

Candidate Number :

Seat No. :

The HKIA / ARB Professional Assessment 2023

Paper 7 Building Design

16 November 2023
09:00 - 15:00 (6 hours)

Venue

Rotunda 2, 3/F
Kowloon Bay International Trade & Exhibition Centre
(KITEC) Kowloon Bay

ONE COMPULSORY QUESTION

Total Mark: 100

General Notes:

Format	Use the A3 plain and A3 tracing papers provided as appropriate.
Presentation	Black ink line drawings are preferred. You may use colour for clarity. DO NOT use RED.

CONTENT

1	Problem Statement	Page 2
2	Site Description	Page 2
3	Design Brief	Page 3
4	Submission Requirements	Page 6

Attachment 1	Location Plan	1:1000	A3 size
Attachment 2	Site Plan	1:200	A3 size
Attachment 3	Typical Module Layout Plan	1:200 & 1:50	A3 size

1 PROBLEM STATEMENT

Joint-User Complex

You, as the Architect, are commissioned by the Government (“Clients”) to design a Joint-user Complex for a local community. The Complex is envisaged to be a hub for serving various needs of the local district. There will be three major components as follows:

- i) **Common Facilities** – To provide shared facilities for the complex including a multi-purpose hall, a cafeteria cum ancillary facilities, and a covered sky garden.
- ii) **Neighborhood Elderly Center (NEC)** - To cope with increasing service demand from the elderly and to meet the area shortfall in the district.
- iii) **Urban Hostel for the Youth (UH)** - To provide transitional quarters for qualified working youth to have their own living spaces.

Your task is to prepare a schematic design for presentation to the Clients. It should be a sensible solution satisfying generally all functional and statutory requirements, yet possessing an architecturally pleasing identity.

The presentation materials are expected to be diligently prepared with good draftsmanship, legible and easily understood for laymen. Preliminary structural and building services provisions should be indicated on floor plans and sections as appropriate.

2 SITE DESCRIPTION

Context

Project location is a hypothetical site located in an urban neighborhood. It is generally a flat site served by public roads of more than 6m wide on two sides. While on the other two sides, the Site is abutted by a public park to the Northeast and a low rise regional electrical sub-station to the Northwest residential high rise to the South and West.

Please see Location Plan (**Attachment 1**) and Site Plan (**Attachment 2**).

Vehicular Access

Vehicular access shall be between points X and Y through Z.

Environmental Factor

Although there are no statutory requirements for environmental design such as Traffic noise, energy efficiency, etc. Your design (building disposition, etc.) should demonstrate awareness and sensibility to the site surroundings.

3 DESIGN BRIEF

3.1 Development Requirements

Site Area	2,200m ² (approximate)
Zoning	Government, Institution or Community (G/IC)
Permissible GFA under lease	Unrestricted
Permissible Plot Ratio and Site Coverage	Requirements under the Buildings Ordinance shall be complied with.
Building Height	Not higher than + 80mPD (main roof)
Site Vehicular Access	Vehicular Access is required. Vehicular access shall be between points X and Y through Z.
Transport Facilities	Refer to Para. 3.3(D) – Transport & Ancillary Facilities
Barrier Free Access	Statutory requirements shall be complied with.

3.2 Special Design Requirements

All components should be easily accessible by the public. The NEC and UH should be properly segregated with separate access for privacy and security reasons.

Sky Garden

To further enhance vibrancy of the Complex and to promote social cohesion, it is proposed to include a covered Sky Garden within the complex. This is to be located at upper floor and should be designed to be visible and easily accessible from ground. Where possible, the Architect should optimize outdoor flat roof areas for amenity purpose.

MiC (Modular Integrated Construction)

To shorten construction period and enhance site safety, dormitory rooms for the UH is expected to be constructed by MiC Method. Typical layout plan for a room module is provided in **Attachment 3** for reference.

3.3 Schedule of Accommodation

	Gross Floor (Sq.m)	Remarks
A. Community Facilities		
• Reception / Foyer	150	Must be located at ground floor and easily accessible from General Lay-by. (see Part E of this schedule)
• Multi-purpose Hall with Stage	350	5m clear headroom
• Cafeteria	150	Must be located at ground floor with street frontage
• Kitchen (Cafeteria)	75	
• Public Toilets	As appropriate	Male/Female/Accessible
• Covered Sky garden	Minimum 300, 3m clear headroom	Located at upper floor; Open to public with barrier free access

B. Neighbourhood Elderly Center (NEC)

• Entrance/Reception	As appropriate
• Management Office	50
• Staff Changing Room/Toilets	As appropriate
• Medical Room	20
• Common Room	90
• Activity Rooms	45 x 2 nos.
• Pantry	20

	Gross Floor (Sq.m)	Remarks
C. Urban Hostel for Youth (UH)		
• Entrance/Reception	As appropriate	
• General Office	50	
• Common Room	150	Male/Female/Accessible
• Toilets	As appropriate	
• Dormitory Room with en-suite	(3 x9) x 100 nos.	To be constructed by MiC Method Refer to Attachment 3.

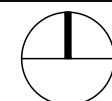
D. Transport & Ancillary Facilities

• General Lay-by	(3.5m x 15m x 3.6mH) x 1 no.	
• Car Parking Spaces for staff	(2.5m x 5m x 2.4mH each) x 4 nos. covered or open.	
• Loading Bays	(8m x 3.5m 3.6mH each) x 1 nos.	
• Refuse Vehicle Parking	(5m x 12m x 4.5mH) x 1 no. with direct connection with Refuse Room	
• Refuse Room	50m ²	Direct connection with Refuse Vehicle Parking
• Transformer Room (Tx Rm)	8m x 6m	To be located at ground floor
• High Voltage Switch Room (HV)	6m x 5m	At appropriate location
• Low Voltage Switch Room (LV)	6m x 5m	At appropriate location
• Generator Room	5m x 5m	At appropriate location
• Air Conditioning Plant Room	6m x 6m	To be located at roof level

4 SUBMISSION REQUIREMENTS

Site Plan (1:200)	Show site development including access point(s) for both pedestrian and vehicular traffic
Plan of Ground floor (1:200)	<ul style="list-style-type: none">• All required spaces according to Accommodation Schedule, with annotation• Major structural elements• Overall and critical dimensions• Appropriate annotation• Site boundary, adjacent streets and structures• Means of Access for Firefighting & Rescue
Plan of First floor Plan(s) of other floor(s) (1:200)	<ul style="list-style-type: none">• All required spaces according to Accommodation Schedule, with annotation• Major structural elements• Overall and critical dimensions• Appropriate annotation
Section (Minimum 1no. section drawing across the entire site at 1:200)	<ul style="list-style-type: none">• Floor to floor and other critical dimensions• Appropriate annotation• Relationship between elements of construction• (e.g. Interfaces and connections of building structure, building envelope, finishes, building services, and etc.)
3-dimensional Illustration	Not compulsory
Calculations	The design is assumed to comply with the relevant Buildings Ordinance and Regulations. No calculation is required.

END OF PAPER



ELECTRICAL SUB-STATION

E

D

BOUNDARY LINE

52M

PUBLIC ROAD 'A' (MORE THAN 6M WIDE)

BOUNDARY LINE

SUBJECT SITE

PUBLIC PARK

42M

BOUNDARY LINE

(APPROXIMATELY 2,200 SM)

A

B

BOUNDARY LINE

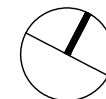
Y

Z

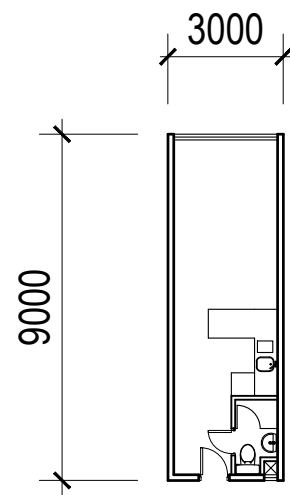
X

C

PUBLIC ROAD 'B' (MORE THAN 6M WIDE) +5

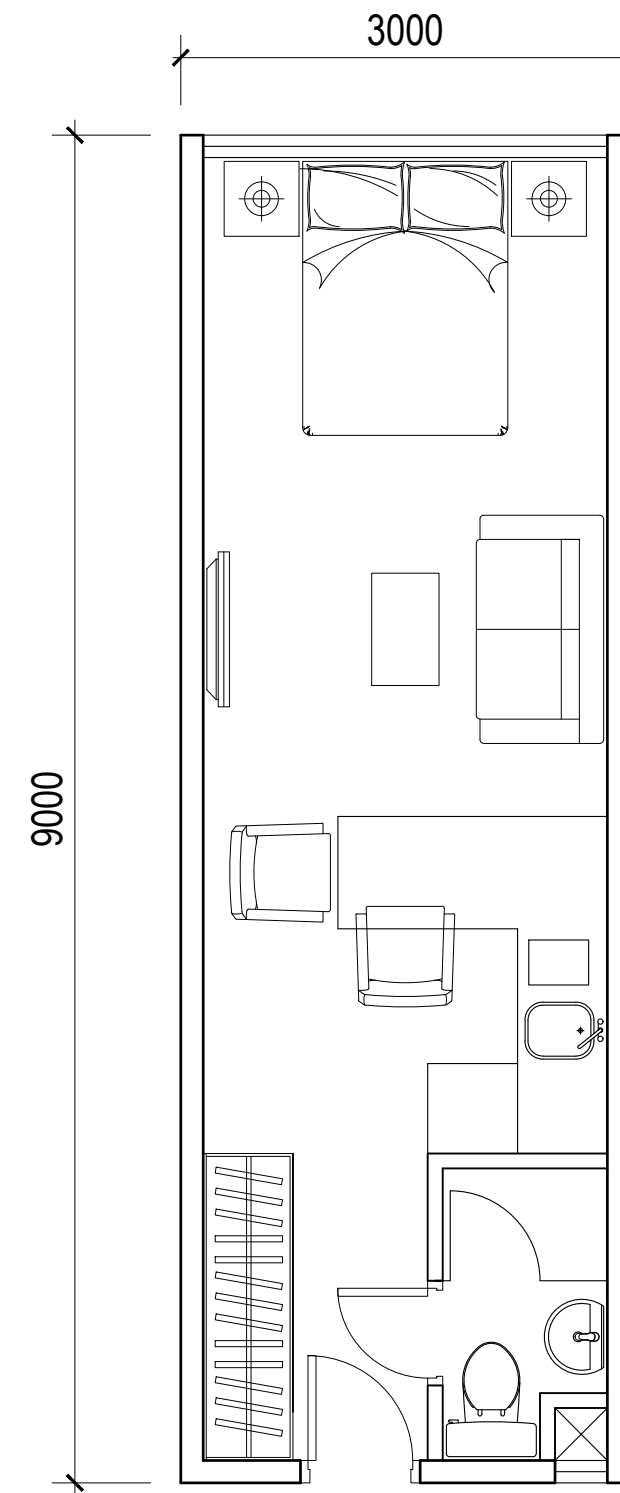


MiC (Modular Integrated Construction)



TYPICAL ROOM MODULE
LAYOUT PLAN

Scale: 1:200



TYPICAL ROOM MODULE
LAYOUT PLAN

Scale: 1:50

