



The Aga Khan Award for Architecture

ARCHITECT'S RECORD

CONFIDENTIAL

I. IDENTIFICATION

Project Title TIMBER MODULAR MOSQUE

Street Address ALL OVER THE STATE OF PAHANG

City PAHANG DARUL MAKMUR Postal Code _____ Country MALAYSIA

Telephone _____ Facsimile _____ Telex _____

II. PERSONS RESPONSIBLE

A. Architect/Planner

Name CSL ASSOCIATES

Mailing Address 69, JALAN PUDU LAMA, BUKIT MAHKAMAH

City KUALA LUMPUR Postal Code 50200 Country MALAYSIA

Telephone 03-2323568/2323569 Facsimile 03-2324912 Telex -

B. Client

Name AMANAH SAHAM PAHANG BHD

Mailing Address TINGKAT 20 & 21, KOMPLEKS TERUNTUM, KUANTAN

City PAHANG DARUL MAKMUR Postal Code 25000 Country MALAYSIA

Telephone 09-515900 Facsimile - Telex -

C. Consultants (e.g. Engineers, Economists, Sociologists, Historians, etc.)

Name RANHILL BERSEKUTU SDN BHD - STRUCTURAL ENGINEER

Mailing Address 17TH FLOOR BANGUNAN ARAB-MALAYSIAN, JALAN RAJA CHULAN

City KUALA LUMPUR Postal Code 50200 Country MALAYSIA

Telephone 03-2382155 Facsimile - Telex -

D. Master Craftsman/Contractor

Name NUMEROUS

Mailing Address _____

City _____ Postal Code _____ Country _____

Telephone _____ Facsimile _____ Telex _____

III. USE

- A. Specify type(s) of use MOSQUE
- B. User(s) or Occupant(s)
1. Occupation/Profession N.A.
2. Income Level (check one) High Medium Low Mixed
- C. Specify any change(s) between planned and actual use:

IV. PROJECT TIMETABLE

(Please specify year and month)

- A. Design: Commencement JAN'1985 Completion NOV'1985
- B. Construction: Commencement PLS REFER APPENDIX 1 Completion
- C. Date of Project Occupancy PLS REFER APPENDIX 1

V. PROJECT ECONOMICS

(Please specify amount, currency and date of transaction)

- | | Amount | Currency | Date |
|--------------------------------------|---|----------|------|
| A. Total Initial Budget | CONSTRUCTION COST VARIES FROM
US\$64,620.00 ONWARDS. | | |
| B. Cost of Land | <u>N.A.</u> | | |
| C. Analysis of Actual Costs | | | |
| 1. Infrastructure | <u>N.A.</u> | | |
| 2. Labour | <u>N.A.</u> | | |
| 3. Materials | <u>N.A.</u> | | |
| 4. Landscaping | <u>N.A.</u> | | |
| 5. Professional Fees | THIS BEING A RELIGIOUS BUILDING, NO
ARCHITECTURAL FEE WAS CHARGED. ARCHITECTURAL
SERVICES WAS PROVIDED ON GOODWILL BASIS. | | |
| 6. Other | CONSTRUCTION COST VARIES FROM
US\$64,620.00 ONWARDS | | |
| D. Total Actual Costs (without land) | | | |
| E. Actual Cost per sq.m. | <u>N.A.</u> | | |

F. Cost Comparison

Please indicate how the costs of this project relate to typical building costs in the country (check one):

 Average Above Average **X** Below Average

G. Sources of Funds

1. Please indicate the percentage of funds that came from:

 Private Sources **X** Public Sources

2. If funding was public, what percentage was from: RELIGION AFFAIRS DEPARTMENT OF PAHANG DARUL MAKMUR

 X Local Sources National Sources International Sources

Please continue overleaf

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VII. GENERAL GEOGRAPHY AND CLIMATE

Please describe the local climatic and geographic characteristics and the extent to which these have been taken into consideration in the design process.

THE MALAYSIAN WARM, HUMID CLIMATE IS CHARACTERIZED BY ITS INTENSE TROPICAL SUNSHINE, HEAVY SEASONAL RAINFALL AND STRONG WINDS.

VIII. EVOLUTION OF DESIGN CONCEPTS

Please describe the history of the project, from its conception to its final construction and actual use.

PLS REFER TO APPENDIX 2

IX. PROJECT SIGNIFICANCE AND IMPACT

In what way is this project important ? Please describe the aspects of the project which represent a particular achievement (for example the technical, economic, or social achievement, or its response to culture, climate, etc.).

PLS REFER TO APPENDIX 3

X. PRESENTATION REQUIREMENTS

A. The materials described below are the minimum requirements for project presentation. These materials will be used in the preparation of standardised presentations to be constituted by the Award office and reviewed by the Master Jury. Subsequently, they will form part of the permanent Award archives and may be made available for public consultation.

The submission materials should be clearly identified and should not be bound or mounted. For slides and photographs, a list of captions should be provided for each image; the name(s) of photographer(s) and date(s) of photography should also be specified.

1. Map indicating location of project in city, community, neighbourhood, or landscape.
2. Ten (10) photographs; preferred and maximum size for A4 presentation (18 x 24 centimetres).
3. Twenty (20) slides; 24 x 36 millimetres.
4. Drawings; preferred and maximum size for A3 format presentation (29,7 x 42 centimetres).
Site, Roof, and Massing Plans;
Floor Plan(s);
Elevations;
Sections.
5. Curriculum Vitae, or Firm's Prospectus.

B. The submission of additional materials is encouraged. Please specify any appended materials not listed above.

1. List of ASPA Mosques location in Pahang (Appendix 4);
2. A CSL Associates brochure on page 2, top right corner, a picture of Type C ASPA at Tanjung Api, Kuantan, Pahang picture was taken in 1986, at near completion stage by Mr Jimmy C S Lim;
3. List of photographs (Appendix 5);
4. List of Slides (Appendix 6)

C. Please indicate other sources of information on the project(s), e.g. publications, personal contacts, etc.

Majalah Arkitek - Nov/Dec'90 issue
(Original article enclosed)

Please note: The submission of this Record is a prerequisite to candidacy for the Award. All information contained in and submitted with the Record will be kept strictly confidential until announcement of the Award is made. Subsequently, such material may be made available by the Aga Khan Award for Architecture and you hereby grant the Aga Khan Award for Architecture a non-exclusive licence for the duration of the legal term of copyright (and all rights in the nature of copyright) in the Material submitted to reproduce the Material or licence the reproduction of the same throughout the world.

Signature _____

Name (please print) JIMMY C S LIM

Date 11/7/91

All materials should be forwarded to:

The Aga Khan Award for Architecture

Award Procedures
32, chemin des Crêts-de-Pregny
1218 Grand-Saconnex
Geneva, Switzerland

Telephone: (22) 798 90 70

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APPENDIX 1

IV (B) (C)

Construction period varies for each prototype and depending on the skill of local builders. To date more than twelve (12) mosques have been built and there is still ongoing construction for present and future mosques for villages around Pahang.



VIII) EVOLUTION OF DESIGN CONCEPTS

The Client ASPA (Amanah Saham Pahang Berhad) had requested that their mosque meets with two criteria. The mosque to be designed for the State of Pahang Darul Makmur has to use timber as the prime prefabricated material and that it has to reflect a "Pahang" theme. Queries to what constituted the Pahang cultural roots lead to the discovery that much of Pahang's historical background was linked to the Bugis people. We had then decided that the spirit of Pahang architecture should also project some of the Bugis-heritage. The Bugis people who had migrated to Pahang were originally from Makassar (Ujong Pandang) from the Sulawesi island.

Having decided to conduct our research from the original source, we embarked for Sulawesi to discover that their oldest mosque, Masjid Ende to be most inspirational. Masjid Ende, still very much intact, was a masonry structure, with a lean-to verandah wrapped around it, with pitched roof, pyramidal in form. The surrounding village too had pitched pyramidal roofs. However, quite a number of houses now had "onion" shaped roofs - a result of cross cultural infusion "grafted" onto the top of the pyramid. The Bugis culture today is no longer strong due to influences from other cultures in Makassar.

The design concept was finally an amalgamation of ideas - the architectural heritage of the Bugis people, the Malaysian architectural heritage, and of the climatic, site, construction & materials constraints.

We had also investigated the Masjid Kampung Laut, the oldest mosque built in Malaysia which was important in concluding our analysis of a Pahang/Malaysian mosque typology. This being based on Masjid Agung Demak, Java, Indonesia (1479).

Design Concept

The main concept in the design of the mosque is to provide a space which complies with the requirements and basic essential need of prayer, capable of being erected easily, economically and rapidly.

The ASPA mosque design has been stripped off the frills one would associate with a mosque, leaving only the essential "space" for the praying congregation and a niche for the "imam". As such, the familiar "dome" component which is largely symbolic rather than structural in nature, has been left out in view of economy and the limitations of timber as a structural matter. And also the "dome" being a South Indian influence.

Spiritually, the space designed will convey the feeling of spaciousness and volume, conducive to religious congregation.

Total flexibility is also incorporated into the design so that if the need arises, the mosque can be extended and utilised for other activities such as "kenduri", kindergarten or an Islamic study centre.



IX. PROJECT SIGNIFANCE AND IMPACT

The ASPA (Amanah Saham Pahang Berhad) mosque, being a prototype design, is a result of certain factors taking in the consideration of a simple design, an easy construction system and the speed of erection, without compromising the religious significance of a mosque as a prayer house. A design of prefabricated standard package that has the basic design parts and yet allowing the local builder to be able to build the structure to blend in with the surrounding aesthetics.

This requires the design of a "sensitive" prototype. Each repetition has to be adaptive and respectful of its environment, maybe even enhancing it. Not only should it respect the natural individuality of each village, the mosque, a house of prayer should stand majestically as a symbolic landmark to the locality. The mosque as a symbolical reminder to the people of their beliefs, should also fulfil the basic needs of a building that of a place of shelter.

The ASPA mosque was designed for a rural context and as such it has to blend in with the similarly-built vernacular timber village. Hence, strategically we needed to clarify the imagery most suited, choosing as reference models in the form of Masjid Kampung Laut, the oldest mosque built in peninsular Malaysia and the Masjid Ende, the oldest mosque in Makassar. Respect for the past solution of pitched roofs, occurring in many houses in Malaysia as well as from the original built-forms of Bugis houses, caused the rejection of the alien Indian "dome" which were much adopted in other bigger and royal mosques. It was a big step in reverting back to our roots to form a Malaysian mosque typology.

Embodied within the design of ASPA mosque, was a hope to reflect the hierarchical order of the Malay people's society and way of life through the flexibility of a square plan and the heightened spaciousness produced by the high and many tiered roof.

Islam has been a way of life for every Muslim and religion has been a base for social activities, particularly in the rural sectors. The blending in of the mosque design with the village structures is a response in enhancing the role for religion in every villager's life. While the Malay village house has demonstrated its suitability in the climatic context, it is only natural that the village mosque follow an architectural and construction system that has been the practice of local carpenters and has proved to be compatible all these time.



Quote:

A recently renewed interest in national architectural identity has sparked a reevaluation of the regional subtype (our earliest subtype) as a model for major mosque projects. After many years of neglect, this form of mosque, best exemplified by the Kampung Laut Mosque, has been revived with modifications which make it significant as a piece of architectural transformation. One example of this is the Abu Bakar Mosque in Karak, Pahang (1986). In line with the idea of structural expression, the roof of this building is supported by a system of exposed trusses and tension cables, allowing longer spans required by the larger structure. This has also enhanced the design by providing a vast articulated void on the interior. Consistent with this modification is the use of metal-deck roofing system which gives these buildings their modern external appearance. As a concession to cost and practicality, and as a tribute to its origins, the whole structure is raised on stilts and the walls are made of timber strips.

- an extract from a paper by David Mizan Hashim - an Aga Khan Award recipient.

Article on "Typology and the Evolution of the Malaysian Mosque", which appeared in Majalah Arkitek Nov/Dec'90 issue.



Architectural Treatment

The overall architectural expression are in timber with traditional concrete stairs and deep profiled "V" shaped, metal sheet roofing being the other two secondary materials utilised.

Consideration of the local climatic and site conditions were also accounted for and are in the following context.

Ventilation

Three feet louvred wall panels and ventilating shutters located between roof layers allow for unimpeded air flow and cross ventilation, both horizontally and vertically. This will discourage air to be trapped in the building.

The floor level is raised to improve ventilation as wind velocity increase with altitude. Large overhangs (about seven feet to seven feet six inches) are used as means to direct air flow into the building.

Sun/Rain Control

Large overhangs (extending four feet from the building) provide shade when sunny and shelter when rainy. In addition, they also help reduce glare and provide indirect lighting which is comfortable and psychologically cooling to the occupants.

Construction System

The construction system is based on a simple timber post and beam prefabricated system. In adopting this system, standard basic components were utilised to ensure easy, economical and rapid construction.

All standard components of the building were fabricated off-site, transported to the site and erected as scheduled.

Planning

The design basically comprises of a square plan, roofed over by a system of tiered pyramidal roofs with a ventilator at the apex. The design is variable to accommodate a range of congregation capacity of 300, 400 and 500 persons.

