



## The Aga Khan Award for Architecture

## ARCHITECT'S RECORD

CONFIDENTIAL

## I. IDENTIFICATION

Project Title DARUL AMAN MOSQUE

Street Address 1 JALAN EUNOS

City SINGAPORE 1440 Country SINGAPORE

Telephone 7521402 Telex \_\_\_\_\_

## II. PERSONS RESPONSIBLE

**A. Architect** HOUSING & DEVELOPMENT BOARD

Mailing Address HDB CENTRE, 3451 JALAN BUKIT MERAH

City SINGAPORE 0315 Country SINGAPORE

Telephone 2739090 Telex SINHDB RS 22020

**B. Client** MAJLIS UGAMA ISLAM SINGAPURA

Mailing Address ISLAMIC CENTRE, 273 BRADDELL ROAD

City SINGAPORE 2057 Country SINGAPORE

Telephone 2568188 Telex \_\_\_\_\_

**C. Consultants** (e.g. Economists, Sociologists, Demographers, Engineers)

Name HOUSING & DEVELOPMENT BOARD

Mailing Address HDB CENTRE, 3451 JALAN BUKIT MERAH

City SINGAPORE 0315 Country SINGAPORE

Telephone 2739090 Telex SINHDB RS 22020

**D. Contractor** M/S GUAN HONG CONSTRUCTION CO PTE LTD

Mailing Address BLK 165 BUKIT MERAH CENTRAL #08-3677

City SINGAPORE 0315 Country SINGAPORE

Telephone 2739166 Telex \_\_\_\_\_

**E. Master Craftsman** IKRAM ARTS (S) PTE LTD

Mailing Address TANJONG KATONG COMPLEX #03-52

City SINGAPORE 1440 Country SINGAPORE

Telephone 7430207 Telex \_\_\_\_\_

**III. USE**A. Specify type(s) of Use: PRAYER, RELIGIOUS SCHOOL, SOCIAL FUNCTION

B. User/Occupant

1. Occupation/Profession RESIDENTS OF THE HOUSING ESTATE2. 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 1 February 1983 Completion 20 January 1984B. Construction: Commencement 20 July 1984 Completion 31 July 1986C. Date of Project Occupancy 3 August 1986**V. PROJECT ECONOMICS**

(Please specify amount, currency and date of transaction)

	Amount	Currency	Date
A. Total Initial Budget	<u>\$2,398,000.00</u>	<u>S\$</u>	<u>24.3.84</u>
B. Total Actual Costs	<u>\$2,310,036.83</u>	<u>S\$</u>	<u>1.7.86</u>
C. Actual Cost per sq. m.	<u>\$ 921.62</u>	<u>S\$</u>	<u>1.7.86</u>
D. Analysis of Costs			
1. Land	<u>-</u>	<u>S\$</u>	<u>1.7.86</u>
2. Infrastructure	<u>\$ 31,319.57</u>	<u>S\$</u>	<u>1.7.86</u>
3. Labour	<u>\$ 693,011.05</u>	<u>S\$</u>	<u>1.7.86</u>
4. Materials	<u>\$1,617,025.78</u>	<u>S\$</u>	<u>1.7.86</u>
5. Professional Fees	<u>\$ 173,252.76</u>	<u>S\$</u>	<u>1.7.86</u>

E. Cost Comparison

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

☐ Average ☐ Above Average ☒ Below Average

F. Sources of Funds

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

0% Private Sources 100% Public Sources

2. If funding was public, what percentage was from:

0% local 100% national 0% international sources

(Please continue overleaf if necessary)

2/6

## VI. CONSTRUCTION DETAILS

### A. Site and Building Area (please indicate in square metres)

1. Total Site Area: 3,561 m<sup>2</sup>
2. Total Ground Floor Area: 1,782.72 m<sup>2</sup>
3. Total Combined Floor Area (including basement(s), ground floor(s) and all upper floors): 2,275.8 m<sup>2</sup>

### B. Construction and Technology

1. Describe the structural system and the basic method of construction

Reinforced concrete post and lintel system with steel roof truss using steel hollow section.

2. Indicate which major building parts were fabricated on-site and which were fabricated elsewhere

The whole roof structure in steel, rhombic frame truss was fabricated on site and lifted up by cranes.

### C. Description of Materials

(please also indicate if locally produced or imported)

1. Foundations Reinforced concrete piles and concrete foundation.
2. Principal structural members Ground Floor: Reinforced concrete columns and beams  
Roof : Steel hollow section
3. Infill Bricks, timbers
4. Rendering of Facades or Exterior Finishes Granolithic plastering and timber screen
5. Floors Reinforced concrete floors with ceramic tile finish
6. Ceilings Timber and gypsum board
7. Roofing Clay roof tiles
8. Other elements (please specify) Decorative concrete fences

### D. Type of labour force (please indicate percentage)

25% Skilled Workers 75% Unskilled Workers

### E. Origin of labour force

30% Domestic 70% Foreign

(Please continue overleaf if necessary)

3/6

## VII. GENERAL GEOGRAPHY AND CLIMATE

A. Please describe the local geographic characteristics:

The country has generally flat terrain with localised hills and mounds.

B. Please describe the local climatic characteristics:

The climate is equatorial, with a uniformly high daily average temperature of 28°C and relative humidity of around 85 and 90 percent. Rain falls all the year round but tends to be most copious from November and January during the monsoon season.

## VIII. EVOLUTION OF DESIGN CONCEPTS

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

The Darul Aman Mosque occupying a land area of approximately 3561 sq m is sited within an urban setting bounded by two major roads and adjoins a high-rise public housing development called the Eunus Housing Estate. Completed in 1986, it is one of the nine mosque buildings designed and built by the Housing and Development Board (HDB) to cater for the religious needs of the Muslim Community living in this region of the Singapore Island.

The planning of the mosque is conceived based on the traditional courtyard concept of the idea of segregating the main prayer hall from the ancillary facilities and at the same time achieve full natural ventilation throughout the entire building.

The design of Darul Aman Mosque is based on traditional Malay Architectural building forms found locally. The traditional pitch-roof and timber construction is translated by the use of modern technology and material to create a unique piece of architecture. The mosque displays interesting Islamic geometry and patterns throughout the building using a simple rhombic motif. From the structural elements to the lattice screens, the motif is applied throughout. On a larger scale, the motif, evident in the columns and beams is further accentuated in the ceiling truss and brackets.

The consistent application of the motif not only serves to create harmony in the various elements but also unifies the whole design in a interlacing display thus giving the building a distinct expression. Together with the tropical character of the design, the use of this geometric motif imbues the architecture with a timeliness Islamic spirit.

## IX. PROJECT SIGNIFICANCE

1. 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.)

The Darul Aman Mosque is a design breakthrough as being the first attempt to recreate traditional architecture using modern technology. This project was awarded the Gold Medal, Singapore of Institute of Architects Award in 1987 as an exemplary model of good design, construction and more importantly for an effort to search out and successfully develop an otherwise rapidly disappearing traditional architecture at the same time meeting the demands of contemporary architecture.

2. Please indicate the degree to which the client and users are satisfied with the project.

The building is well received and highly commended by the users in terms of architectural design and function. Since the opening of the mosque in August 1986, there has been no modifications to any part of the building.

## **X. PRESENTATION REQUIREMENTS**

1. The materials described below are the minimum requirements for project presentation. Please note that standard presentation dossiers are prepared by the Award, and materials should not be mounted or bound. All materials should be clearly identified. The following should be submitted:
  - A. Map indicating location of project in city, community, neighbourhood, or landscape.
  - B. Ten (10) photographs; preferred and maximum size for A4 presentation (18 × 24 centimetres).
  - C. Twenty (20) slides; 24 × 36 millimetres.
  - D. Drawings; preferred and maximum size for A3 format presentation (29.7 × 42 centimetres).  
Site, Roof, and Massing Plans;  
Floor Plan(s);  
Elevations;  
Sections.
  - E. Curriculum Vitae, or Firm's Prospectus.
2. The submission of additional materials is encouraged. Please specify any appended materials not listed above.

**Short history on mosque building programme by Housing and Development Board.**

3. Please indicate other sources of information on the project, e.g. publications, contacts, etc.

**Copies of News Flash on SIA Design Award 1986**

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 information may be made available by the Aga Khan Award for Architecture for scholarly purposes only. Nevertheless, other persons wishing to publish, reproduce, or reprint such information shall be required to secure prior permission from the author in each instance.

Signature TONY TAN KENG JOO

Name (please print) CHIEF ARCHITECT, HOUSING & DEVELOPMENT BOARD

Date 29/6

**HDB CENTRE, 3451 JALAN BUKIT MERAH, SINGAPORE 0315**

All Materials should be forwarded to:

**The Aga Khan Award for Architecture**

Award Procedures  
32, chemin des Crêts-de-Pregny  
1218 GRAND-SACONNEX  
Switzerland

Telephone: (22) 98 90 70

Telex: 28842 AKAA CH

Cable: AKAWARDS