

WOODEN ARCHITECTURE OF KERALA

A distinct tradition in the Indian subcontinent

Miki Desai

PART II: RESIDENTIAL ARCHITECTURE

In his first article, published in issue #14 of *Wood Design & Building*, architect Miki Desai described the unique aspects of temple architecture in the Indian region of Kerala. In his second article, he turns his attention to residential construction of the region.

In Kerala, secular and religious architecture have many similarities in construction methods, use of materials, craftsmanship and in the idea of sanctity and reverence for the built form. With the influences of Hindu, Christian and Muslim communities, residential building is a rich blend of simple to highly expressive that represents a regional architectural language.

The very nature of climate, availability of materials and ancient religio-cultural beliefs has guided the concepts of Hindu house form in Kerala. Typically, there are homesteads in the rural settings and detached houses located within compounds in urban areas. Variations are found in both kinds of dwellings. Incoming people of other religions have accepted the essential Hindu house form and its building traditions.

A house in Kerala is philosophically defined as a temple for the inhabitants. Moreover, there is a territoriality in secular architecture relating to society rules of gender and to socio-cultural notions of ritual purity.

In a Hindu community, residential types vary with caste; seven to eight types can be identified. The upper caste Brahmin houses are elaborate. The Naiyar and Nambudiri ancestral houses are a large courtyard-type often with two stories.

The number of courtyards used in a single house is significant from the viewpoint of social status.

A wealthy ancestral house is on a large plot of land of up to three or four acres and has several ancillary buildings that make up the residential complex.

These include a gate structure, a temple,





separate bathing structures for men and women, a grain house, kitchens, firewood storage, animal sheds, servants quarters, and a well. Christians and Muslims use the same basic type with minor differences in details.

SPATIAL ORGANIZATION

One finds a strong religious-cultural bias in house plan organization, based on the regional version of *Vastushashtra*, the ancient Hindu building science scriptures. The spatial organization is socially governed and is rather formal. Like the Gopuram [entrance gate-structure] of the temples, the residential territory is marked by either a humble structure protecting a gate or a simpler version resembling a Gopuram.

The use of a decorative ceiling of nine-squares in the entrance verandah is similar to that in temples where it is invariably used over all entrances and transition junctures. Upon entering the house one has an immediate sense of an inner world based on the themes of human scale, status of the family, and a spiritual connection with nature through the courtyard.

The courtyard is the sacred center where each side represents a cardinal direction. It is a substantial central space that acts as a symbolic and organizing element. Usually one enters a platform space defined by four to six columns which frame the prime view of the house while looking into the courtyard and the covered corridors of the other three wings. The courtyard holds together the platform and the columned corridors as a distinct space for the daily life of the family.

When visitors are present, the platform and perhaps the distinct living area become a male domain. One of the wings would become the female domain with a slatted-wall looking into the courtyard while maintaining an air of privacy. The stress on ritual ablution can be seen from the selective locations of kitchen, water sources, house temple and the valuables room combined with granary for personal use.

The construction and articulation techniques are sophisticated and resemble those of the religious architecture of the region. There is a wide spread use of wooden slats as openings/windows that

allow for air circulation and sun screening while guarding privacy. When used on the outside, as in a verandah, the slats are often vertical and have a decorative curved shape. Exposed rafters and columns, and the use of dormer windows are common characteristics. Selective location of the dormers permits gentle and continuous ventilation of the roof.

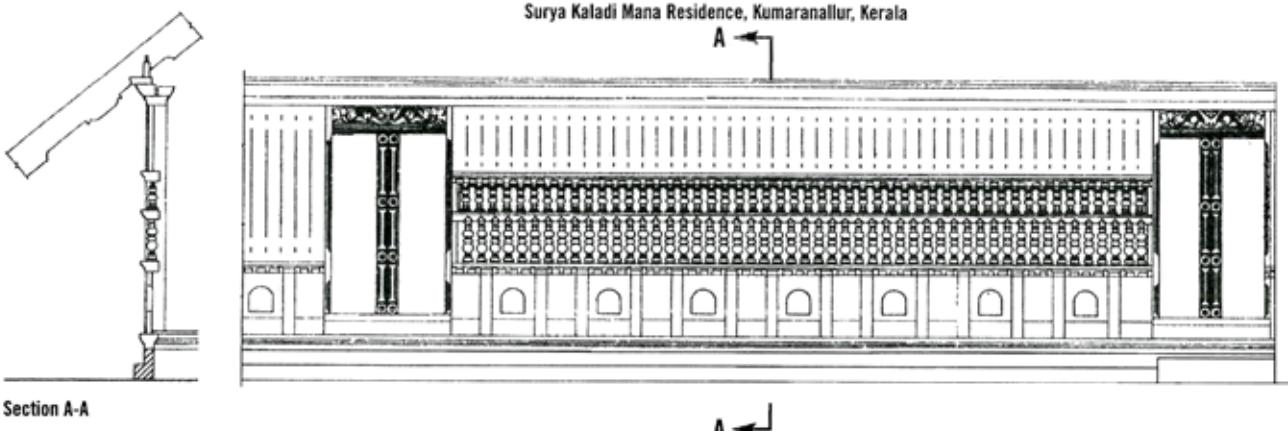
Columns have a few consistently-followed orders and people cherish them as objects of beauty and strength. Ornamentation is not an appliquéd but a matter of fashioning and purposeful articulation of the material as in the rafters and the other roof members.

1 Dormers have location significance of both symbolic and utilitarian nature. Its panels, lathed supports and the eave boards are decorative and show the status of the owner.

2 Verandah of a typical non-courtyard house of a Christian family, showing wooden walls, sliding door and rafters, etc.

3 A typical small courtyard of a Naiyar House.

4 Front view of Naiyar House. Local carpenters act both as craftsmen and designers.



Section A-A



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STRUCTURE

Wood is used to frame the entire building where the roof design dictates the form. Resting on a stone foundation, wood framing forms the walls. Sometimes the wall has sliding wooden panel doors that allow the building to be opened up to the verandah. Details of joinery are worked out in advance to ensure error-free assembly of the frame. The main components include wall plates or multi-piece beams, rafters, cross ties and through ties, dormers, overhangs, doors and partitions.

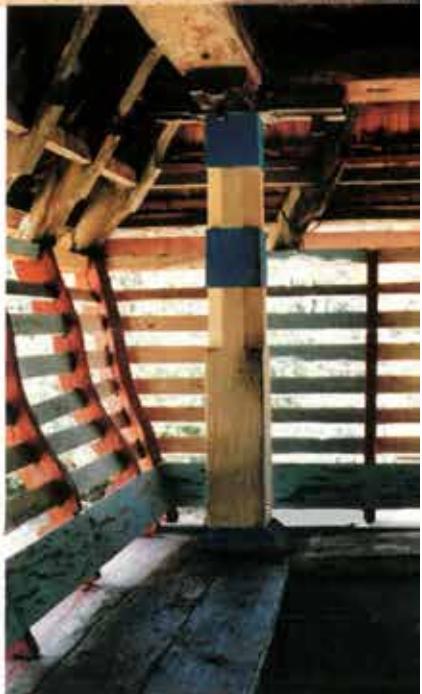
The roof form follows strict rules according to the *Vastushashtra* scriptures that call for an intricate vocabulary of wooden parts. Geometric principles and mathematical calculations are followed since each member of the roof must have exact dimensions. All the wooden members have a local terminology and joinery sequence.

Because of heavy rains, close attention is paid to the projecting termination of the roof and many indigenous variations are found. The idea of a double roof over the granary and valuables room is unique here. While minimizing damage from fire caused by lightning strikes is advanced as the main reason for the double roof, the air passing through the gap between the two roofs also has a cooling effect that lowers humidity. Both upper and the lower roofs are structurally similar. ■

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Drawings done with the help of EARTHWATCH (USA) volunteers.

More photos and drawings for this article are found in issue #15 of www.wood.ca.

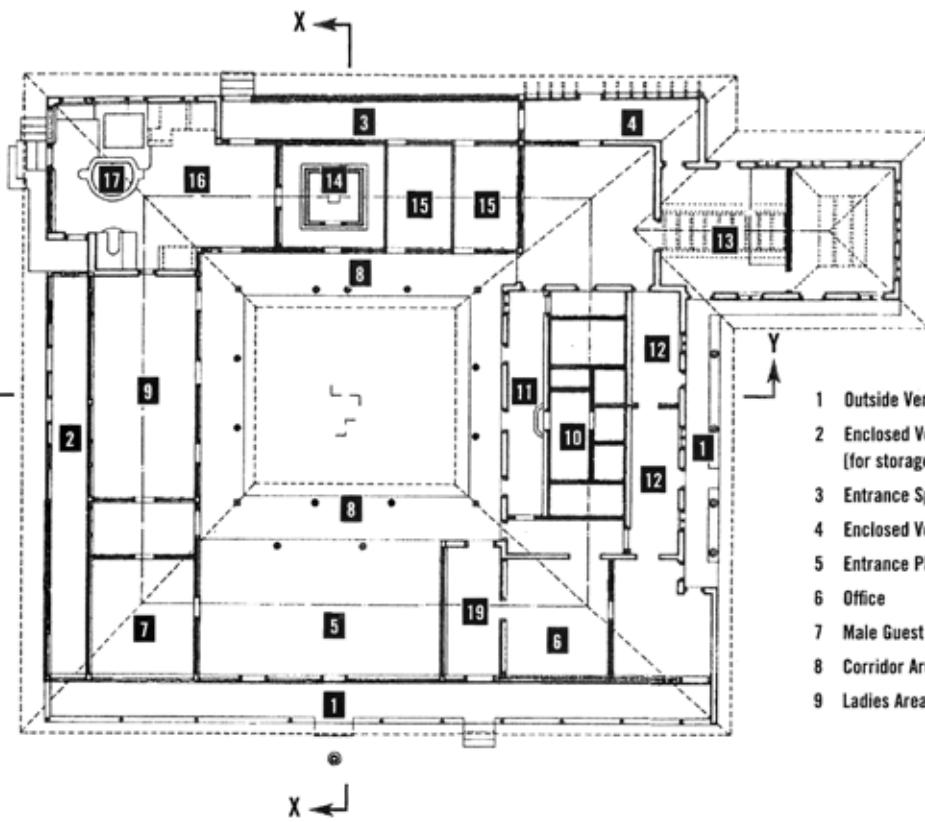


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5 Entrance verandah of a Naiyar House roof where beauty is expressed in the columns, beams, wall plates, rafters, struts, and extended rafters.

6 A well maintained Christian house, originally bought from a Hindu family.

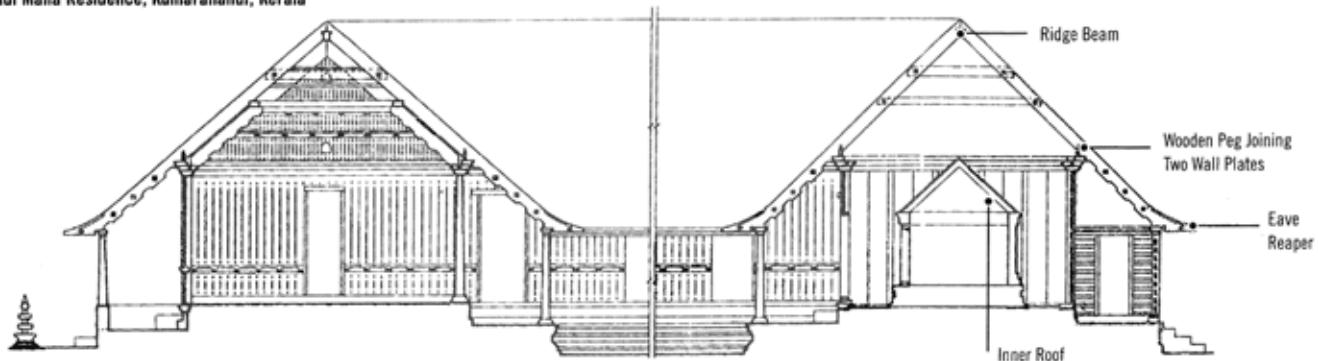
7 Wooden slats allow for air circulation and sun screening while guarding privacy.



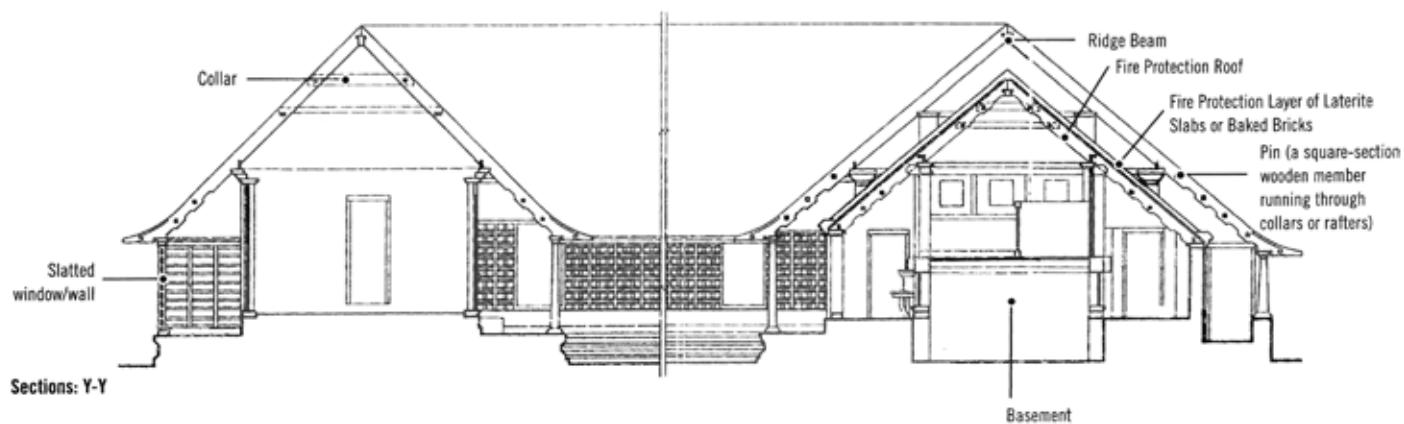
Typical Residential Floor Plan
Surya Kaladi Mana Residence, Kumaranallur, Kerala

1 Outside Verandah	10 Room for Valuables
2 Enclosed Verandah [for storage or utility area]	11 Auxiliary Room
3 Entrance Space	12 Storage
4 Enclosed Verandah [seating area]	13 Bedroom
5 Entrance Platform	14 House Temple
6 Office	15 Temple Auxiliary Space
7 Male Guest Room	16 Kitchen
8 Corridor Around Courtyard	17 Well
9 Ladies Area/Dining Area	

Sections: XX and YY
Surya Kaladi Mana Residence, Kumaranallur, Kerala



Sections: X-X



Sections: Y-Y