



## The Aga Khan Award for Architecture

## 1995 ARCHITECT'S RECORD

1356.MAL

**I. IDENTIFICATION**

Project Title MENARA MESINIAGA

Street Address 14, JALAN SS16/1, SUBANG JAYA

City SELANGOR DARUL EHSAN Postal Code 47500 Country MALAYSIA

**II. PERSONS RESPONSIBLE****A. Architect/Planner**

Name T.R. HAMZAH & YEANG SDN BHD

Mailing Address 8, JALAN SATU, TAMAN SRI UKAY

City SELANGOR DARUL EHSAN Postal Code 68000 Country MALAYSIA

Telephone 60-3-4571966 Facsimile 60-3-4561005 Telex -

**B. Client**

Name MESINIAGA SDN BHD

Mailing Address 1A, JALAN SS16/1, SUBANG JAYA

City SELANGOR DARUL EHSAN Postal Code 47500 Country MALAYSIA

Telephone 60-3-7358828 Facsimile 60-3-7363838 Telex -

**C. Project Affiliates**

Please list those involved in the project and indicate their rôles and areas of responsibility (e.g. engineers, contractors, economists, master craftsmen, other architects, clients, etc.).

Name	Rôle
<u>REKA PERUNDING SDN BHD</u>	<u>Civil &amp; Structural Engineers</u>
<u>NORMAN DISNEY &amp; YOUNG SDN BHD</u>	<u>Mech. &amp; Elect. Engineers</u>
<u>BAHARUDDIN ALI &amp; LOW SDN</u>	<u>Quantity Surveyor</u>
<u>T.R. HAMZAH &amp; YEANG DESIGNS SDN BHD</u>	<u>Interior Designer</u>
<u>LAP CONSULTANCY</u>	<u>Landscape Architect</u>
<u>SIAH BROS. SDN BHD</u>	<u>Main Builder</u>
<u>SEDIABENA</u>	<u>Steelworks Builder</u>

### III. ARCHITECT'S BRIEF

Please describe the initial project programme.

1. The client as marketing agent for IBM (Malaysia) wanted a showcase building that could contribute to its marketing efforts and iconically represent their commercial success in a high-technology product.

The building was to have the future option of increasing the usable floor area. Sideways and upward growth were options explored but the final design solution is to have "interstitial spaces" that allowed for future expansion of floor area. This idea coincided well with the architect's intention of having "courtyards in the sky". These interstitial spaces are "cut-out" in the facades as stepped 3-storey atrium voids.

2. There were specific spatial requirements for marketing rooms, product demonstration rooms, auditorium, exhibition space, gymnasium and swimming pool.

### IV. EVOLUTION OF DESIGN CONCEPTS

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

1. The first Design Proposal had an atrium and the core in the centre of the building. This built form had voids in the lower floors and upper floors and planting flowing upwards from the ground floor.
2. The second Design Proposal (which was accepted by the client), eliminated the atrium, relocated the core on the periphery (on the east) and had a more even distribution of skycourts with the spiralling landscaping.

## V. CONSTRUCTION DETAILS

### A. Description of Materials

(please also indicate if locally produced or imported and whether fabricated on-site or elsewhere)

#### 1. Foundations

Bore concrete piles.

#### 2. Principal Structural Members

Reinforced concrete structural frame  
with steel outriggers.

#### 3. Infill

Brickwork for internal fire-protected areas.  
Glazed panels for external cladding.  
Gypsum board for internal partitioning.

#### 4. Rendering of Façades or Exterior Finishes

Aluminium composite panels for cladding (imported)  
spraytile finish to other masonry areas (local).

#### 5. Floors

Granite (imported) for ground floor lobby.  
Homogenous tiles (local) for poolside, toilets, roof terraces.  
Carpet tiles (imported) for office areas & lift lobbies.

#### 6. Ceilings

Mineral fibreboard (imported) for office areas and lift lobbies.  
Fibrous plaster & gypsum board for ground floor reception,  
auditorium & exhibition space.

#### 7. Roofing

Metal deck roofing (imported) to sky-gym.  
Tiled r.c. slab on roof terrace (local).

#### 8. Other elements (please specify)

Painted mild steel outriggers to roof structure and  
mezzanine deck.

### B. Construction Technology

Indicate the basic construction technology, methods, details or systems.

Reinforced concrete structural frame (conventional system).

C. Type of Labour Force (please indicate percentage)	<u>60%</u>	Skilled Workers	<u>40%</u>	Unskilled Workers
D. Origin of Labour Force	<u>30%</u>	Domestic	<u>70%</u>	Foreign

**VI. TIMETABLE**

(please specify year and month)

- A. Commission 1989
- B. Design: Commencement 1989 (sketch) Completion 1991 (detail design)
- C. Construction: Commencement June 1989 Completion August 1992
- D. Date of Project Occupancy August 1992

**VII. AREAS AND SURFACES**

Site and Building Area (please indicate in square metres)

1. Total Site Area 47,236 sq.m.
2. Total Ground Floor Area 19,159 sq.m.
3. Total Combined Floor Area 11,210 sq.m.  
(including basement(s), ground floor(s) and all upper floors)

**VIII. ECONOMICS**

Please specify the amounts in local currency. Provide the equivalent in US dollars. Specify the date and the rate of exchange for US dollars at that time.

	Amount in Local Currency	Amount in US dollars	Exchange Rate	Date
A. Total Initial Budget	<u>RM17 M</u>	<u>\$6.6 M</u>	<u>\$1 = RM2.57</u>	<u>29.11.94</u>
B. Cost of Land	<u>confidential</u>			
C. Analysis of Actual Costs				
1. Infrastructure				
2. Labour				
3. Materials				
4. Landscaping				
5. Professional Fees				
6. Other				
D. Total Actual Costs (without land)	<u>RM23 M</u>	<u>\$8.9 M</u>	<u>\$1 = RM2.57</u>	<u>29.11.94</u>
E. Actual Cost per sq.m.	<u>RM2,050</u>	<u>\$798</u>	<u>\$1 = RM2.57</u>	<u>29.11.94</u>
F. Cost Comparison				

Please indicate how the costs of this project relate to typical building costs in the country:

                     Average ✓ Above Average                      Below Average

**G. Sources of Funds**

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

✓ Private Sources                      Public Sources

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

                     Local Sources                      National Sources                      International Sources

**IX. PROJECT SIGNIFICANCE AND IMPACT**

In what way is this project important ?

1. The project constitutes the "second series" (1989 - 1994) in our experiments with re-inventing tall buildings design.
2. The first series (1979 - 1989) consisted of the following:
  - Plaza Atrium (transitional spaces and windscoops)
  - Wisma SMI (vertical landscaping)
  - Menara Boustead (skycourts and vertical landscaping)
  - Leisure Bay (naturally ventilated apartments)
3. The second series began after 1989 in which we brought all the ideas developed in or first series together into a single building. Here Menara Mesiniaga incorporated our ideas in transitional spaces, skycourts, vertical landscaping, naturally ventilated core.
4. By bringing the various concepts together in a simple building, the design became a new genre of tall buildings, the "Bioclimatic Skyscraper". This signified a totally new approach to skyscraper design.
5. Most of the earlier work in relating building to climate (e.g. O. Koenigsberger 1973, Olgyay 1963) pertained to low-rise and medium-rise buildings. Most research work in this field of bioclimatic design virtually stopped when energy became abundant and very little work was done especially in relating climate to tall buildings design as low-energy buildings.
6. When the designing of sustainable and low-energy buildings became important again in the 90's, the bioclimatic approach to skyscraper design had to be rethought. The significance in this project is the pioneering of the bioclimatic approach to tall buildings, leading to a different approach to the design of tall buildings (as low-energy high quality buildings)

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Name (please print) DR. KENNETH YEANG KING MUN

Signature 

Date 1 December 1994