



Golconde: The Introduction of Modernism in India

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As contemporary architectural practice has sought to cope with the demands of an increasingly global society, architects are confronting the dilemma of proposing design solutions in unfamiliar cultural and geographic contexts. All too often, the international nature of contemporary practice compels an accelerated schedule of client meetings, site visits, and design proposals, all on unfamiliar cultural and geographic terrain. The results of this type of engagement seldom result in an architecture capable of assimilating the nuances of site, local identity, and technology.

Our research has focused on an exemplary work of early modernist architecture in India, designed by two pioneers of the modernist movement. Working within a cross-cultural platform, they built one of the earliest works of sustainable modern architecture in the world. It predates the more renowned, modernist essays by Le Corbusier in Chandigarh (1951–64) and Ahmedabad (1952–56), and pioneers the use of reinforced concrete construction in India. Completed in 1945, the building—a dormitory for a spiritual community—espouses the virtue of radical economy and uncompromising construction standards. It proposes a mode of architectural practice where issues of technology and environment dictate the conception and tenor of the entire design process.

HISTORY

Sri Aurobindo Ghosh intended to build in his very active and growing Ashram a truly up-to-date modern dormitory for his disciples. St. Hilaire had been writing to me about the project for some time. He sent me photographs of the Pondicherry architecture, eighteenth century French colonial, with high-ceilinged dark rooms behind colonnades and roofed terraces. These I had criticized as unsuitable in this day and age of advanced techniques and an absence of formal elegance. This point of view and an unexplainable confidence in me from Sri Aurobindo brought about his request for my photograph upon the receipt of which he apparently formed a judgment of my character and sent me a considerable sum of money for expenses to cover the transportation of my wife, son and myself to India.¹

Sri Aurobindo (1872-1950) was born into a prominent family in Calcutta, the first capital of British-ruled India. At the age of seven, he was sent to England, where he studied at St. Paul's School in London, and at King's College in Cambridge. Returning to India in 1893, he became an active participant in the Indian freedom struggle against British rule. In 1908, the British Government imprisoned Sri Aurobindo for his role in anti-government activities. His year-long incarceration provoked a series of spiritual experiences, causing a sudden devotion to an evolving spiritual mission. In 1910, he decided to leave the territory of British India and settled in the French colony of Pondicherry on the south-eastern coast of India.

In 1926, Sri Aurobindo established a spiritual community with his disciple Mirra Alfassa (1878-1973), known by devotees as simply "the Mother". Mirra Alfassa was a French citizen of Egyptian-Turkish parentage. Together, they developed an ashram with a focus on a spare, meditative existence devoid of dogma. The charisma of the founders and their teachings attracted a diverse international following that continues to this day. Early visitors to the ashram included the photographer Henri Cartier-Bresson, and architects Antonin Raymond and George Nakashima.

Raymond and Nakashima's narratives of their time in Pondicherry deal primarily with the peace and beauty they experienced in the idyllic ashram setting. It is clear from their accounts that in 1935, Antonin Raymond's architectural office in Tokyo received a commission for the design of a new residential dormitory for the ashram. Raymond had been recommended by Philippe B. St. Hilaire (Pavitra), a French engineer and ashram devotee, who had befriended Raymond in Japan. The French government had expressed concern at the growing influence of the Ashram and proposed that the ashramites refrain from any further purchases of property in the French section. A property adjacent to the local Tamil neighborhood was selected as the proposed site for the new building. Funds for construction were donated by Sir Akbar Hydari, Prime Minister of the prosperous state of Hyderabad, as a token of gratitude. His son, Ali Hydari, had sought and received solace in the ashram community. The renowned Golconda diamond mines, located in Hyderabad, were the source for the dormitory's eventual name, Golconde.

Antonin Raymond first arrived in Japan in 1919 to serve as project architect for Frank Lloyd Wright's Imperial Hotel in Tokyo. Raymond established his own architectural office in 1920 and was regarded as an innovative, modern architect, known for incorporating traditional Japanese aesthetics and methods of construction in his work. He also pioneered the use of reinforced concrete in Japan.

The task of making a preliminary site visit had been assigned to George Nakashima, who was then working as an architect at Raymond's office in Tokyo. Schematic design for the dormitory project was completed in early 1936. The construction supervision was entrusted to Nakashima and Francois Sammer—a Czech architect who had worked for Le Corbusier in Russia before joining Raymond's staff. The ingenuity of Raymond's design and the absence of skilled contractors in Pondicherry, posed a particular dilemma for the construction of the building.

In the architecture of today we endeavour to get back to the primary values so as to respond directly to the physical and spiritual needs of man without being subject to the prejudices that for the past centuries have restrained us and from which the style and forms of the buildings in Pondicherry have emerged. We are laying the foundation of a new kind of architecture found on the principles and not habits of the mind. Just as in your philosophy: aiming at the very outset for a mind that is free, a mind open and as much as possible disentangled from preconceived ideas.”²

Nakashima returned to Pondicherry in 1936, and spent the next two years as both an ashram devotee (he adopted the Indian name *Sunderananda* — *one who delights in beauty*), and a project architect. As project architect, Nakashima developed many of the building's careful construction methods and details on site. During his stay, he maintained a meticulous diary of the construction progress (a practice followed by several members of the ashram, as a way to regularly communicate with the Mother) and dutifully submitted it to the Mother for her commentary.

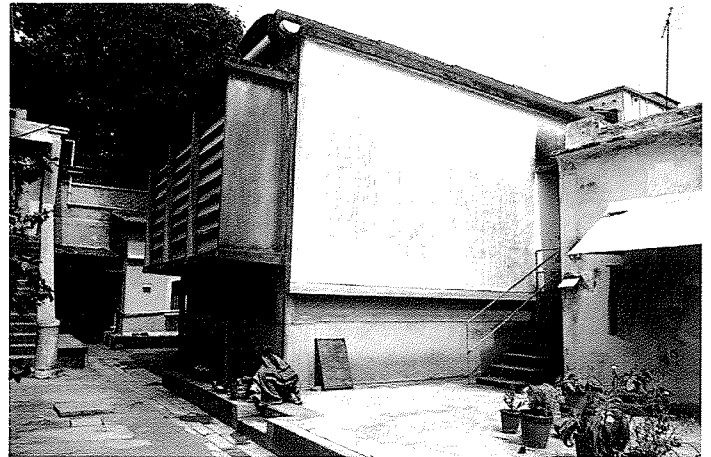


Figure 1 Picture of Model House / photograph by Ashok Dilwali

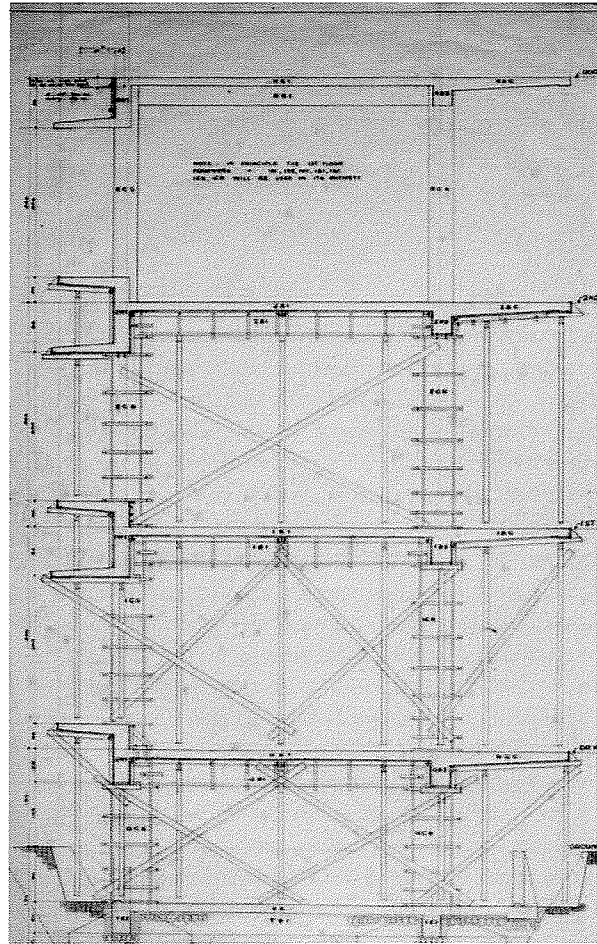
The architects constructed a full scale 'model house' in a temple compound adjacent to the site. This experimental building served as a laboratory for refining many of the construction materials and details.

Although Raymond originally envisioned a six-month time frame for construction, this schedule did not account for Sri Aurobindo's desire to protect the tranquil ashram environment from the din associated with a commercial construction company. Thus a workforce comprised solely of members of the ashram began construction. They were supervised by Nakashima, Sammer, and Chandulal (a devotee of Sri Aurobindo who had trained as an engineer). In order to test the feasibility of the design, the architects constructed a full-scale mock-up in a temple compound adjacent to the site (figure 1). This experimental "model house" served as the laboratory for refining many of the construction materials and details, and continues to serve as a primary residence for a member of the ashram today.

Figure 2 Formwork Section / archival drawing

Leading a team of untrained ashram devotees, George Nakashima carefully guided construction with many sheets of explicit construction drawings. This section showed the ashramites how to brace the formwork while the concrete cured.

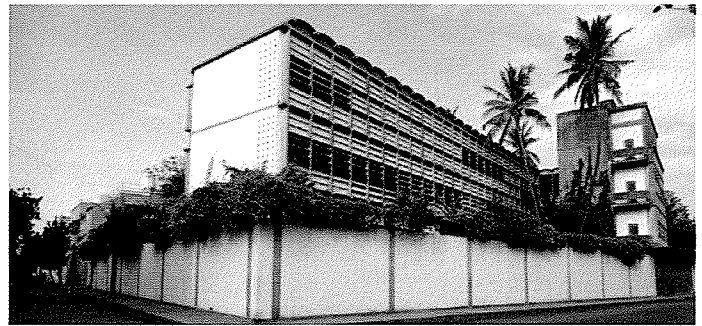
By 1937, the imminent threat of war compelled Raymond to close his Tokyo office and leave Japan. Arriving with his family in Pondicherry, Raymond spent a few months at the ashram before returning to the United States. Nakashima and Sammer were entrusted with the completion of the project. Due to the absence of an experienced construction crew, Nakashima's duties included the preparation of detailed drawings for the construction of the concrete form work (figure 2). Chandulal supervised the on-site scheduling of materials and labor and Sammer took charge of completing the construction drawings. Due to the political unrest in Asia and Europe, many of the materials and hardware originally stipulated in the building specifications could no longer be imported. The development of alternative solutions on-site became necessary. In order to cast all metal hardware components stipulated in the design drawings, the architects constructed a foundry on the building site. The devotees of the Sri Aurobindo Ashram donated brass utensils, including cups, bowls, and plates. These were melted and recast as bolts, hinges, and door handles.



George Nakashima left India in October 1939, having completed most of the concrete work for the structure. After Nakashima's departure, Udar Pinto assumed the task of supervising the construction. Udar, an Indian aeronautical engineer, and his British wife Mona had joined the ashram in 1937. Sammer continued to work on completion of the drawings and the design of the furniture. Like Nakashima, Udar consulted with the Mother on all decisions pertaining to the design. Golconde was substantially completed in 1942 and continues to serve as a dormitory for devotees in Sri Aurobindo's Ashram.

Figure 3. Exterior view from Southeast / photograph by Ashok Dilwali

This early morning south-eastern view, illustrates the boundary wall with its elevated garden, the stair tower, and the operable concrete louvers on the northern facade. The precast, thin-shelled concrete roof vaults create a buffer from the tropical solar exposure, and facilitate drainage during the intense monsoon rains.



BUILDING

Since Pondicherry didn't have a wharf, the steel was brought in from a freighter anchored in the Bay of Bengal on boats made of palm trunks lashed together. By the time they were unloaded on the beach, the steel rods had been bent so that they looked like a mass of spaghetti. From the shore they were dragged by bullock carts to the building site, where long lines of laborers hammered them straight.³

Golconde remains a remarkable architectural edifice, seamlessly negotiating the tenets of early modernist architecture, while addressing the pragmatic impositions of a tropical context (figure 3). Presented with the condition of a hot and humid climate, Raymond sought a design solution that would mitigate the effects of the Pondicherry weather. The building is sited such that the major façades are oriented toward the north and south, availing of the breeze (figure 4). The landscape plan situates lines of water channels and reflecting pools along the northern and southern gardens; furthermore, the northern garden has a spare ground cover, whereas the southern shade garden has been densely planted with trees. The temperature differential between the northern and southern gardens facilitates natural convection currents through the building.

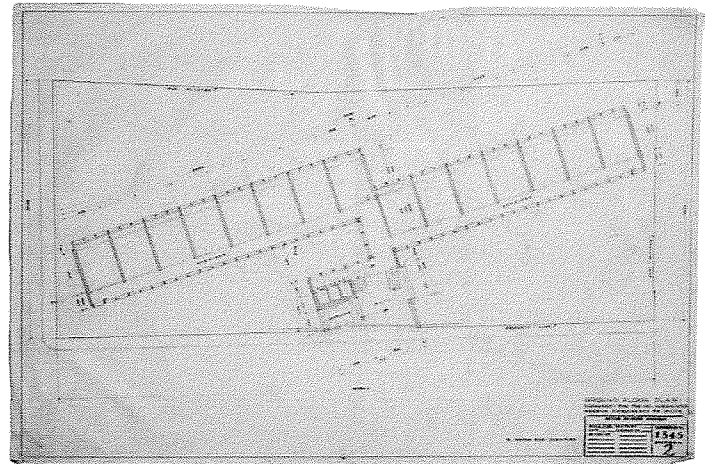


Figure 4 Ground Floor Plan / archival drawing

Taking advantage of a slender site, the plan layout offers maximum exposure on the northern and southern façades while absorbing a minimal heat gain on the slim eastern and western façades. Oriented towards a public street to the north, the stair tower and corridor serve as a buffer allowing each room a direct, more private relationship with the cooler southern garden.



Figure 5 View of lotus pond and south façade / photograph by Ashok Dilwali

The most striking feature of Golconde is the skillful integration of the building with its landscape. The abstract permutations of the operable concrete skin are balanced with the serenity of the lotus pool and garden—a calm and meditative environment for devotees.

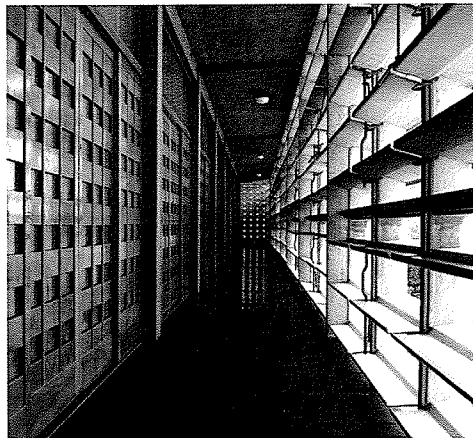
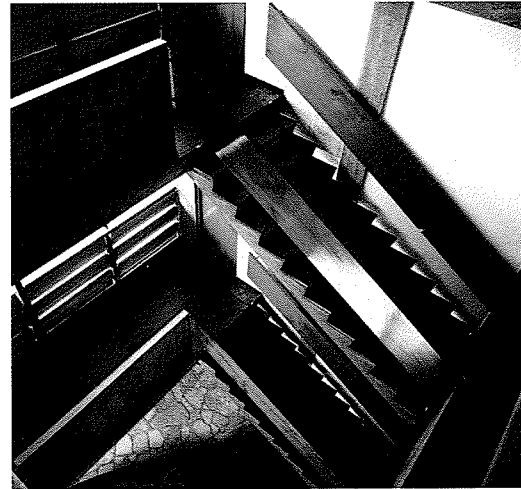


Figure 6. Interior Corridor / photograph by Ashok Dilwali

The north facing interior corridors facilitate a passive solar strategy for convection cooling. The sliding panels consist of staggered strips of teak wood, allowing for the passage of breeze, while maintaining visual privacy. Operable concrete louvers ensure constant air circulation between the north and south facades.

Figure 7 Central Stairwell / photograph by Ashok Dilwali

The seemingly utilitarian service core comprising of the main staircase and bathrooms achieves a simple grandeur by connecting earth and sky. Each handrail consists of a single board of oiled teak, anchored into the precast banisters with custom brass hardware.



The immaculately maintained building uses a spare material palette: reinforced concrete primary structure, bowed concrete shell roof, and polished Cuddapah (a local slate) floors. The building's presence on the street is anomalous; an exposed concrete wall with an oversize teak door, devoid of any ornamentation except for a small lotus—the Mother's chosen flower. The entry door leads into a garden where the first signs of activity in the self-contained community are perceptible. The partially excavated ground floor serves as the functional hub, containing dining and laundry facilities. This subtle siting gesture allows the residential upper floors to maintain a privacy; as the building is lifted above pools and gardens, it is undisturbed by the routine arrivals and departures of visitors and devotees. From the exterior, the building has a surreal, abstract quality (figure 5). The facades are modulated with operable asbestos cement louvers set in custom-made brass hardware. Sliding teak doors separate the interior rooms from a main, single-loaded corridor (figure 6). The crushed seashell plaster walls and black stone floors of each room provide a luminous canvas for the mélange of breeze and light entering through the louvers and sliders. The central core, containing the main stair as well as the bathroom units, services the building (figure 7).

The most striking feature of Golconde is the skillful integration of the building with the surrounding landscape. Shifts in scale from structure to detail, and transitions between exterior and interior, occur with grace and precision. Golconde remains architecturally vital, not solely for its technical finesse or extraordinary craft, but as a living testament to the original modernist credo—architecture as the manifest union of technology, aesthetics, and social reform. Within Pondicherry's unique cultural setting, Golconde offers an undiluted view of a wholly triumphant Modernism, where exemplary tectonics and exceptional construction are manna for a sophisticated and evolved community.

CONCLUSION

Given our current professional engagement with sustainability, it seems fitting to examine little-known historical precedents where the symbiosis between design, construction, and the environment remains exemplary. The conceptual force of Golconde's design solution remains radical even by the standards of today. In articulating an unambiguous stance toward minimal resource consumption, the building nonetheless champions a unique aesthetic. Eschewing the prevailing stylistic norms, Golconde proposes a visual identity that constantly affirms the primacy of its environmental agenda: a protective skin of manually operable louvers, a roof system where concrete roof tiles create an insulating zone above the concrete roof deck, woven teak-wood sliding doors that permit the passage of breeze without compromising visual privacy, and a system of pools and gardens that cool the ambient air.

The story of Golconde—in both design and construction—remains quintessentially international. Having outlived its designers, it celebrates their ideals of a progressive vernacular modernism, simultaneously resonant in the local and universal context.

RESEARCH METHODOLOGY

Our archival research on Golconde has focused on recording the correspondence between the Sri Aurobindo Ashram and the architects, reproducing existing architectural drawings, and cataloguing any previously unpublished documents relating to the building, including the notebooks of George Nakashima, Udar Pinto, and Chandulal. During our research visits to Pondicherry, we compiled a bibliography of published texts (books and journal articles) by Antonin Raymond, George Nakashima, Sri Aurobindo, and the Mother, pertaining to the design and construction of Golconde. Interviews with several members of the ashram have enabled us to sequence significant aspects of the evolution of Golconde: Raymond and Nakashima's time in India, Udar Pinto's contributions to the completion of the building, the notable involvement of several members of the ashram during the construction, and the role of the Mother as client—marshalling the talents and skills of disparate personalities to ensure a completed work of uncompromising quality.

A vital part of our work in Pondicherry involved preservation of original drawings: design drawings produced by Raymond's office, as well as on-site drawings by Nakashima and Sammer. Housed for over sixty years in Golconde and maintained by the Ashram Archives, they have deteriorated rapidly, a result of the acid in the paper and the humid climate. After sorting and cataloguing over two hundred original sheets, fifty sheets have been photographed (6cm x 7cm color transparencies) and reprinted to the original size. We scanned and printed archival photographs of Nakashima, Sammer, Udar Pinto, and any surviving images of the construction process. For our photo essay, we commissioned the services of Ashok Dilwali, one of India's foremost professional photographers.

NOTES

1. Antonin Raymond, *Antonin Raymond; An Autobiography* (Rutland, Vt.: C. E. Tuttle, 1973).
2. Antonin Raymond, letter to Philippe B. St. Hilaire, n.d.
3. George Nakashima, *The Soul Of A Tree: A Woodworker's Reflections* (New York, N.Y.: Kodansha Intl., 1981), 64.

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