pierre Jeanneret, Ludwig Mies van der Rohe, Isamu Noguchi, Eero Saarinen, and Florence Knoll herself. However, Nakashima saw furniture making more as a spiritual journey, crafting unique pieces that responded to the natural form of each piece of wood. His work expresses a worldview that is based upon a unique set of circumstances including his formal education in architecture, his exposure to European Modernism, eastern religious philosophy, and traditional Japanese craft traditions, including instruction from Issei carpenter Gentaro Hikogawa while confined to a Japanese-American internment camp. He began his professional career as an architect, working at the vanguard of International Modernism in Japan before turning to furniture design. Thus, Nakashima is also responsible for the design and construction of the structures that comprise the Nakashima Woodworker complex, erected between 1946 and 1982. Designed in the International Style infused with elements of traditional Japanese architecture and featuring the innovative use of concrete, the buildings and structures in the complex are treasures of Nakashima's unique legacy of craftsmanship and design excellence.

## Describe Present and Historic Physical Appearance

The George Nakashima Woodworker site is located at 1847 and 1858 Aquetong Road, Solebury Township, Bucks County, Pennsylvania. The property consists of a complex of buildings on both sides of Aquetong Road on two tax parcels. On the south side is a nine-acre, partially wooded, parcel that contains eighteen resources including the George Nakashima House (1946), the Workshop (1946), the Showroom (1954), the Finishing Department (1955), the Main Lumber Storage Building (1956; 1968), the Chair Department (1957), the Lanai (1958), the Pool Storage House (1958), the Pool House (1960), the Swimming Pool (1960), the Conoid Studio (1957-60), the Arts Building and the Cloister (1964-67), the George Nakashima Garage (1967), the Reception House (1975-77), the Heating House (1977), the New Lumber Storage Building (1982), and the Pole Barn (1990). On the north side of Aquetong Road on a partially wooded three-acre parcel are the Mira Nakashima House (1970), the Mira Nakashima Guest House (1971), and the Mira Nakashima Garage (1985). There are twenty-one resources total on the property, nineteen of which were designed and constructed by George Nakashima and are contributing; only the Pole Barn and the Mira Nakashima Garage are noncontributing. The buildings and structures generally reflect the International Style with some also possessing traditional Japanese influences. All of the buildings (on both tax parcels) were designed by George Nakashima, who also oversaw the construction of most of the buildings. Materials used include stone, cement block, concrete, glass, stucco, and wood. Some of the roof types also constitute significant experiments with engineering systems not widely applied, particularly with regard to residential or small-scale structures. These include a conoid shell roof which is a shape generated from a section of a cone; a hyperbolic paraboloid which is a saddle-shaped surface; and a scissors truss, which is a truss that is asymmetrical resembling a partially open pair of scissors. The buildings and the setting retain physical integrity and continue to be used for a variety of purposes including

residences, education, production, storage, and administration related to the legacy of internationally known furniture craftsman George Nakashima.

**The Site**

The setting for the property consists of sparsely wooded areas with intermittent open mown areas; approximately 50 percent of the property is open space. A gravel driveway and footpaths are the primary means of vehicular and pedestrian circulation within the complex of buildings. Generally, there is no signage for pathways or on buildings. After entering the complex, there is a small parking area to the right (west) for workers and visitors. Many of the buildings are built along a south-facing ridge and have large windows on the south facing side allowing natural light and heat into the buildings and providing a view of open mown areas, scattered trees, and densely wooded areas. Buildings are spaced relatively far apart but in a linear cluster on the northern half of the property along the ridge not far from Aquetong Road. Buildings used for processes and workshops are clustered closest to Aquetong Road, lumber storage buildings are along the northern boundary of the property, and buildings with residential and administrative uses are toward the center and east parts of the property. The buildings with administrative and residential functions including the Reception House, George Nakashima House, Showroom, and Conoid Studio, are entered from the rear or north side with the front or south side facing onto the open areas. At the base of the hillside are located the pool and pool house to the west and the Arts Building and Cloister to the east. The buildings are not physically or visually separated from each other. For example, the main storage building is immediately adjacent to the Reception House. The driveway for the property crosses Aquetong Road and connects to the Mira Nakashima property, which also has scattered trees, wooded areas, and a small pond.

Many of the principal buildings are surrounded or connected by Japanese-inspired features such as stone walls and paths, boulders, pebble beds, patios, and small ponds. Native plant species were supplemented by non-indigenous plants and trees introduced by Nakashima for decorative purposes that now feature prominently in the landscape. Some of these trees were planted by George Nakashima and his father, brought in from the Pacific Northwest to remind him of his homeland. Key buildings, including the Nakashima residence, Reception House, Showroom, Chair Department, and Conoid Studio, are positioned along the south-facing ridge to take advantage of the view shed and optimize natural light. They do not align perfectly and instead are sited in keeping with the natural lay of the land. The hillside is terraced to create a gradual decline and includes low stone walls at the upper tier and concrete walls for bracing at the lower tier to the east.

Most of the buildings are surrounded by pebble beds that project out just beyond the eaves of the roofs along the drip line to help facilitate drainage. Along the northern side of the Conoid Studio a raised drain bed constructed of stone and concrete sits on the pebble bed. A simple arched aggregate concrete bridge crosses over the drainage area to provide access to a concrete patio at the entrances to the Conoid Studio to one side and the Chair Department to the other. A metal sculpture adorns this patio. On the other side of the Chair Department is a stone patio, the southern boundary of which is defined by a low stone wall that doubles as a bench for a picnic table supported by a stone base. Dry-laid stones create a low terrace at the front of the buildings located along the ridge, with pebble beds between them. Large pebble beds also appear adjacent to the deck at the west end of the Showroom, flanking a small fish pond with a concrete lip that cantilevers out over the hillside. Pebbles fill the yard to the immediate rear of the Nakashima residence. Large and small stones laid nearly flush with the ground provide stepping stones to and from stoops; others are raised above ground level as steps for decks. A larger pond and rock garden is located at the front of the Arts Building where it joins the Cloister. An elevated area delineated by stone walls is located on the west side of this area.

**Arts Building** (contributing building; map #1)
The Arts Building was completed in 1967 in the International Style and was constructed as an art gallery and museum to display works by Ben Shahn. It continues to serve as a museum that also displays artifacts associated with George Nakashima. The building is about two-and-a-half stories tall and measures approximately 36' x 40'. Its roof is a hyperbolic paraboloid constructed of plywood covered with asphalt. Walls are constructed of concrete block, stone, and poured concrete. Large sections of the west and south sides are glass windows. Along the west wall on the first floor of the building is a tile mosaic designed by artist Ben Shahn. The south side of the building has two entrance doors, one near the southwest corner and the other large sliding doors leading out to the covered walkway. The interior of the building features a cantilevered floating staircase that leads to a mezzanine. The staircase has no outside rail and no risers, and the ends of the steps are secured deeply into a thick stone wall. Many examples of Nakashima's furniture, as well as some of his architectural renderings (although not of structures within the Nakashima complex) are in the building.

**Cloister** (contributing building; map #1B)
Connected to the arts building by a covered walkway, the cloister is a small, one story, rectangular-shaped building. It has a shed-type roof covered with asphalt. Walls are constructed of cement block. There are three wood entrance doors with horizontal glass panels. The interior features rice paper screens over windows, exposed beam ceilings, and plaster walls. The cloister contains a bedroom, bathroom, kitchen, and storage room. The International Style cloister was planned and constructed more-or-less simultaneously with the Arts Building (1964-67).

**Conoid Studio** (contributing building; map #2)
With a distinctively designed reinforced concrete conoidal shell roof, the Conoid Studio provides work areas for the design of furniture as well as space for education and training. The concrete roof is approximately 2-½" thick and has sinusoidal waves beginning on the northern side of the building that flatten towards the southern side of the building. The sinusoidal waves are not only aesthetically pleasing, but are key to the support and structural engineering of the building. There is an arched beam or end arch that supports the roof along the southern façade. The building is constructed into a south-facing hillside and cantilevered from a basement wall. It measures approximately 40' x 40'. Materials used on the walls of the studio include cement block, stone, stucco, and glass. The roof of the building is constructed of poured concrete with reinforcing rods and wire lath. The non-weight-bearing upper walls are constructed of light frame. The interior of the building includes a large open area with kitchen, bathroom, and a design office area. The south-facing windows allow for a maximum amount of natural light partially filtered through rice paper screens. Floors are wood and the ceiling exposes the same sinusoidal curves of the exterior. There is a *tatami*, or raised platform with grass mats, located in a rectangular bay that cantilevers outward from the building on the south side. A large rice paper "Akari" lighting sphere by Isamu Noguchi is suspended from the ceiling. Numerous Nakashima-designed chairs and tables are used in the room. Construction of the Conoid Studio began in 1957 and was completed in 1960, in the International Style. It is counted as a contributing resource to the property.

**Chair Department** (contributing building; map #3)
The Chair department was originally built as a clubhouse for workers. However, soon after it was built it was converted to space for assembling chairs. The building, the same form as the Conoid Studio, has a conoidal shell roof made of plywood. The Chair department was built in 1956 as a smaller prototype for the larger Conoid Studio built the following year. The Chair Department, however, does not have the sinusoidal waves in the roof. Overall the building measures approximately 25' x 20' and is nearly two stories high at the south side. Since the building is cantilevered into the hillside, it is one story on the north side. Wall materials include stucco, concrete block, wood, and glass. It is a contributing building.

**Finishing Department** (contributing building; map #4)
Originally built for lumber storage, the Finishing Department was quickly converted for use as a building where finish is applied to the furniture. It was built in 1955 and is also International in style. The building is counted as a contributing resource. The roof over the main part of the building is a slightly sloped gable, covered with plywood and asphalt. There is also a shed roof over a wing that is covered with corrugated Transite, which is a composite of asbestos and concrete. The walls are constructed of cement block and wood. The south side consists almost entirely of large glass windows.

**Showroom** (contributing building; map #5)
The Showroom was constructed in 1954, specifically for use as an area to place examples of the furniture on display and as the business office. The building has a gently sloped gable roof supported by recycled barn beams that is covered with corrugated Transite. Wall materials include stone, wood, and stucco. The building is trapezoidal in shape and has a covered wood deck and patio. Sliding rice paper screens lead to the wood deck and to an entryway that leads to the patio. The interior features a *tatami* platform, cherry wood floors, a small fireplace, a hanging cabinet, and wall lights designed by Nakashima. In addition to the open showroom area there is also a bathroom, office, and kitchen area now used as office space.

**Workshop** (contributing building; map #6)
The workshop is where the furniture is manufactured. The original section of the workshop was constructed in 1946 with additions made to the building in 1959, 1970, and 1988. The original 1946 section of the workshop is contained in the easternmost part of the building. In 1959, the original section of the workshop was expanded by an addition on the west side. In 1970, the northern part of the workshop was added and the carport to the east, later modified to shop space. The workshop has a gable roof with a projecting clerestory added in 1985. The roof is covered with corrugated Transite and asphalt. Wall materials are wood, stucco, Transite, glass, and cement block. It is irregular in shape measuring roughly 65' x 60'.

**George Nakashima House** (contributing building; map #7)
Built in 1946, the George Nakashima House served as the primary residence for the Nakashima family and is currently used as a residence by Kevin Nakashima, George's son. A small addition was built onto the house in 1954 for a bedroom. The house has a gable roof covered with wood shingles built in 1982 over the original poured concrete tile roof, expanding the house three feet to the south. Walls are stucco, stone, and wood. It measures roughly 55' x 15' and is one story in height. The interior of the house features natural un-milled support posts, large recycled beams and hardwood floors. The living room has a fireplace and rice paper sliding doors that lead to a balcony that overlooks the open space areas of the property.

**Heating House** (contributing building; map #8)
The Heating House is a contributing building, measuring 17' x 9'. It was built in 1977 and is constructed of concrete block and wood. It housed the fuel and the wood-fired boiler for heating the George Nakashima House; the boiler has since been converted to oil.

**Lanai** (contributing structure; map #9)
The Lanai is a small structure designed for the Simpson Redwood Company to serve as outdoor living space. It was constructed in 1958 of California redwood with a cantilevered design and anchored in concrete. A stone barbecue is built into the structure. The roof is now covered with cedar shake shingles. It is counted as a contributing structure.

**George Nakashima Garage** (contributing building; map #10)
The garage is a small rectangular concrete block building with a gable roof covered with corrugated Transite. The walls are covered with stucco and it has a foundation of stone. It is a one-car garage with an overhead door and a round window. It also includes a laundry room and storage. The garage was constructed in 1967 and is a contributing building.

**New Lumber Storage Building** (contributing building; map #11)
The new lumber storage building was completed in 1982. The walls are constructed of cement block and it has a plywood and asphalt-covered shed type roof. It is a contributing building.

**Main Lumber Storage Building** (contributing building; map #12)
Built in 1956, the main lumber storage building had an addition in 1968 and a small electric kiln addition in 1999. The main Lumber Storage Building features two hyperbolic paraboloid roofs made of plywood and covered with plywood and asphalt. Walls are constructed of cement block. It is a contributing building.

**Reception House** (contributing building; map #13)
The Reception House was built from 1975 to 1977 to serve as a guesthouse featuring a tea room and Japanese-style sunken bath; it continues to be used as a guest house and as a location for meetings. The roof of the house is covered with cedar shake shingles. The support system for the roof is a unique scissor truss design. Wall material includes stone, stucco, and cement block. The interior features a living area with a fireplace, a dining area with a kitchen cleverly hidden behind sliding wood and rice paper screens, and a tea room with a *tatami* floor. There is also a large, amoeba-shaped, sunken Japanese bath heated by a Japanese wood-burning boiler.

**Pole Barn** (noncontributing building; map #14)
Although designed by family members with an architect's background, due to its recent vintage, the pole barn is a noncontributing resource; it was constructed in 1990 with additions in 1995 and 2006. It is a very large building measuring roughly 45' x 180' and serves as a lumber storage building, containing the huge slabs of wood from which the Nakashima furniture is fashioned.

**Pool Storage House** (contributing building; map #15)
The Pool Storage House is used to store chemicals and equipment for the nearby swimming pool but was built primarily to serve as a prototype for the pool house. It was built in 1958 and has a canted barrel vault roof made of plywood that rests on a cement block base. It is a contributing resource.

**Pool House** (contributing building; map #16)
The Pool House is a large building measuring 33' x 30' and is open at both ends. It was constructed in 1960 with a distinctively canted barrel vaulted roof design. The roof is constructed of plywood and covered with a thin layer of asphalt and edged with copper. The base of the pool house is constructed of stone and concrete block. It is a contributing resource to the historic property.

**Swimming Pool** (contributing structure; map #17)
The swimming pool was built about the same time as the pool house, in 1960, and won a prize for its amoeba shape with cantilevered overhang. It is constructed of reinforced concrete and is counted as a contributing structure.

**Mira Nakashima House** (contributing building; map #18)
The Mira Nakashima House was constructed in 1970 and is a contributing resource to the historic property. The building was designed and built by George Nakashima for his daughter Mira. It has a distinctive scissor truss roof design that is covered with cedar shake shingles. Wall materials include cement block, wood, and stucco. It has a concrete and wood deck across the main façade, accessed by a wood ramp. Large sliding doors lead from the deck to the house. The interior features an open floor plan, hardwood floors, with rice paper screened windows and a corner fireplace in the living area. The hardwood and linoleum floors are laid directly over the 3" x 8" structural members laid flatwise and project outside to form the porch. It has a kitchen, bath, and four bedrooms.

**Mira Nakashima Guest House** (contributing building; map #19)
Built in 1971, the Mira Nakashima Guest House is a small building, the distinctive feature of which is its scissor truss roof design. The roof is covered with cedar shake shingles. Wall materials include stucco and cement block. It is a contributing building, but was restored and slightly reconfigured in 2008 by Mira.

**Mira Nakashima Garage** (noncontributing building; map #20)
The Mira Nakashima Garage was built in 1985. It was not designed or built by George Nakashima and is therefore a noncontributing building. It has a cedar shake roof and vertical wood siding.

**Statement of Integrity**
The George Nakashima House, Studio, and Workshop complex retains a high degree of historic integrity. Very few noncontributing resources are located on the property; with few exceptions most of the buildings remain unaltered and the setting and overall landscape of the property are outstanding. The noncontributing buildings on the property have designs that fit with the existing buildings. For example, the pole barn, while a very large storage building, is covered with naturally weathered boards and exposed rafter tails that mimic other buildings on the property. The workshop is one building that has been altered due to the growth of the manufacturing operation. However, many of the changes that have occurred to the building fall within the period of significance and were executed by Nakashima; therefore, the changes are similar to and fit in with the buildings on the property. The setting for the property includes many small landscape elements that add considerably to the historic value of the property. These landscape elements include small ponds, scattered trees, some of which are unique specimens to the area, clusters of boulders, and stone walls. Overall the property retains all aspects of historic integrity including its location, setting, materials, design, workmanship, feeling, and association.

## 8. STATEMENT OF SIGNIFICANCE

Certifying official has considered the significance of this property in relation to other properties:
Nationally: X Statewide: _ Locally:

| | |
|---|---|
| Applicable National Register Criteria: | A_ B X C X D |
| Criteria Considerations (Exceptions): | A_ B_ C_ D_ E_ F_ G X |
| NHL Criteria: | 2 and 4 |
| NHL Exceptions: | 8 |
| NHL Theme(s): | III. Expressing Cultural Values<br>5. architecture, landscape architecture, and urban design<br>6. popular and traditional culture<br>V. Developing the American Economy<br>1. extraction and production<br>2. distribution and consumption |
| Areas of Significance: | Architecture<br>Art (American Craft movement)<br>Commerce<br>Engineering<br>Ethnic Heritage, Japanese<br>Industry<br>Landscape History |
| Period(s) of Significance: | 1946-1982 |
| Significant Dates: | N/A |
| Significant Person(s): | George Nakashima |
| Cultural Affiliation: | N/A |
| Architect/Builder: | George Nakashima |
| Historic Contexts: | XVI. Architecture<br>International Style |

**State Significance of Property, and Justify Criteria, Criteria Considerations, and Areas and Periods of Significance Noted Above.**

## Introduction

The George Nakashima Woodworker complex is significant under NHL Criterion 2 for its association with internationally renowned furniture designer and woodworker George Nakashima, and under Criterion 4 for its innovative Japanese influenced International Style structures designed by Nakashima and built under his direct supervision. Criterion Exception 8 with regard to the fifty-year rule is applicable since six of the seventeen contributing resources on the property post-date 1963, although all but one was designed by Nakashima, who lived, worked, and played a role in the furniture business on the property until his death in 1990. These more recent buildings also played integral roles in the operation of the company and the relationship of his family, which were interwoven. The property includes his former residence, studios, showroom, production workshops, reception house, lumber storage buildings, and other resources associated with his family and career from 1946 to 1990. Construction began on the first building in 1946; the last building George Nakashima designed and built was completed in 1982. Mira Nakashima-Yarnall continues to produce furniture based on her father's archive of designs, as well as her own original work, which is in keeping with his design philosophy. She and other family members, including her brother Kevin and some of her children and their families, are also involved in the business.

George Nakashima is recognized as one of America's most eminent furniture designer-craftsman, and a significant force within the American Craft movement of the mid-twentieth century, a seminal period for woodworking in the United States.[1] As a self-proclaimed "woodworker," Nakashima became an important voice for the artist craftsmen, helping to create a new paradigm for studio furniture production in the postwar period.[2] While revered as a master craftsman, Nakashima preferred the moniker "woodworker," reflecting his life-long commitment to the subjugation of the ego as a means to developing his creative force. Nakashima's exposure to eastern religion and Japanese craft traditions taught him not only the value of humility, but of seeking peace, beauty, and harmony through one's work. As was true with the previous Arts & Crafts period of furniture making, Nakashima and others within the new movement rejected the mass-production brought on by the machine age. At the same time, they embraced Modern stylistic influences and ideas that were international in scope. Reflecting the European Modernist tradition, Nakashima espoused a minimalist, utopian vision of design for the common man. Often defined as "organic naturalism," his timeless pieces defy stylistic categorization, although some designs harken back to American classics such as the Windsor chair and the Shaker "plain style."[3] Believing in the spiritual qualities of wood, Nakashima's signature features incorporated techniques intended to enhance the impact of the wood's natural beauty, such as the "free-edge" and the use of butterfly inlays. The wood was cut along the grain to form large, monolithic slabs and elements generally viewed as imperfections, such as knots and splits, were celebrated. Nakashima's veneration for wood as his

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[1] David L. Barquist, "Druids and Dropouts: Working Wood, 1945-1969," in *Crafting Modernism: Midcentury American Art and Design*, ed. Jean Falino (New York: Abrams, in association with Museum of Arts and Design, 2012), 226-245.

[2] Janet Koplos and Bruce Metcalf, *A History of American Studio Craft* (Chapel Hill: The University of North Carolina Press, 2010), 249-250. According to the authors, Nakashima received quite a bit of publicity and his opinions became influential. He and a few others represent a new paradigm for studio furniture: the woodworker. As they explained, Nakashima defined woodworker as "one who makes things in wood, adopting an approach that seeks to integrate both art and craft," taken from George Nakashima, *Soul of a Tree*, 219. Nakashima outlined his "woodworker" philosophy in his address at a path-breaking conference held in New York in 1953 on the topic of the influence of design on modern living.

[3] Steven Beyer, *George Nakashima and the Modernist Moment* (Doylestown, Pennsylvania: James A. Michener Art Museum, 2001), 12. Nakashima's designs for chairs in particular are reminiscent of traditional American designs such as the Windsor chair or chairs crafted by Shaker craftsmen.

medium is expressed in his seminal work *The Soul of a Tree*, where he speaks of his desire to "offer the tree a second life of dignity and strength." The book has provided inspiration for many craftsmen.[4]

His success as an artisan propelled him briefly into the arena of mass-production; between 1945 and 1954 internationally recognized modern furniture manufacturers Hans and Florence Knoll produced a selection of Nakashima's designs, which appeared alongside other noted modernists including: Franco Albini, Harry Bertoia, Pierre Jeanneret, Ludwig Mies van der Rohe, Isamu Noguchi, Eero Saarinen, and Florence Knoll herself. High-end furniture manufacturer Widdicomb-Mueller of Grand Rapids, Michigan likewise produced suites of Nakashima furniture, between 1957 and 1961. According to Steven Beyer, "By the early 1950s, less than ten years after the establishment of his studio, Nakashima had distinguished himself as one of the most important [furniture] designers practicing in America." His foray into mass-production exposed Nakashima to a much broader audience, elevating his national standing as a designer and leading to comparisons with other noted American furniture designers of the era such as Charles & Ray Eames. However, Nakashima saw furniture making more as a spiritual journey, crafting unique pieces that responded to the natural form of each piece of wood.[5] Thus he soon returned to his workshops as his sole means of production and, with the help of a handful of skilled individuals (which later included daughter Mira), was able to maintain his high standards for quality and integrity. In this regard, Nakashima is more appropriately compared with prominent craftsman such as Wharton Esherick and Sam Maloof. Still, Nakashima's work expresses a worldview that is based upon a unique set of circumstances including his formal education in architecture, his exposure to European Modernism, eastern religious philosophy, and traditional Japanese craft traditions, including instruction from Issei carpenter Gentaro Hikogawa while both men were confined in a Japanese-American Internment Camp. As a testimony to George Nakashima's skill and national prominence, he was awarded the American Institute of Architect's Craftsmanship Medal in 1952. Nakashima's work has also been included in some of the most celebrated national exhibitions of handcrafted Modern furniture of the twentieth century, and he appears in every noted publication on the craft movement and fine woodworking in America.[6]

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[4] George Nakashima, "The Soul of a Tree," in *The Craft Reader*, ed. Glenn Adamson (Oxford: Berg Publishers, 2010), 222. Originally published as George Nakashima, *The Soul of a Tree: A Master Woodworker's Reflections* (Tokyo: Kodansha, 1981).

[5] Todd Merrill and Julie V. Lovine, *Modern Americana: Studio Furniture from High Craft to High Glam* (New York: Rizzoli International Publications, 2008), 125. According to the authors, "George Nakashima was surely one of the most recognized of the so-called studio furniture makers emerging from the postwar period. His name was constantly linked with the likes of Charles Eames and Eero Saarinen. However, while those designers were dedicated to the cause of mass production, Nakashima remained adamantly a craftsman, ever suspicious of the dehumanizing effects of the machine made."

[6] Exhibits include: the Museum of Modern Art's first exhibition of American design titled, *Design for Use, USA* (1951); the Renwick Gallery of the Smithsonian Institution's *Woodenworks* (1972); and Boston's Museum of Fine Arts's *The Maker's Hand: American Studio Furniture, 1940-1990* (2003). Nakashima's work has also been the focus of exclusive showings, such as: New York's American Craft Museum's *Full Circle*, a fifty year retrospective (1989) and the James A. Michener Museum's *George Nakashima and the Modernist Moment* (2001).

Publications in which George Nakashima is the sole subject include: Derek E. Ostergard, *George Nakashima: Full Circle* (1989); Steven Beyer, *George Nakashima and the Modernist Moment* (2001); and Mira Nakashima, *Nature, Form & Spirit: The Life and Legacy of George Nakashima* (2003). He was also included in an influential study organized by the Committee on Design and Craftsmanship titled "A Study of Design and Craftsmanship in Today's Products" presented by the Walker Art Center in Minneapolis, which included an exhibition and conference. George Nakashima is featured in the most authoritative texts on American craft, Modernism, and studio furniture, including: Edward S. Cook et al., *The Maker's Hand: American Studio Furniture, 1940-1990*; Glenn Adamson, ed., *The Craft Reader* (2010), the first comprehensive anthology of writings on modern craft; Todd Merrill and Julie V. Lovine, *Modern Americana: Studio Furniture from High Craft to High Glam* (2008); Jeannine Falino and Jennifer Scanlan, *Crafting Modernism: Midcentury American Art and Design* (2011), in-depth examination of the American studio craft movement in the decades following World War II (featuring the greatest artisans within the major mediums); Janet Koplos and Bruce Metcalf, *A History of American Studio Craft* (2010). The Woodenworks exhibition was also accompanied by a publication: *Woodenworks; Furniture Objects by Five Contemporary Craftsmen: George Nakashima, Sam Maloof, Wharton Esherick, Arthur Espenet Carpenter, Wendell Castle* (1972). George Nakashima was the cover feature in *Fine Woodworking* magazine, a publication

George Nakashima began his professional career as an architect, working at the vanguard of International Modernism in Japan before turning to furniture design. Thus as a trained architect, George Nakashima is also responsible for the design and construction of the structures that comprise the Nakashima Woodworker complex, erected between 1946 and 1982. Designed in the International Style infused with elements of traditional Japanese architecture and featuring the innovative use of concrete, these structures are to be considered among the treasures of Nakashima's unique legacy of craftsmanship. Pure examples of the International Style are fairly rare, and these structures reflect Nakashima's exposure to some of the early pioneers of the style that gave birth to the Modern movement in architecture. Most notably, Nakashima worked in Japan with Antonin Raymond who was a protégé of Frank Lloyd Wright and is generally considered to be a father of Modern architecture in Japan.[7] It should be noted that although other American architects applied elements of Japanese building crafts to their designs, it was generally only done superficially; Raymond and his associates, Nakashima included, incorporated them into their designs in a better integrated and distinctive manner. While Nakashima's skillful and innovative approach to architecture is manifested in the buildings that he designed for his New Hope complex, examples of his work in the United States are extremely limited. In fact, his transformation from architect to furniture designer was primarily a reaction to American architectural practice in the mid-twentieth century, which he found antithetical to his earlier experiences in Europe and Asia. Nakashima embraced the hallmarks of the new International Style, such as its simple forms and clean lines, open plan, and expansive glass—elements often made possible through the plasticity of concrete construction. To this he added authentic elements of traditional Japanese building craft. In addition, well known structural engineers Paul Weidlinger, Matthys Levy and Mario Salvadori worked with George Nakashima on the Conoid Studio, Chair Department, and the (first) lumber storage building to create unique, experimental roof forms using concrete construction.

**George Nakashima's Early History and Influences**

George Nakashima was born May 24, 1905, in Spokane, Washington. He grew up in the forested mountains of the Pacific Northwest that surrounded his family home in Seattle. His education consisted of the study of forestry—perhaps initiating his reverence for trees—and then architecture at the University of Washington. In 1928 he was given a one-year scholarship to study architecture in Paris at the École Americaine des Beaux-Arts in Fountainebleu. After graduating from the University of Washington in 1929 he received a scholarship to attend the Graduate School of Design at Harvard University. Preferring a better grounding in engineering, he soon transferred to the Massachusetts Institute of Technology (MIT) and received a master's degree in architecture in 1930. While Nakashima believed that architecture must transcend engineering, he felt that an understanding of engineering principles and the nature of building materials was essential in order "to satisfy an

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considered to be the first comprehensive periodical for technical information on hand skills, new technologies, machine tools, and woods. See: John Kelsey, "George Nakashima: For Each Plank There's One Perfect Use," *Fine Woodworking* 14 (Jan.-Feb. 1979): 40-46.

George Nakashima's house has also been featured in three publications: Tina Skinner, *Esherick, Maloof, and Nakashima: Homes of the Master Wood Artisans* (2009); and Leslie Williamson, *Handcrafted Modern: At Home with Mid-century Designers* (2010), which includes the most significant interiors created by the designers themselves at their own residence, including those of Russel Wright, George Nakashima, Harry Bertoia, Charles and Ray Eames, Walter Gropius, Eva Zeisel, and Albert Frey; Michael Gotkin, *Artist's Handmade Houses* (2011), featuring the homes of Henry Chapman Mercer, Paolo Soleri, Russel Wright, Henry V. Poor, Raoul Hague, George Nakashima, Ralph R. Whitehead and Jane B. McCall, Sam Maloof, Frederick E. Church, Constantino and Ruth Nivola, Ruth and Robert Hatch, and Michael Kahn and Leda Livant.

[7] Kurt G. F. Helfrich and William Whitaker, eds., *Crafting a Modern World: The Architecture and Design of Antonin and Noemi Raymond* (New York: Princeton Architectural Press, 2006), 25.

architect's obligation to truth."[8] After MIT he was hired by the Richard Brooks Studio in New York to paint murals for the New York capitol building in Albany and a year later was hired by the Long Island State Park Commission to paint murals and design buildings. He worked on projects at Jones Beach, Sunken Meadow Park, and Montauk Point. He lost the job in 1933 due to the Depression and traveled across the country to Seattle to see his parents. From Seattle he traveled back to New York and then via steamship across the Atlantic Ocean eventually making his way once again to Paris.

Near Nakashima's apartment in Paris, renowned Modernist architect Le Corbusier's "Pavillion Suisse" was under construction. According to his autobiography *The Soul of a Tree*, Nakashima made weekly visits to observe the process.[9] The Pavillion Suisse is considered a landmark of Modern design. It signaled the application of the International Style to structures other than those intended for industrial purposes, moving beyond functionalism to incorporate curvilinear forms and aesthetic details. Nakashima was greatly impacted by this structure. According to Mira Nakashima,

> While Nakashima had surely been introduced to the design philosophy of Le Corbusier during his years of studying architecture in the United States and at Fontainebleau, seeing the Pavillion being built allowed him to observe the Swiss master's work at very close hand. As he watched the structure grow week by week, he was filled with excitement to learn Le Corbusier's techniques and methods of building, his innovative use of concrete, and his new forms. Nakashima's vigilant observation allowed him to carry an intimate knowledge of the procedure and construction methods of reinforced concrete—not to mention a love for the expanded possibilities of the medium—throughout his life.[10]

Nakashima appreciated, and later applied to his own designs in New Hope, Le Corbusier's use of concrete, open-space planning, simple, clean lines, and horizontal courses of windows (intended to admit as much light as possible). Le Corbusier also calibrated his proportions based on the height of a man, which, he believed, assured a sense of harmony throughout the work, and promoted a feeling of peace and well-being. According to Mira, "All of these principles were, in fact, shared by the traditional architecture of Japan, and they resonated deeply with Nakashima."[11]

After a year in Paris, Nakashima traveled to Japan. He visited his mother's ancestral home in Kamata and was immersed for the first time in the traditional lifestyle of the Japanese. As Nakashima described his time in Japan, "It was a great experience to savor the life of my forebears after having spent my youth in America. The sensitive environment, the expressive language, the excellence of the architecture and crafts, the traditions and the personal relationships—all touched me to the depths of my being."[12] In 1934, he took a job with architect Antonin Raymond, who is recognized as the father of Modern architecture in Japan.[13] Raymond came to Japan to work with Frank Lloyd Wright on the Imperial Hotel, and decided to stay and establish an architectural office in Tokyo after the project was completed. Raymond was interested in integrating modern Western building

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[8] According to Mira Nakashima, at Harvard, "he soon discovered that Harvard's program was based on the theoretical design approach of Walter Gropius and the Bauhaus School. So, after only a few weeks at Harvard, his quest for a solid grounding in engineering propelled him to . . . MIT." Mira Nakashima, *Nature, Form & Spirit: The Life and Legacy of George Nakashima* (New York: Abrams, 2003), 13.

[9] George Nakashima, *The Soul of a Tree: A Woodworker's Reflections* (Tokyo: Kodansha International, 1981), 10.

[10] Mira Nakashima, *Nature, Form & Spirit*, 16-17.

[11] Ibid., 18.

[12] George Nakashima, *Soul of a Tree*, 59.

[13] Helfrich and Whitaker, *Crafting a Modern World*, 25.

technology with traditional Japanese architectural forms.[14] In so doing, he worked closely with Japanese craftsmen and absorbed their traditions in a manner that had apparently eluded Wright. Likely as part of their personal interest and professional study of Japanese building traditions, Nakashima traveled with coworker Junzo Sakakura to visit various architectural monuments, including the shrines and temples of the ancient capital of Kyoto. According to Nakashima, these were "fabulously built wooden structures expressing the beauty and serene quality of the island people of Japan, and the deep reverence these people have for nature."[15] They also attended tea ceremonies and festivals. The cumulative effect of these experiences was the development within Nakashima of a deep appreciation of Japanese cultural and architectural traditions. In addition, Sakakura and their other coworker, Kunio Maekawa, had worked with Le Corbusier in Paris and so Nakashima was able to learn more about the master's work and to exchange ideas.[16]

Around 1936 the Raymond office received a commission to design a building for the ashram of Sri Aurobindo in Pondicherry, India. George Nakashima was interested in working in India and agreed to undertake the on-site design construction of the building. While working on the project, he became a disciple of Sri Aurobindo and partner Mira Alfassa, and donated his salary for the project to the monastery. They had developed a spiritual philosophy known as Integral Yoga, which taught that beauty is the expression of divine truth, that freedom fosters creativity, and that focus develops discipline. These ideas deeply affected Nakashima such that "when he established his own studio in Bucks County, he wanted it to be a center for the evolution of a life moved by a higher consciousness, a life of the spirit." Thus according to his daughter Mira, "He always spoke of his work as a spiritual adventure, as an attempt to bring forward his psychic being, but rejecting all that comes from the ego, vital desire, and the mind's presumptuous, reasoning incompetence."[17] The building, named Golconde, was constructed in the International style of reinforced concrete with a roof made of 5' x 3' pre-cast concrete barrel vaulted sections. The experience underpinned Nakashima's passion for, and increased his knowledge of, reinforced concrete construction that he would later realize in his designs for the New Hope compound.

George Nakashima completed his work in India and traveled back to Tokyo in 1939. At this time the world was on the verge of war and Antonin Raymond closed his office in Tokyo and moved to New York City, later purchasing a farm outside of New Hope, Pennsylvania. While he was in Tokyo, George Nakashima met Marion Okajima, a Japanese American working as a private English tutor, and they were engaged. When he returned to the United States, Marion joined him and they were married in Los Angeles in 1941. Settling in Seattle, Nakashima worked as an architect for Ray Morin while beginning to make furniture part time. Father Leopold Tibesar of the Maryknoll Boy's Club gave Nakashima permission to use their basement workshop in exchange for teaching the boys woodworking. He set up a small furniture shop and it was there that he produced his first privately commissioned collection of handcrafted furniture, for cosmetics executive Andre Ligne. The commission allowed Nakashima to devote himself full-time to furniture making and he made the decision to reject his architecture career. He had become increasingly disillusioned by American architectural

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[14] It should be noted that Antonin Raymond's wife, Noemi Raymond, collaborated with her husband in designing the furniture and interiors of houses he designed. According to William Whitaker, Collection Manager for the Architectural Archives at the University of Pennsylvania, "the subtle integration of furniture and interiors that suited Japanese and western living styles or traditions was an important, and developed, model that Nakashima saw in the Raymond office…Raymond's own work in the New Hope area from the late 1930s and early 1940s integrates interiors, furniture, and traditional Japanese design elements." This type of integration would emerge again as George Nakashima realized the designs for his woodworker complex. William Whitaker, e-mail message to James A. Jacobs, March 28, 2013, copy in NHL file for the George Nakashima Woodworker Complex.

[15] George Nakashima, *Soul of a Tree*, 58.

[16] Mira Nakashima, *Nature, Form & Spirit*, 18.

[17] Ibid., 34.

design and practice, particularly that of Frank Lloyd Wright, whose work, although beautifully designed and spectacularly celebrated, was poorly engineered. Nakashima believed, however, that furniture making was a natural extension of architecture at a smaller scale, and that his experience as an architect could inform his furniture design. While in Seattle, he also developed a friendship with artist Morris Graves who shared his interest in Indian philosophy and who gave him a book on Shaker furniture, a now well-worn volume within his still extant reference library.

On December 7, 1941, the Japanese attacked Pearl Harbor and shortly thereafter those of Japanese ancestry living on the West Coast were forced into internment camps away from the Pacific Coast. The Nakashimas, including their newborn daughter Mira, were relocated to Camp Minidoka in Idaho. In George Nakashima's autobiography *The Soul of a Tree*, he describes the mass incarceration in the internment camps as "a stupid and insensitive act, one by which my country could only hurt itself. It was a policy of unthinking racism."[18] Despite the horrendous circumstances, Nakashima made the best of his situation. As luck would have it, Japanese carpenter Gentaro Hikogawa was also incarcerated at the camp; Hikogawa was well-trained in the use of traditional Japanese hand tools and had an intimate knowledge of Japanese wood joinery. Hikogawa taught his skills to Nakashima, thus enhancing Nakashima's already considerable furniture making ability. They used scraps of wood and bitter-brush scavenged from the desert to make pieces of furniture that could enhance their primitive living conditions. While Nakashima claimed to bear no scars from the interment experience, it certainly strengthened his beliefs. As Mira explains, "Fortunately, he was able to transform anger and negativity into the positive passion of conviction, the passionate creativity of his work, and the passion for beauty and perfection, which served him well."[19] Rather than building animosity because of his heritage, Mira points out that "My father's insistence that he was a citizen of the world not limited by national or racial boundaries, enabled him to rise above prejudice and persecution, to embrace, rather than reject the Japanese culture and aesthetics as few, if any, of his fellow internees dared."[20] In fact, the experience eventually led to the conception of the globe-encircling Altars for Peace that he would erect in his later years.

In 1943, one of George Nakashima's professors at MIT contacted his former employer Antonin Raymond to petition for the release of the Nakashima family which was granted with the provision that Nakashima work for Raymond. Since many of Antonin Raymond's jobs at the time were government related, Nakashima could not work as an architect, but as a worker on his New Hope farm, primarily tending to the chickens. However, he was able to set up a small workshop in the Raymond milk house, designing what became known as the "milk house" stool and table, which, among other designs, were a regular part of his furniture line. While living in the New Hope area, George Nakashima also became enamored with the building traditions of the early Quaker settlers. In fact, in *The Soul of a Tree*, he includes sketches of the nearby Thompson-Neely house and barn.[21] In 1945, after the war was over, George Nakashima moved into a small house near Meetinghouse Road and continued to design and build furniture. In 1946, he approached a Quaker farmer and asked him if he could have three acres of his land along Aquetong Road in exchange for carpentry work. The farmer agreed and George Nakashima began to construct his workshop while he and his family lived in a tent on the property. The parcel was expanded through the years to 8.7367 acres, and a total of 12.2 acres including Mira's property.

**The Development of the George Nakashima Woodworker Complex**

Soon after he acquired the land George Nakashima built his workshop, immediately followed by the design and construction of a house for himself and his family. Thus began a tradition of combining family residential

[18] George Nakashima, *Soul of a Tree*, 69.
[19] Mira Nakashima, *Nature, Form & Spirit*, 43.
[20] Ibid., 41.
[21] George Nakashima, *Soul of a Tree*, 69, 71.

buildings with workshops, storage buildings, and studios; and mixing family life with the manufacture, design, and marketing of furniture. As the business grew, Nakashima hired workers to assist him, who often became like family members themselves. George Nakashima was the creative talent, while his wife Marion acted as the business manager. Children Mira and Kevin Nakashima would eventually become a part of the business, with Mira playing a major role in the design and manufacturing of the furniture, including the execution of designs from the archive left by her father as well as the introduction of her own designs in the same spirit. According to William Whitaker, Collection Manager for the Architectural Archives at the University of Pennsylvania, "the living/working environment Nakashima created had a direct precedent in the Raymonds' New Hope Farm (which for several years operated as their home, office, and a 'school' of sorts for apprentices in 1939-41."[22] The house the family lived in was small, just one story high and relatively simple in design, reflecting his signature blend of Modern architecture and Japanese building traditions. In addition to designing these buildings, George Nakashima also took a hands-on approach to their actual construction. He was his own general contractor on each project and directly supervised the work, if not actually performing the work himself. He also rarely made blue prints of his designs. Instead he drew his plans by hand with pencil on paper, which was also true of his furniture designs. Although Nakashima was capable of producing high-quality architectural renderings, the fact that none were produced for these structures reflects Nakashima's insistence on being an active participant in the construction as well as the design process.

The first structure to be erected was the workshop, in 1946. It is a simply constructed building made of cement block with large windows in the southern exposure for natural lighting and war surplus Transite roofing. It has been expanded over the years to include additions made in 1959, 1970, and 1988. While the workshop is an unassuming structure, it has been in continuous use as the site for the production of Nakashima furniture since its inception in 1946. It is where most of the furniture was created, the woodworkers trained, and where Nakashima worked through the creative process to realize new designs.

George Nakashima next turned to building a house, which he did largely on his own using both traditional and/or indigenous and experimental materials. According to daughter Mira,

> The house was of stone, with oak framing, and some experimental materials such as concrete roof tiles. I remember watching my father hand-pouring and setting the concrete tiles on the roof, and we used to pick up fieldstone along the highway and put them in the car if they looked to be the right size and shape for the wall he was constructing. Dad would often send me to the rock-pile to find small stones to fit into a particular spot; it was my first lesson in architecture.[23]

In the tradition of the International Style, the George Nakashima House combines natural materials including local stone, white stucco walls, and simple wood trim to create an asymmetrical design that also features exposed framing, ribbon windows, glass walls in the living area, and an open floor plan. Elements indicative of Japanese architecture include rice paper Shoji screens used as dividers, and rafters and support posts (or parent posts) consisting of un-milled trees simply stripped of their bark. The living room ceiling is made of wide cedar panels held by clips to allow for expansion. The alternating use of materials, the lack of symmetry, and exposed structural elements create architectural interest. The street front features local stone with an entrance almost hidden in a recessed area to one end. In the opposing elevation, the stone is carried out in the retaining wall while the section of wall above is faced in stucco. One end of the house is covered with natural wood planks laid vertically while the other is of plain stucco. As with all the Nakashima structures, the attention to detail is

[22] Whitaker, e-mail message to Jacobs, March 28, 2013.
[23] Mira Nakashima, *Nature, Form & Spirit*, 46.

striking. Dark stained rafters extend under the eaves and in the gable ends, with the rafter ends painted white to highlight them; similar exposed framing appears in the ceiling of the recessed entry porch, and various structural elements appear on the exterior where the roof supports meet the walls. And as in the Japanese tradition whereby houses are to be in harmony with nature, transition between the indoors and outdoors is created by means of wide doorways entering onto patios and decks. There is no railing on the deck to obstruct the view and large stones are used as they were found in nature as steps leading from the deck to the yard, which is covered in pebble-sized stone. Stone retaining walls help to level the house and yard, which is banked within the hillside.

For a considerable length of time (1946 to 1954) the workshop and house were the only buildings on the property. A series of events occurring during this period greatly increased Nakashima's recognition, providing both the demand and capital needed to expand his business. The result was the design and construction of additional structures to the new Hope complex. In 1946, Nakashima established a relationship with H. G. Knoll Associates, a furniture manufacturer in New York City, and with Widdicomb-Mueller Company of Grand Rapids, Michigan, in 1957. While short-lived, these relationships presented significant opportunities for Nakashima. In 1951 examples of George Nakashima's furniture were included in a well-traveled, ground-breaking exhibition of Modern design initiated by the Museum of Modern Art in New York City. From 1951 to 1961, the Jamaican resort, Frenchman's Cove, commissioned George Nakashima to build a collection of furniture for the resort. Two dining tables designed for the Frenchman's Cove project became part of Nakashima's regular line of furniture and were sold after 1958 at the new Showroom.

In 1955, a building was constructed for lumber storage, which was quickly converted to the Furniture Finishing Department. Thus began a significant period of construction at the New Hope property. Mira describes her father's work during this period:

> As the furniture business prospered, it afforded him the financial capability to consider building again, and indeed, demanded more space for his operations. He also continued to design and build elsewhere as opportunities arose. Although he had not done any architectural work since he had put up his first house and workshop on the New Hope property, 1954 marked the beginning of a flurry of building, which would include new space to work, to show pieces to clients, and to store the expanding inventory of lumber, and even in 1960, to build a kidney-shaped swimming pool and barrel-vaulted pool house. The most important of these new buildings was the Conoid Studio, which would be a combination design studio, conference room, and a place to keep some of his finest pieces of wood.[24]

Along with the Finishing Department, George Nakashima designed and built the Showroom in 1954. Like the Nakashima house, the Showroom is a finely crafted structure that blends inside with out, and Modernism with traditional Japanese motifs. It is a one-story rectangular building with a large open interior space to display furniture, with ample room for conducting business. Also like the Nakashima house, it includes character defining elements such as exposed framing members highlighted against white drywall ceilings, stone walls visible both inside and out and including a stone fireplace with custom-designed metal hood, large expanses of glass, and the use of shoji screens. Again, in keeping with the Japanese philosophy of harmonizing the structure with its natural environment, sliding glass doors lead to a wood deck that overlooks a small pond, situated at the gable end. The surrounding landscape includes stone retaining walls and pebble walks.

[24] Ibid., 136.

In 1954, Kevin Nakashima was also born to George and Marion Nakashima. As a result, the house had to be expanded by an addition to include another bedroom.

Building continued on the property and by 1956 George Nakashima began the use of experimental roof designs, particularly the conoidal and hyperbolic paraboloid. Simplistically speaking, a conoid is a modified cone shape, while a hyperbolic paraboloid is a saddle-shaped curve. Both are innovative and economical methods of covering a large area with a relatively thin and lightweight roof surface. In experimenting with the conoid shell roof type, Nakashima designed and built a clubhouse or lounge for his workers in 1956. The building's roof was made of a layered plywood shell. The clubhouse was soon converted for use as a chair assembly shop, or the Chair Department as it is now known. It was followed in 1960 with the construction of the most remarkably engineered and designed building on the property, the Conoid Studio. To construct the Chair Department (1957), Conoid Studio (1957-60), and the main lumber storage building (1956) George Nakashima hired engineers Paul Weidlinger, Mario Salvadori, and Matthys Levy of Weidlinger Associates. Paul Weidlinger was the founder of Weidlinger Associates Incorporated in New York City, which continues to be one of the most outstanding engineering consulting firms in the world, specializing in the analysis and effect of seismic activity on buildings and structures.[25] As Mira explains,

> During the 1950s he [George Nakashima] became fascinated by the capabilities of warped thin-shell or "form-resistant" structures. He especially admired the work of Mario Salvadori, Paulo Luigi Nervi, and Felix Candela, and had a correspondingly low opinion of some of Eero Saarinen's concrete structures, which he called 'unwilling' shells, because of their thickness. He determined to build his own shells, based on sound engineering principles that would permit both an economical use of materials and 'organic' forms. Behind this idea lay a belief that sound engineering was an expression of the laws of nature, and that a beautiful structure was a manifestation of those laws.[26]

The studio measures 40' x 40' and so the idea of the curved or conoid shape was to support the roof and allow it to cover a large open space. While an ordinary conoid has a doubly curved surface, the team decided to add a series of small sine curves to increase the strength of the roof, resulting in its unusual scallop-shell-like appearance. The roof is supported and further strengthened by a reinforced concrete arch located at the overhanging front of the building, with a concrete lintel atop the wall supporting the rear and stiffeners inserted in alternate corrugations. According to an article appearing in *Engineering* magazine at the time of its construction, "The resulting shell has an entirely new form and represents a new application of the conoidal shell." As the article also states, while conoidal shells are frequently used in monitored industrial buildings in Europe, they are rare in the United States. Thus, this represents a "departure in the design philosophy of reinforced concrete shells"[27] and a truly unique structure. The roof of the Conoid Studio is not only unique for its shape, but also for its poured reinforced concrete construction, which measures only 2-½" in thickness.

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[25] Mario Salvadori was an engineer and architect who worked on the Manhattan Project during World War II. In 1956, Matthys Levy was a recent graduate in structural engineering from Columbia University. He went on to design and engineer landmark structures including the Georgia Dome in Atlanta and La Plata Stadium in Argentina. He also was a consulting engineer on the investigation into the collapse of the World Trade Center buildings in New York City on September 11, 2001. He is currently chairman of Weidlinger and Associates, Inc. in New York City.

[26] Mira Nakashima, *Nature, Form & Spirit*, 136.

[27] "Adventure in Structure, Sea Shell Roof," *Architectural Record* 122 (November 1957); and Matthys P. Levy and Paul Weidlinger, "Conoid with Corrugations Makes an Unusual Roof," *Engineering News-Record* 159 (December 5, 1957).

The interior of the Conoid Studio is a masterful blend of Modern design with Japanese elements such as shoji screens to modulate the light emanating from the completely glazed front wall. The conoid roof was highly successful in creating the desired effect. As Mira describes it:

> The overall effect of the interior of the Conoid Studio is that of a soaring, freely undulating, but organically disciplined space, something like a gigantic, organically formed seashell, transiting in graduated waves from a flat sine curve to an open arch facing the sun. The walls of this structure would be largely glass, as they did not have to carry the weight of the roof.[28]

A finely crafted wood partition separates the studio space from the domestic uses, such as the kitchen, bathroom, storage, and design office space.

Interleaved with George Nakashima's building and architectural work on his New Hope property, the furniture manufacturing business was thriving. Construction of the Conoid Studio inspired George Nakashima to design an entire line of furniture that he sold at his New Hope showroom including the Conoid chair, bench, coffee table, end tables, and dining table. The Conoid furniture differed from much of Nakashima's earlier work by including daring architectural elements such as "rigorously architectonic bases" cantilevered seats, angled back supports, and thin floor runners. As biographer Derek Ostergard points out, Nakashima used for the first time the "fully developed cantilevered seat, a powerful statement, perhaps reflecting confidence after completion of the Conoid Studio."[29]

Like the Arts Building, the main lumber storage building constructed in 1956 of cement block has two thin hyperbolic paraboloid roofs built with three layers of 3/8" plywood in order to cover a large open space of thirty-one square feet. Noted for its economy and ease of construction, Nakashima called his new method of constructing a hyperbolic paraboloid, "perhaps the easiest and cheapest way to roof a clear span of this size."[30]

In 1958, George Nakashima was commissioned to design an outdoor living room by the Simpson Lumber Company of Arcata, CA. The living space was designed as a cantilevered lean-to anchored in a concrete base and included a stone barbecue. The "Lanai," as it came to be known, was designed to be built of redwood. The lumber company advertised the outdoor family room in various popular magazines of the time, offering copies of the plans for the structure at no charge. This was a marketing tool by the Simpson Lumber Company to entice customers to purchase its redwood lumber products. In the July 1958 issue of *The Woodworker* Nakashima is quoted as saying the project was intended to "bring the East to the West." As it was explained, "This 'lanai' features two cantilevered piers of reinforced concrete around which Nakashima has used California redwood to produce an aura of pure beauty as well as practicality. The graceful shingled roof imparts a light and serene feeling and the entire structure is airy, yet strong; protective, yet unobtrusive, and the design reflects the manner in which wood can be worked with the best styling of both the Orient and the West."[31] The prototype for the Lanai is on the Nakashima property near the Reception House, and includes a stone beehive barbecue.

In 1959, the small and somewhat inconspicuous pool storage house was constructed. Its significance is that it was a prototype for the much larger Pool House that was built nearby in 1960. Mira Nakashima, a high school

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[28] Mira Nakashima, *Nature, Form & Spirit*, 136.
[29] Derek E. Ostergard, *George Nakashima: Full Circle* (New York: Wiedenfeld & Nicolson, 1989), 77.
[30] "A Lumber Storehouse, New Hope, Pennsylvania," *Architectural Record* 126 (July 1959).
[31] Kenneth R. McDonald, "Pennsylvania Designer Uses California Redwood to Fashion this 'Lanai'," *The Woodworker* (July 1958): 31.

senior at the time, assisted with the design and construction of the pool storage house. Both the pool storage building and the pool house have plywood barrel vaulted roofs set on solid stone or cement block foundations. The Pool House was also designed to have a passive solar heating system that provides hot water for showers in the building. The swimming pool is also uniquely designed and engineered with a cantilevered concrete extension on the south side and won a design award in 1960.

By now, the Nakashima complex had grown considerably and in a manner that was well integrated with the natural environment. In his furniture catalog Nakashima described himself as an architect for the whole environment, able to produce "an integrated concept of architecture, furnishings and landscape."[32]

The next building to be constructed on the property was the Arts Building, in 1967. The building has a hyperbolic paraboloid roof design and was specifically constructed to display the works of Ben Shahn, the well-known mural painter, photographer, and social activist. George Nakashima and Ben Shahn became friends in the 1950s. George Nakashima designed an addition on Ben Shahn's house in the New Deal community of Roosevelt, New Jersey, and Ben Shahn purchased furniture from George Nakashima. From 1967 to 1969, Ben Shahn's art was sold at the Nakashima studio in New Hope and in the Arts Building following its construction. Ben Shahn sketched a tile mosaic that he proposed for installation on the west wall of the Arts Building. Unfortunately Shahn passed away in 1969, prior to its execution by the Gabriel Loire stained glass studio in France. The tile mosaic was built in eight sections and transported back to New Hope for installation on the west wall in 1972. Among the extraordinary features of the Arts Building is its cantilevered stairway, handcrafted by Nakashima, with steps resembling the edges of the milk house table embedded into the stone wall; its soaring roofline with exposed beams, its open space interior, and expansive glass walls. Perpendicular to the Arts Building is "the Cloister," a series of rooms—bedroom, bathroom, and service kitchen—that Nakashima intended to house visiting craftsmen from Japan (although that goal was never realized).

In 1970, Nakashima's daughter Mira and her family were in need of a place to live in the New Hope area and so he purchased a parcel of land across Aquetong Road from the main complex in 1968 and began the construction of her house. In the design and construction of Mira's house and an adjacent guesthouse, he employed a scissors truss roof, which is basically an asymmetrical gable resembling a partially open pair of scissors. It is an economical means of supporting a roof that with the addition of natural tree support posts on the interior and exposed support structure makes the roof both aesthetically pleasing and well engineered. It shares many of the same qualities of the George Nakashima House in its styling, use of materials, and architectural elements, and blending of indoors and outdoors. It combines stucco and wood with concrete block, and has an open plan with sliding doors that lead out to a deck. The site also includes a small guesthouse of the same materials and also has the character defining scissor-truss roof.

Another building on the property that employs the use of a scissors truss roof is the Reception House or "Sanso Villa." Built in 1975-77, this building is arguably his finest example of freely translated traditional Japanese domestic architecture. In addition to its demure scale and simplicity, it includes many other modern translations of defining characteristics of Japanese domestic architecture, including: its open space; exposed structural elements; three *nakabashira*, or internal posts, and a *daikokubashira*, also referred to as *oyabashira*, a parent or mother post; glass walls; *tatami* mat covered floors; and *shoji* screens. It begins with the *genkan* or welcoming entrance with storage for shoes, behind which is located a modern version of a *mizuya* or small kitchen with a cupboard and wash-up for tea utensils. The kitchen can be hidden behind shoji screens that open on to the dining area. On the other side of the room is the living area with a stone fireplace and built-in features

[32] Ostergard, *George Nakashima*, 80.

including a window seat, *ji-bukuro* or low storage compartment (actually a casing for the heating elements) with cabinets above, and a *tsuke shoin* or built-in desk. The most distinguishing features are perhaps the attached Japanese tearoom, entered through an expanded *nijuri guchi* or a small doorway through which guests must enter on their hands and knees, and the *horiburo*, a sunken tiled Japanese-style soaking tub but heated by convection from a wood-burning boiler.

The Reception House is furnished with many of Nakashima's signature pieces to complete the integrity of its design and jewel-box-like perfection. Like the other residential structures, the Reception House has sliding glass doors and a deck that looks out over the hillside from its terraced site. It reflects Nakashima's whole environment approach; the integration of architecture, furnishings, and landscape. With the completion of the Reception House in 1977, the major architectural design and engineering work undertaken by George Nakashima on the site was essentially completed, although he remained involved in the furniture design business until his death in 1990.

**The International Style and Traditional Japanese Architectural Forms**

As outlined, the structures that comprise the Nakashima complex were designed by George Nakashima in the International Style infused with elements of traditional Japanese architecture. While the combination may sound peculiar at first blush, as Nakashima has proven, the two are eminently compatible. Both styles seek simplicity of form, celebration of the natural beauty of the materials, and the conspicuous display of structural components. As already discussed, Nakashima's background provided him with a very distinctive set of ideas and experiences brought together to create this site. These experiences included his architectural education, personal observations on the work of Modernist master LeCorbusier, his own work in Japan and India for Antonin Raymond, eastern religious philosophy, and his exposure to traditional Japanese craftsmanship. Although Nakashima eventually abandoned architectural practice in favor of woodworking, he continued to design and build structures for his business and for himself and his family, and to bring an architect's understanding to the production of furniture. His keen perception of the philosophical and design principles that underpin both the International Style and traditional Japanese building practices are uniquely and expertly manifested at the Nakashima complex.

The International style first emerged in Europe in the 1920s and 1930s, and was formally introduced to America through a 1932 exhibition held at the Museum of Modern Art (MoMA). In a 1963 publication Henry Russell Hitchcock, one of the very same individuals responsible for that exhibition, announced that the International Style was now over.[33] The style had been deemed by many to be stark, cold, and elitist. And when compared to the revival styles of architecture then popular in the United States, perhaps their assessments were correct. The International Style has always been considered a radical diversion from popular architectural practice, and in that regard it has been imminently successful; what early proponents of the International Style indeed intended was a break from the architectural conventions of the past. While pure examples of the International Style, particularly for residential architecture, are fairly rare, many mid-century Modern buildings reflect its influence. This is true most specifically with regard to the utilization of a set of basic design principles (outlined below) and the introduction of open floor plans.

Rather than slavishly copying the architectural styles of the bygone eras with all its fussy ornament, the International style sought beauty in the true character of construction. This notion has been popularly summarized by adages such as "less is more" and "form follows function." The three defining principles of the

[33] Henry Russell Hitchcock and Philip Johnson, *The International Style* (originally published under the title: *The International Style: Architecture Since 1922*) (New York: W. W. Norton, 1995), 20.

International Style—volume, regularity (rather than symmetry), and the avoidance of applied decoration—certainly reflect these ideals. If in fact the International Style is dead, it is certainly not forgotten, owing to the tremendous impact that it had on the profession worldwide. Before it was so named, the International style marked the emergence in Europe of the Modernist movement. It was nothing short of a revolution in architectural design that would reverberate across the globe. As one architectural historian explains, "The International Style served a vital purpose. By establishing a pattern and a method this movement provided the necessary backbone of the development of a new architecture, which might otherwise have floundered without certain shape or purpose. The International Style consciously defined a formula by which any architect could design a good building."[34] Thus the emergence of the International Style and the subsequent rejection of historical precedent in architectural design had a profound effect on architectural practice and education in the United States that continues to the present day.

The term "International Style" was coined by three individuals, Henry Russell Hitchcock, Phillip Johnson, and Albert H. Barr Jr., who worked together in 1932 to create the MoMA exhibition of this emergent, largely European style in order to provide its U.S. début. Barr was the first director of MoMA; Johnson, an architect by training, was the founder of the museum's Department of Architecture and Design; and Hitchcock, a respected architectural historian. While attendance to the exhibition was not overwhelming, it traveled throughout the country and was outlined in an associated publication entitled, *The International Style*. The publication served to disseminate early ideas about the style, but also provided a lasting tribute. The moniker that they chose, "International Style," reflected the global distribution and perspective of its early practitioners—and perhaps due to aspirations held by Hitchcock and Johnson—for its future proliferation. The roots of the International Style can be traced to earlier movements occurring largely in Holland, France, and Germany, such as the Bauhaus, De Stijl, and the aesthetics of cubism and constructivism. Also influential was experimentation in reinforced concrete lead by Adolf Loos and Le Corbusier, as were the use of steel and glass and the standardization of building components pioneered by individuals such as Walter Gropius and Adolph Meyer.[35] As *The International Style* publication announced, "Today a single style has come into existence. The aesthetic conceptions on which its disciplines are based derive from the experimentation of the individualists. . . . This contemporary style, which exists throughout the world, is unified and inclusive, not fragmentary and contradictory like so much of the production of the first generation of modern architects."[36]

The book outlines the three principles of International Style, beginning with volume. The concept of volume relates to structure. In the past structural support was provided by the walls of a building. The International Style utilized the skeleton or framework of the building, usually constructed in metal or concrete, to provide support. These supports appear as a grid of vertical and horizontal members, exposing the true character of the construction. The beauty of this system was that it freed the structure of its load-bearing walls and thus allowed open interior floor plans and the realization of large sections of wall in glass. Sections of glass were countered by solid walls, generally covered in white stucco formed to provide a continuous overlay, becoming a hallmark of the style. According to Hitchcock and Johnson, "This concession to the principle of achieving a smooth continuous surface is an important instance of the exaggeration of the functionalist's anti-aesthetic claims."[37] Windows became the most visible character-defining detail feature, punctuating the otherwise bare walls and defining a rhythm, which leads to the second principle, regularity.

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[34] Mary Mix Foley, *The American House* (New York: Harper & Row, 1980), 241.
[35] Ibid., 241.
[36] Hitchcock and Johnson, *International Style*, 35.
[37] Ibid., 65.

Free of many of the interior walls that were necessary to the support of traditionally constructed buildings, International-styled structures were not tied to the symmetry that had defined earlier buildings. On the contrary, if form was to follow function, maintaining symmetry would prove difficult. According to our authors, "The natural expression of the various functions grouped in one building is *not* symmetrical."[38] Thus, as they further noted, "technically the prime architectural problem of distribution is to adjust the irregular and unequal demands of function to regular construction and the use of standardized parts."[39] Moreover, symmetry was considered synonymous with monotony. Instead, buildings were to follow a certain regularity that would create aesthetic interest. Because rooms are generally broader than they are tall, a horizontal orientation became another character-defining feature of the style. The horizontal nature of the structures was further emphasized by banding or broad expanses of windows and/or glass walls.

The third principle of the International Style is the avoidance of applied decoration. As an alternative, decoration was defined as all the "incidental features" of the design that provide interest.[40] The authors further argued against applied ornament by claiming that the quality of the execution of such details had declined significantly since the mid-eighteenth century. Perhaps this was true also because construction technology had evolved in a manner such that ornament had lost its functional quality and the aesthetic associated with its production (as indicated by the term "applied decoration"). Instead the contrast needed to provide architectural interest was obtained through the use of varying materials presented in their natural form. White walls were thought to create a less striking contrast with the natural environment, while at the same time highlighting complementary materials such as wood, metal, and glass. Traditional ornament was replaced by more subtle designs focused on window style and arrangement, and on horizontal axis. Window style included clean-cut, flush mounting and ribbon banding. A horizontal axis was further accentuated by utilizing a flat and/or parapet roofline. Porches and terraces that melded the interiors with the out-of-doors also helped the International Style building to blend with its environment.

Focusing on the nature of the building materials and stripping away the applied ornament lends an element of simplicity to the International Style that is in harmony with the precepts of traditional Japanese architecture. As noted Bauhaus-trained German architect Bruno Taut commented after a visit to Japan in 1933, "Japanese architecture has always been modern."[41] Indeed, the Japanese obsession with simplicity in the design of domestic architecture was first introduced in the fourteenth century by influential Zen Buddhist priests (known as the Muromachi and Momoyama periods). The movement "sought to eliminate the inessential and seek the beauty in unembellished humble things. It sought spaciousness in deliberately small spaces, and a feeling of eternity in fragile and temporary [wood] materials. A house's interior was not to be just protected from nature, but to be integrated with nature in harmony."[42] Removing unnecessary décor provided for a flexible use of space. Built-in cabinets provided storage and eliminated the need for freestanding furniture. Bedrolls could be brought out at night, allowing room for work and play during the day. Space was defined by the size of a standard tatami mat of 90 x 180 centimeters, which is considered adequate sleeping room for the average person. And in fact, every dimension of the Japanese house is relative to that of a *tatami* mat and thus based on the scale of the human body. Japanese traditionally favor wood as a building material, reflecting a deep-seated respect for nature. Thus, Japanese carpenters are noted for having perfected techniques for drawing out the

[38] Ibid., 72.
[39] Ibid., 71.
[40] Ibid., 82.
[41] Geeta Nehta and Kimie Tada, *Japan Style* (North Clarendon, VT: Tuttle Publishing, 2005), 9.
[42] Ibid., 9.

intrinsic beauty of wood, often left in a rustic condition.[43] Integration with nature is facilitated through elements such as *shoji* screens and sliding doors "fusuma" that allow whole walls of the house to open onto it.

The Japanese Shoin style that developed during the Muromachi period (1336-1572) included distinct elements: a *tokonoma* or honored decorative alcove for hanging scrolls and other special objects; a *chigaidana*, staggered shelves located near the *tokonoma*; *chodaigamae* or decorative doors; a *tsuke shoin*, hanging shelf or built in desk; *shoji* screens; *tatami* mats; and *nakabashira* or interior supporting posts and *daikokubashira*, also referred to as *oyabashira*, a parent or mother post.[44] Other features appearing in Japanese houses are a *genkan* or entrance for welcoming guests that included a built-in cabinet for storing shoes; a *ji-bukuro* or low storage compartments appearing in the recesses between *tokonomas*; a *mizuya* or small kitchen with a cupboard and wash-up for tea utensils, and a *goemon-buro* or metal tubs heated from below by a wood stove. It was also during the Muromachi and Momoyama periods that the tea ceremony became more popular and that spaces within houses designed to facilitate such activities emerged. Tea rooms are entered through a *nijuri guchi* or a small doorway through which guests must enter on their hands and knees, thus requiring them to leave behind their (Samurai) swords and their egos in the pursuit of a pure and humble state of mind.[45]

Eventually the formal Shoin style gave way to a more relaxed Sukiya style, avoiding symmetry and repetition in favor of rustic simplicity. Along with it, the Sado or Chado "Way of Tea" sought to extend the "meditative simplicity" of the tea ceremony or *chanoyu* into every aspect of life to create harmony with nature and a retreat from the cares of the world.[46] These ideals strongly influenced arts and architecture in Japan. As one author describes it, "Contrary to Le Corbusier's adage of modern architecture, a traditional Japanese house is not simply a "machine to live in," but a home for the soul."[47] In fact, the traditional Japanese farmhouse or *minka* utilizes natural materials and building techniques that span hundreds of years.[48] *Minkas* are characterized by the use of a heavy wooden structural frame and thatched roof. Since their builders generally did not have access to the finest quality milled wood, *minkas* often incorporate large uncut or uneven timbers in their natural form, joined by mortise and tenon rather than metal fittings. The use of such materials and conditions helped to instill a reverence for joinery within the Japanese culture, as did their admiration for nature. Heavy thatched roofs were also an important part of Japanese aesthetic, and their deep overhangs provide protection from frequent rains and damp climate. Japanese roofs, now more likely tiled than thatched, generally do not include drains, using rain chains and gravel channels in the ground to carry run-off from the roof.

The relationship between the house and garden was also very important to the Sukiya style and thus great emphasis was placed on the landscape. Traditional Japanese house sites include a tea garden to mediate between the house and the outside world, separated by shoji screens. Shoji doors and windows are generally situated to take advantage of garden views or natural light. The garden plantings are intended to be a microcosm of nature, with thick moss carpets, larger evergreens, and low shrubs. Elements of the garden are accessed or joined by meandering paths or stepping stones referred to as a "rojo."

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[43] Ibid., 9.
[44] Ibid., 15.
[45] Ibid., 23-31.
[46] Ibid., 20. As the authors relay, "In architecture chanoyu has generated a special style called the Sukiya style, known for its minimalism, simplicity, rusticity, understatement and restrained playfulness."
[47] Ibid., 18.
[48] The word *minka* originally meant a home of a common person who was not an aristocrat or a samurai; however, it is now primarily used to describe farmhouses with heavy wooden structures and thatched roofs. Nehta and Tada, *Japan Style*, 108.

With the precepts of the International Style and elements of traditional Japanese architecture in mind, the influences that inspired Nakashima speak directly to the design and construction of his woodworker complex. According to William Whitaker, Nakashima's architectural designs—along with that of Antonin Raymond and others such as Junzo Yoshimura—"constitutes one of the most significant examples of the cross-fertilization of Modern Architecture" and are also exemplars of the "artistic interconnections" between Japan and the United States. Distinct from Greene & Greene's early-twentieth century work incorporating elements of Japanese architecture, Raymond and his "circle," Nakashima included, sought an unprecedented level of knowledge and understanding of Japanese building traditions and how they might be incorporated into Modern design.[49]

Beginning with the Nakashima family house in 1946, followed by the Showroom in 1954, Conoid Studio in 1960, Arts Building in 1967 (and its associated Cloister in 1965), culminating with the jewel box Reception House in 1977, Nakashima combined these characteristic design elements. And in the case of the Conoid Studio in particular, Nakashima's designs also incorporated the innovative use of structural concrete. As with other proponents of the Modern Movement, Nakashima rejected the notion of style. According to Nakashima, "There is actually no 'modern' and no 'traditional,' but rather honesty and dishonesty of concept. When we speak of 'modern' it is again a style, and often as sentimental and 'traditional' as Cape Cod. Whatever styles and forms we have should evolve from the methods and materials used."[50]

**George Nakashima and the American Craft Movement, 1945-1970**

George Nakashima is recognized as one of America's preeminent furniture designer-craftsman, and a significant force within the American Craft movement of the mid-twentieth century. The post-war period from 1945 to 1969 is considered to be one of the seminal periods for woodworking in the United States, sometimes referred to as the "golden age," and Nakashima was one of its foremost contributors.[51] According to the curator of American decorative arts at the Philadelphia Museum of Art, David Barquist,

> The postwar generation, seeking an alternative to the austerity of the Depression and war years, embraced wood as a more natural and traditional medium. A dazzling sequence of iconic landmarks in the history of American craft followed, beginning with Rude Osolnik's irregular wood turnings of about 1945 and George Nakashima's natural-edge slab-top coffee table of 1946, through the elegant lines of Sam Maloof's trademark rocking chair of 1963 and Wendell Castle's music stand of 1964. These craftsmen celebrated wood with a passion that became the identifying characteristic of makers of handmade furniture and turnings in the decades after the war."[52]

During the war and the Depression years that preceded it, both the demand for luxury and handmade goods and the supply of needed materials collapsed. The return to prosperity that followed the war brought both new possibilities *and* new building materials; developed for use during the war, materials such as plywood and plastics, and methods such as lamination and synthetic-bonding elements enabled the affordable mass production of furniture and other objects, quickly meeting rising demand for consumer goods.[53] Designers such as Charles and Ray Eames gained distinction with prefabricated designs now considered iconic. Many, however, saw the rise in mass production as a sign of a soulless society. As synthetic materials entered the

[49] Whitaker, e-mail message to Jacobs, March 28, 2013.
[50] George Nakashima, "How We Treat Wood," *Journal of the American Institute of Architects* 18 (July 1952): 10.
[51] Glenn Adamson, "Gatherings: Creating the Studio Craft Movement," in Falino, *Crafting Modernism*, 32.
[52] Barquist, "Druids and Dropouts," in *Crafting Modernism*, 226-245.
[53] Tastemakers, Mary and Russel Wright's 1950 *Guide to Easier Living* (1950) emphasized the convenience and economy of mass-produced goods as the best solution to meeting the demands of modern life.

home furnishings market during the 1950s and 1960s, Nakashima was among the few who continued to use traditional materials and production methods, and to reflect back to vernacular forms, albeit with a modern spin.[54] According to Glenn Adamson of the Victoria and Albert Museum in London, "Put simply, there was a sense of crisis about the future of the handmade." As with the previous Arts and Crafts period, craftsmen were determined to restore valued traditions. As Holly Hotchner, Director of the Museum of Arts and Design summed it up: "In the period immediately after World War II, the crafted object, and the process of making things by hand, became an invigorating counterbalance to wartime experiences and privations, the homogeneity of mass-production, and the creeping alienation of suburban and corporate life."[55]

Many of the craftsmen of the post-war period worked alone to create unique objects, and were motivated not by the promise of fame and fortune, but by their search for self expression within an increasingly alienating society. Nakashima referred to himself as a "woodworker" rather than a furniture designer or craftsman. This notion resonated with many others working in the field, most of whom were self-taught or minimally trained (although the GI Bill did provide training opportunities and colleges now created fine arts programs that offered such coursework).[56] Nakashima was among the exceptions, having been trained in architecture. The "woodworker" moniker reflected Nakashima's life-long commitment to the subjugation of the ego as a means to developing his creative force. Nakashima's exposure to Eastern religion and Japanese craft traditions taught him not only the value of rejecting one's ego, but of seeking peace, beauty, and harmony through one's work. As Nakashima explains it, "The key to fine workmanship lies in the drive for perfection and the development of skills to achieve it. Perhaps as a backlash to industrialism and commercialism, a new concept seems to be taking hold."[57]

It was perhaps Nakashima's all-encompassing approach to his life and work that resonated with craftsman of the post-war era and that made him so revered. In an interview with *Life* magazine in 1970 he urged his fellow craftsmen to get away from the trappings of civilization and "enjoy the nature and the life of the spirit." According to Nakashima, "I think there are times when one should go underground when he can't stand what is going on in the outside world."[58] As with the Arts and Crafts movement, those working in the post-war era felt that industrialization needed to be counter-balanced with handicrafts and thus there was a growing discussion about the role of the craftsman in an era of mass production. According to Matilda McQuaid, Associate Curator of Architecture and Design at MoMA, "this intensity of mass production during the 1940s and the infusion of new materials created if not a backlash then a yeaning by both consumer and craftsman for natural materials and the irregularities of handcrafted objects during the postwar period."[59]

The furniture designs employed by George Nakashima reflect a variety of influences. Often defined as "organic naturalism," his timeless pieces really defy stylistic categorization. At the same time, some designs hark back to American classics such as the Windsor chair and the (also timeless) Shaker "plain style," both of which are known for their economy of design and the conspicuous use of elements such as tenons and dovetail joints.[60]

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[54] Ostergard, *George Nakashima*, 64-65.
[55] Holly Hotchner, "Foreword," in Falino, *Crafting Modernism*, 14.
[56] Barquist, "Druids and Dropouts," in Falino, *Crafting Modernism*, 227.
[57] George Nakashima, "The Soul of a Tree" in *The Craft Reader*, 224.
[58] "The Craftsman: Fulfilling our Need and Nostalgia for Wood," *Life* 68 (June 12, 1970): 78.
[59] Matilda McQuaid, "George Nakashima and the Mass Production of Craftsmanship," in James A. Michener Art Museum, *George Nakashima and the Modernist Movement* (Doylestown, PA: James A. Michener Art Museum, 2001), 16.
[60] Steven Beyer, *George Nakashima and the Modernist Moment* (Doylestown, PA: James A. Michener Art Museum, 2001), 12. Nakashima's designs for chairs in particular are reminiscent of traditional American designs such as the Windsor chair or chairs crafted by Shaker craftsmen.

Likewise, much of Nakashima's design work reflects the Arts and Crafts Movement ideal of combining beauty with functionality. Believing in the spiritual qualities of wood, Nakashima's signature features incorporated techniques intended to diminish human impact upon wood's natural beauty, by use of the "free-edge" and the butterfly inlay. The wood was cut along the grain to form large, monolithic slabs and elements generally viewed as imperfections such as knots and splits were celebrated. His signature butterfly joints were also often used to connect two mirrored segments of a tree to create large pieces such as dining tables. Nakashima believed that the beauty of the natural wood spoke for itself; his role was to utilize it in a way that highlighted that fact. As he explained it in an interview with *Life* magazine,

> The direction of cut, the thickness of cut, all these things are very important. The growth lines of winter, when a tree is growing slowly, give the grain its bands of darker, harder wood. The summer growth is wider, lighter, softer. And because of all the strange twists inside even trees that look very straight, all these differences became exaggerated and beautiful in the cutting. In root wood and crotch wood, those places where a tree changes direction, you find a different grain, a shimmering burl-like grain. But every board is unique and there are always surprises.[61]

Thus, Nakashima is typically known for using wood as close to its natural state as possible; retaining the free edge of the tree in order to capture its natural elements and configuration was a major component of that philosophy. According to Nakashima, cutting the wood " is like cutting a diamond."[62] This tendency is a reflection of Nakashima's Japanese heritage; as he explains, "To leave a piece of wood alone, simply for its own value, is rather Japanese. In Japan there is a reverence for wood and a gentleness toward nature that we don't have here in the west."[63]

At the same time Nakashima and others of the post-war era embraced Modern stylistic influences and ideas that were international in scope. Modernism originated in Europe through movements such as the Bauhaus and many of its artisans and architects immigrated to America in the post-war period. Imported Danish modern, for example, became a touchstone of modern design by the 1950s.[64] As in the European Modernist tradition, Nakashima espoused a minimalist, utopian vision of design for the common man. As Ostergard characterizes it,

> Nakashima's work may owe a debt to both East and West, but in fact, his designs of the last half-century have been international in scope, timeless in quality. Balanced on the cusp of two cultures, the disparate methodologies of craftsmanship and mechanization, and the differing personal motivation of a lover of nature and a trained architect, Nakashima and his aesthetic have retained its vivid validity and consistency. Ultimately it has been the mixture of all these factors that has made his work unique, despite his professed lack of interest in individual statements.[65]

In his seminal work, *The Soul of a Tree* and in other venues Nakashima helped to outline a new paradigm for studio furniture design and production. In her essay for the James A. Michener Art Museum's publication *George Nakashima and the Modernist Moment,* McQuaid discusses three particularly significant events that helped define George Nakashima's role in the movement. The first was his participation in MoMA's path-

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[61] "The Craftsman: Fulfilling our Need and Nostalgia for Wood," 78.
[62] Ibid.
[63] Ibid.
[64] Todd Merrill and Julie V. Lovine, *Modern Americana: Studio Furniture from High Craft to High Glam* (New York: Rizzoli, 2008), 19.
[65] Ostergard, *George Nakashima*, 86.

breaking 1951exhibition *Design for Use, USA*, which traveled throughout the United States and in Europe. It was extremely influential in part because it was the first MoMA exhibition about American design that placed emphasis on those items "that were typically, even particularly, American."[66] The exhibition was also intended to deliver an important message about the designer-craftsman as both "an aid to manufacturing and a corrective to its dehumanizing effects, a message that drew equally from the legacies of the Bauhaus and the Arts and Crafts movement."[67] It was a message that Nakashima also espoused and for which he would continue to advocate. The exhibition included three of Nakashima's best known pieces: the "High Mira" three-legged stool, which was one of the earliest designs produced in his New Hope studio and was inspired by the classic American Windsor chair; and two of his pieces from his first major commission in 1941 for Andre Ligne, a walnut chair with cushions, and a walnut occasional chair with a grass seat. Nakashima's adherence to tradition and his independent studio production set him apart from many of his contemporaries who were also included in the exhibition yet designed for mass production.

Next, Nakashima was included in a landmark study undertaken by Walker Art Center in Minneapolis in cooperation with other major museums, which in a similar mode to the MoMA exhibition, focused on how product design could be substantially improved by craftsman and industry working together. As both a proponent and successful model for the role of the craftsman in the world of industrial production, Nakashima was among the prominent American designers examined by the Committee on Design and Craftsmanship. The study culminated in a publication entitled "A Study of Design and Craftsmanship in Today's Products," and included an accompanying film and a conference. Among the objectives of the study was to discover "the ways in which individual designer-craftsmen contribute to the production of well-done things by perpetuating the traditions of craftsmanship and by exploring new directions in form and technique."[68] Nakashima's work was used to illustrate ideas about the artist-craftsman as successful designer-producer. While dedicated to craftsmanship, Nakashima understood the role that mechanized processes could play in handcrafted work. He was very willing to utilize machine tools in his furniture production "as long as the intrinsic qualities of the material were not compromised by the lack of individual wood selection, hand detailing, sanding, and finishing."[69]

According to McQuaid, George Nakashima's impact was also recognized by his participation in an important and well attended conference held in New York in 1953 on the influence of design on better living. Nakashima gave an address, entitled "One Man's Answer," which was followed by a panel discussion about the roles of art and design. Along with Nakashima, the panel included preeminent industrial designer Henry Dreyfuss; president of Steuben Glass, Inc. Arthur Houghton Jr.; and California architect Paul Williams. In his address, Nakashima expressed the view that "American civilization was spiritually deprived and motivated primarily by its materialism" and made an appeal for "a more integrated approach, not only to design and the manufacturing process, but to life itself."[70] Nakashima advocated for a balance between art and design, culminating his talk with the following statement:

> We must adapt to our experiences and our technology. To accomplish this, as I see it, a whole new environment has to be created, an environment not based on the sentiments of the spinning wheel but also not based on sentiments and tyrannies of the production line. Rather an

[66] McQuaid, "George Nakashima," 20.
[67] Glen Adamson, *The Craft* Reader (Oxford and New York: Berg Publishers, 2010), 36.
[68] Unpublished prospectus titled "Design and Craftsmanship," sponsored by the Committee on Design and Craftsmanship, 3-4, Museum of Modern Art Library, New York, NY, as cited in McQuaid, "George Nakashima," 22.
[69] McQuaid, "George Nakashima," 23.
[70] Ibid., 25.

> environment which provides a synthesis of what is good for us as human beings, who are in control of their environment, not victims of it.[71]

Numerous other important events helped to shape and define Nakashima's career as a nationally significant designer-craftsman. In 1946, Nakashima established a relationship with H.G. Knoll Associates, a furniture manufacturer in New York City. Knoll mass-produced some of Nakashima's designs, although custom production and sales of his furniture continued at the New Hope workshop. H. G. Knoll had a similar relationship with a number of highly regarded Modern furniture designers of the mid-twentieth century.[72] In addition to Nakashima, these included Isamu Noguchi, Eero Saarinen, Robert Venturi, and Ludwig Mies van der Rohe, to name a few of the best known. As Mira Nakashima informs us, "Shu [Florence] Knoll was the driving force behind the Knoll planning unit. She wanted serious quality in everything that the company made, and she recruited artists of the highest caliber to design for it, among them the architect Alvar Aalto, the sculptors Harry Bertoia and Isamu Noguchi, and my father."[73] Although Nakashima eventually decided to end his relationship with Knoll and return to independent work, it was an important experience; it both presented his work to a broad and discriminating audience and provided important lessons about furniture manufacturing and marketing. As Mira explains it, "Nakashima's collaboration with Knoll ended in 1954, but his association with Knoll was a fruitful one. It gave my father the opportunity to see how craftsmanship and industry could work together, and how a serious designer could produce pieces of genuine quality for the mass market."[74]

Perhaps a factor of the lessons learned during his venture with Knoll, it was also about this same time that Nakashima developed furniture catalogs. The first in 1945 was a small, six-fold blueprint design. In 1951, Nakashima issued a book-form catalog that featured ten new items, and the next catalog, issued in 1955, introduced twenty-one new designs. Interestingly, the delicate line drawings used in the 1955 catalog reflect the fact that the character of the final product was subject to the selection of the wood and the needs of the client rather than being rigidly fixed.[75] Also running counter to the "mass-production" of Nakashima pieces for Knoll was his development during this period of one of the most important designs of his career, the Slab Coffee Table. As Ostergard commented, "it was his expanded use of the free edge that revealed his most important artistic growth at this stage."[76] Likewise his use of the butterfly joint as both a functional and decorative element had become an integral component of his designs. According to Ostergard, "although Nakashima was not the first designer to employ it, he developed it more fully than anyone else."[77]

By the early 1950s, Nakashima had distinguished himself as one of the most important furniture designers in the country. This was accomplished through the high quality of his work and by the model that he provided as an individual dedicated to his craft—qualities that Nakashima would surely argue must go hand-in-hand. As McQuaid states, Nakashima became the silent voice of the artist-craftsman—frequently referred to as such in publications and often depicted as the artist in creative isolation who desired distance from activities that took

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[71] "Nakashima's Solution: His Own Woodworking," *New York Herald Tribune*, October 25, 1953, as cited in McQuaid, "George Nakashima," 24.

[72] The corporate headquarters for Knoll, located in East Greenville, Pennsylvania, was contacted in an attempt to retrieve sales and production data regarding the relative success of Nakashima's designs versus other designers at Knoll; however, this data was not available. Elizabeth Needle and Linda F. Kasper, e-mail message to author, 2008.

[73] Mira Nakashima, *Nature, Form & Spirit*, 76.

[74] Ibid., 77.

[75] Ostergard, *George Nakashima*, 69.

[76] Ibid., 63, 69.

[77] Ibid., 70. As Ostergard also points out, in the past the butterfly joint was used primarily as a remedial joint to repair a split piece of wood; rarely was it used as a primary joint in the construction of furniture.

him away from work and family."[78] While Nakashima's recognition by the public was not as great as designers such as the Eameses or Saarinen, considering that his pieces were individually crafted while their designs were mass-produced, his influence was remarkably far-reaching. More so than many of his contemporaries, Nakashima's "presence and his commitment to his ideals came to be regarded by many as a seminal influence on studio craft after the war."[79] Nakashima's acclaim can also be attributed to his involvement with Knoll, which constituted an endorsement of his work at the highest levels of Modern furniture design. Working with Knoll also provided Nakashima an opportunity to prove that industry and craft could be integrated in a manner that contributed to the quality of both. Another such opportunity was soon to present itself.

In 1957, George Nakashima was approached by Widdicomb-Mueller Company of Grand Rapids, Michigan and asked to design a line of furniture, also intended for mass production, similar to the arrangement he had previously negotiated with H. G. Knoll. As with that venture, Nakashima was able to test and to refine his own beliefs about craftsmanship and industry. Incorporated in 1873, the Widdicomb Furniture Company was located in what was historically the center for furniture manufacturing in the United States. By the late nineteenth century, it claimed to be the largest manufacturer of bedroom furniture in the world. Although the operation was largely mechanized by the early twentieth century, the decorating and finishing was still done by hand in order to create high-end pieces. In the 1920s they began producing some Modern designs and within a decade were producing them exclusively. The company contemplated using thirty-five different designers before selecting George Nakashima. The resulting *Origins* line, which included full suites of furniture, was introduced on June 12, 1958, at the Furniture Fair in Grand Rapids.[80] It was also featured on the cover of the October 1958 issue of *House Beautiful*. Although clearly modern, the *Origins* line, like all of Nakashima's work, was considered timeless; the company referred to it as "a new 'American look' that despite its traditional inspiration was 'a boldly modern approach'" to design. As with Knoll, the relationship with Widdicomb-Mueller was constructive for Nakashima "allowing him to broaden his base of support among consumers and critics" alike.[81] Moreover, as Matilda McQuaid described it, "his work for Widdicomb-Mueller seemed to go beyond just a financial benefit and became a test of his beliefs about the craftsman's maintaining control over the machine and ultimately assuming the responsibility for the final product." As McQuid concludes, "Ultimately, Nakashima always saw himself as a woodworker."[82] He soon returned to studio production and the *Origins* line was discontinued. As Ostergard points out, "Nakashima's dual role as designer *and producer* may have kept his operations vital. This may be why Nakashima also limited the scale of his operations. By so doing, he has been able to retain a strong degree of control over the output of his firm."[83]

Among the other significant indications of Nakashima's achievement in the field was his inclusion in an exhibition by the Renwick Gallery of the Smithsonian Institution in 1972 entitled *Woodenworks.* The Renwick Gallery is devoted to the study and presentation of American design and crafts and significantly *Woodenworks* was its inaugural exhibition. It featured the work of five preeminent craftsmen, all working in wood and all of whom were noted for combining modern forms with traditional materials and skills; they included: Wendell Castle, Arthur Espenet Carpenter, Wharton Esherick, Sam Maloof, and George Nakashima. According to the accompanying publication, the Renwick curators were responding to the "new awareness" about the role of the

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[78] McQuaid, "George Nakashima," 25.
[79] Ostergard, *George Nakashima*, 58.
[80] There is little to no sales or production data available to verify the relative success of the line in the Widdicomb Furniture Company archives, which are located at the Grand Rapids Public Library in Michigan. Ruth Van Stee, Grand Rapids Public Library, e-mail message to author, 2008.
[81] Ostergard, *George Nakashima*, 72.
[82] McQuaid, "George Nakashima," 29.
[83] Ostergard, *George Nakashima*, 64.

professional craftsman in society. They stated that "Today, when plastics so often take the place of wood and ape its appearance in commercially produced furniture, it seems fitting to take a fresh look at the familiar traditional material as handled by master craftsmen to recover some sense of that special quality generated from a mating of individual creativity with fine natural material." Also important indicators of Nakashima's acclaim were two exclusive exhibitions of his work, one just before and the other following his death in 1990. The first was New York's American Craft Museum's *Full Circle*, a fifty year retrospective (1989); and secondly, the James A. Michener Museum's *George Nakashima and the Modernist Moment* (2001). Nakashima was also included post-mortem in the Boston's Museum of Fine Arts *The Maker's Hand: American Studio Furniture, 1940-1990*, in 2003. *The Maker's Hand* exhibition also appeared in book form and has been called the most authoritative publication to date about the Studio Furniture movement. It states "To connoisseurs of modern furniture, names such as Wendell Castle, Wharton Esherick, Sam Maloof and George Nakashima are signposts to a revolution in the decorative arts that remains one of the most vital of our time."

In addition to exhibitions, George Nakashima has been the subject of numerous publications, and has in fact been featured in every noted publication on the Craft movement and fine woodworking in America. Publications which featured George Nakashima as the sole subject include: Steven Beyer, *George Nakashima and the Modernist Moment;* Mira Nakashima, *Nature, Form & Spirit: The Life and Legacy of George Nakashima;* and Derek E. Ostergard, *George Nakashima: Full Circle*. As already mentioned, he was also involved in an influential study organized by the Committee on Design and Craftsmanship titled "A Study of Design and Craftsmanship in Today's Products" presented by the Walker Art Center in Minneapolis. Nakashima is also celebrated in numerous compendiums of the studio craft movement in addition to the ones mentioned above, including: *The Craft Reader*; *Crafting Modernism: Mid-Century American Art and Design*; and *Modern Americana: Studio Furniture from High Craft to High Glam.* In addition, the George Nakashima House, as part of his craft legacy, has also been featured in: *Esherick, Maloof, Nakashima: Homes of the Master Wood Artisans* (2009); *Handcrafted Modern: At Home with Mid-Century Designers (2010); and Artists' Handmade Houses* (2011).

Finally, among the most significant recognitions that George Nakashima has received for his work as a master American craftsman is the American Institute of Architect's Craftsmanship Medal, which he received in 1952. As stated in the citation: "You have perpetuated in your work in the design and making of furniture the high standards of past ages of handcrafts, and that respect for good materials and honest labor . . . that will in any age distinguish great craftsmanship."[84] George Nakashima won many other awards for both his furniture design and for his architecture. Among these are the Silver Medal of Honor in Design and Craftsmanship given by the Architectural League of New York, 1960; Catholic Art Association Medal, 1969; listing in *Who's Who in America*, 1975; Gold Medal and title of Japanese American of the Biennium in the Field of Arts, San Francisco, 1980; Honor Award for Inspired Creativity Outstanding Sensitivity in Design, The Pennsylvania Society of Architects of the American Institute of Architects, 1981; Bucks County Distinguished Service Award, 1985; and the University of Washington Alumnus Summa Laude Dignatus, 1990.

As a collectible item, Nakashima's work is highly prized and valued today, despite his insistence that his furniture first be useful. As Mira Nakashima explains, "My father said that his furniture should not be considered overly precious and that it was meant to be lived with. . . . Ironically, some of Nakashima pieces today are now considered works of art, at least for insurance purposes. . . . There are many stories of how this piece or that piece created a peaceful atmosphere in a client's home or office (except when squabbles later arose

[84] "The Craftsmanship Medal for 1952 to George Nakashima," *Journal of the American Institute of Architects* 18 (July 1952): 4.

over who would inherit it)."[85] A check of David Rago's auction house web site located in nearby Lambertville, New Jersey, which handles Arts and Crafts and Modern furniture, reveals just how valuable Nakashima furniture is in today's collectible market: walnut floor lamp with white paper, $25,000; set of four high Mira walnut chairs, $17,000; walnut double chest of drawers, $14,000; and English walnut side table with free edge, $14,000. Furniture made by Nakashima became popular among the progressive upper and middle class, including doctors and lawyers, as well as other artists. For example, in the estate of Andy Warhol there was a Nakashima coffee table, and artist Ben Shahn owned several Nakashima pieces. One of George Nakashima's more notable commissions was for Nelson Rockefeller who hired him in 1974 to design furniture for the New York governor's Japanese style house in Pocantico Hills, New York.

Due to George Nakashima's spiritual and religious nature he designed altar rails, benches, pews and tabernacles for several churches in Bucks County. In the mid-1980s he embarked on a mission to make six altars of peace, one for each of the world's continents. The first of these altars was crafted in 1986. It measured slightly over 10' x 10' and was made of two matching sections of a walnut tree that were connected by butterfly joints. The altar was installed in the Cathedral of St. John the Divine in New York City. The mission of constructing the altars has continued through the efforts of his children Mira and Kevin Nakashima. Mira, an architect and designer, also has continued to produce George Nakashima's furniture at the New Hope studio as well as executing and selling some new designs based on her father's philosophies.

**Comparisons with Other Designer Craftsman**

According to Ostergard, writing in *George Nakashima; Full Circle*, "While there were aesthetic corollaries between Nakashima's work and that of his contemporaries who evolved as designers, only a few noted craftsman produced work on the same individual, handcrafted basis during this period."[86] As already discussed, many of the furniture designers of Nakashima's era used the new materials that became available during the mid-twentieth century. Charles Eames, for example, used plastic and stainless steel, and designed furniture with simple shapes such as squares and rectangles. Eero Saarinen also used plastic but favored space-age lines such as curves and circles; his tulip chair, which he designed for the H. G. Knoll Company, is an example. Jere Osgood, who, like Nakashima trained in architecture, attained recognition using lamination to create curvilinear forms. Ostergard rightly identifies Wharton Esherick as the closest comparison to Nakashima as a designer craftsman. And another designer-craftsman with whom Nakashima has been compared is Sam Maloof. In fact, Tina Skinner aligns the three in her publication *Esherick, Maloof, Nakashima: Homes of the Master Wood Artisans*, recognizing that the influential trio turned to traditional craft and woodworking at the same time that the United States was deeply embracing mass consumerism.[87] The three were likewise featured in *Woodenworks*, the Renwick Gallery's debut exhibition (and in various publications and compendiums of the craft), along with Wendell Castle and Arthur Espenet Carpenter.[88] George Nakashima, however, distinguished

[85] Mira Nakashima, *Nature, Form & Spirit*, 116.

[86] Ostergard, *George Nakashima*, 53.

[87] See: Tina Skinner, *Esherick, Maloof, Nakashima: Homes of the Master Wood Artisans* (Atglen, PA: Schiffer Publishing, 2009).

[88] Wendell Castle, like other craftsman who came of age in the 1960s, did not share the earlier generations reverence for wood. As he once stated, "It is important not to be subservient to a material. The significant thing about my work is not what it is made of but what it is." Lee Nordness, *Objects: USA—Works by Artist-Craftsmen in Ceramic, Enamel, Glass, Metal, Plastic, Wood and Fiber* (1970), 265, as cited in Barquist, "Druids and Dropouts," 231. Castle's work was regarded more for its artistic or sculptural qualities than for its functionality, as with Nakashima's furniture designs. As a result, Castle's pieces appealed to a smaller, more elite audience, designing what has been called "art furniture." Arthur Espenet Carpenter was a self-taught furniture maker who began his woodworking career turning wood bowls with a lathe in the San Francisco area. His signature style, known as the "California Roundover" incorporated curved lines and rounded edges. After about a decade of maintaining a successful business, in 1957 he bought a farm in Bolinas and began making furniture full-time. Claiming inspiration from Esherick and Maloof, Carpenter's designs

himself from even these designers by executing designs that are clearly modern with very simple streamlined shapes or a natural free edge wood shape, reflected in his unique experiences and worldview.[89] In addition, Esherick, Maloof, Carpenter, and Castle are generally categorized as "studio artisans" while Nakashima is considered a "designer craftsman" due to his foray into contract production and the size of his operation.[90] For the purposes of this nomination, moreover, there are limited numbers of craftsmen that also designed and built their own home and studio complexes. The most notable example, which has already been designated an NHL, is the Wharton Esherick Studio (although the Eames House is also a NHL).

Wharton Esherick

Wharton Esherick was an artist, furniture maker, and interior designer, and as the elder among this group, is said to have "pioneered the archetype of the self-taught woodworker."[91] Ostergard identifies numerous differences between Esherick and Nakashima, one of the most important perhaps being that Esherick had a "distinctly personal element to design" whereas Nakashima was more interested in anonymity (initially refusing to even sign his pieces). Esherick created one-of-a-kind pieces; while Nakashima worked from set prototypes, his pieces were made distinctive by the idiosyncrasies of wood with which he worked. In addition, Ostergard claims that Nakashima's work was "often veiled by vernacular or natural forms and the use of fundamental materials."[92] Esherick attended the Pennsylvania Academy of Fine Arts and began his career as a graphic artist and painter. He first used carving tools to craft frames that would complement his artwork, turning then to woodcuts and eventually to furniture design. While sharing Nakashima's respect for wood, Esherick's pieces often included ornamental carving in the Art Nouveau, Art Deco, and Cubist idioms, revealing a sculptor's sensitivity to form. In fact, Esherick considered himself foremost a sculptor.[93] Esherick's home, like his furniture, is almost sculptural and each component is handcrafted. Organic in form, it evolved slowly over a forty-five year time span. Esherick's home shares a fairly diminutive scale and simplicity with Nakashima's, but little else beyond the use of indigenous materials such as native stone. The adjoining Esherick workshop is, however, more aligned with the Modernist movement than the rest of the structure, having been designed with the help of Louis Kahn, albeit modeled after a stone barn. The Esherick complex is also far less extensive than Nakashima's; Esherick combined his residence and studio/gallery in one structure (also on site is a wood shed, out house, and log garage, now a visitor's center).

Sam Maloof

Sam Maloof worked during the same time period as Nakashima, beginning in 1945 until his death in 2009, and was also largely self-taught. Both received extensive press coverage, beginning in the late 1940s, in magazines

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were considered spare and practical, yet at the same time sleek and often artistic in nature. He too crafted his own home and workshop. The latter is a circular edifice with the kitchen at its core, encircled by contemporary, open-space rooms.

[89] Rude Osolnik is also recognized as a "pioneer in retaining features of individual pieces of wood," but he was a wood turner and not a furniture maker. Barquist, "Druids and Dropouts," 227.

[90] Merrill and Lovine, *Modern Americana*, 20. Other "designer-craftsman" discussed in this publication along with Nakashima include: Vladimir Kagan, Silas Seandel, Paul Evans, and Phillip Lloyd Powell (the latter two worked together), although the authors comment that Nakashima was the most recognized among them. Also working in the New Hope area were Evans and Powell— the former was a metal sculptor and the latter a woodworker who combined their talents. Silas Seandel was also primarily a metal sculptor. Valdimir Kagan's style was sleek, organic and very modern, with an affinity toward the Danish modern designs then very much in vogue.

[91] Barquist, "Druids and Dropouts," 228.

[92] Ostergard, *George Nakashima*, 55.

[93] Carolyn Pitts, "Wharton Esherick Studio," National Historic Landmark Nomination Form (Washington, DC: U.S. Department of the Interior, National Park Service, 1992), 13.

such as *House Beautiful*, *Life*, *Look*, and *Newsweek*, as well as in art and architecture periodicals such as *Craft Horizons* and *Fine Woodworking*.[94] Likewise, both took advantage of machine tools and employed assistants in their workshops and created prototypical designs that have endured over time. Maloof too worked in his own home-based studio to create handcrafted designs in the modernist idiom, and was known for his innovative joinery. Unlike Nakashima who worked more in isolation, Maloof was part of a very active academic and artisan community that grew up around Claremont (California), encompassing Claremont and Scripps Colleges, where many local artists taught and/or studied. Maloof entertained and had access to a broad range of artists, architects, and designers. Maloof's home and studio is very different from Nakashima's; it is a sprawling California style contemporary that grew from a bungalow to a twenty-six-room timber frame house. Maloof added each room as he could afford it, now totaling 7,000 square feet, to house his extensive art collections as well as examples of his own furniture. In this regard, the Maloof House is very different from the sparse house that George Nakashima built for himself and his family. While Nakashima welcomed other artisans to his property, his compound includes numerous discrete buildings for family, guests, furniture display, and furniture manufacture.

Eames House (Case Study House #8) (NHL, 2006)

Two other NHL sites are connected with modern designers: the (Charles and Ray) Eames House; and Manitoga, the Russel Wright Home & Studio. At the Eames House, located in the Pacific Palisades of Los Angeles, California, the "living component" or residence and the "working component" or studio are joined by an open court, unlike the complex of structures erected by George Nakashima that separates family, workshop, and studio space. The Eames House is significant architecturally as the most intact of the famed Case Study houses; the Case Study program was part of an effort undertaken by a number of noted architecture and design professions to promote modern architecture in the post-war era by basically designing and building model homes. It is considered one of the most significant attempts at creating experimental or demonstration homes in our nation's history.[95] The house, built in 1949, consists of a modular design with an exposed steel frame painted black with colorful infill in one of several materials; include plaster, plywood, asbestos, glass, and Pylon (translucent laminate similar to fiberglass). The interior has an open plan with living spaces on the first floor and bedrooms on the second. Comparisons between the Eameses and Nakashima as furniture designers have already been discussed. Wright's Manitoga is also intended as an experimental house to demonstrate how American families could live better by utilizing basic principles of domestic economy and modern design. Wright was a highly influential mid-twentieth century industrial and interior designer best known for his inexpensive, mass-produced household items and furnishings, and for his conviction that "good design is for everyone."[96] In that regard, Wright was more aligned with the Eames's approach to production than that of George Nakashima. With regard to the structure, a main block is connected by a wood pergola to a wing that serves as both master bedroom and workroom. Completed in 1960, the house is built into an abandoned quarry and has been described as "part cave, part forest pavilion, [a] rough hewn house that hugs the brow of a cliff over a secluded quarry pool [sheltering] nobly dramatic spaces which join the panorama of nature, change with the seasons."[97]

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[94] Barquist, "Druids and Dropouts," 230.

[95] Elaine Jackson-Retondo, "Eames House," National Historic Landmark Nomination Form (Washington, DC: U.S. Department of the Interior, National Park Service, 2006).

[96] Kathleen LaFrank, "Manitoga (Russel Wright Home)," National Historic Landmark Nomination Form (Washington, DC: U.S. Department of the Interior, National Park Service, 2005), 12.

[97] Ibid., 4.

Working as solitary craftsmen in an isolated environment of their own making appears to have been a part of the persona of the designer-craftsmen of the post-war era, as indicated by the home and studio complexes of Wharton Esherick, Sam Maloof, and George Nakashima. The Eames and Wright houses, while personal residences, were intended to also serve as models for modern design and living. The Nakashima complex is unique in its International and Japanese influenced styling and its use of experimental concrete, but also by the fact that it includes numerous individual structures for living, working, studying, wood storage, and furniture display. Mira Nakashima, a talented designer-craftsperson in her own right, has worked tirelessly to continue her father's unique legacy and to maintain the spirit with which Nakashima Woodworker was established. Moreover, each of these sites reflects the design philosophy and aesthetic of its maker and thus each is a fiercely individualistic, even idiosyncratic, set of structures that are one-of-a-kind and beyond comparison.

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Previous documentation on file (NPS):

__ Preliminary Determination of Individual Listing (36 CFR 67) has been requested.
_X_ Previously Listed in the National Register. NR#0800782, Listed 08/14/2008
__ Previously Determined Eligible by the National Register.
__ Designated a National Historic Landmark.
_X_ Recorded by Historic American Buildings Survey: HABS No. PA-6783
__ Recorded by Historic American Engineering Record: #

Primary Location of Additional Data:

_X_ State Historic Preservation Office
__ Other State Agency
__ Federal Agency
_X_ Local Government
__ University
__ Other (Specify Repository):

## 10. GEOGRAPHICAL DATA

**Acreage of Property:** 12.2 acres

**UTM References:** Lambertville (NJ, PA) Quadrangle

| | Zone | Easting | Northing |
|---|---|---|---|
| A | 18 | 503541 | 4465576 |
| B | | 503885 | 4465781 |
| C | | 504056 | 4465459 |
| D | | 503707 | 4465269 |

**Verbal Boundary Description:** The boundary for the proposed property includes all of Bucks County Tax Map Parcel numbers (TMP#) 41-36-77 and 41-36-87-13. Bucks County Tax Maps are available at Bucks County Courthouse, Board of Assessment, 3rd floor, 55 E. Court Street, Doylestown, Pennsylvania, 18901.

**Boundary Justification:** The proposed boundary contains all of the resources historically associated with George Nakashima. Both tax parcels contain buildings designed by or associated with Nakashima and his family. No buildings with association to Nakashima were excluded. The boundary also includes natural and cultural landscape features that are integral parts of the setting which are part of the properties overall historic integrity.

## 11. FORM PREPARED BY

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**Date:** November 2007 (NR documentation); October 2012

**Edited by:** James A. Jacobs, Historian
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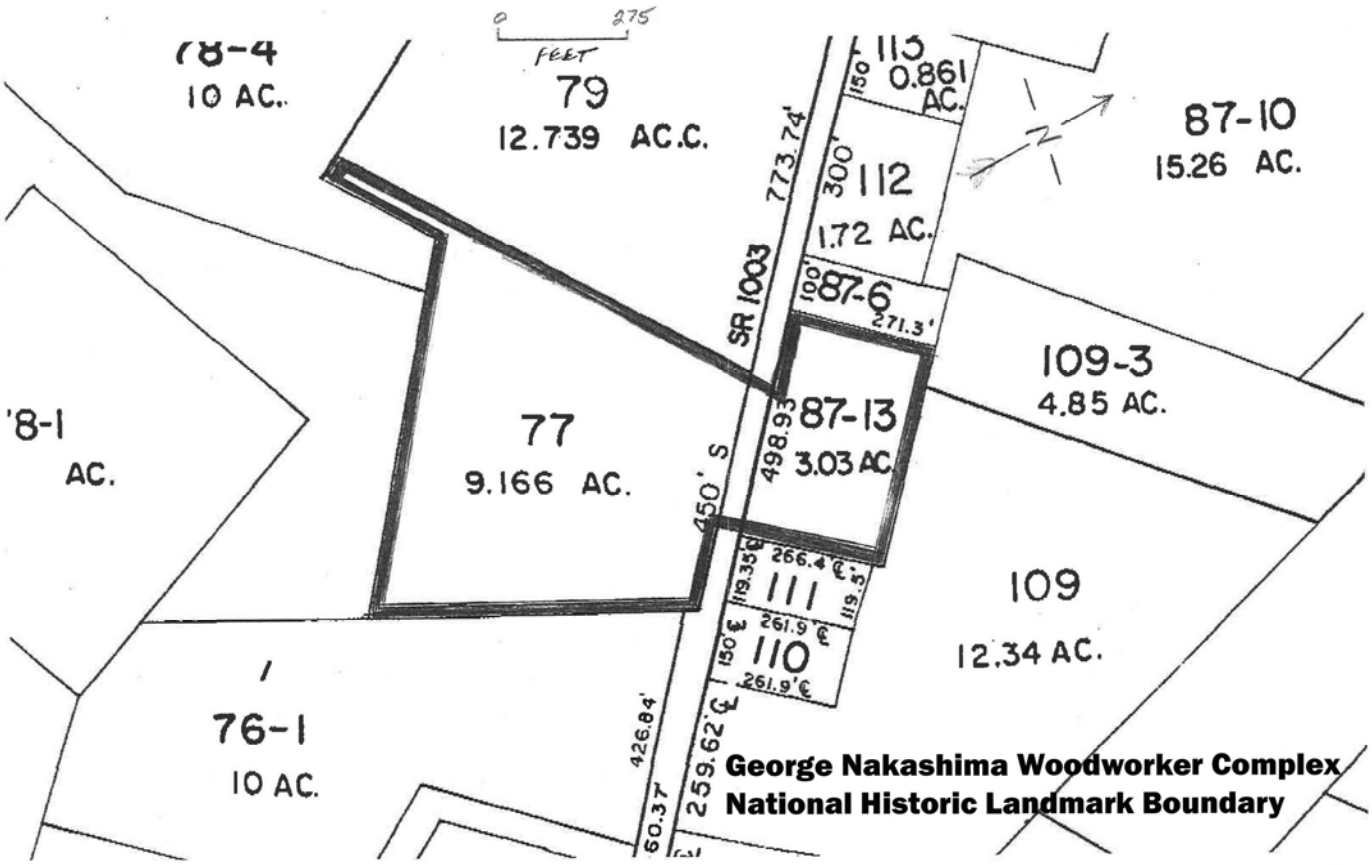
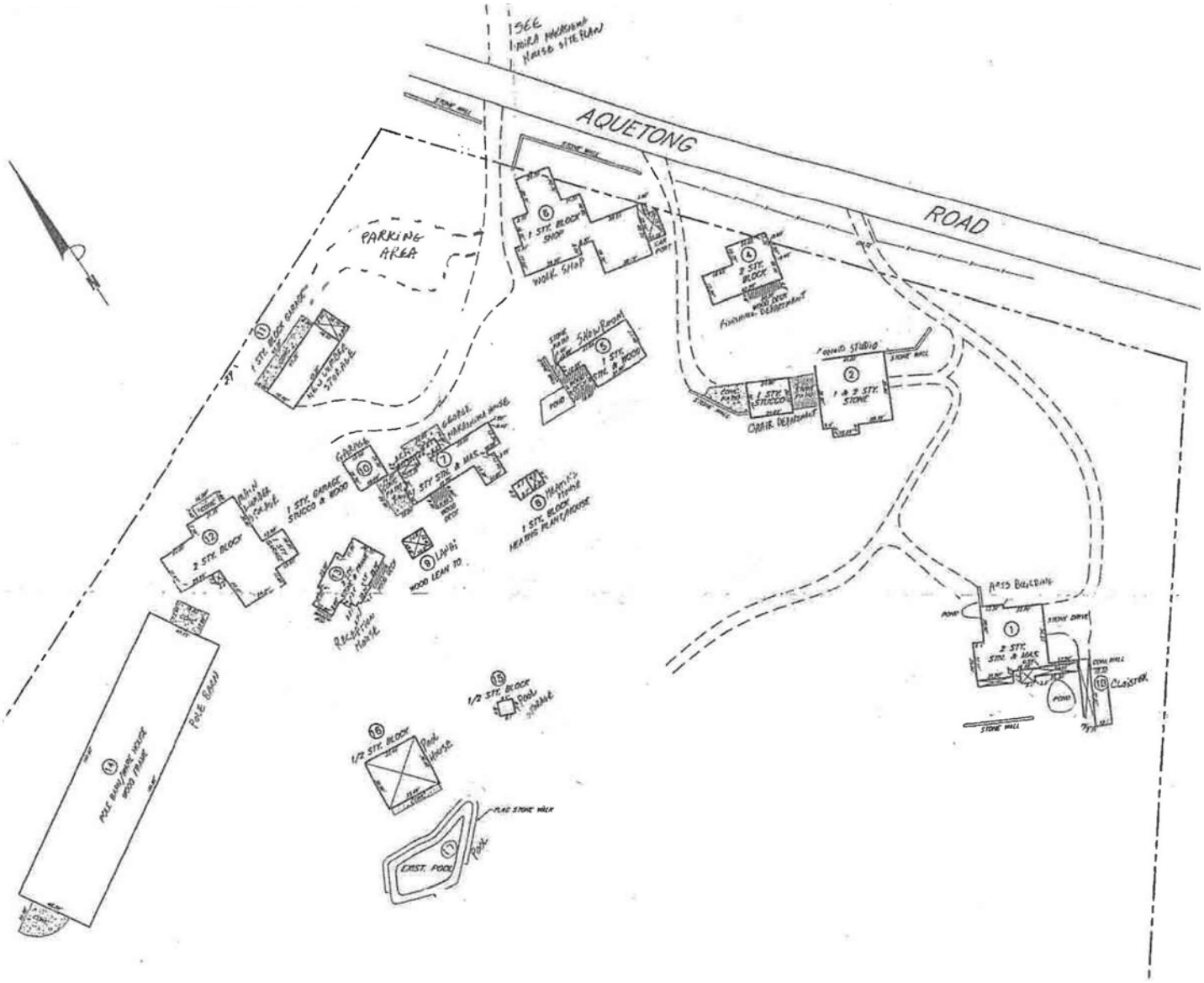
National Historic Landmarks Program
Historic American Buildings Survey
1201 Eye Street NW, 7th Floor
Washington, DC 20005

**Telephone:** (202) 354-2184

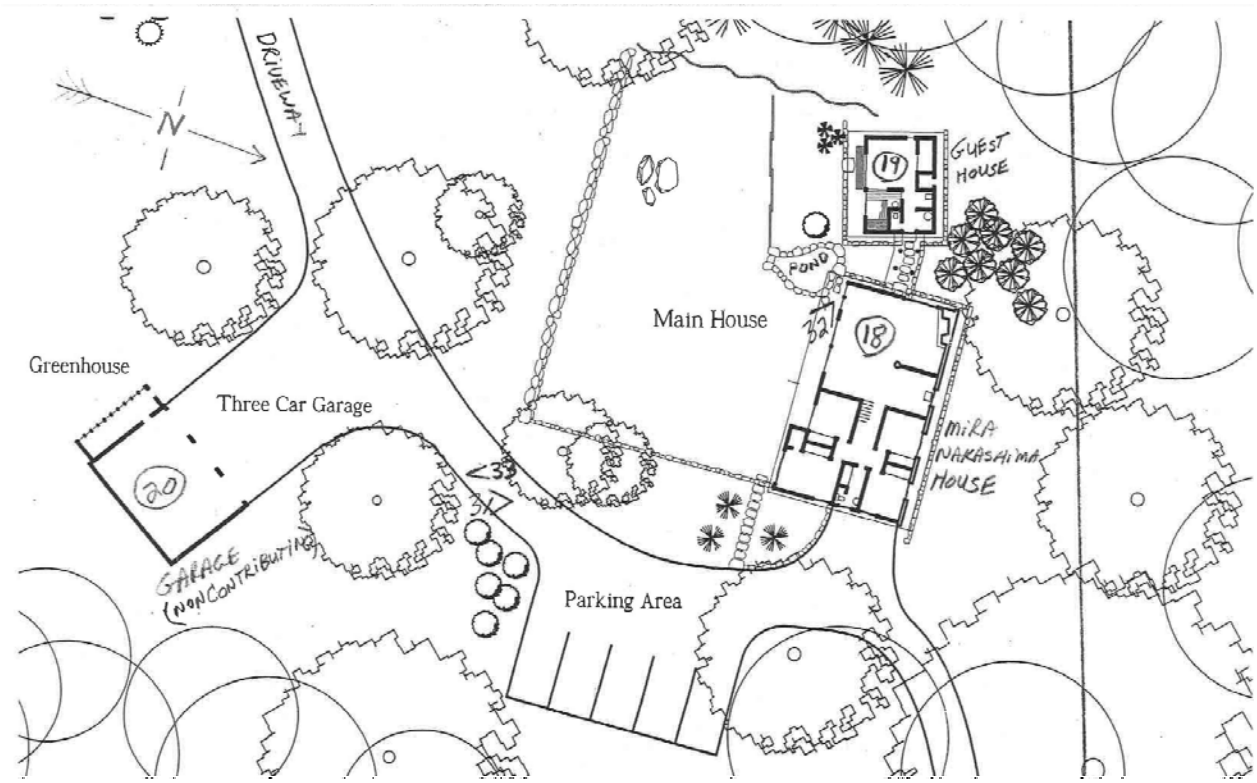
DESIGNATED A NATIONAL HISTORIC LANDMARK
April 22, 2014




George Nakashima Woodworker Complex, NHL boundary, 2007, 2013

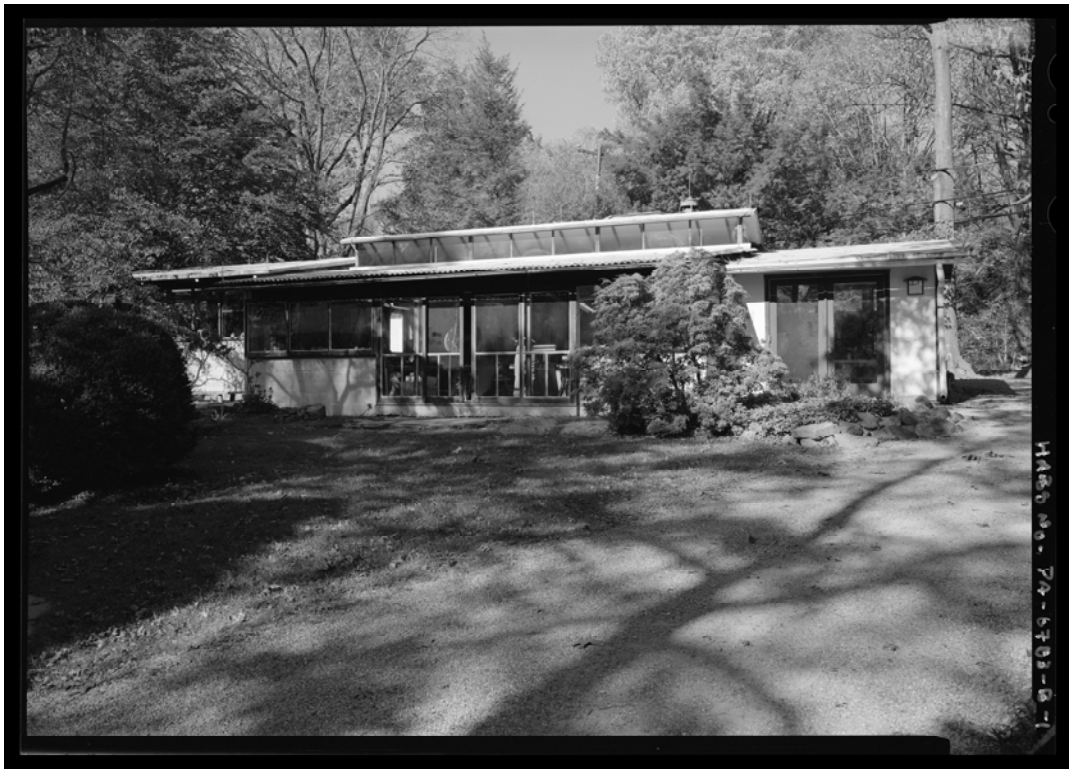



George Nakashima house and studio buildings, site plan, 2007



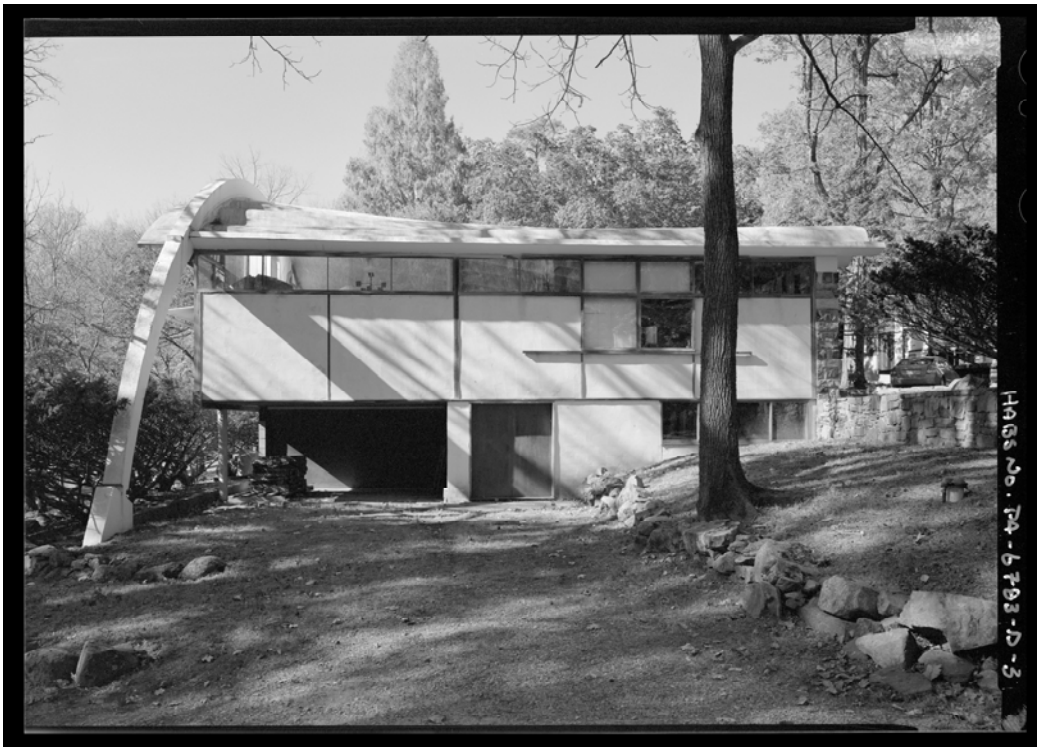

Mira Nakashima house, site plan, 2007

George Nakashima House, looking southeast
James Rosenthal, HABS, photographer, 2012



Workshop, looking north-northeast (above)
Detail view, Workshop interior, craftsman inserting butterfly joint (below)
James Rosenthal, HABS, photographer, 2012

Interior view, Showroom, looking west
James Rosenthal, HABS, photographer, 2012



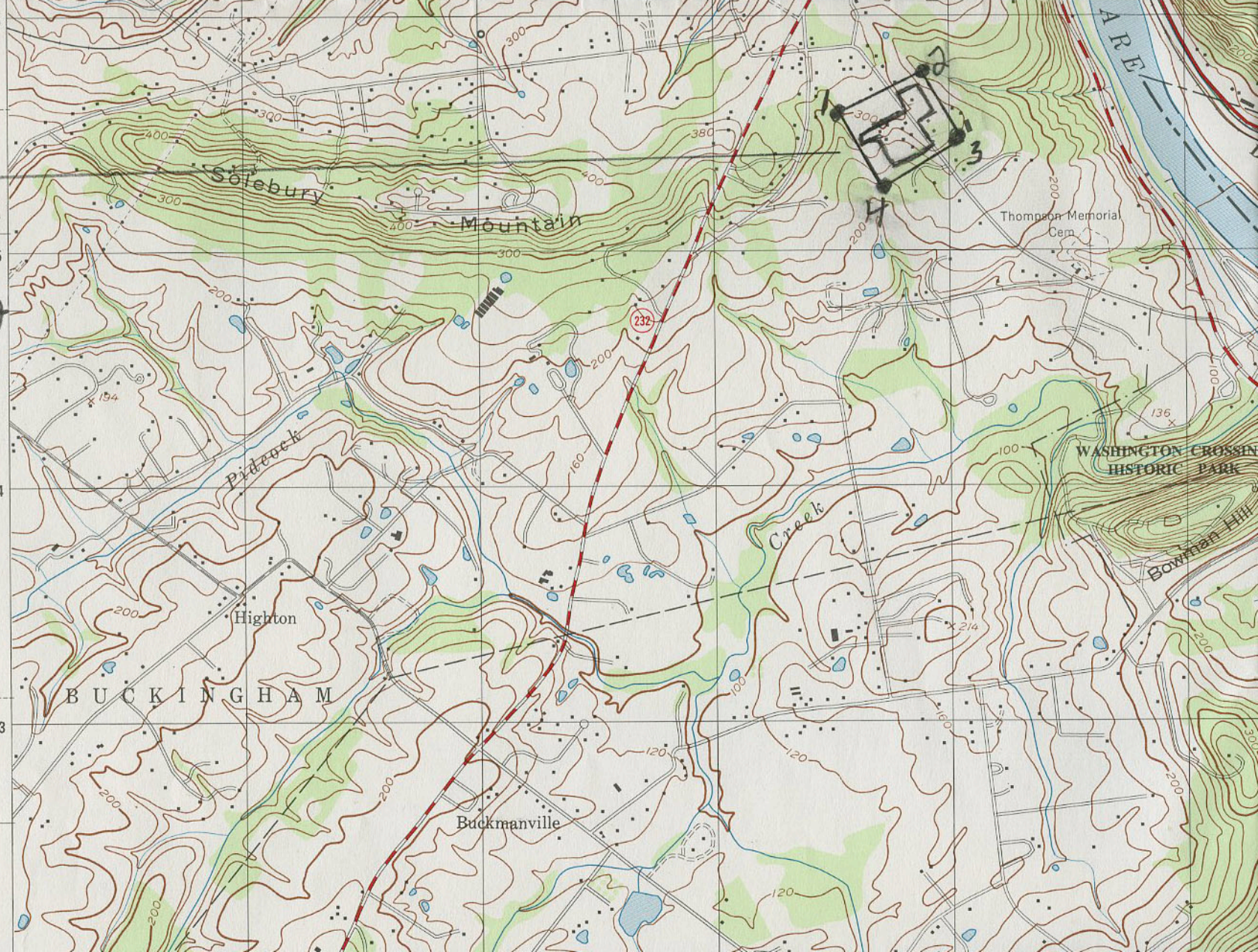

Conoid Studio, side elevation looking west-northwest (above)
Interior view, Conoid Studio, looking southeast (below)
James Rosenthal, HABS, photographer, 2012

Arts Building viewed from the Cloister, looking north (above)
Interior view, Arts Building, looking west (below)
James Rosenthal, HABS, photographer, 2012

Reception House, looking west (above)
Interior view, Reception House, looking northwest (below)
James Rosenthal, HABS, photographer, 2012

A Scottish Wych Elm Burl Conoid Bench with back (above)
The first Peace Altar in the Arts Building before shipment to the Cathedral of St. John the Divine in New York City, 1986 (below)
Courtesy of Mira Nakashima, George Nakashima Woodworker, S.A.

The iconic Conoid chair first designed ca. 1960.
Courtesy of Mira Nakashima, George Nakashima Woodworker, S.A.

GEORGE NAKASHIMA
HOUSE, STUDIO
+ WORKSHOP
BUCKS COUNTY, PA

| | Z | E | N |
|---|---|---|---|
| 1. | 18 | 503541 | 4465576 |
| 2. | 18 | 503885 | 4465781 |
| 3. | 18 | 504056 | 4465459 |
| 4. | 18 | 503707 | 4465269 |