

Modular Integrated Construction

(Answer Version)



Name: _____ Class: _____ Student No.: _____




What is Modular Integrated Construction



Modular Integrated Construction (MiC) is an innovative building method similar to stacking blocks, where prefabricated small components are assembled together to form a building.



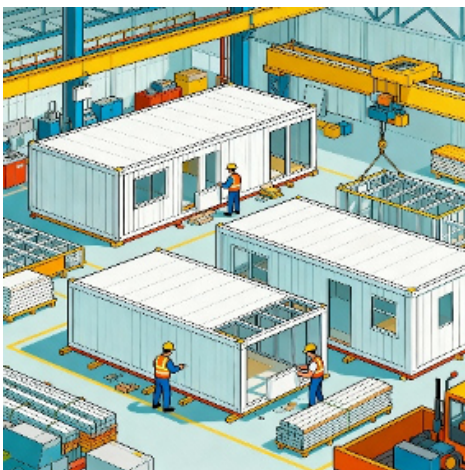


Benefits of Modular Integrated Construction




1. Time-saving

Most modules, such as walls, floors, and bathrooms, are pre-assembled in the factory and include finishes, piping, and equipment. Once delivered to the site, these modules can be quickly assembled like building blocks, helping to significantly reduce construction time.



2. Improve Quality

Before mass producing components, prototypes are created for testing, which helps ensure quality control and minimise errors during construction. This also results in a more uniform and neat appearance of the building.



Benefits of Modular Integrated Construction



3. Better Management

The controlled factory environment makes production easier to manage and allows for more flexible control over project progress.




4. Weather-Resistant

Working in a factory eliminates concerns about delays caused by rain or strong winds.



5. Enhance Work Environment and Site Safety

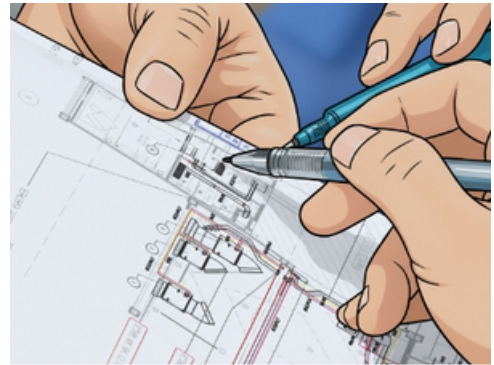
This construction method improves site safety by reducing the risk of falls and slips, and protects workers from harsh weather conditions.



Steps of Modular Integrated Construction

1. Project design

At the early stages of the project, component suppliers and local contractors need to collaborate on the design to ensure it is locked in early.




2. Engineering approval

The design must comply with the “Building Regulations” and other relevant requirements, ensuring that all procedures meet regulations.

3. Factory assembly

Before mass production, prototypes of the various components are made and tested. Components are trial assembled in the factory, allowing for simultaneous work on foundation and underground works.





Steps of Modular Integrated Construction

4. Transporting components to the construction site

Special transportation arrangements are needed for components over 2.5 meters, considering temporary storage locations to support logistics and construction plans.



5. On-site installation

Temporary waterproofing is required after component installation and before permanent waterproofing is completed. Also, connections need to be made between components and core elements (like structural, mechanical and electrical systems).

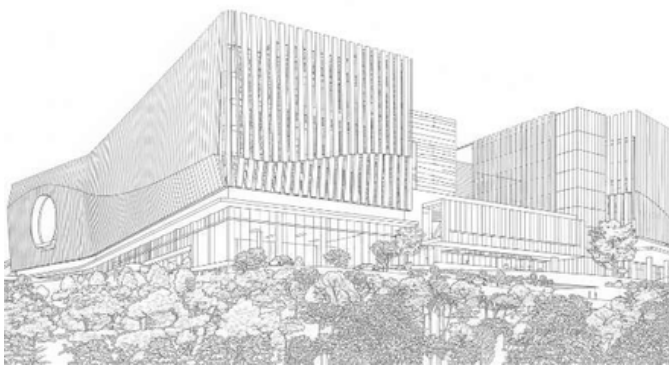




Test your knowledge



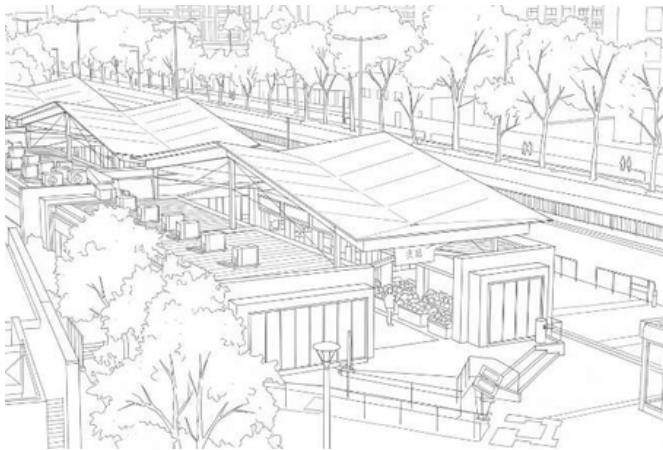
1. Guess which buildings in Hong Kong were constructed using Modular Integrated Construction?



☒ Chinese Medicine Hospital in Tseung Kwan O



☒ Elderly's Home at Jat Min Chuen Chung Yuet Lau



☒ Skylight Market at Tin Sau Road, Tin Shui Wai



☐ Residential Project at No.8, Huabichang Hutong, Beijing



1. Guess which buildings in Hong Kong were constructed using Modular Integrated Construction?



☒ Skylight Market at Tin Sau Road, Tin Shui Wai



☐ Student Housing of Nanyang Technological University Singapore



☐ Hong Kong - Shenzhen Innovation and Technology Park (HSITP)



☒ Nam Cheong 220



2. What does Modular Integrated Construction mean?



☐ The construction site slowly built brick by brick



☒ Building modules are prefabricated in the factory before being transported to the site for assembly



☐ Make the house grow by itself using magic



3. What are the benefits of this construction method?
(Multiple choices allowed)

- ☒ Time-saving
- ☒ Cleaner
- ☐ Weather conditions will not affect progress
- ☒ Easy to control the quality
- ☐ Additional manpower is required

4. Coloring activity

If you were to design a building module using Modular Integrated Construction, highlight the facilities you would include by using different colors.





5. If you were to build a two-levels school, how would you plan its modular layout? Please illustrate your ideas.

(Hint: You may draw classrooms, stairs, restrooms, roofs, etc.)

My building is _____.

Its features are _____.