

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Subventions – Miscellaneous

28QJ – Expansion and Improvement of Wanchai Campus of the Hong Kong Academy for Performing Arts

Members are invited to recommend to Finance Committee the upgrading of **28QJ** to Category A at an estimated cost of \$444.8 million in money-of-the-day prices for the expansion and improvement of the Wanchai campus of the Hong Kong Academy for Performing Arts.

PROBLEM

The Hong Kong Academy for Performing Arts (HKAPA) needs additional space and facilities to support the implementation of the normative four-year undergraduate programme under the new academic structure and to meet the existing learning needs of students.

PROPOSAL

2. The Secretary for Home Affairs (SHA), on the advice of the Director of Architectural Services (D Arch S), proposes to upgrade **28QJ** to Category A at an estimated cost of \$444.8 million in money-of-the-day (MOD) prices for the expansion and improvement of the Wanchai campus of HKAPA.

/ **PROJECT.....**

PROJECT SCOPE AND NATURE

3. The scope of **28QJ** comprises –
- (a) construction of a nine-storey building block adjoining the north-eastern side of the existing Theatre Block (the annex building). This will accommodate classrooms, studios, laboratories, music rooms, offices, workshops and support facilities (e.g. mechanical and electrical rooms, toilets, dressing rooms, storage areas). The new annex building will also include a chiller plant room for the installation of an air cooled chiller to enhance the reliability of air-conditioning system of the whole Wanchai campus;
 - (b) construction of a one-storey lightweight structure on the flat roof over the existing Concert Hall, Lyric Theatre, TV Studio and Recital Hall at the Theatre Block. The structure will accommodate studios, laboratories (e.g. computer laboratory, dance science laboratory, multi-media laboratory and other technical laboratories), office and support facilities (e.g. dressing rooms and storage areas);
 - (c) construction of an additional floor at upper level of the void space over the existing Scenic Art Workshop on UG/F of the Theatre Block. The additional floor will accommodate classrooms and storage areas;
 - (d) conversion of the existing fountain pump room into an administration office and a store room; and
 - (e) redesign and reconfiguration of the existing library including establishment of learning commons with group study rooms.

A site plan is at Enclosure 1. The artist's impressions of the annex building, layout plans, sectional drawing and list of facilities are at Enclosures 2 to 5 respectively.

4. Subject to the funding approval of the Finance Committee, HKAPA plans to commence the construction works in the second quarter of 2013 for completion in the fourth quarter of 2015.

/ **JUSTIFICATION**

JUSTIFICATION

5. The original design capacity of the existing Wanchai campus buildings of the HKAPA is to house 600 full-time students. With the development of HKAPA's academic programmes and gradual expansion of student population over the years, the total number of full-time equivalent students has increased to 932¹ in the 2011/12 academic year. While the space shortage could be partly relieved with the lease of Bethanie (a heritage building at Pokfulam which provides about 1 240 m² in net operational floor area (NOFA)) as the HKAPA's second campus since 2006, the space shortage problem has not been entirely addressed.

6. With the migration from the current three-year to a four-year undergraduate degree programme structure starting the 2012/13 academic year, the HKAPA's space shortage problem will be aggravated due to the projected increase of full-time equivalent students to 979¹ by the 2016/17 academic year. Additional space will be required for holding more classes, lectures, rehearsals and inter-disciplinary activities concurrently under the new academic structure. On the basis of the planning standards of the University Grants Committee, the HKAPA estimates that there will be a space shortfall of 8 287 m² in NOFA under the new academic structure by the 2016/17 academic year. HKAPA therefore proposes to carry out works to expand and improve the existing campus (paragraphs 3(a) to (d) above) to provide additional 5 120 m² in NOFA for accommodating new classrooms, music rooms, studios, laboratories, offices and support facilities.

7. HKAPA also plans to redesign and reconfigure the existing library to rationalise its layout, and enhance the learning environment by improving the layout of the common area to facilitate self-study, project work and co-operative learning, including the provision of group study rooms (paragraph 3(e) above).

8. The proposed project seeks to provide additional space by constructing the annex building and maximising the structural capacity of the existing premises. In the meantime, HKAPA will continue to rent commercial premises in or near Wanchai to provide teaching and rehearsal space.

/ **FINANCIAL**

¹ In providing the number of full-time equivalent students, we have taken into account the number of part-time students by adopting an appropriate ratio of part-time students to full-time students (based on the duration of individual part-time programme and the number of teaching hours involved).

FINANCIAL IMPLICATIONS

9. We estimate the capital cost of the project to be \$444.8 million in MOD prices (please see paragraph 12 below), broken down as follows –

			\$ million
(a)	Demolition		12.2
(b)	Foundation		63.4
(c)	Building		144.6
(d)	Building services		78.5
(e)	External works		2.4
(f)	Additional energy conservation measures		5.9
(g)	Furniture and equipment ²		29.3
(h)	Consultants' fees for		10.3
	(i) contract administration	10.1	
	(ii) management of resident site staff (RSS)	0.2	
(i)	Remuneration of RSS		1.7
(j)	Contingencies		33.3
	Sub-total		381.6 (in September 2011 prices)
(k)	Provision for price adjustment		63.2
	Total		444.8 (in MOD prices)

/ 10.

² The estimated cost is based on an indicative list of furniture and equipment including special equipment (e.g. various types of pianos, dance equipment, movable stage, music stands and music chairs, mirrors, shock absorbing rug, movable parallel bars, sewing machines, cutting tables for sewing, etc.).

10. HKAPA proposes to engage consultants to undertake tendering, contract administration and site supervision for the project. A detailed breakdown of the estimate for consultant's fees and RSS costs by man-months is at Enclosure 6.

11. The construction floor area (CFA) of this project is approximately 10 889 m². The estimated construction unit cost, represented by the building and the building services costs, is \$20,448 per m² of CFA in September 2011 prices. D Arch S considers the estimated construction unit cost reasonable and comparable to those of similar projects.

12. Subject to approval, HKAPA will phase the expenditure as follows –

Year	\$ million (Sep 2011)	Price adjustment factor	\$ million (MOD)
2012 – 13	3.1	1.05325	3.3
2013 – 14	113.1	1.11118	125.7
2014 – 15	212.9	1.17229	249.6
2015 – 16	38.8	1.23677	48.0
2016 – 17	8.9	1.30479	11.6
2017 – 18	4.8	1.37656	6.6
	<u>381.6</u>		<u>444.8</u>

13. HKAPA has derived the MOD estimates on the basis of the Government's latest set of assumptions on the trend rate of change in the prices of public sector building and construction output for the period 2012 to 2018. HKAPA will award the contract on a lump-sum basis because the scope of the works can be clearly defined in advance. The contract will provide for price adjustments.

14. HKAPA estimates that the additional annual recurrent expenditure (such as overheads for operating the buildings) arising from the project amounts to about \$7 million.

/ PUBLIC

PUBLIC CONSULTATION

15. The project will be implemented within the existing boundary of the Wanchai campus of the HKAPA. There are no residential developments nearby, and the project will not affect residents in the vicinity. The project has received support from the Wan Chai District Council and the Task Force on Harbourfront Developments on Hong Kong Island under the Harbourfront Commission. The HKAPA also consulted its staff and students in December 2011 who have expressed support for the project.

16. On 20 April 2012, we consulted the Legislative Council Panel on Home Affairs and Members expressed support for the project. Noting that the proposed project could not fully meet the space requirement of the HKAPA, while agreeing to the submission of the funding application to the Public Works Subcommittee, Members passed a motion proposing that the use of the small park adjacent to the HKAPA should be examined as part of the Academy's campus under its expansion project. We would study Members' suggestion on HKAPA's further expansion, taking into account its technical feasibility, cost implications, as well as the views of the local community and other stakeholders.

ENVIRONMENTAL IMPLICATIONS

17. This is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The project will not cause long-term environmental impact. HKAPA has included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

18. During construction, HKAPA will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contract. These include the use of silenced plants or quality powered mechanical equipment, mobile noise barriers, frequent cleaning and watering of the site, and the provision of wheel-washing facilities.

19. At the planning and design stages, HKAPA has considered measures (e.g. using metal site hoardings and signboards which can be recycled or reused in other projects) to reduce the generation of construction waste where possible. In addition, HKAPA will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the site) on site or in other suitable construction sites as far as possible, in order to minimize the disposal of inert construction waste at public fill reception facilities³. HKAPA will encourage the contractor to maximize the use of recycled/ recyclable inert construction waste, and use of non-timber formwork to further reduce the generation of construction waste.

20. At the construction stage, HKAPA will require the contractor to submit for approval a plan setting out the waste management measures which will include appropriate mitigation means to avoid, reduce, reuse and recycle inert construction waste. HKAPA will ensure that the day-to-day operations on site comply with the approved plan. HKAPA will require the contractor whenever practicable to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. HKAPA will control the disposal of inert construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.

21. HKAPA estimates that the project will generate in total about 6 500 tonnes of construction waste. Of these, HKAPA will reuse about 1 300 tonnes (20%) of inert construction waste on site, and deliver 4 225 tonnes (65%) to public fill reception facilities for subsequent reuse. HKAPA will dispose of the remaining 975 tonnes (15%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$0.2 million for this project (based on a unit cost of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne⁴ at landfills).

/ **HERITAGE**

³ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation. Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

⁴ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90 per m³), nor the cost to provide new landfills (which is likely to be more expensive), when the existing ones are filled.

HERITAGE IMPLICATIONS

22. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interest and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

23. The project does not require any land acquisition.

ENERGY CONSERVATION MEASURES

24. This project has adopted various forms of energy efficient features including –

- (a) sea-water cooled chillers;
- (b) automatic demand control of chilled water circulation system;
- (c) automatic demand control of supply air;
- (d) demand control of fresh air supply with carbon dioxide sensors;
- (e) heat wheels for heat energy reclaim of exhaust air;
- (f) T5 energy efficient fluorescent tubes with electronic ballast and lighting control by occupancy sensors;
- (g) light-emitting diode (LED) type exit signs;
- (h) automatic on/off switching of lighting and ventilation fan inside the lift; and
- (i) building energy management system for large installations.

25. For renewable energy features, HKAPA will install solar bollard park lights at various flat roof areas.

26. For recycling features, rainwater recycling system will be provided to collect water for landscape irrigation.

27. For greening features, this project will provide greening at the roofs of 7/F to 9/F of the annex building.

28. The total estimated additional cost for adoption of the above features is around \$5.9 million (including \$2.8 million for energy efficient features). The energy efficient features will achieve 9.2% energy savings in the annual energy consumption with a payback period of about 9 years.

BACKGROUND INFORMATION

29. We upgraded **28QJ** to Category B in September 2011.

30. HKAPA was established in 1984 under the Hong Kong Academy for Performing Arts Ordinance (Cap. 1135) with the objects to foster and provide for training, education and research in the performing arts and related technical arts.

31. HKAPA engaged consultants with its own resources in March 2011 to carry out site investigation, and prepare preliminary and detailed designs for this campus expansion and improvement project.

32. The project will not involve any tree removal.

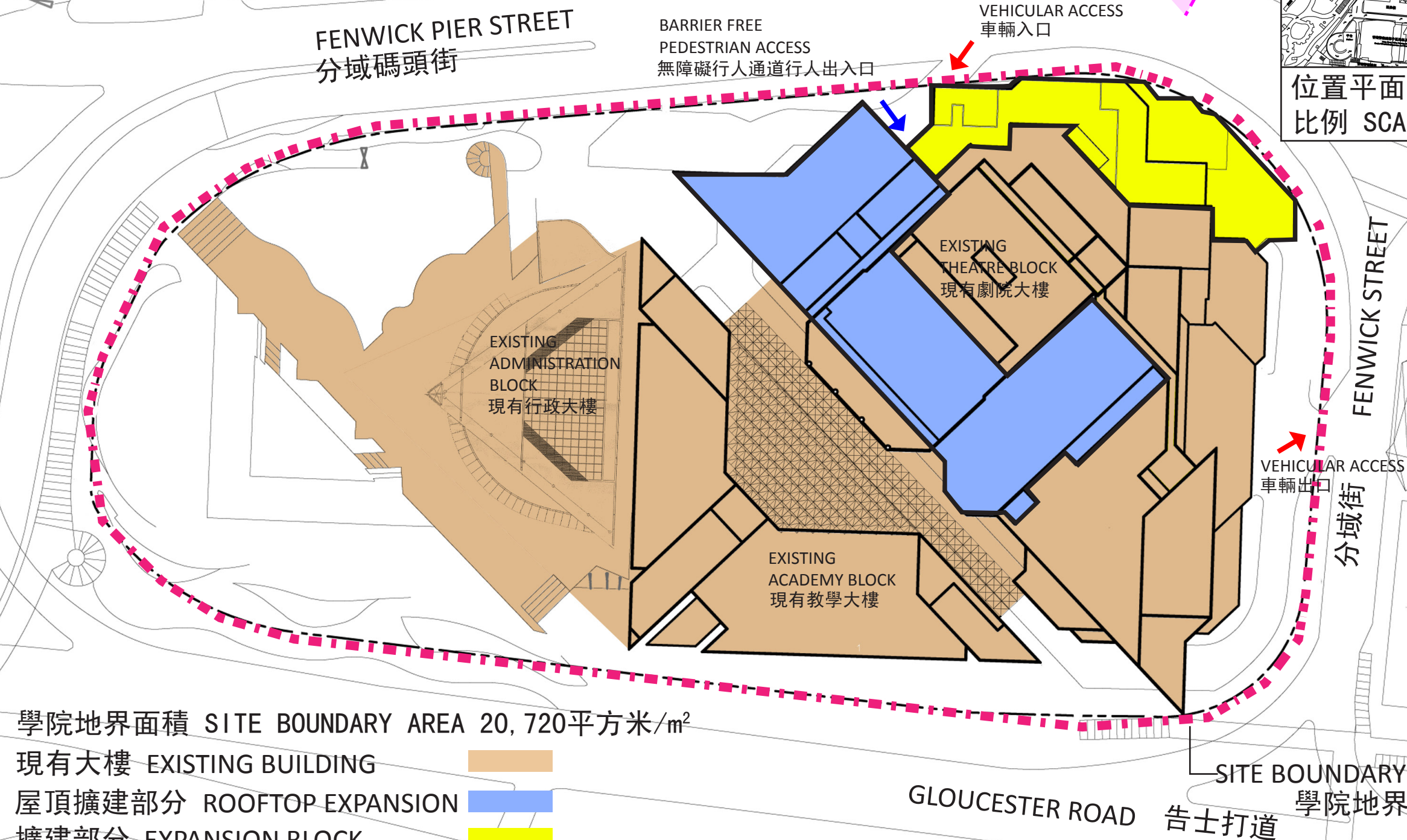
33. HKAPA estimates that the project will create about 215 jobs (190 for labourers and another 25 for professional/technical staff) providing a total employment of 4 980 man-months.

28QJ – Expansion and Improvement of Wanchai Campus of Hong Kong Academy for Performing Arts (HKAPA)

28QJ – 香港演藝學院灣仔校園擴建及改善工程

總平面圖 SITE PLAN

比例 SCALE 1:800



學院地界面積 SITE BOUNDARY AREA 20,720平方米/m²

現有大樓 EXISTING BUILDING

屋頂擴建部分 ROOFTOP EXPANSION

擴建部分 EXPANSION BLOCK

學院地界 SITE BOUNDARY

位置平面圖 LOCATION PLAN

比例 SCALE 1:5000



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VIEW OF THE EXPANSION FROM NORTH-EAST (ARTIST'S IMPRESSION)

從東北面望向擴建部分外觀構思圖



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BIRD'S VIEW OF THE EXPANSION FROM NORTH (ARTIST'S IMPRESSION)

從北面望向擴建部分的鳥瞰圖

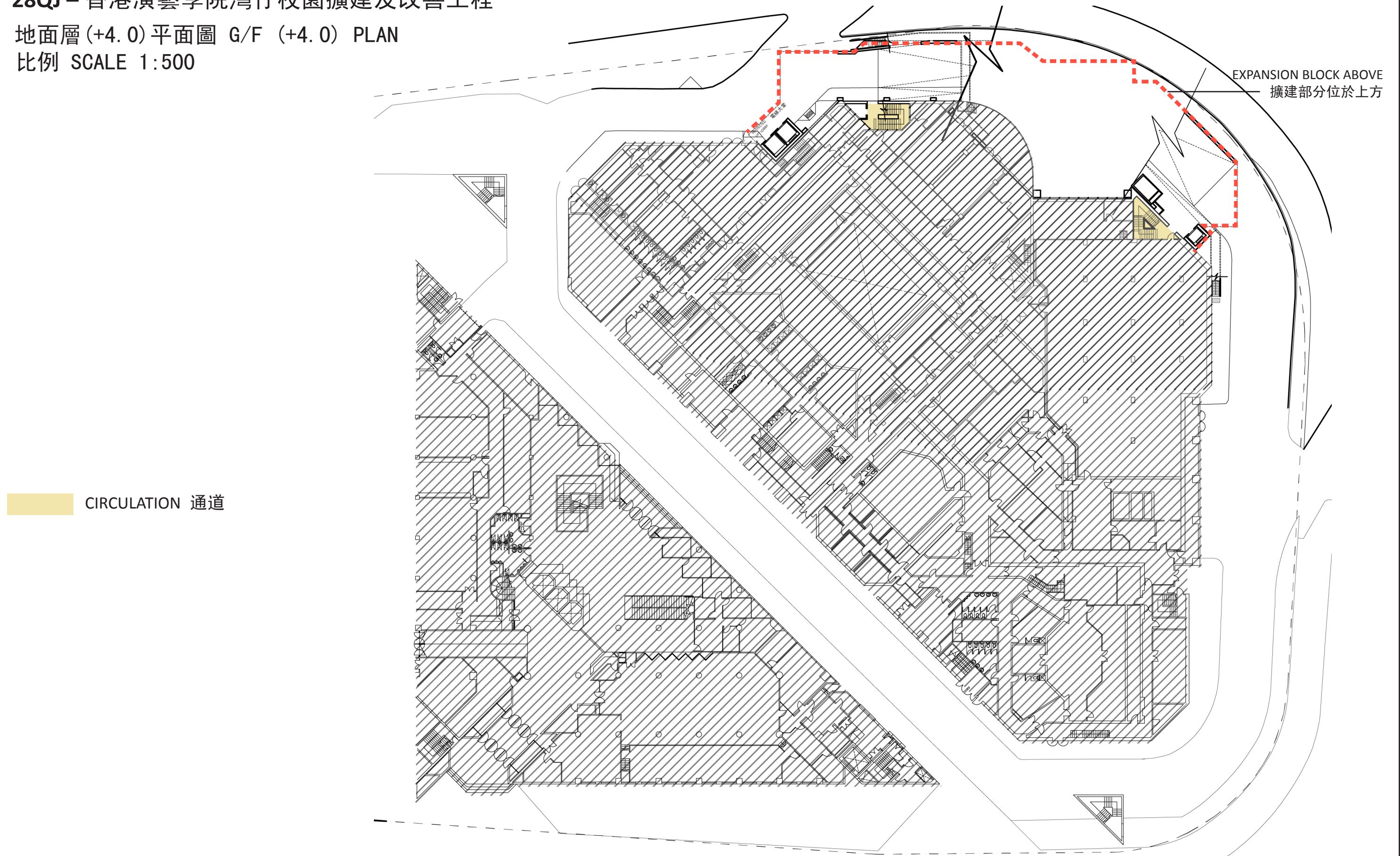


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地面層 (+4.0) 平面圖 G/F (+4.0) PLAN

比例 SCALE 1:500

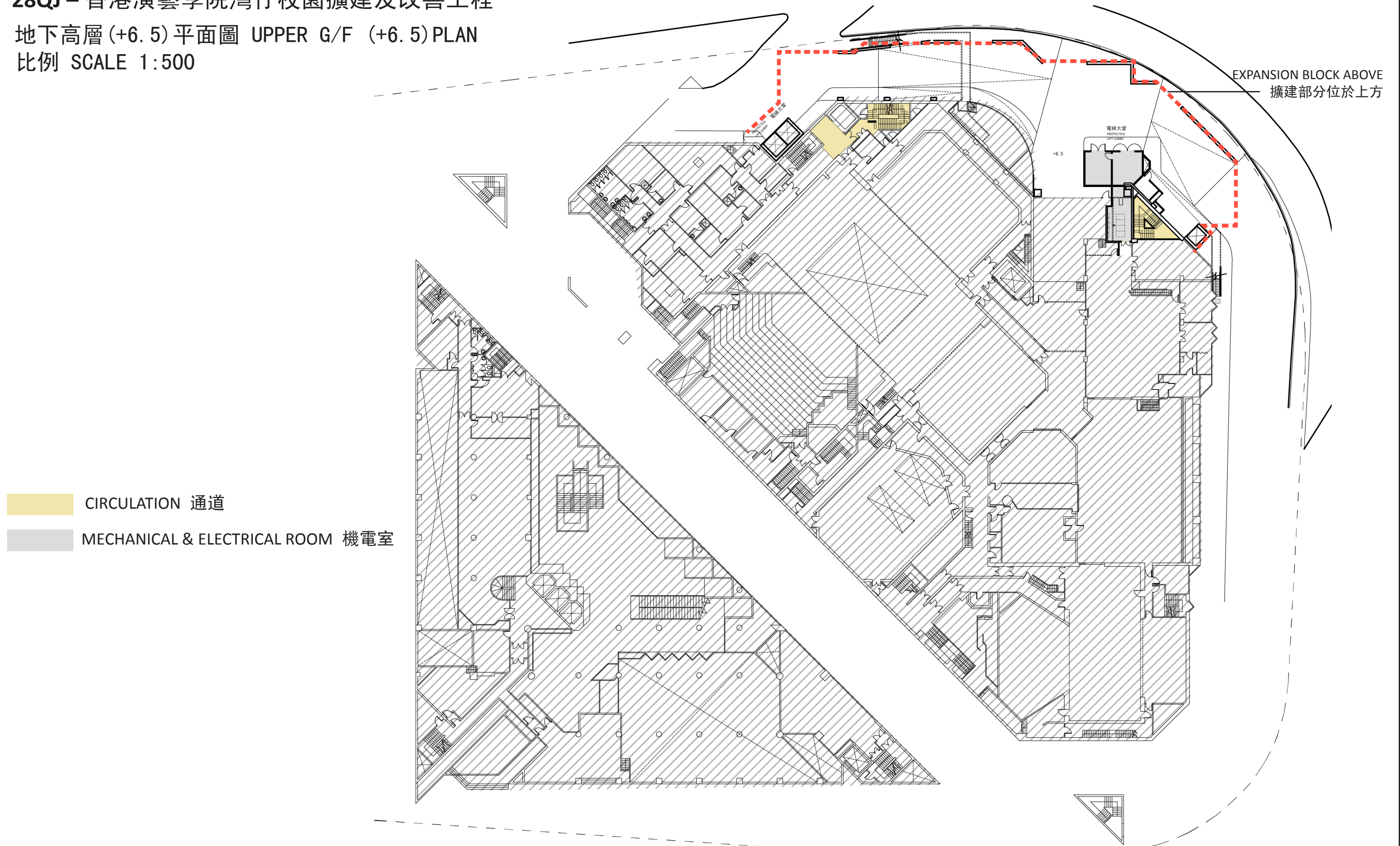


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地下高層(+6.5)平面圖 UPPER G/F (+6.5) PLAN

比例 SCALE 1:500

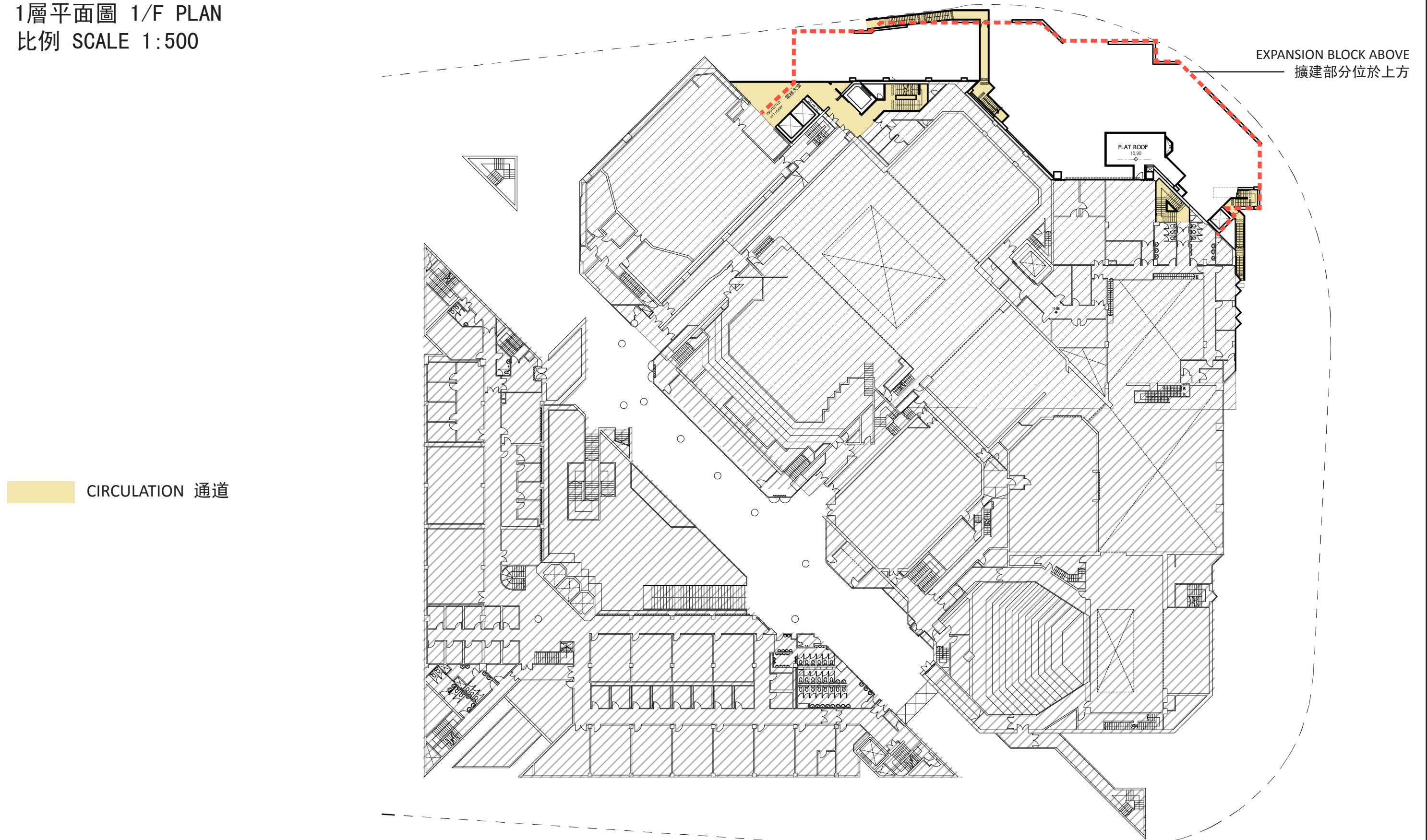


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1層平面圖 1/F PLAN

比例 SCALE 1:500

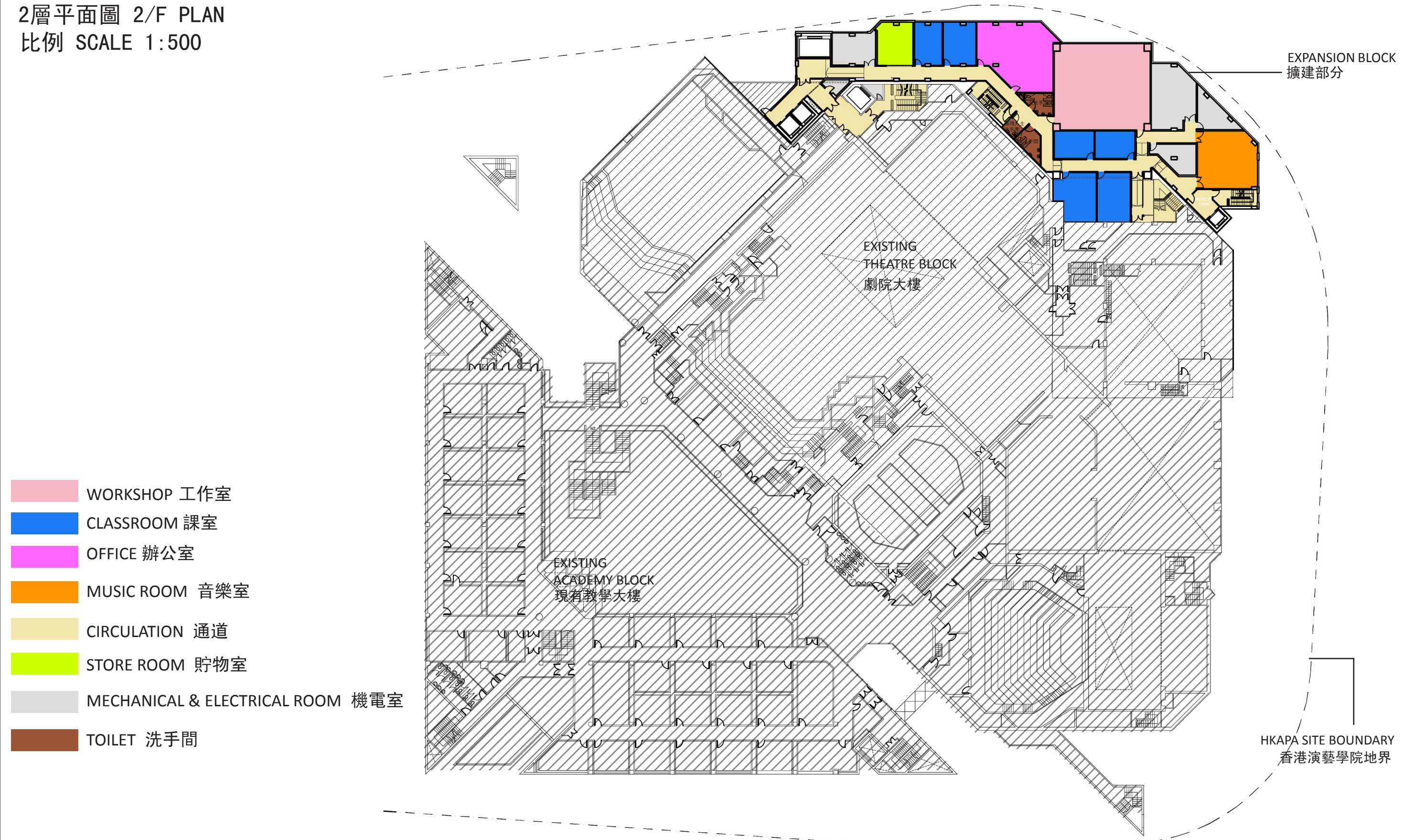


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2層平面圖 2/F PLAN

比例 SCALE 1:500

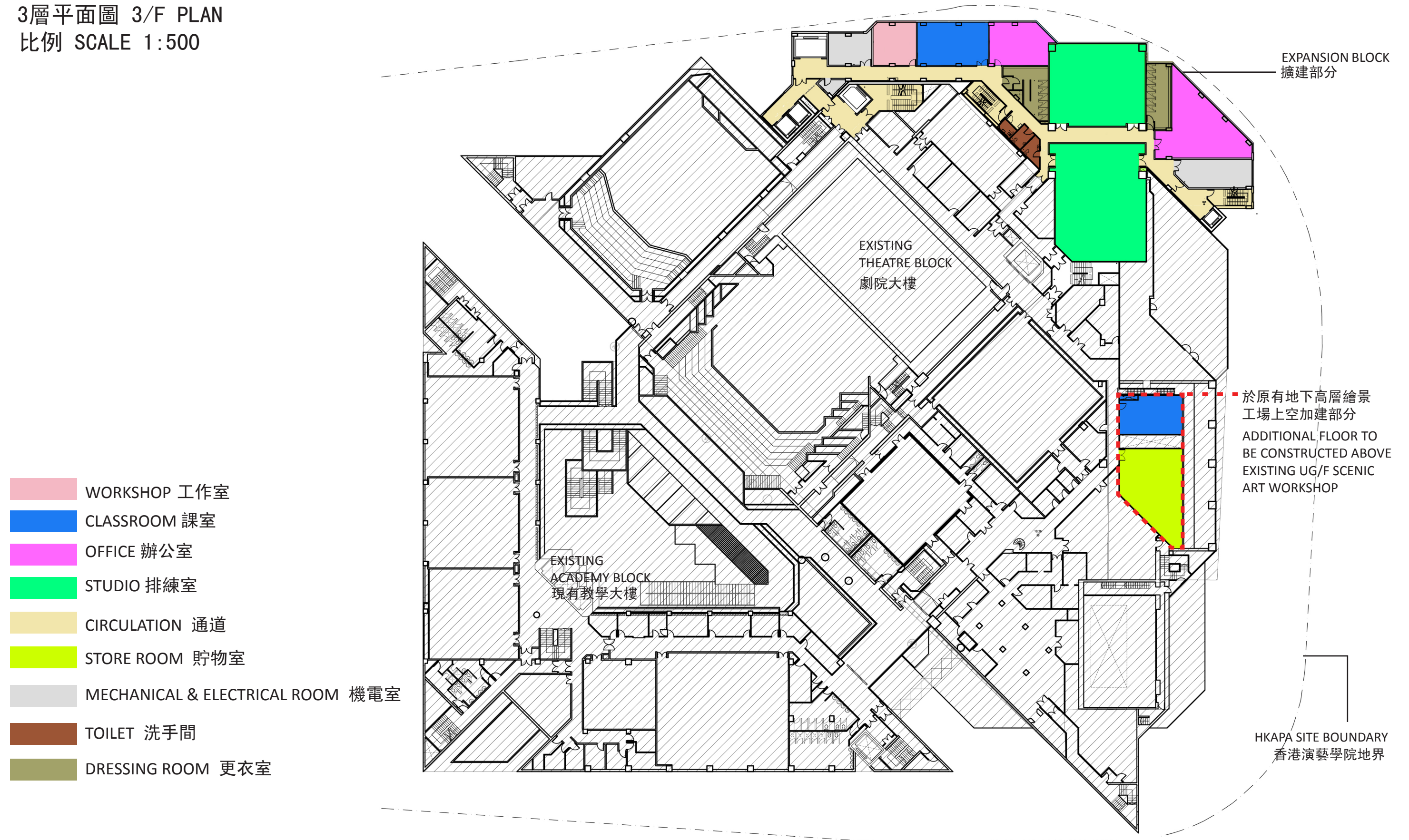


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28QJ – 香港演藝學院灣仔校園擴建及改善工程

3層平面圖 3/F PLAN

比例 SCALE 1:500

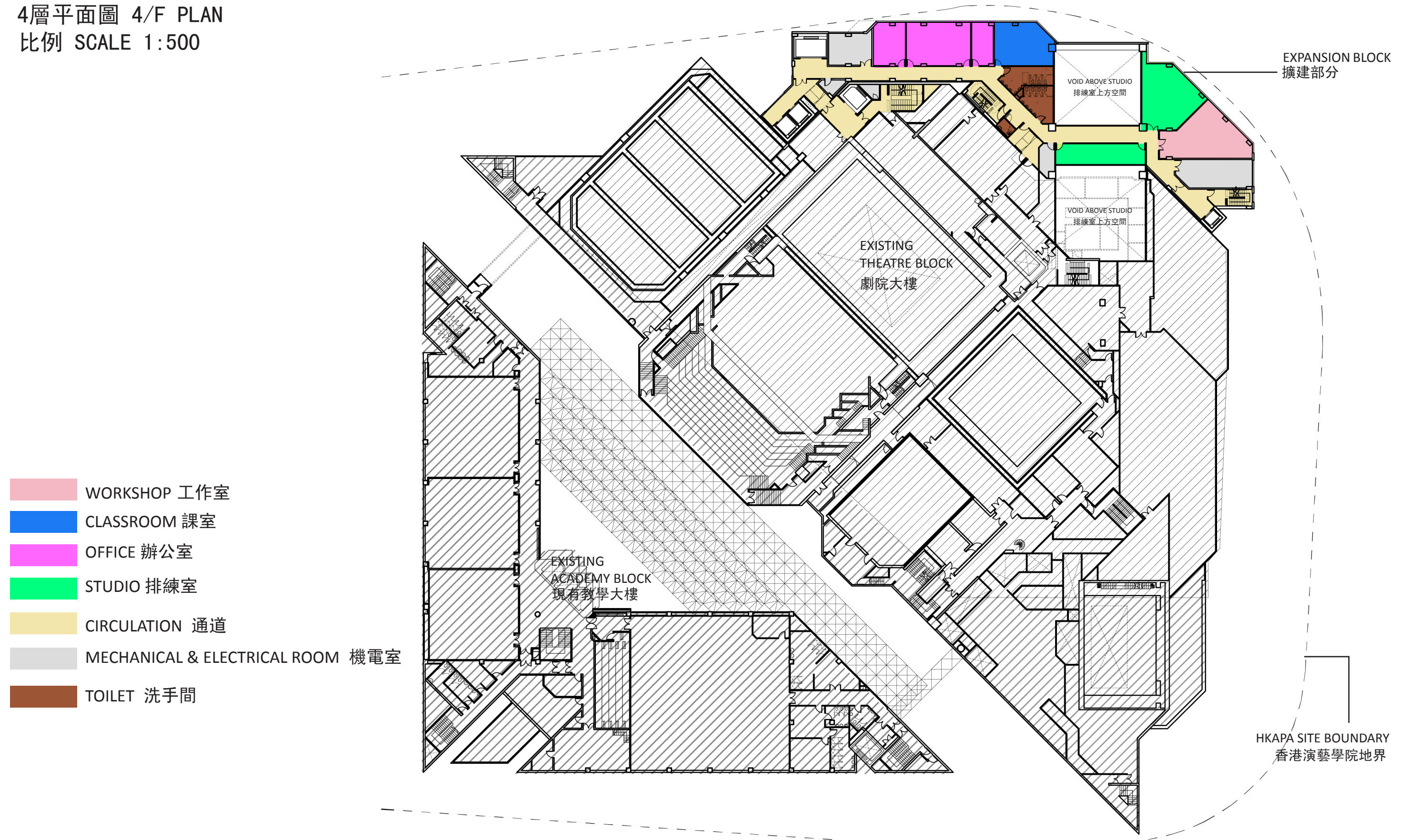


28QJ – Expansion and Improvement of Wanchai Campus of Hong Kong Academy for Performing Arts (HKAPA)

28QJ – 香港演藝學院灣仔校園擴建及改善工程

4層平面圖 4/F PLAN

比例 SCALE 1:500

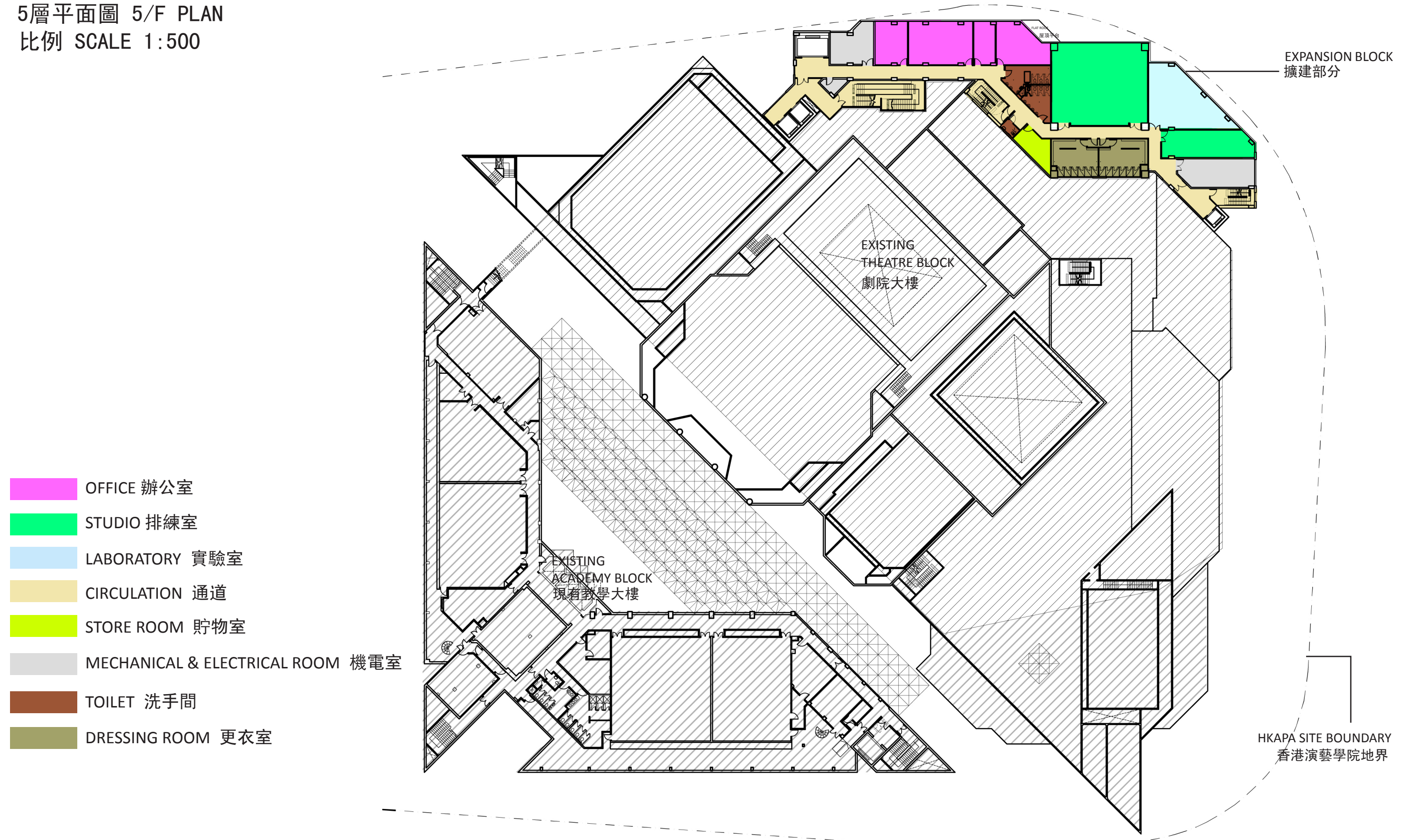


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28QJ – 香港演藝學院灣仔校園擴建及改善工程

5層平面圖 5/F PLAN

比例 SCALE 1:500

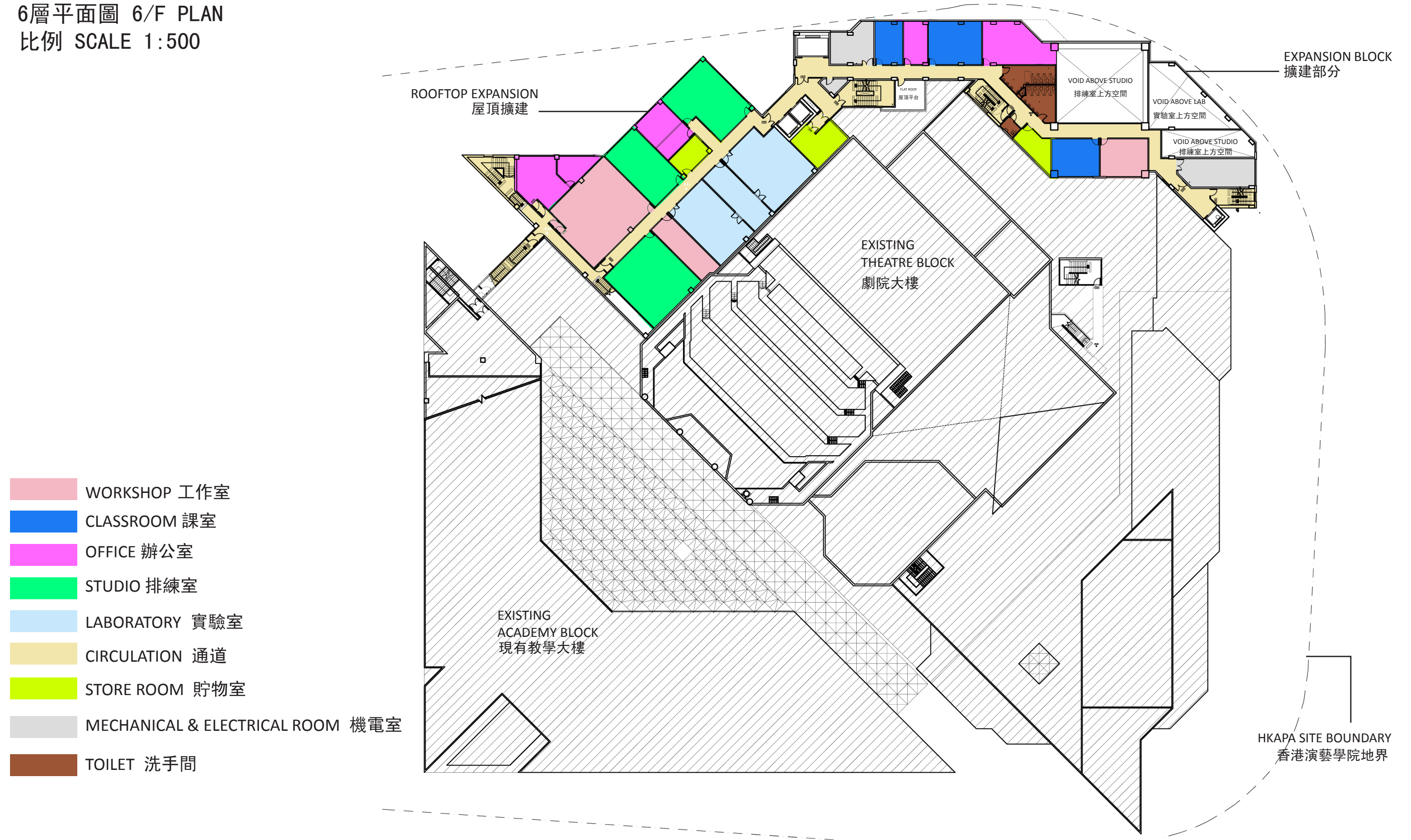


28QJ – Expansion and Improvement of Wanchai Campus of Hong Kong Academy for Performing Arts (HKAPA)

28QJ – 香港演藝學院灣仔校園擴建及改善工程

6層平面圖 6/F PLAN

比例 SCALE 1:500

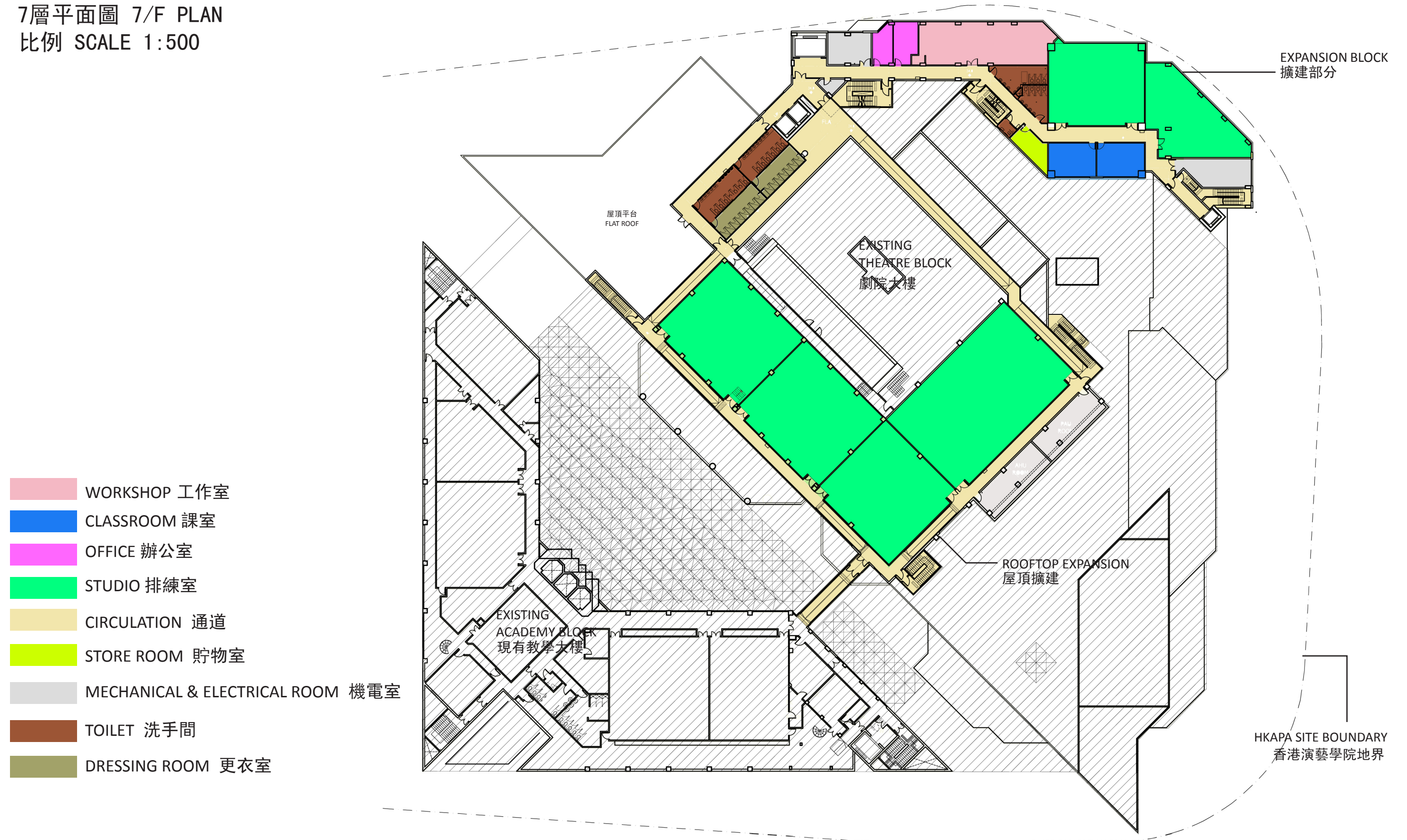


28QJ – Expansion and Improvement of Wanchai Campus of Hong Kong Academy for Performing Arts (HKAPA)

28QJ – 香港演藝學院灣仔校園擴建及改善工程

7層平面圖 7/F PLAN

比例 SCALE 1:500

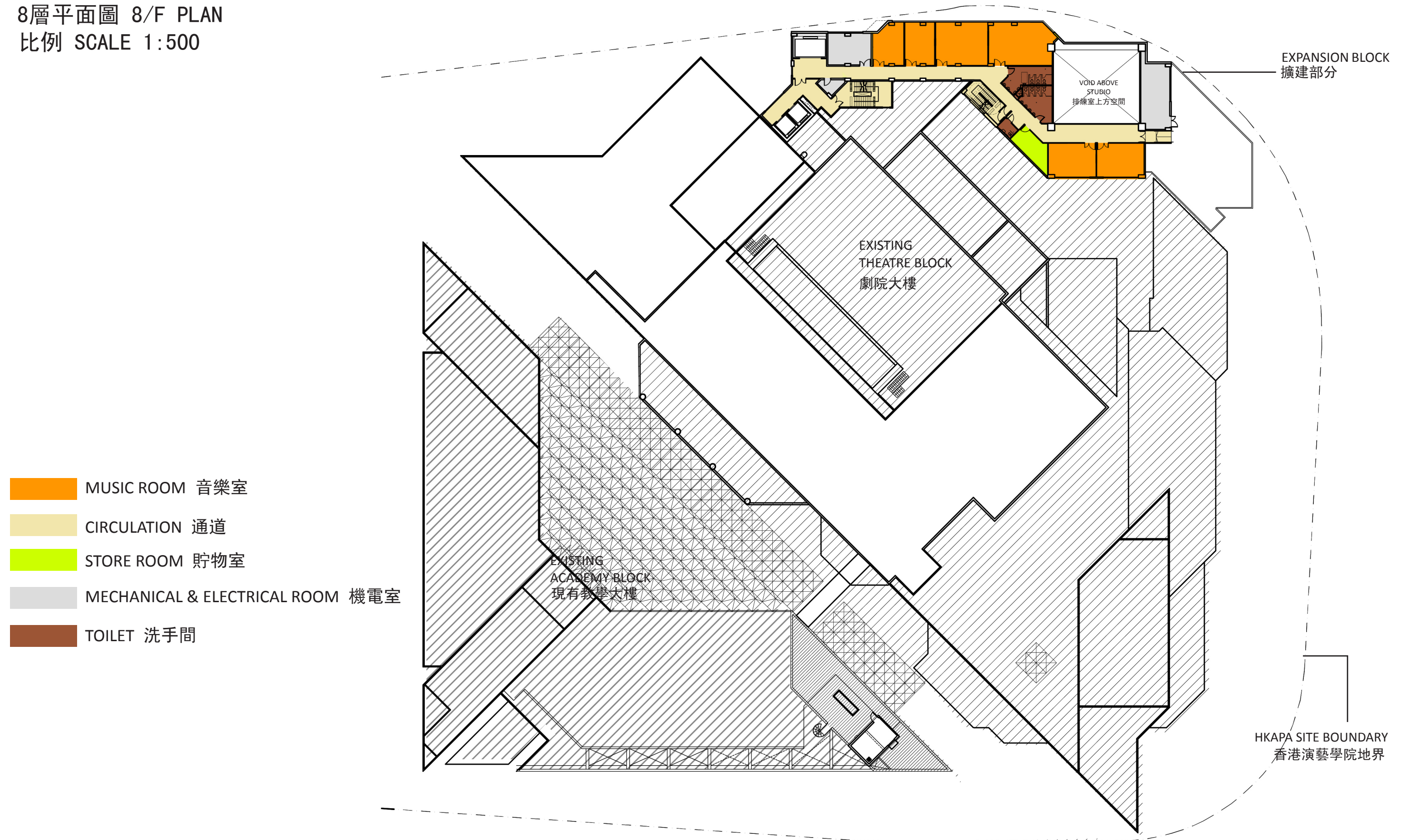


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28QJ – 香港演藝學院灣仔校園擴建及改善工程

8層平面圖 8/F PLAN

比例 SCALE 1:500

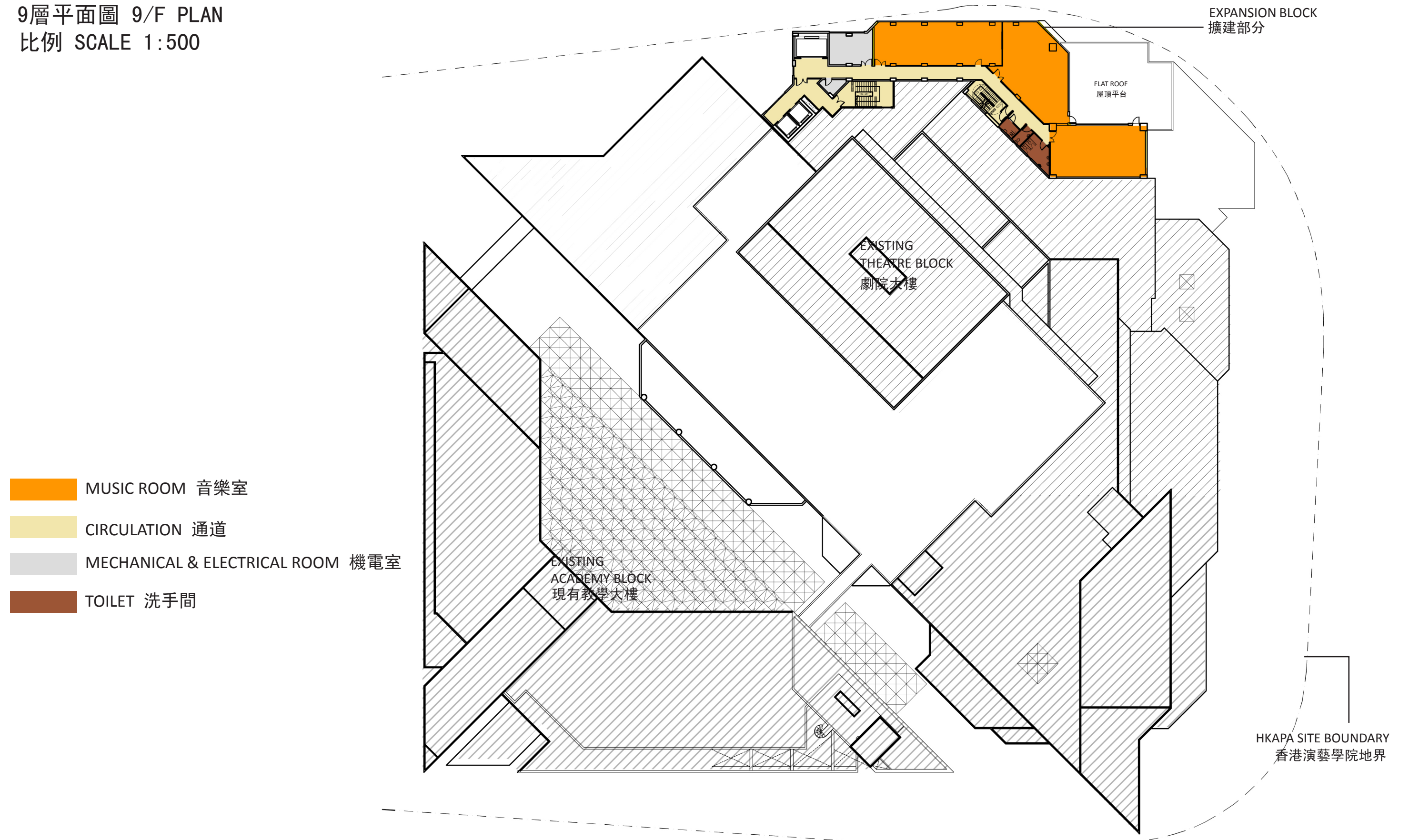


**28QJ – Expansion and Improvement of Wanchai Campus
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28QJ – 香港演藝學院灣仔校園擴建及改善工程

9層平面圖 9/F PLAN

比例 SCALE 1:500



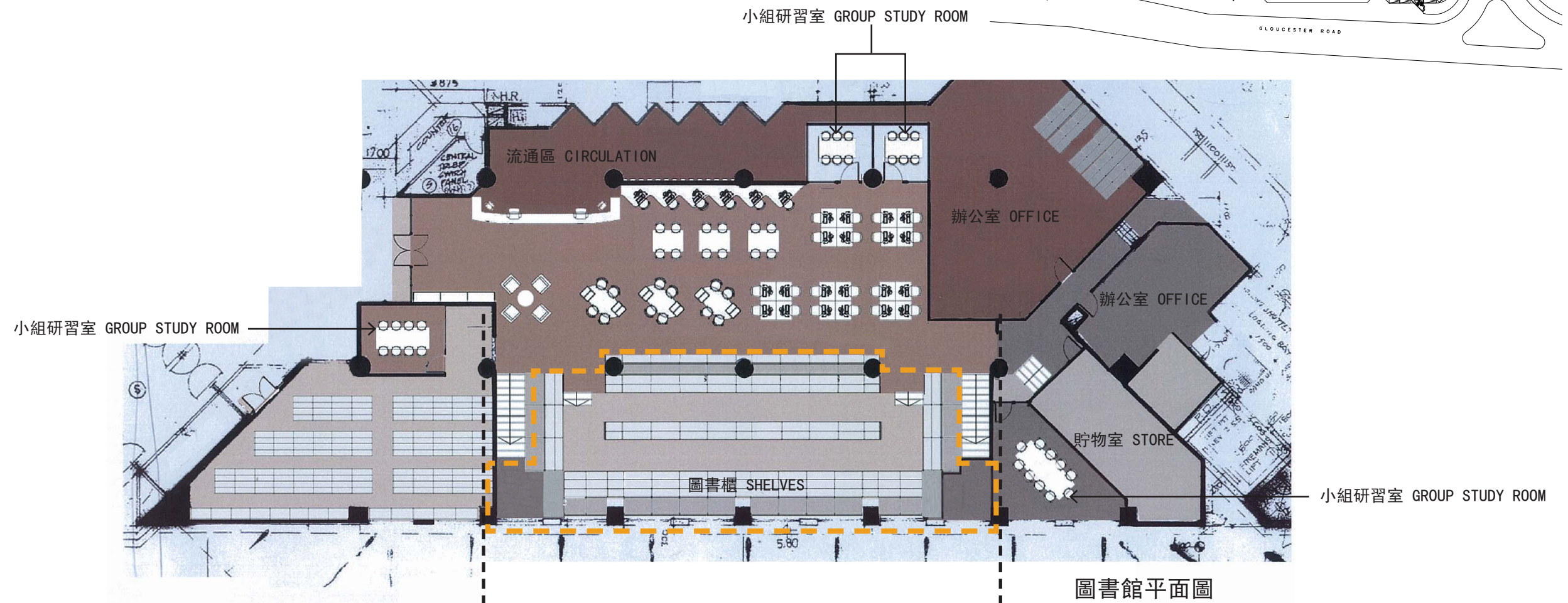
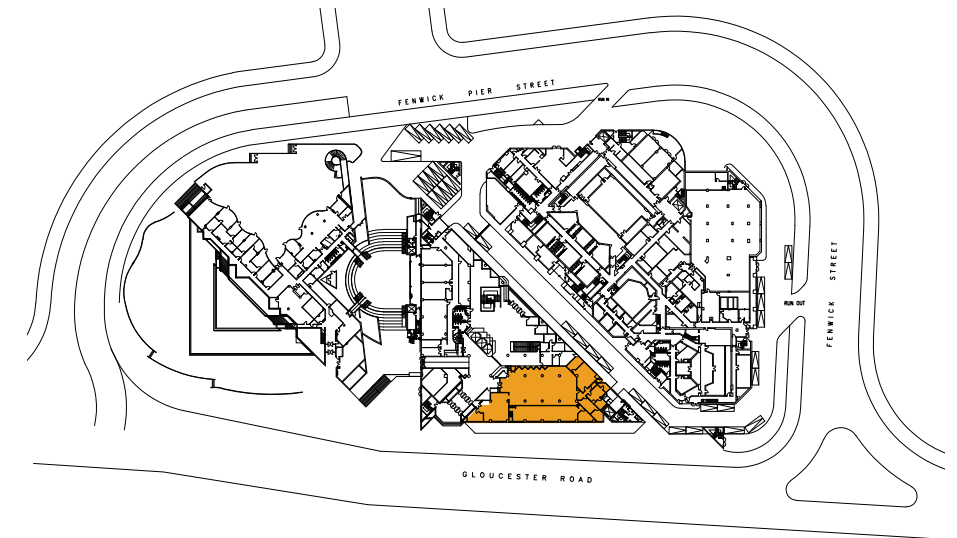
**28QJ – Expansion and Improvement of Wanchai Campus
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28QJ – 香港演藝學院灣仔校園擴建及改善工程

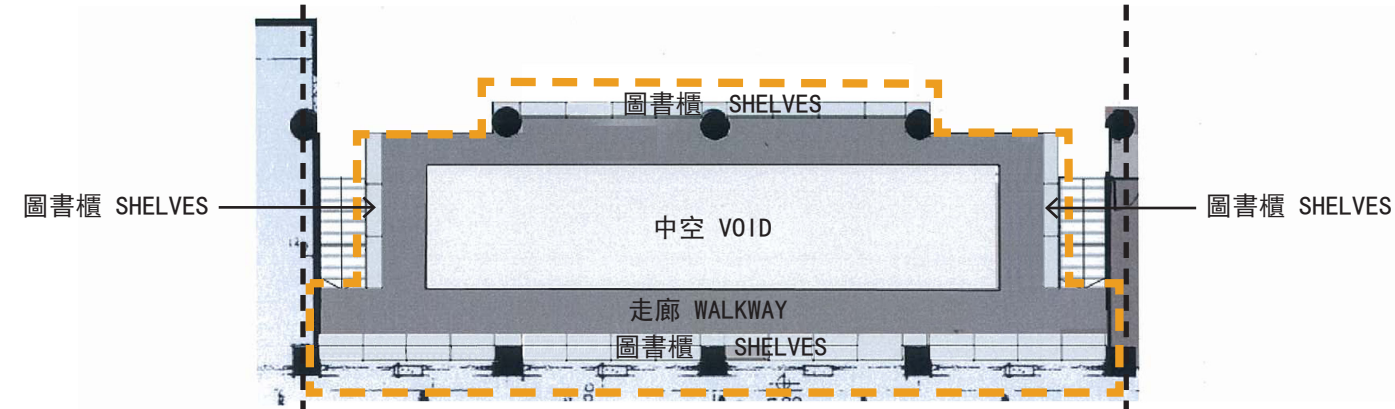
重新設計及配置後的圖書館平面圖

LAYOUT PLAN OF LIBRARY AFTER REDESIGN AND RECONFIGURATION

比例 SCALE 1:200



圖書館平面圖
LIBRARY FLOOR PLAN



圖書櫃之上方
UPPER-PART OF SHELVES

**28QJ – Expansion and Improvement of Wanchai Campus
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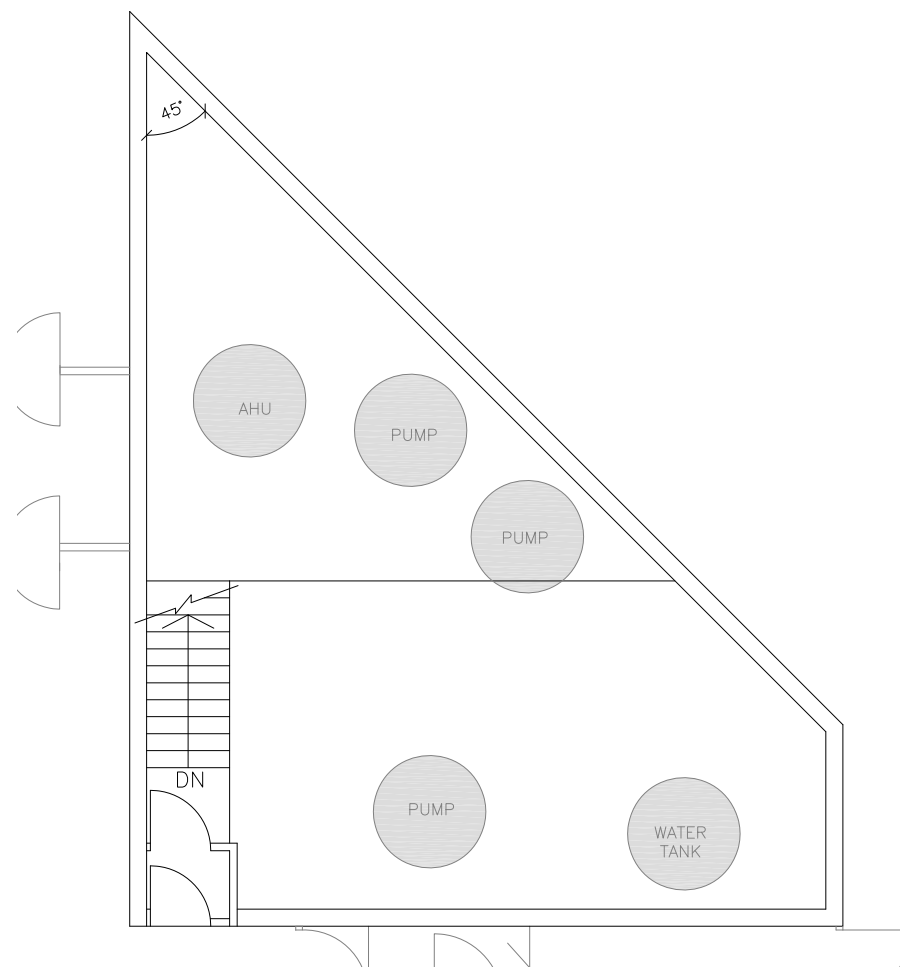
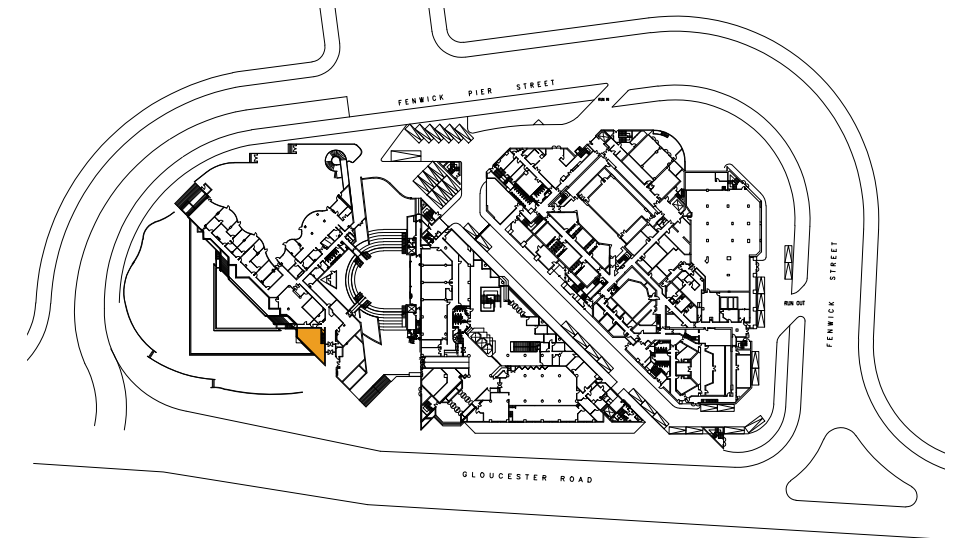
28QJ – 香港演藝學院灣仔校園擴建及改善工程

辦公室及貯物室平面圖(由噴泉泵房改建)

LAYOUT PLAN OF OFFICE AND STORAGE SPACES

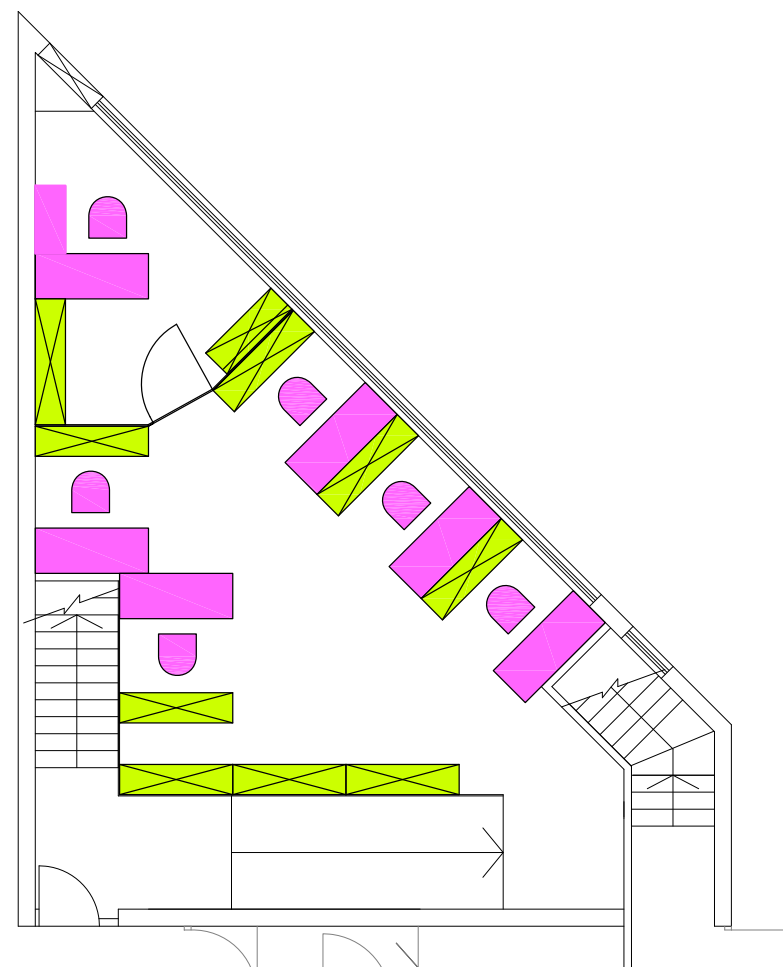
(CONVERSION OF EXISTING FOUNTAIN PUMP ROOM)

比例 SCALE 1:100



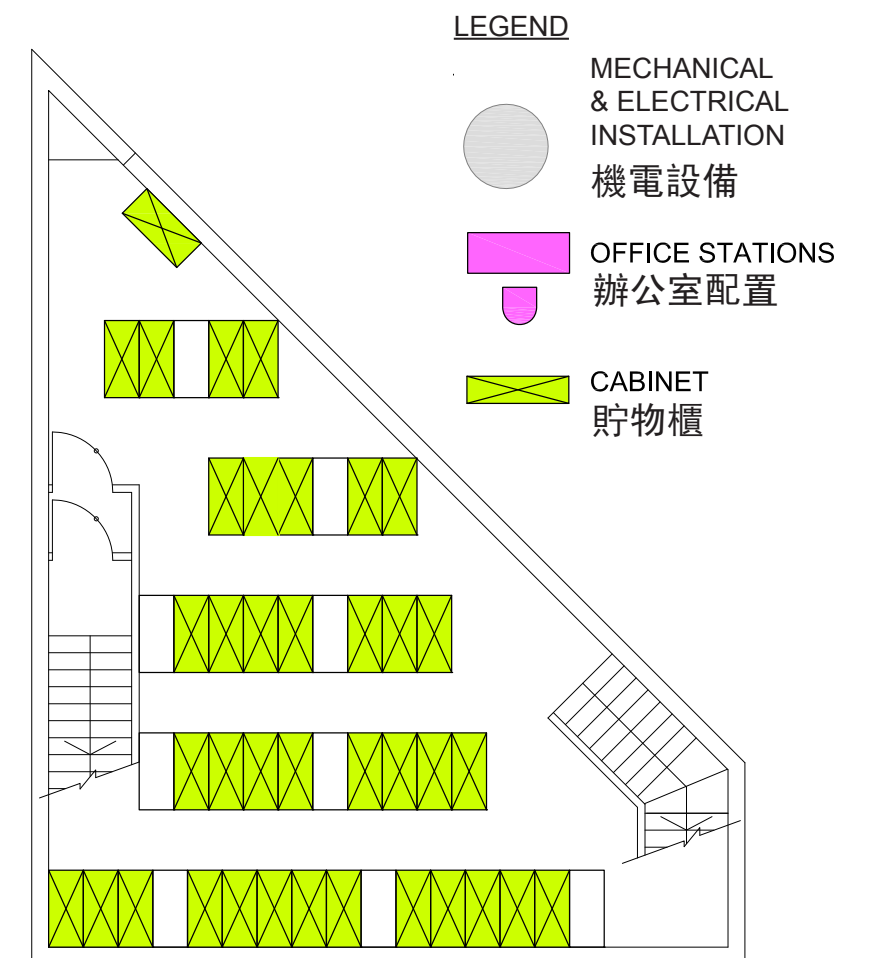
現有地庫層平面圖 (噴泉泵房)

EXISTING LAYOUT PLAN AT BASEMENT FLOOR (FOUNTAIN PUMP ROOM)



建議的地面層平面圖 (辦公室)

PROPOSED G/F LAYOUT PLAN (OFFICE)



建議的地庫層平面圖 (貯物室)

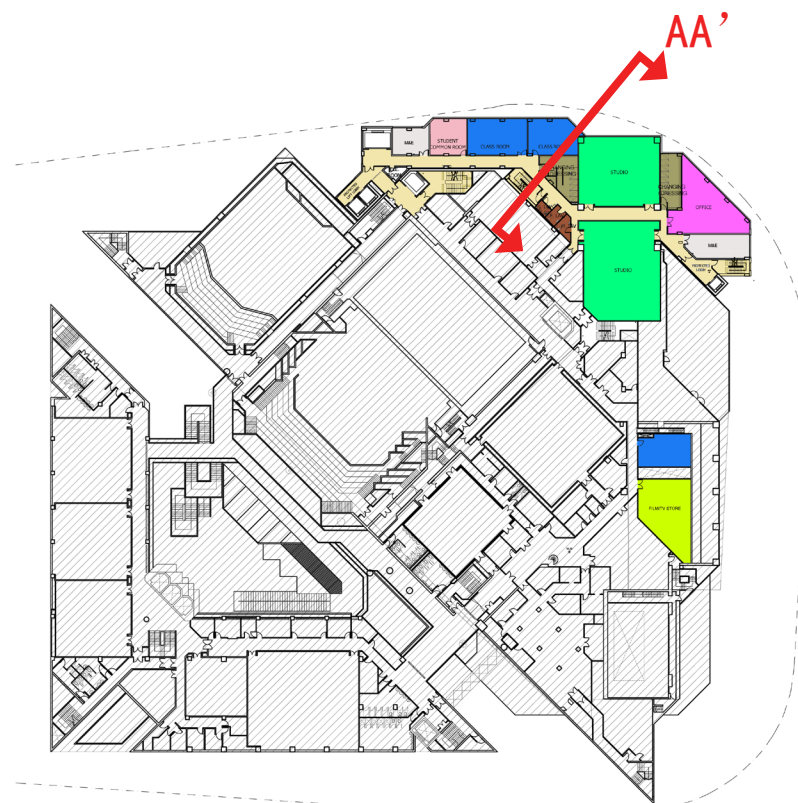
PROPOSED BASEMENT FLOOR PLAN (STORAGE)

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剖面圖AA' SECTIONAL PLAN AA'

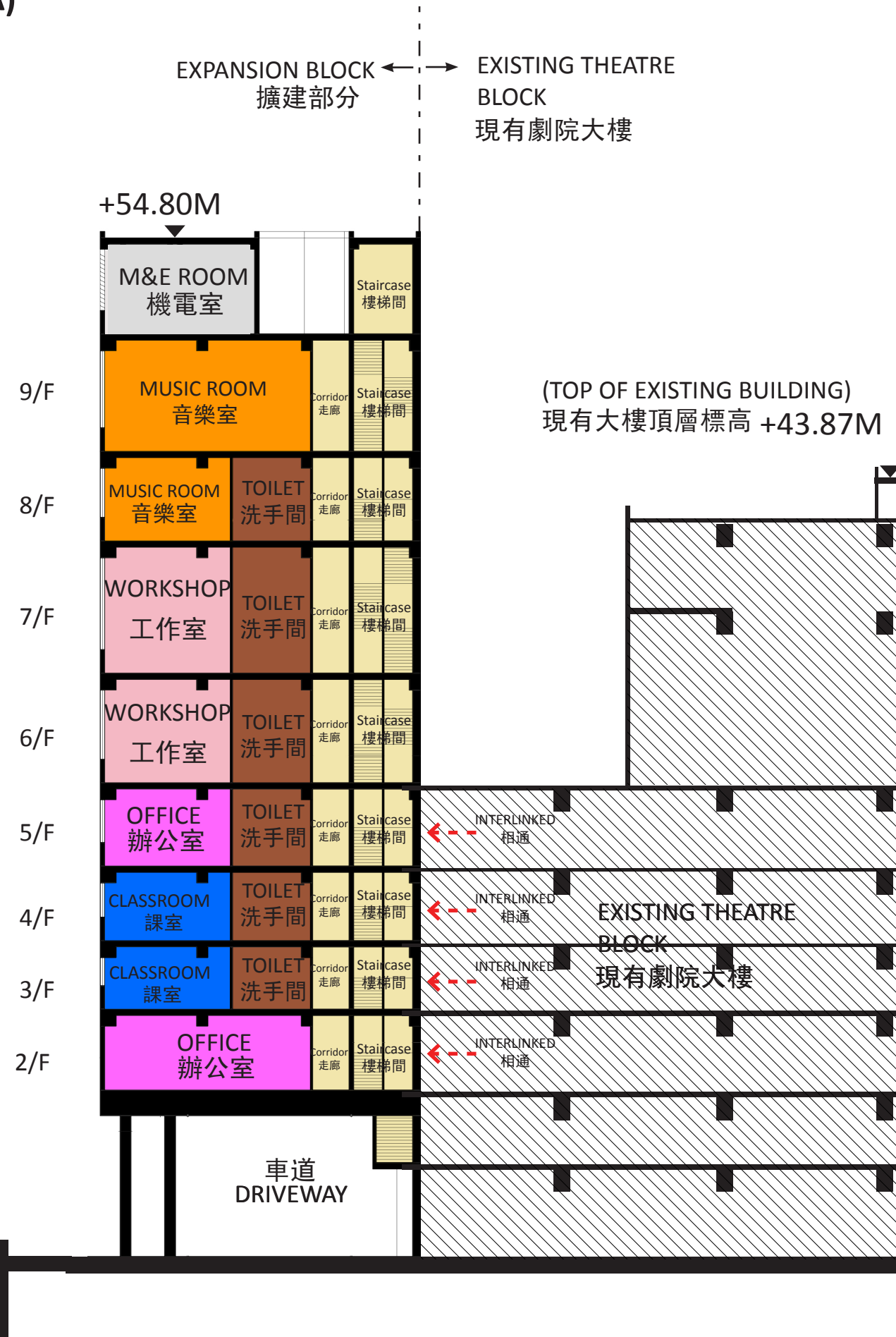
比例 SCALE 1:250



SITE BOUNDARY
基地邊界

FENWICK PIER STREET
分域碼頭街

+3.80M

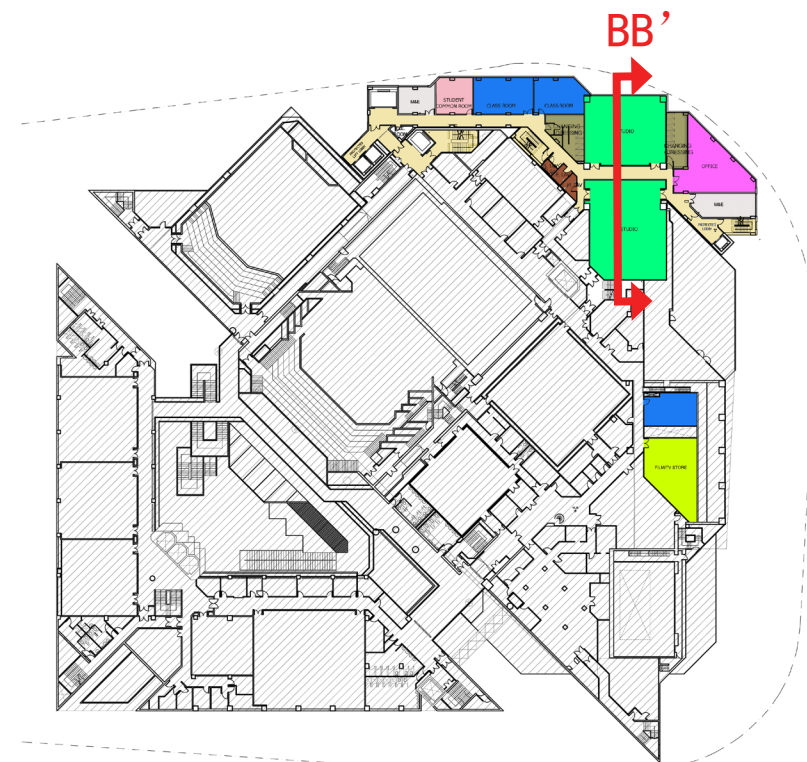


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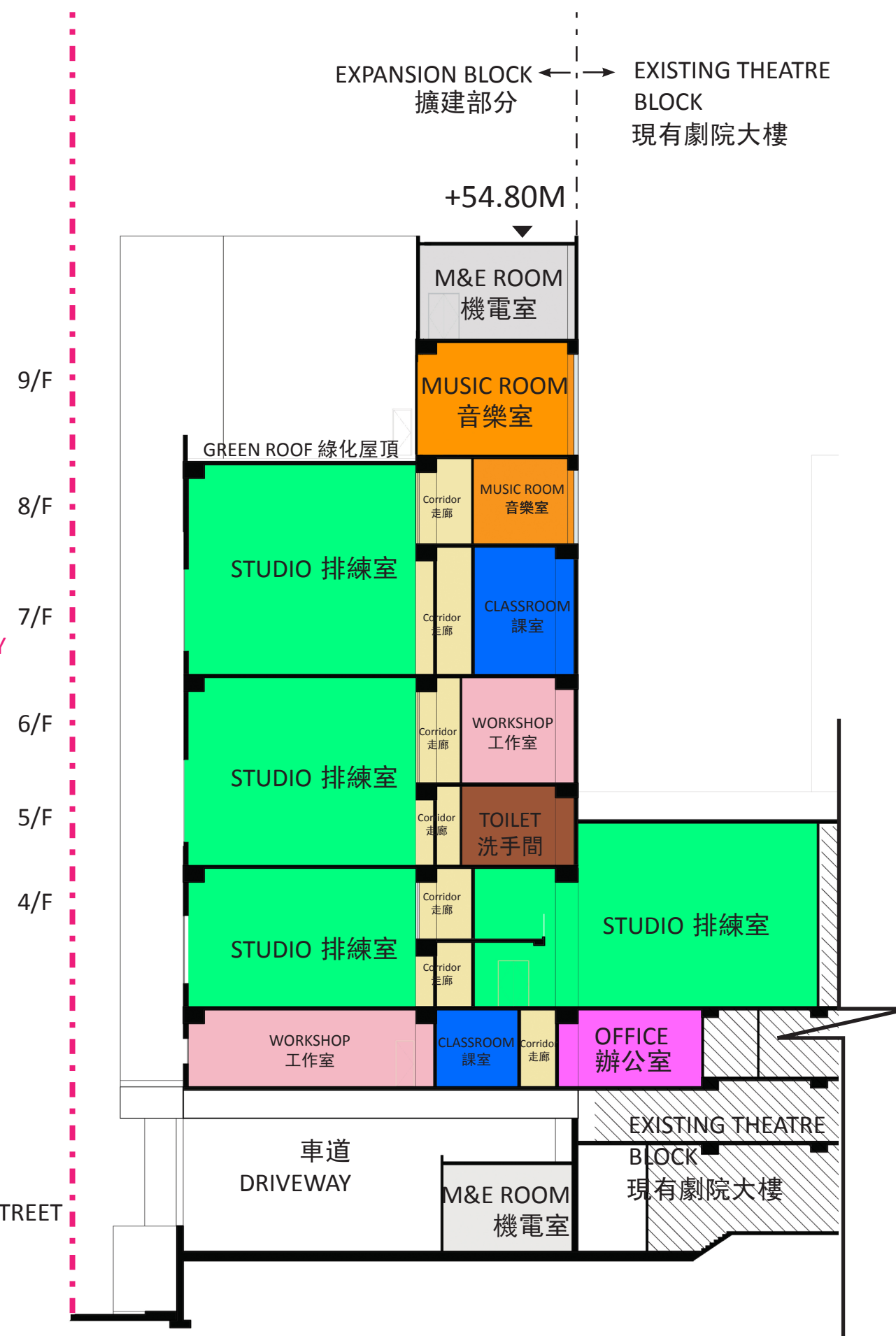
剖面圖BB' SECTIONAL PLAN BB'

比例 SCALE 1:250



SITE BOUNDARY
基地邊界

FENWICK PIER STREET
分域碼頭街



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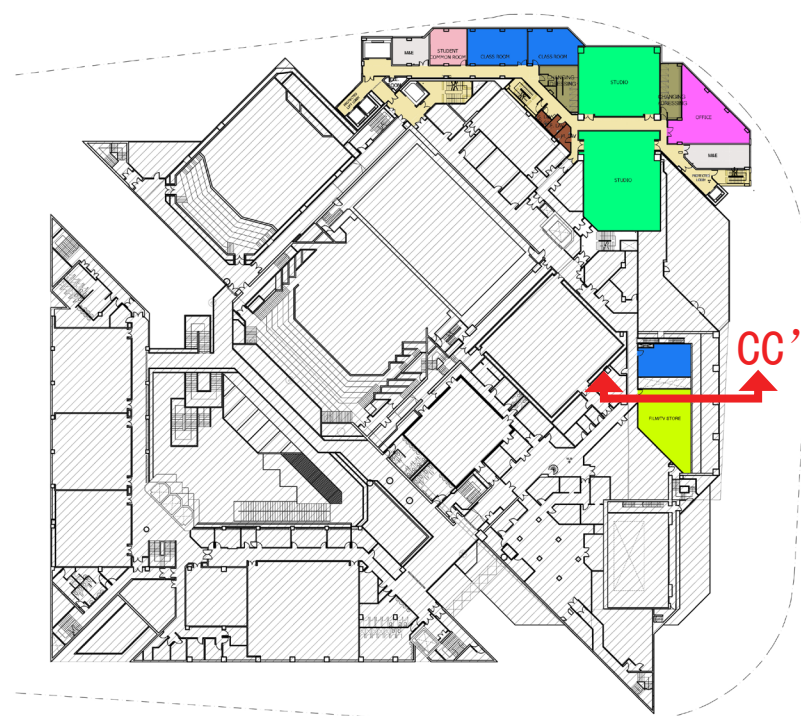
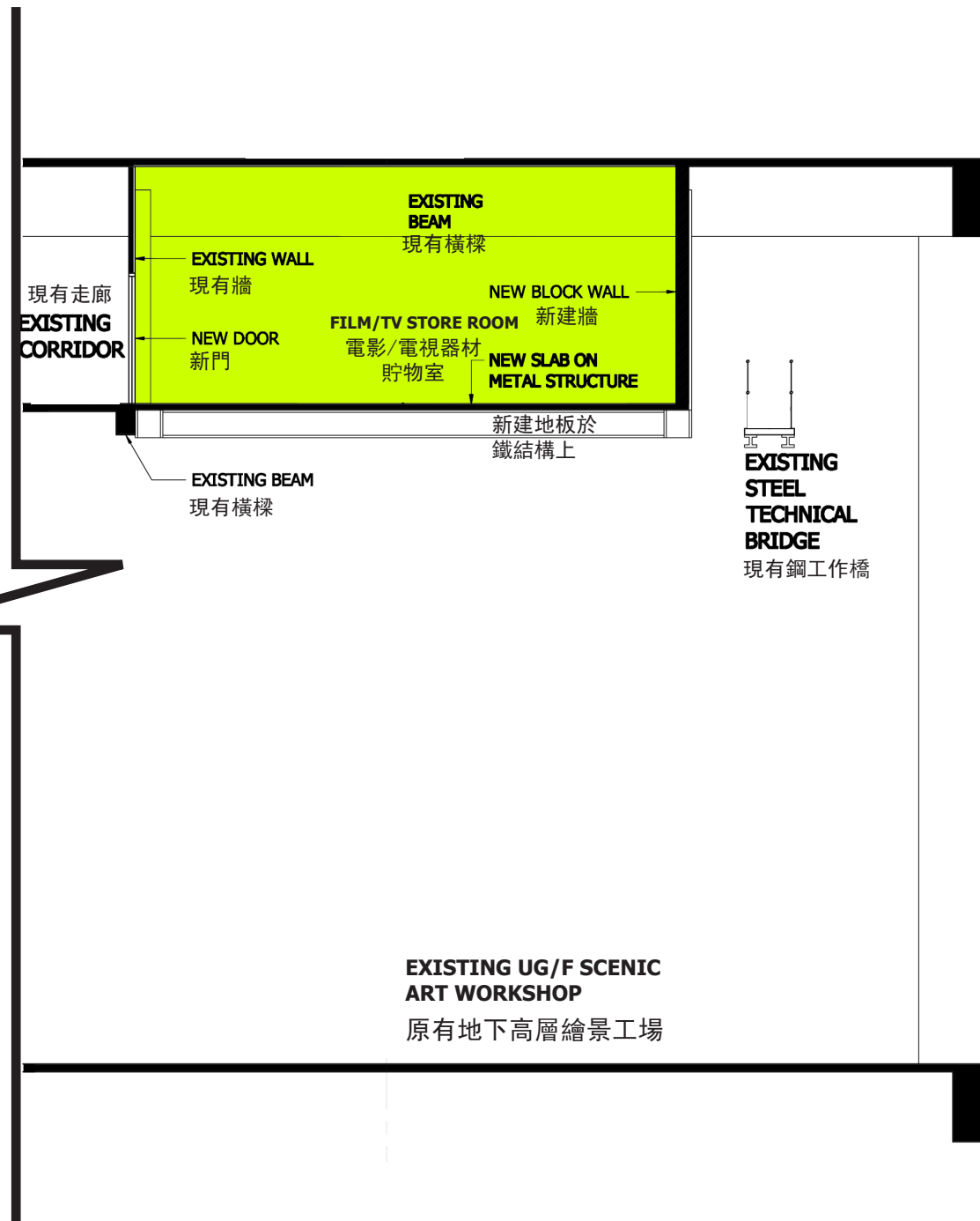
剖面圖CC' SECTIONAL PLAN CC'

比例 SCALE 1:100

4TH FLOOR
第四層

3RD FLOOR
第三層

UPPER
GROUND
FLOOR
地下高層



**28QJ – Expansion and Improvement of Wanchai Campus
of the Hong Kong Academy for Performing Arts**

List of facilities

Facilities		Estimated floor area in net operational floor area (NOFA)(m²)
(a)	Classrooms	351
(b)	Studios	1 858
(c)	Laboratories	714
(d)	Music rooms	844
(e)	Office facilities	771
(f)	Support facilities (e.g. dressing rooms, storage for equipment, musical instruments, props, etc.)	582
Total		<hr/> 5 120 <hr/>

**28QJ – Expansion and Improvement of Wanchai Campus
of the Hong Kong Academy for Performing Arts**

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2011 prices)**

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees (\$ million)
(a) Consultants' fees for contract administration ^(Note 2)	Professional	-	-	-	10.1
				Sub-total	10.1
(b) Resident site staff (RSS) costs ^(Note 3)	Technical	56	14	1.6	1.9
				Sub-total	1.9
Comprising –					
(i) Consultants' fees for management of RSS					0.2
(ii) Remuneration of RSS					1.7
Total					12.0 ^(Note 4)

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the costs of site supervision staff to be employed by the consultant. (As at now, MPS salary point 14 = \$21,175 per month.)
2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreements for the design and construction of **28QJ**. The construction phase of the assignment will only be executed subject to Finance Committee's funding approval to upgrade **28QJ** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.
4. Having examined the consultant's fees and staff costs for site supervision estimated by the HKAPA, the Director of Architectural Services considers the estimates acceptable.