

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS

Health - Clinics

72MC – Enhancement of Public Health Laboratory Centre

Members are invited to recommend to the Finance Committee the upgrading of **72MC** to Category A at an estimated cost of \$200.0 million in money-of-the-day prices.

PROBLEM

We need to enhance the existing facilities of the Public Health Laboratory Centre (PHLC) in order to keep up with the international standards in providing public health laboratory services and to deliver laboratory services with higher efficiency.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Food and Health, proposes to upgrade **72MC** to Category A at an estimated cost of \$200.0 million in money-of-the-day (MOD) prices for the alternation and improvement works of the PHLC.

PROJECT SCOPE AND NATURE

3. The project site is the existing area on the first to third floors of the PHLC located at the junction of Nam Cheong Street and Cornwall Street in Shek Kip Mei. The PHLC was built in 2001 and commissioned in 2002.

4. The proposed scope of works comprises –
- (a) alterations to the first to third floors of the PHLC so as to (i) upgrade the microbiology laboratories and its supporting facilities; (ii) relocate the Chemical Pathology and Haematology Division from Lek Yuen Health Centre in Sha Tin; and (iii) construct a pathology store; and
 - (b) improvements to the ventilation system and air conditioning installations of the laboratories on the first to the third floors of the PHLC.
5. A site and location plan, floor plans, a sectional drawing and an artist's impression of the project are at **Enclosures 1 to 6**.
6. We plan to commence the proposed works upon obtaining funding approval from the Finance Committee for target completion in around two years.

JUSTIFICATION

7. The PHLC is part of the Public Health Laboratory Services Branch (PHLSB)¹ of the Centre for Health Protection under the Department of Health (DH). The PHLSB provides clinical diagnostic and public health laboratory services to the public and private healthcare institutions in Hong Kong. PHLC has laboratories for conducting various types of tests, and accommodates their ancillary facilities. These laboratories are accredited by the International Organisation for Standardisation, and are designated by the World Health Organization (WHO) as reference laboratories for various communicable diseases including Coronavirus Disease 2019 (COVID-19). At present, the PHLC is designated as Biosafety Level 2 in accordance with the WHO Laboratory Biosafety Manual².

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¹ The PHLSB comprises three functional divisions, namely, the Microbiology Division, the Histopathology and Cytology Division and the Chemical Pathology and Haematology Division.

² According to the Manual, there are four levels of laboratory facilities. They are designated as basic – Biosafety Level 1, basic – Biosafety Level 2, containment – Biosafety Level 3, and maximum containment – Biosafety Level 4. Biosafety level designations are based on a composite of the design features, construction, containment facilities, equipment, practices and operational procedures required for working with agents from the various risk groups. The Manual is available at https://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/.

8. The PHLC has been providing safe and reliable laboratory services through its well-trained professionals. With the advancement in laboratory technology, laboratory testing has become increasingly important in tackling communicable diseases. To keep up with the international standards in providing public health laboratory services, it is essential for DH to enhance the existing facilities of the PHLC. This includes upgrading the microbiology laboratories and the supporting facilities by setting up a laboratory suite that meets Biosafety Level 3 as specified in the WHO Laboratory Biosafety Manual³.

9. As part of the enhancement, DH plans to integrate the PHLSB's services by relocating the Chemical Pathology and Haematology Division from Lek Yuen Health Centre to the PHLC and constructing a pathology store in the PHLC. Upon completion of the project, all laboratories and ancillary facilities of the PHLSB will be accommodated in the same building for optimal use of existing resources to achieve synergy. Unlike the existing anti-epidemic arrangement where PHLC officers have to offer services at various locations, the enhancement would facilitate immediate deployment and utilisation of manpower and equipment in the PHLC to tackle urgent and surging service demand arising from emerging communicable diseases in Hong Kong. Converting the existing facilities to enhance and integrate the existing laboratory services would be a more cost-effective approach than building a new laboratory centre. Any further enhancement works in light of the experience of COVID-19 will be separately initiated upon review.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the proposed works to be \$200.0 million in MOD prices, broken down as follows –

/(a) ...

³ For example, requirements meeting biosafety level 3 include: the building ventilation system must be so constructed that air from the laboratory meeting Biosafety Level 3 is not recirculated to other areas within the building; an autoclave for the decontamination of contaminated waste material should be available; manipulation of all potentially infectious material must be conducted within a biological safety cabinet or other primary containment device, etc.

		\$ million (in MOD prices)
(a)	Site works and demolition	7.8
(b)	Building	57.7
(c)	Building services	77.4
(d)	Additional energy conservation, green and recycled features	1.5
(e)	Furniture and equipment ⁴	19.3
(f)	Consultants' fees for	7.6
	(i) Contract administration	6.7
	(ii) Management of resident site staff (RSS)	0.9
(g)	Remuneration of RSS	10.6
(h)	Contingencies	18.1
Total		200.0

11. We propose to engage consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimated consultant's fees and RSS costs by man-months is at **Enclosure 7**.

12. The construction floor area (CFA) of **72MC** is about 4 860 square meters (m²). The estimated construction unit cost, represented by the building and building services costs, is \$27,798 per m² of CFA in MOD prices. We consider this unit cost comparable to that of similar projects built by the Government.

/13. ...

⁴ The estimated cost is based on an indicative list of furniture and equipment required.

13. Subject to funding approval, we plan to phase the expenditure as follows –

Year	\$ million (in MOD prices)
2021 – 2022	20.9
2022 – 2023	103.1
2023 – 2024	24.2
2024 – 2025	21.8
2025 – 2026	17.8
2026 – 2027	12.2
	<hr/> 200.0 <hr/>

14. We have 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 from 2021 to 2027. We will deliver the enhancement works through a lump sum contract as the scope of the works can be clearly defined in advance. The contract will provide for price adjustment.

15. We estimate the annual recurrent expenditure arising from this project to be \$9.5 million.

PUBLIC CONSULTATION

16. We consulted the Community Affairs Committee of the Sham Shui Po District Council (SSPDC) on the project on 11 July 2019 and a site visit was arranged to PHLC for its members on 13 August 2019. Members of SSPDC did not raise any objection to the proposal.

17. We consulted the Legislative Council Panel on Health Services on 13 December 2019. Members of the Panel supported the project.

ENVIRONMENTAL IMPLICATIONS

18. The project is not a designated project under Schedule 2 of the Environmental Impact Assessment Ordinance (Cap. 499). We completed the Preliminary Environmental Review (PER) for the project. The PER has concluded and the Director of Environmental Protection agreed with the project would not have long-term environmental impacts.

19. We will incorporate into the works contract the mitigation measures recommended in the PER to control the environmental impacts arising from the construction works to within established standards and guidelines. These measures include the use of quieter powered mechanical equipment, erection of temporary noise barrier, silencers, mufflers and temporary acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities to minimise dust generation. We have included in the project estimates the cost to implement suitable mitigation measures to control short-term environmental impacts.

20. At the planning and design stages, we have considered measures (e.g. using metal site hoardings so that these materials can be recycled or reused in other projects) to reduce generation of construction waste wherever possible. In addition, we will require the contractor to reuse inert construction waste on site or in other suitable construction sites as far as possible in order to minimise the disposal of inert construction waste at public fill reception facilities (PFRFs)⁵. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, and the use of non-timber formwork to further reduce the generation of construction waste.

21. At the construction stage, we 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. We will ensure that the day-to-day operations on site comply with the approved plan. We will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. We will control the disposal of inert and non-inert construction waste at PFRFs and landfills respectively through a trip-ticket system.

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⁵ PFRFs are specified in Schedule 4 of Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste at PFRF requires a licence issued by the Director of Civil Engineering and Development.

22. We estimate that the project will generate in total about 480 tonnes of construction waste. Of these, we will deliver about 10 tonnes (2.1%) of inert construction waste to PFRFs for subsequent reuse. We will dispose of the remaining 470 tonnes (97.9%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRFs and landfill sites is estimated to be about \$0.1 million for the project (based on a unit charge rate of \$71 per tonne for disposal at PFRFs and \$200 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

HERITAGE IMPLICATIONS

23. 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

24. The proposed project will only involve government land. No land resumption is required.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

25. This project will adopt various suitable energy efficient features, in particular –

- (a) variable speed drive for chillers; and
- (b) heat pump for space heating and dehumidification.

26. The total estimated additional cost for adoption of the above features is about \$1.5 million (including \$1.0 million for energy efficient features), which has been included in the cost estimate of the project. The energy efficient features will achieve 5.5% energy savings in the annual energy consumption with a payback period of about eight years.

BACKGROUND INFORMATION

27. We upgraded **72MC** to Category B in September 2015. We engaged consultants to undertake various services, including architectural and quantity surveying services at a total cost of about \$8.5 million. The services and works provided by the consultants were funded under block allocation Subhead **3100GX** “Project feasibility studies, minor investigations and consultants’ fee for items in Category D of the Public Works Programme”. The consultancy services commenced in March 2016 and the detailed design for the proposed works was completed in October 2019.

28. The proposed works will not involve any tree removal.

29. We estimate that the proposed works will create about 55 jobs (45 for labourers and 10 for professional or technical staff), providing a total employment of 1 150 man-months.

Food and Health Bureau
January 2021



石硤尾配水庫遊樂場
SHEK KIP MEI
SERVICE RESERVOIR
PLAYGROUND

香港浸信會區樹洪伉儷康復
護養院
HONG KONG BAPTIST MR.
& MRS. AU SHUE HUNG
REHABILITATION &
HEALTHCARE HOME

現有公共衛生檢測中心
EXISTING PUBLIC HEALTH
LABORATORY CENTRE

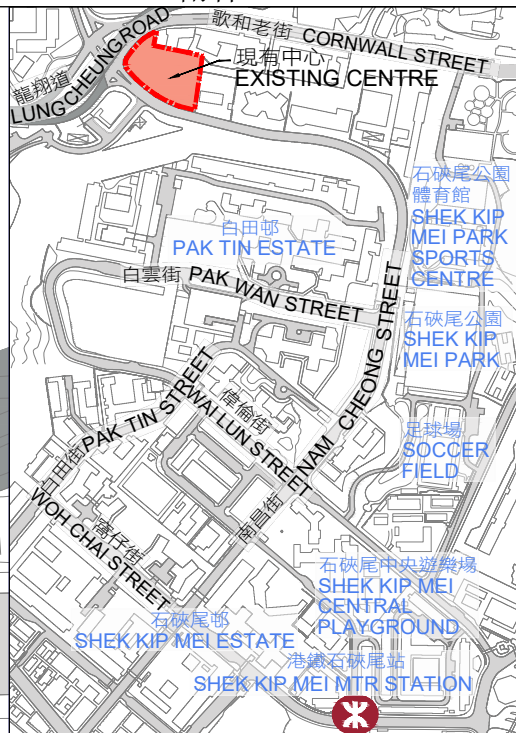
香港心理衛生會
臻和學校
MENTAL HEALTH
ASSOCIATION OF HONG
KONG CORNWALL
SCHOOL

澤安道駕駛考試中心
CHAK ON ROAD
DRIVING TEST CENTRE

石硤尾消防局
SHEK KIP MEI
FIRE STATION

圖例 LEGEND

- 地段界線
LOT BOUNDARY
- 現有地面綠化
EXISTING AT-GRADE GREENING
- 現有車輛出入口
EXISTING VEHICULAR INGRESS / EGRESS
- 現有行人出入口
EXISTING PEDESTRIAN ENTRANCE / EXIT
- 現有無障礙出入口
EXISTING BARRIER-FREE ENTRANCE / EXIT
- 小巴士
MINIBUS STOP
- 現有行人過路線
EXISTING AT-GRADE PEDESTRIAN CROSSING



位置圖
LOCATION PLAN



位置圖
LOCATION PLAN

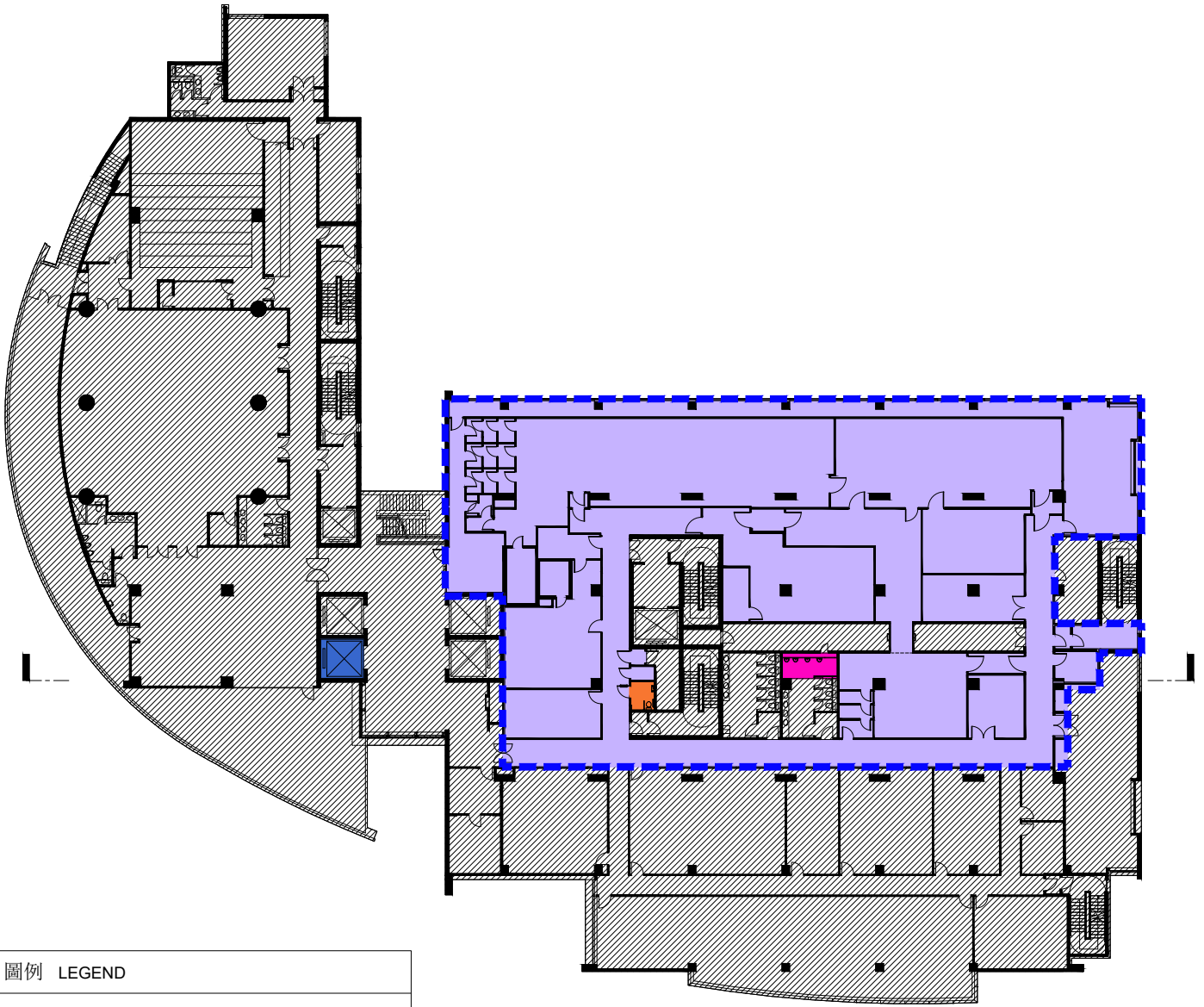


工地平面圖
SITE PLAN

72MC
提升公共衛生檢測中心設施工程
ENHANCEMENT OF PUBLIC HEALTH LABORATORY CENTRE



ARCHITECTURAL
SERVICES
DEPARTMENT 建築署



圖例 LEGEND

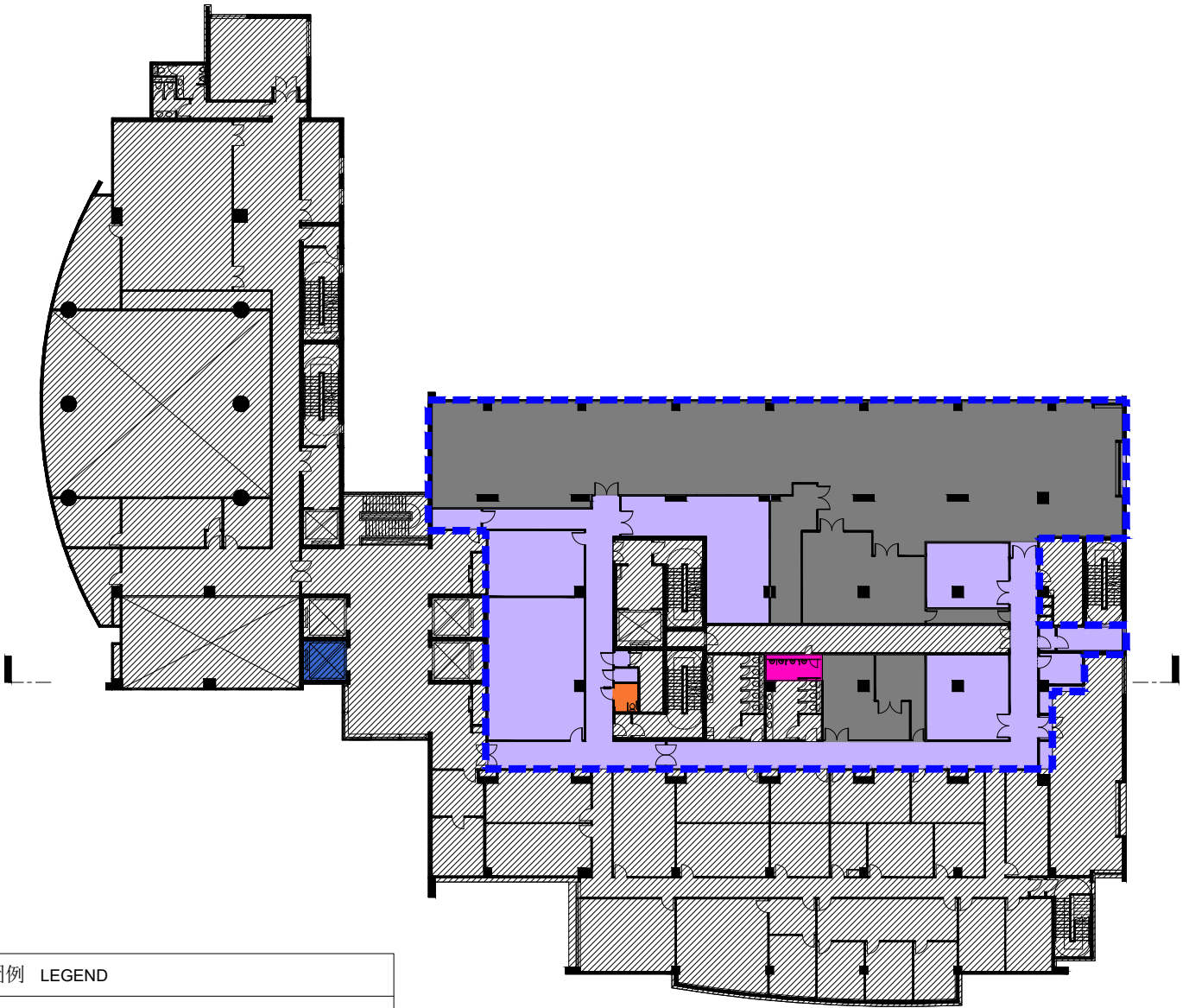
-  施工區域
WORKS AREA
-  現有暢通易達升降機
EXISTING ACCESSIBLE LIFT
-  辦公室/化驗室/貯存室
OFFICE / LABORATORY / STORE ROOM
-  暢通易達洗手間
ACCESSIBLE TOILET
-  洗手間
TOILET
-  非改建範圍
NON-RENOVATED AREA

一樓
平面圖
FIRST FLOOR
PLAN








72MC
提升公共衛生檢測中心設施工程
ENHANCEMENT OF PUBLIC HEALTH LABORATORY CENTRE



ARCHITECTURAL
SERVICES
DEPARTMENT 建築署



圖例 LEGEND

-  施工區域
WORKS AREA
-  現有暢通易達升降機
EXISTING ACCESSIBLE LIFT
-  辦公室/化驗室/貯存室
OFFICE / LABORATORY / STORE ROOM
-  暢通易達洗手間
ACCESSIBLE TOILET
-  洗手間
TOILET
-  機電房
PLANT ROOM
-  非改建範圍
NON-RENOVATED AREA

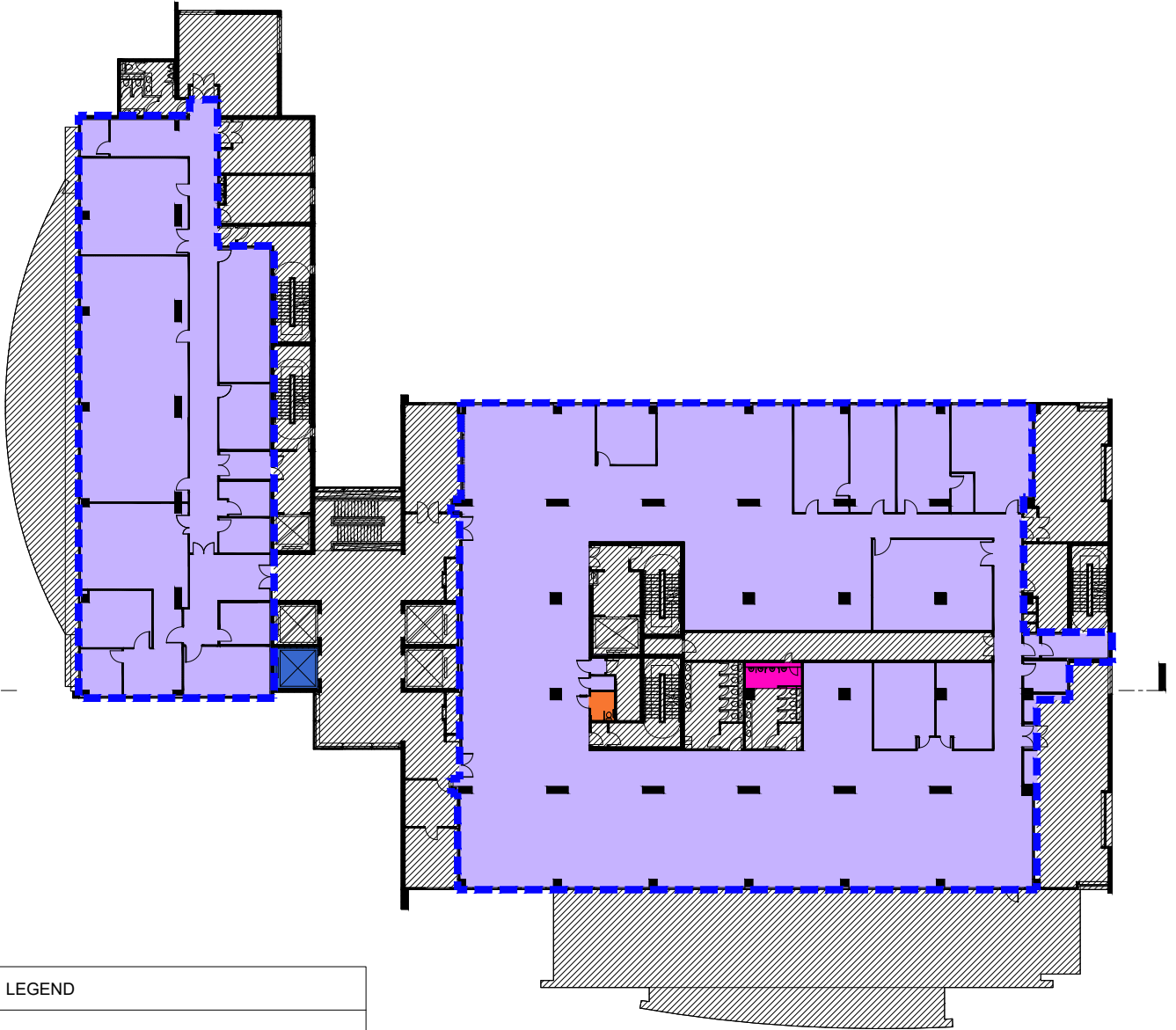
5m 0 10m

二樓
平面圖
SECOND FLOOR
PLAN

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提升公共衛生檢測中心設施工程
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圖例 LEGEND

-  施工區域
WORKS AREA
-  現有暢通易達升降機
EXISTING ACCESSIBLE LIFT
-  辦公室/化驗室/貯存室
OFFICE / LABORATORY / STORE ROOM
-  暢通易達洗手間
ACCESSIBLE TOILET
-  洗手間
TOILET
-  非改建範圍
NON-RENOVATED AREA

5m 0 10m

三樓
平面圖
THIRD FLOOR
PLAN

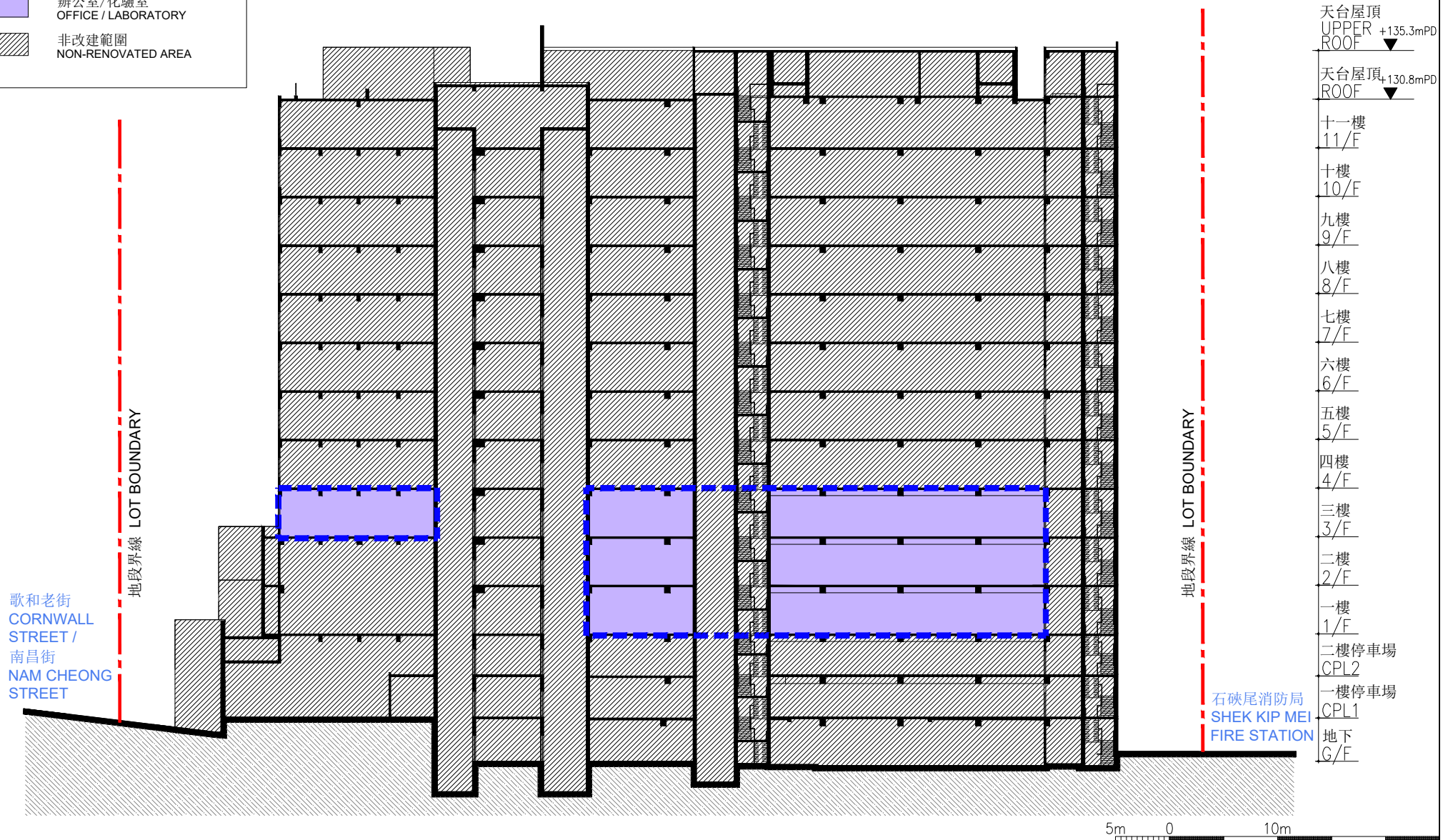
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圖例 LEGEND

-  施工區域
WORKS AREA
-  辦公室/化驗室
OFFICE / LABORATORY
-  非改建範圍
NON-RENOVATED AREA



- 天台屋頂
UPPER ROOF +135.3mPD
- 天台屋頂
ROOF +130.8mPD
- 十一樓
11/F
- 十樓
10/F
- 九樓
9/F
- 八樓
8/F
- 七樓
7/F
- 六樓
6/F
- 五樓
5/F
- 四樓
4/F
- 三樓
3/F
- 二樓
2/F
- 一樓
1/F
- 二樓停車場
CPL2
- 一樓停車場
CPL1
- 地下
G/F

歌和老街
CORNWALL
STREET /
南昌街
NAM CHEONG
STREET

石硤尾消防局
SHEK KIP MEI
FIRE STATION

5m 0 10m

剖面圖
SECTION

72MC
提升公共衛生檢測中心設施工程
ENHANCEMENT OF PUBLIC HEALTH LABORATORY CENTRE



ARCHITECTURAL
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DEPARTMENT 建築署



擬建化驗室的構思透視圖

PERSPECTIVE VIEW OF THE LABORATORY (ARTIST'S IMPRESSION)

構思圖
ARTIST'S
IMPRESSION

72MC
提升公共衛生檢測中心設施工程
ENHANCEMENT OF PUBLIC HEALTH LABORATORY CENTRE

Enclosure 7 to PWSC(2020-21)28

72MC – Enhancement of Public Health Laboratory Centre

**Breakdown of the estimates for consultants' fees and resident site staff costs
(in September 2020 prices)**

		Estimated man-months	Average MPS* salary point	Multiplier <small>(Note 1)</small>	Estimated fee (\$ million)
(a) Consultants' fees for contract administration <small>(Note 2)</small>	Professional	–	–	–	5.6
	Technical	–	–	–	0.3
				Sub-total	<hr/> 5.9#
(b) Resident site staff (RSS) costs <small>(Note 3)</small>	Professional	–	–	–	–
	Technical	204	14	1.6	9.9
				Sub-total	<hr/> 9.9
Comprising -					
(i) Consultants' fees for management of RSS				0.7#	
(ii) Remuneration of RSS				9.2#	
				Total	<hr/> 15.8 <hr/>

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS salary point to estimate the cost of RSS supplied by the consultants (as at now, MPS salary point 14 = \$30,235 per month).
2. The consultants' fees for contract administration is calculated in accordance with the existing consultancy agreement for provision of contract administration and site supervision of **72MC**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **72MC** to Category A.
3. The consultants' staff cost for site supervision is based on the estimate prepared by the Director of Architectural Services. We will only know the actual man-months and actual costs after completion of the construction works.

Remarks

The cost figures in this Enclosure are shown in constant prices to correlate with the MPS salary point of the same year. The figures marked with # are shown in money-of-the-day prices in paragraph 10 of the main paper.