1983 TECHNICAL REVIEW SUMMARY

Nail Cakirhan House
Akyaka Village , Turkey

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A traditional Yayla house designed by the owner in a sea-side village in Turkey.

Date of Completion : August 1971

I. Objectives

The designer wished to build a traditional and well-crafted house in his home area , a residence which would be modest , peaceful and reminiscent of his childhood , where he and his wife could rest.

II. Description of site

Akyaka village is located to the southwest of the Anatolian peninsula at the very end of the Bay of Kerme (Gökova) . It lies in a pine forest at the base of rugged mountains , in country which is just becoming popular as a resort . The Gökova region has a subtropical climate , with hot summer days tempered by the cool sea breeze and mild winters with cold nights . High on a cliff , the house surveys the landscape , with the sea just 150 m. to the south .

The lot measures 2,000 sq.m. (about 0.5 acres) and includes tall pine trees . A road toward the north connects it to the small cluster of houses that make up the village some 500 meters away . Akyaka has a tradition of timber houses , but modern concrete structures are increasingly common , as is true throughout Turkey .

III. Design and Construction

Brief and Requirements

The needs of Nail Cakirhan and his wife Halet were rather simple , and included areas for :

living (themselves)

gathering (with friends)

sleeping (themselves)

sleeping (friends)

These functions could overlap in the same space or change according to the time of day . A sheltered outdoor area was to provide additional

the two side rooms , enhancing the multivalency of the house .

The lateral walls of the mabeyn contain ornamental cupboards (for books , bottles and glasses) . The deeper , back part of these cupboards , which open into the lateral rooms , are used to store clothes and bedding during the day . Each of the rooms has a fireplace flanked by two cupboards . One of these is for storing clothes , while the other "cupboard" door gives access to the bathroom . A traditional serpenc or shelf passing continuously over the doors and windows ties the rooms together . Cupboards and shelves display a high level of craftsmanship , as do the traditional windows and richly ornamented wooden ceilings .

The loggia is supported on wooden columns with decorated capitals and contains the traditional raised seat or ayazlik at the west end , where the breeze is strongest .

The garden is reached by a traditional semi-circular flight of steps of local pink stone .

Structure , Materials and Technology

1. Structure and Materials

Both houses have a traditonal timber frame which resists earthquakes through its elasticity . The foundations and platform are framed by rubble stone walls with cement mortar ; the raised platform is filled with earth .

The roof has no truss , but simply posts and beams . Wooden planks form its slopes , which are covered with the round , red "alaturka" tiles of the region .

The walls are filled with brick and rendered with lime-plaster and whitewash . The floor is wood , over a 5 cm. airspace , except in the shower rooms , the kitchenette and the toilet . The ceilings and built-in furniture are also wooden .

2. Structural technology

All major elements were fabricated on-site and the woodwork was crafted by hand . There were 4 workmen , 2 masons and 2 carpenters supervised by the designer himself .

3. Building Services and Site Utilities

Initially a well as was dug for water , and a septic tank for sewage . The house was connected to the Akyaka electricity lines in 1977 , and to the water system in 1981 .

Origin of Materials and Labour Force

The technology was traditional , all materials were locally produced and the labour force was 100 per cent Turkish .

The first step for Nail Cakirhan was in effect to seek out building crafts-men , especially carpenters of the old school . But only two elderly

living space during the warm season . Separate bathrooms for themselves and guests , a small kitchen and lavatories completed the programme.

As the Cakirhans were freqnelty away , a smaller , simpler caretaker's lodge also seemed necessary .

The built area measures :

house	147 sq.m.
caretaker's lodge	48 sq.m.
Total built area (including eaves)	195 sq.m.

Evolution of Design Concepts

1. Siting

The house was built on the lower slope of the land , beneath old pine trees , facing south towards the cool sea breeze . The caretaker's lodge flanks the entrance on the upper part of the site . A garage and a store-room were later added nearby.

A path 2 m. wide and some 50 m. long leads from the entrance to the house . Large local flagstones were set directly into the ground without cement , so that herbs can grow between them . The existing forest was preserved , and only local trees and plants were added . The garden is enclosed on three sides by a traditional masonry wall about 1.50 m. high , which tapers towards the top : the southern end is open to overlook the sea .

2. Architectural Aspects

As described by the author , "programme , project and design were elaborated in the course of time -- seeing , feeling , sensing" . Thoughts and forms were not formally drawn on paper (a few sketches were sufficient) but more or less directly laid out on the ground , as traditional master builders used to work .

A divanhane , an open loggia supported on columns , shields the southern façade . From the divanhane one can enter the two lateral odas or rooms flanking a mabeyn . The mabeyn draws one into a large polygonal central hall or divanhane , with which it forms a whole . This hall continues the tradition of the central eyvan in Ottoman houses . The central living/gathering space is thus flanked by identical living/sleeping rooms , arranged in a subtly articulated row . The lateral rooms give onto bath-rooms where clothes are also stored . A kitchenette and a lavatory also adjoin the lateral rooms , at either end of the loggia , from which they can also be entered .

The caretaker's lodge contains two lateral rooms separated by a toilet and a shower room . It also has a loggia towards the south , which can be entered from the sides .

3. Decoration

No moveable furniture is used in the house , with the exception of low couches with cushions placed below the windows in the central hall and

carpenters could be found in Ula . The younger generation did not know the craft and mainly supplies wooden formwork for concrete construction .

IV. Construction Schedule and Costs

History of Project

The programme and the design were roughed out , without formal drawings , between September 1969 and September 1970 . Construction started on September 10 , 1970 and preceded in three phases :

1. The foundations , framework , walls and roofs were completed in 45 days .

2. Woodwork and built-in furniture were completed in 24 days during June 1971 .

3. Furnishings (matresses , couches , cushions , etc.) required an additional 15 days .

Occupancy began on August 22 , 1971 .

The garden wall , garage , storage house , path and ladscaping were all completed in a month during 1972 .

Total Cost

The total cost of construction was 97,960 T.L. , equivalent to $ 7,535 in 1983 . Funds were completely private .

V. Technical Assessment

Design Features

The houses blend well into the natural environment , and in any case , the main house is hardly visible behind the garden walls . Unfortunately , the surroundings are changing drastically with the gradual construction of many concrete houses .

Functional Assessment

The multi-purpose use of space is a major quality of the houses . The only moveable furniture consists of tray-stands , book-stands and traditional braziers . Beds are only set out at night , leaving the space free for daytime use . In summer time , straw mats and kilims (flat woven carpets) are spread out in the loggia and strewn with colorful cushions . The arrangement of the house perfectly suits the inhabitants' way of life .

Environmental Performance

The house is thermally insulated by the large air space left beneath the tiled gables of the roof . Hot air is vented through the wooden ceilings . When the sun is high , the deep loggia and generous eaves provide a band of deep shadow over the windows and around the house . In the summer , the house remains cool and comfortably ventilated , yet without drafts . When the fireplaces are lit in the winter , their glowing coals are

placed in the brazier in the central hall , and the doors to the lateral rooms are opened to heat the entire house . Heavy blankets provide adequate warmth for sleeping .

Ageing and Maintenance Problems

No deterioration is yet to be observed . Naturally the weatherproof rendering on the façades will have to be periodically renewed . External woodwork was not coated with "pinoteks" so as to keep its natural colour .

Analysis of Costs

The land was valued at 43,000 T.L. in Summer 1969 . The total cost was 97,960 T.L. (US$7,535 in 1971) , comprising of :

the main house	78,760 T.L.
the caretaker's lodge	19,200 T.L.
Total	97,960 T.L.

The total includes two main components :

materials	63,250 T.L.
labour	34,710 T.L.
Total	97,960 T.L.

Built-in furniture is included in the total , as are furnishings (wooden divans , matresses , cushions , blankets , kitchen oven , garden chairs , etc.) , which alone amounted to 15,000 T.L.

The garden wall and the two entrance gates cost 14,040 T.L. and should be included in the price of the infrastructure .

The total , 170,000 T.L. (US$13,077 in 1971) was about 13 per cent more than the initial estimate of 150,000 T.L. (The annual rate of inflation during the 1970's was 30 per cent .) No professional fees were involved , for Cakirhan served as his own designer and master-builder The unit cost for construction was US$38,64 per sq.m. Official statistics for the same year , 1971 , give an average cost os US$30.98 per sq.m. for housing , which rises to US$64.69 when the construction is concrete .

The designers conclude that :

> Although timber construction requires high quality , expensive wood , it is still economical in that it utilizes scrap wood as well , especially when a number of structures are built simultaneously .
>
> A timber house can be built more rapidly than a concrete one of the same size .

VI. Aesthetic Assessment

The house does not reveal itself easily , even once one is inside the garden walls , as it turns its back to visitors and is somewhat masked by trees . Indeed it remains in close harmony with nature . "When

inside you feel the way you do in a loggia , in the midst of a flower garden , in the midst of nature" , says its owner . One feels simultaneously inside and outside .

Even with the ornamentation , everything is "modest , sober , genuine" . Details are judiciously designed . For instance , doors cut diagonally across the corners of the rooms in the old Farisi way . This arrangement allows the doors to disappear into the spaces reserved for them against the cupboards , when they are open . When all the doors are open , all the rooms , including the loggia , merge into a single visual and physical space . Each room is both a part of the house and an entity by itself .

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