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The Government of the Hong Kong Special Administrative Region

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Ref. : DEVB(PSGO) 38/1
Group : 5

6 September 2024

Development Bureau
Technical Circular (Works) No. 4/2024

Modular Integrated Construction (MiC)

Scope

This Circular sets out the policy on the adoption of Modular Integrated Construction (MiC) for new building works¹ with total construction floor area (CFA) larger than 300m² under the Capital Works Programme (CWP) to be tendered on or after 1 October 2024.

Effective Date

2. This Circular shall take immediate effect.

Effect on Existing Circulars and Circular Memoranda

3. This Circular supersedes DEVB TC(W) No. 2/2020.

¹ Including building works funded under Heads 702 to 707, 709 and 711; and Capital Subvention Projects under Head 708 of the Capital Works Reserve Fund (CWRF).

Background

4. MiC is a construction method whereby freestanding volumetric modules with finishes, fixtures, fittings, furniture and building services installation, etc. manufactured off-site and then transported to site for assembly.

5. Since the introduction of MiC policy under the Chief Executive's Policy Address in 2017, the Government has been promoting the adoption of MiC in the construction industry and the Development Bureau (DEVB) has driven the adoption of MiC through pilot applications in capital works projects. Following the 2023 Policy Address and 2024-25 Budget, the Government shall aim to develop MiC as one of the industries in the Greater Bay Area (GBA) that enjoy clear advantages and promote Hong Kong as an international centre for MiC applications.

6. MiC has the benefits of enhanced efficiency, shortened construction period, improved site safety performance, better building quality, less construction waste, less demand for site labour as well as less construction nuisance, etc. MiC not only contributes to the quality and sustainable built-environment but also help ease some of the challenges of the local construction industry.

7. DEVB established a cross-departmental MiC Steering Committee in 2019 to oversee the development of MiC policy. In 2023, DEVB formed the Steering Committee on High Productivity Construction (SC) to further promote the development of High Productivity Construction methods including MiC in Hong Kong and subsume the MiC Steering Committee into the SC. The Terms of Reference and membership of the SC are enclosed in **Annex I**. To support the SC's works, a Consultative Committee (CC) for collecting ideas and views from industry stakeholders as well as a Technical Sub-committee (TSC) providing technical advice to the SC were also set up.

Policy

8. The Government shall continue to lead by example through capital works projects to spearhead the wider adoption of MiC and advance the MiC technology in Hong Kong. MiC shall be adopted for new building works of suitable building types as listed in **Annex II** and achieve the overall MiC adoption rate as stated.

9. The policy is applicable to relevant projects in the feasibility, investigation, planning or design stages irrespective of modes of delivery. To fully harness the benefits of MiC, the adoption of MiC shall be considered at early design stage. To avoid abortive design work and adverse impact to the project programme and cost, the project teams shall consider adoption of MiC in preparing the Technical Feasibility Statement (TFS) and during the review of the preliminary design by the departmental Review Committee² (or a setup of similar authority for subvented projects). Building layouts and structural systems shall be conducive to efficient MiC installation. In-situ structural and finishing works shall also be minimised. Tender provisions shall also encourage contractor proposals that can lead to programme and cost savings.

Modular Integrated Construction Dedicated Section

10. A Modular Integrated Construction Dedicated Section (MiC Dedicated Section) has been established under the Project Strategy and Governance Office (PSGO) of DEVB serving as a one-stop platform to provide technical advice and supports to individual project and further promote the adoption of HPC to the industry.

11. Project offices / works agents are encouraged to approach the MiC Dedicated Section at early stage of the project for advice on their MiC design proposal if they consider there are issues on the MiC adoption in their projects.

² Refer to requirements stated in ETWB TC(W) No. 19/2003.

Milestone Payment

12. To reflect the actual resources spent and work done by the contractors in implementing the MiC works with a view to enhancing their cash flow, a milestone payment mechanism for MiC works for Capital Works Contracts was promulgated via memo DEVB(PSGO)100/1 dated 22 November 2023 as enclosed in **Annex III**.

Exemption

13. There may be exceptional grounds³ affecting the suitability of adopting MiC for the various building types in **Annex II** or achieving the overall 50% MiC adoption rate. When such circumstances arise, the project office / works agent concerned shall seek exemption from the SC via PSGO of DEVB. The project information required to be submitted to SC is listed in **Annex IV**.

14. Subject to sufficient information being provided for projects seeking exemption, the SC will grant its decision normally within 28 calendar days upon receipt of the application for exemption.

15. Adoption of MiC may be suitable in some circumstances⁴ even for projects or building types other than those listed in **Annex II**. In such cases, the project offices are encouraged to duly consider adopting MiC in their projects and could seek steering from the SC if necessary.

Management and Updating of Project List

16. The PSGO shall be responsible for managing and updating the project list in **Annex II** on a need basis.

³ Examples of exceptional grounds include stringent site constraints and/or project programme limitation, etc.

⁴ With needs of relocation and reassembly, expediting construction, minimising environmental nuisances, etc.

Enquiries

17. Enquiries on this Circular should be addressed to Chief Assistant Secretary (Works) 1.

(Ricky C K LAU)
Permanent Secretary for Development (Works)

STEERING COMMITTEE ON HIGH PRODUCTIVITY CONSTRUCTION

TERMS OF REFERENCE

1. To oversee the High Productivity Construction (HPC) policy in Hong Kong;
2. To steer and oversee adoption of HPC in government and government-funded building projects, including vetting projects seeking for exemptions, resolving hurdles and coordinating efforts of various departments;
3. To explore ways to encourage adoption of HPC in projects other than those in item 2 above;
4. To identify and address regulatory issues relating to HPC;
5. To provide high-level technical advice and support to other policy bureau or departments on adoption of HPC;
6. To coordinate the development of HPC methods and streamlining of related approval process to remove barriers for the industry; and
7. To formulate measures to strengthen MiC supply chain, including marking available Land in Northern Metropolis for manufacturing and storage of modules by the industry, and formulate measures to facilitate transportation and testing of MiC modules.

**STEERING COMMITTEE ON
HIGH PRODUCTIVITY CONSTRUCTION**

MEMBERSHIP

Chairman:

Permanent Secretary for Development (Works)

Members:

Director of Architectural Services

Director of Buildings

Director of Electrical and Mechanical Services

Director of Water Supplies

Deputy Secretary (Planning & Lands) 1, DEVB

Head of Project Strategy and Governance Office, DEVB

Deputy Secretary for Financial Services and the Treasury (Treasury)³, FSTB

Deputy Director of Environmental Protection (1), EPD

Deputy Commissioner/Planning & Technical Services, TD

Secretary:

Chief Assistant Secretary (Works)¹

Ad-hoc members (to be invited on a need basis):

Deputy Director (Development & Construction), Housing Department

Deputy Director of Lands/General, LandsD

Deputy Commissioner, C&ED

Deputy Director of Fire Services, FSD

Deputy Director of Planning/District, PlanD

Deputy Director of Marine, MD

Any other relevant Bureaux / Departments

Adoption of MiC in various building types

	Building types	Accommodations to adopt MiC
1.	Staff quarters	<ul style="list-style-type: none"> Residential units
2.	Hostels	<ul style="list-style-type: none"> Kitchens
3.	Residential and Care Homes	<ul style="list-style-type: none"> Residential units Supporting areas in residential floors Nursing areas, e.g. consultation rooms Accommodation for staff
4.	Schools	<ul style="list-style-type: none"> Classrooms Principal / teachers' rooms, special rooms, laboratories, libraries
5.	Office buildings	<ul style="list-style-type: none"> Office areas
6.	Data center buildings	<ul style="list-style-type: none"> Server rooms UPS rooms Support offices
7.	Medical facilities	<ul style="list-style-type: none"> Wards Supporting areas in ward floors Consultation rooms Treatment rooms Accommodation for medical staff, e.g. quarters and offices Education facilities, e.g. classrooms
General facilities for the above building types		<ul style="list-style-type: none"> Pantries, lavatories, shower rooms and changing rooms Lift shafts and lift machine rooms

Notes:

- For building types 1 to 6, the use of MiC is mandated for the listed accommodations under the respective building types. These building types shall achieve an overall MiC adoption rate at no less than 50% of the total construction floor area. Exemption from SC is necessary if these requirements cannot be met.

For the purpose of calculating the MiC adoption rate, the area for basement, covered landscape / playground area, carpark and loading / unloading area shall be excluded from the total construction floor area. For school buildings, the area for assembly hall shall also be excluded.
- For building type 7 - medical facilities, the use of MiC is mandated for the listed accommodations and project teams shall endeavour to maximise MiC adoption in other parts of medical facilities. Exemption from SC is necessary if there are genuine difficulties for practical adoption. Meanwhile, they are not bounded to meet the minimum 50% overall MiC adoption rate given the diversity in planning requirements.
- Project office / works agent shall also aim to adopt MiC in other parts of the building, which can be counted towards the overall MiC adoption rate.
- For campus-type development, the building type and the calculation of MiC adoption rate shall be considered separately for each individual building block.

MEMO

<p><i>From</i> Secretary for Development</p> <p><i>Ref.</i> () in DEVB(PSGO)100/1</p> <p><i>Tel. No.</i> 3509 8331</p> <p><i>Fax No.</i> 2537 1961</p> <p><i>Date</i> 22 November 2023</p>	<p><i>To</i> Distribution</p> <p><i>(Attn. : _____)</i></p> <p><i>Your Ref.</i> in _____</p> <p><i>Dated</i> _____ <i>Fax No.</i> _____</p> <p><i>Total Pages</i> 3</p>
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**Milestone Payment for Modular Integrated Construction Works
for Capital Works Contracts**

DEVB Technical Circular (Works) No. 2/2020 set out the policy on the adoption of Modular Integrated Construction (MiC) for new building works. This memo promulgates the adoption of milestone payment for MiC works.

2. As compared to conventional site-based practices, the adoption of MiC requires comprehensive design and implementation plan including the programming and logistics arrangements to facilitate the manufacturing, delivery and assembly processes. To this end, contractors have to spend considerable resources in the early planning and preparation stage, and to finance high upfront cost of the design and factory modularization.

3. As promulgated under DEVB's memo ref. DEVB(W)510/83/08 dated 8.3.2011, interim payment for major off-site prefabrication works could be made subject to relevant precedent conditions including, among others, the maintenance of an effective bond to cover the prefabrication works.

4. To reflect the actual resources spent and work done by the contractors in implementing the MiC works with a view to enhancing their cash flow, it is proposed that for capital works contracts involving building works adopting MiC¹, a milestone payment mechanism should be set for the MiC works. Payment to the contractors shall be made upon achievement of the milestones, and the payment for off-site completed modules shall be made subject to relevant precedent conditions including, among others, a duly executed vesting certificate signed by the contractor instead of maintaining an effective bond. The milestone payment for MiC works (see table below) has been discussed and endorsed by the Steering Committee on High Productivity Construction (SC-HPC).

¹ Including building works funded under Heads 702 to 707, 709 and 711; and Capital Subvention Projects under Head 708 of the Capital Works Reserve Fund (CWRF).

Stage	Milestone	Payment percentage of total MiC works value#
1	Drawings for all MiC modules approved	4%
2	Mock-up for all MiC modules approved	8%
3	Preparatory works necessary for commencement of fabrication of all MiC modules completed	8%
4*	MiC modules completed off-site	35%
5*	MiC modules delivered to Site	25%
6*	MiC modules fixed-in-final-position	20%

* For stage 4, 5 and 6, interim payment shall be certified according to the proportion of works completed in each stage

The payment percentage should not be changed unless with SC-HPC's prior approval

5. It should be noted that the milestone payment for MiC works is not applicable to NEC ECC target contracts, i.e. Option C and Option D, in which the cost reimbursable payment approach serves the purpose.

6. In case project teams consider it not practical to implement the milestone payment for MiC works under individual capital works contract involving building works adopting MiC, approval from an officer at D2 rank or above² shall be obtained beforehand. The approval given shall be copied to CAS(W)1, PSGO, DEVB for information.

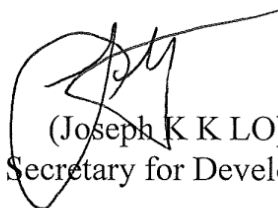
Implementation

7. The milestone payment for MiC works shall be adopted for capital works contracts involving building works adopting MiC for which tenders are to be invited on or after 1 January 2024. The relevant contract provisions will be provided under separate memo for incorporating into the tender documents.

8. Please bring this memo to the attention of project officers responsible for procurement and administration of capital works contracts.

² For Capital Subvention Projects under Head 708 of the Capital Works Reserve Fund (CWRF), approval shall be given from an officer at D2 rank or above of the relevant policy bureau.

9. If there are any enquiries, please contact Jason H Y Wong, AS(PCS)2, on tel. no. 3509 8672.



(Joseph K K LO)
for Secretary for Development

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c.c.

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H/EKEO (Attn: Ms Lilian Cheung)

Internal

CAS(W)1, AS(PCS)3, AS(PM)4, AS(WP4)3 and TS

List of Project Information Required for Application of Exemption

To facilitate the SC in considering to grant exemption for adopting MiC, the following project information shall be submitted:

- (a) brief description of the project;
- (b) project implementation programme;
- (c) design constraints;
- (d) user requirements, such as any special functional or aesthetic requirements;
- (e) building design options;
- (f) justifications for not adopting MiC for different design options, e.g. stringent site constraints, project programme limitation, etc.; and
- (g) any other information as may be required by PSGO.