For discussion **PWSC(2021-22)24**
on 16 June 2021

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS
Education – Primary
356EP – A 30-classroom primary school in Tsuen Wan West Station (TW7) Development, Tsuen Wan

Members are invited to recommend to the Finance Committee the upgrading of **356EP** to Category A at an estimated cost of $392.8 million in money-of-the-day prices.

PROBLEM

We need to construct a primary school in Tsuen Wan West Station (TW7) Development, Tsuen Wan (i.e. Wing Shun Street, Tsuen Wan) for the reprovisioning of The Church of Christ in China Chuen Yuen First Primary School (CYFPS).

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education, proposes upgrading **356EP** to Category A at an estimated cost of $392.8 million in money-of-the-day (MOD) prices for the construction of a primary school premises at Wing Shun Street, Tsuen Wan for the reprovisioning of CYFPS.

/PROJECT …..

PROJECT SCOPE AND NATURE

3. The proposed scope of works of the project includes the construction of a primary school with the following facilities —

(a) 30 classrooms;

(b) six special rooms, comprising a music room, a visual arts room, a general studies room, a multi-purpose room, a computer assisted learning room and a language room;

(c) four small group teaching rooms;

(d) a guidance activity room;

(e) two interview rooms;

(f) a staff room and a staff common room;

(g) a student activity centre;

(h) a conference room;

(i) a library;

(j) an assembly hall;

(k) multi-purpose areas;

(l) a covered playground;

(m) two basketball courts;

(n) a running track[1]; and

(o) ancillary facilities including an accessible/fireman's lift, facilities for the disabled, a tuck shop-cum-central portioning area, stores and toilets, etc.

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[1] A 35-metre running track will be provided to make optimal use of campus space.

4. The proposed new school premises, with a site area of about 5 800 square metres (m^2), will meet the planning target of providing 2 m^2 of open space per student. Parking spaces for private cars, lay-bys for taxis/private cars and school buses will also be provided within the new school premises. The site and location plan, floor plans, sectional drawings, an artist's impression, and the plan of barrier-free access for the project are at **Enclosures 1 to 5** respectively.

5. We plan to commence the proposed works upon obtaining funding approval from the Finance Committee for target completion in around three years.

JUSTIFICATION

6. At present, there are about 900 public sector schools in the territory. Their premises were built in different periods in accordance with the building standards at the time of construction, and facilities in the premises vary. While the standards have been changing over the years, existing school premises in operation are required to comply with the prevailing statutory requirements. As at May 2021, about 200 of them were built according to the prevailing standards.

7. It is the Government's plan to, based on the needs of individual schools, improve the physical conditions and facilities of school premises not built according to the prevailing standards, through reprovisioning or in-situ redevelopment projects. CYFPS, currently occupying a site area of about 600 m^2 at Tai Uk Street, Tsuen Wan, was built in 1960. The school has only 9 classrooms, and other existing facilities such as the computer-assisted learning room, covered playground, basketball court, staff room and general office are undersized according to the prevailing standards. Due to site constraints, the school does not have the additional space required for infrastructure upgrading or in-situ redevelopment. Reprovisioning is considered the most effective way to upgrade the facilities of the school and improve the learning and teaching environment.

8. Upon completion of the proposed capital works project, CYFPS, which currently operates 9 classes, may operate up to 30 classes in the new school premises, subject to the actual enrolment and operational needs. This reprovisioning project will help address the demand for school places in the concerned school net.

/9. …..

9. CYFPS shall cease to occupy and voluntarily relinquish possession of its existing school premises at Tai Uk Street, Tsuen Wan upon reprovisioning. The Education Bureau (EDB) would, in accordance with its policy objective to put vacant school premises (VSP) to gainful use, assess the suitability of the former premises of CYPFS for school or other educational uses having regard to factors including the size, location, physical conditions, etc., of the relevant premises, as well as the educational needs and relevant policy measures. When the EDB confirms that the VSP is not required to be retained for school use, the EDB will, in accordance with the Central Clearing House Mechanism, inform the Planning Department (PlanD) and other relevant departments (such as the Lands Department and the Housing Department) for PlanD's consideration of suitable alternative long-term use. Separately, as at end-February 2021, there is no VSP under EDB's purview in Tsuen Wan District.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the project to be $392.8 million in MOD prices, broken down as follows —

		$million (in MOD prices)
(a)	Site works	3.4
(b)	Foundation	10.7
(c)	Building[2]	179.0
(d)	Building services	94.8
(e)	Drainage	9.7
(f)	External works	27.1
(g)	Additional energy conservation, green and recycled features	4.5

/(h) …..

[2] Building works cover construction of substructure and superstructure of the building.

			$million (in MOD prices)
(h)	Furniture and equipment (F&E)[3]		2.8
(i)	Consultants' fees for		8.9
	(i) contract administration	7.8	
	(ii) management of resident site staff (RSS)	1.1	
(j)	Remuneration of RSS		16.2
(k)	Contingencies		35.7
	Total		392.8

11. We propose engaging consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimate for consultants' fees and RSS costs by man-months is at **Enclosure 6**. The construction floor area (CFA) of the project is about 11 396 m^2. The estimated construction unit cost, represented by the building and building services costs, is $24,026 per m^2 of CFA in MOD prices. This unit cost is comparable to that of similar projects built by the Government.

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

Year	**$ million (in MOD prices)**
2021 – 22	10.5
2022 – 23	82.3

/**Year** …..

[3] The estimated cost of F&E is prepared with reference to the F&E reference list provided by EDB for a new 30-classroom primary school adopting the standard schedule of accommodation. The actual cost will be subject to a survey on the conditions of the existing F&E.

Year	$ million (in MOD prices)
2023 – 24	109.5
2024 – 25	102.8
2025 – 26	38.1
2026 – 27	33.2
2027 – 28	16.4
	392.8

13. 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 2021 to 2028. We will deliver the construction works through a lump-sum contract because we can clearly define the scope of the works in advance. The contract will provide for price adjustment.

14. The cost of F&E for the project, estimated to be about $2.8 million (in MOD prices), will be borne by the Government according to the existing policy. We estimate the annual recurrent expenditure to be $52.8 million upon full commissioning of the new school premises.

PUBLIC CONSULTATION

15. The Social Services and Community Development Committee of the Tsuen Wan District Council has been informed of the progress of this reprovisioning project. The Committee did not raise any objection to the project.

16. We consulted the Legislative Council Panel on Education on 5 February 2021. The Panel supported the project and did not raise any objection to the submission of the funding proposal to the Public Works Subcommittee.

/ENVIRONMENTAL …..

ENVIRONMENTAL IMPLICATIONS

17. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We completed a Preliminary Environmental Review (PER) in December 2020. The PER recommended the installation of insulated windows for noise sensitive rooms exposed to traffic noise exceeding the limits set out in the Hong Kong Planning Standards and Guidelines, in addition to the standard provision of air-conditioning for all standard teaching facilities. With such mitigation measures in place, the project will not be exposed to long-term environmental impacts. We have included in the project estimates the cost to implement these mitigation measures.

18. During construction, we 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 measures include the use of silencers, mufflers, acoustic linings or shields and the building of barrier walls for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities to prevent dust nuisance.

19. At the planning and design stages, we have considered measures to reduce the generation of construction waste where possible (e.g. using metal site hoardings and signboards so that these materials can be recycled or reused in other projects). In addition, we 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 minimise the disposal of inert construction waste at public fill reception facilities (PFRFs)[4]. 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.

20. At the construction stage, we will require the contractor to submit a plan setting out the waste management measures for Government's approval, 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 construction waste from non-inert construction waste on site for disposal at

/appropriate …..

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

appropriate facilities. We will control the disposal of inert and non-inert construction waste at PFRFs and landfills respectively through a trip-ticket system.

21. We estimate that the project will generate in total about 8 450 tonnes of construction waste. Of these, we will reuse about 1 050 tonnes (12.4%) of inert construction waste on site and deliver 6 210 tonnes (73.5%) of inert construction waste to PFRFs for subsequent reuse. We will dispose of the remaining 1 190 tonnes (14.1%) of non-inert construction waste at landfills. The total cost for disposal of construction waste at PFRFs and landfill sites is estimated to be $0.7 million for this project (based on an 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

22. This 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. This project does not involve resumption of private land.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

24. This project will adopt various forms of energy efficient features and renewable energy technologies, in particular -

(a) heat recovery fresh air pre-conditioners in the air-conditioned space for heat energy reclaim of exhaust air;

(b) photovoltaic system; and

(c) light tubes.

25. For greening features, there will be landscaping, vertical greening and green roof at appropriate areas for environmental and amenity benefits.

26. For recycled features, we will adopt a rainwater harvesting system for landscape irrigation with a view to conserving water.

27. The total estimated additional cost for adoption of the above features is around $4.5 million (including $0.7 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 6.0% energy savings in the annual energy consumption with a payback period of about ten years.

BACKGROUND INFORMATION

28. We upgraded **356EP** to Category B in September 2016. We engaged term contractor to undertake ground investigation, and consultants to undertake various services at a total cost of about $9.8 million. The services and works provided by the consultants were funded under block allocation **Subhead 3100GX** "Project feasibility studies, minor investigations and consultants' fees for items in Category D of the Public Works Programme". The term contractor and consultants have completed all the above consultancy services and works.

29. There is one tree within the project boundary, which is not an important tree[5]. The proposed works will not involve any tree removal proposal. We will incorporate planting proposals as part of the project, including the planting of about 13 trees, 6 894 shrubs, 428 climbers, 7 968 groundcovers, and 319 m^2 of grassed area.

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[5] "Important trees" refer to trees in the Register of Old and Valuable Trees, or any other trees that meet one or more of the following criteria –

(a) trees of 100 years old or above;

(b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;

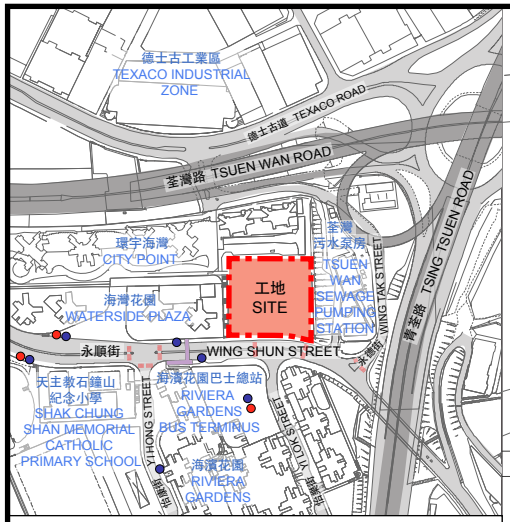
(c) trees of precious or rare species;

(d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or

(e) trees with trunk diameter equal or exceeding 1.0 metre (measured at 1.3 metres above ground level), or with height/canopy spread equal or exceeding 25 metres.

30. We estimate that the proposed works will create about 120 jobs (105 for labourers and 15 for professional or technical staff) providing a total employment of 2 640 man-months.

Education Bureau
June 2021

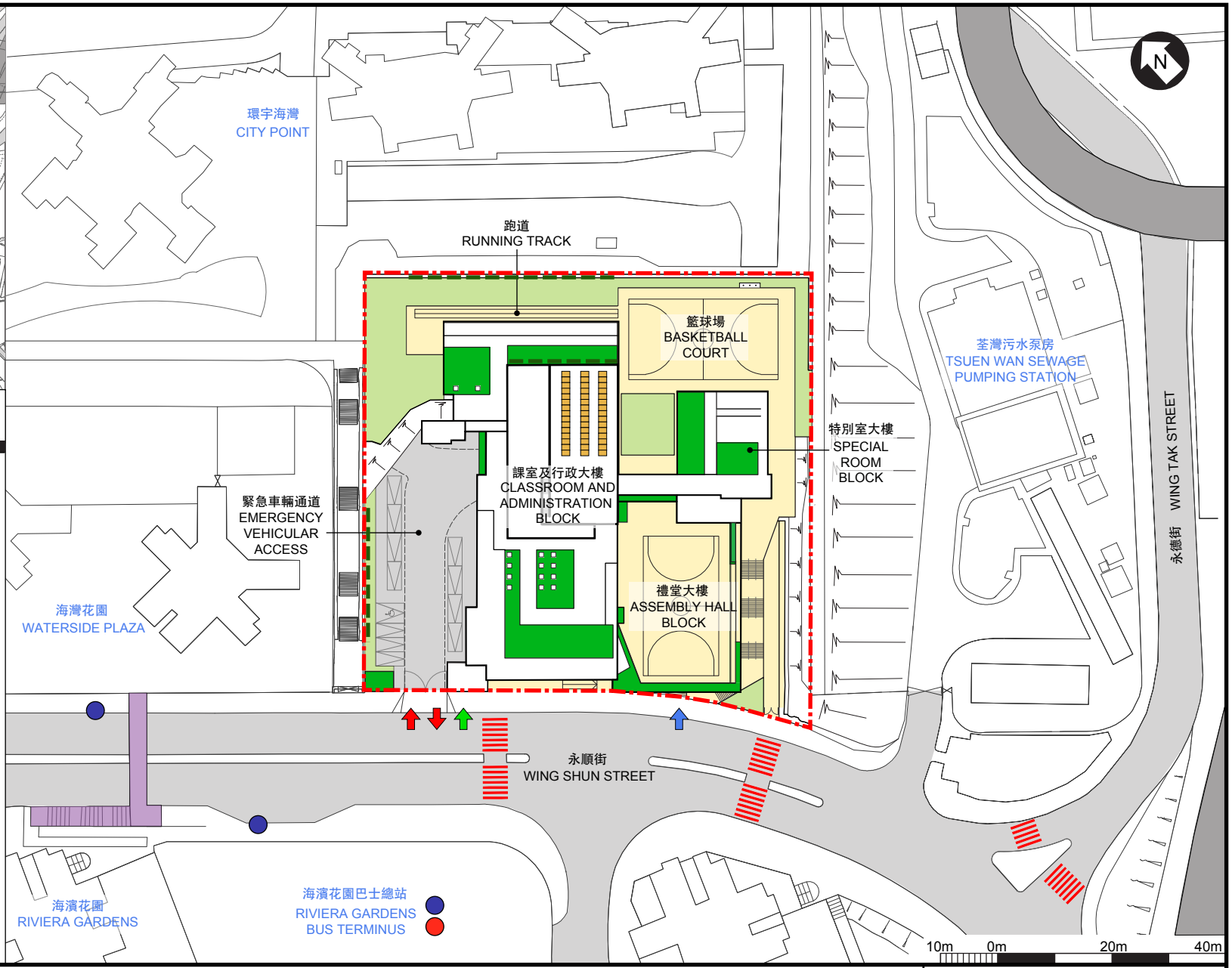


位置圖 LOCATION PLAN

75m 0m 150m

圖例 LEGEND

- 行人出入口 PEDESTRIAN ENTRANCE / EXIT
- 車輛出入口 VEHICULAR INGRESS / EGRESS
- 無障礙出入口 BARRIER-FREE ENTRANCE / EXIT
- 地面綠化 AT-GRADE GREENING
- 天台綠化 LANDSCAPED ROOF
- 通道/露天場地 CIRCULATION / OPEN AREA
- 太陽能光伏板 PHOTOVOLTAIC PANEL
- 有蓋行人天橋 COVERED FOOTBRIDGE
- 行人過路處 AT-GRADE PEDESTRIAN CROSSING
- 垂直綠化 VERTICAL GREENING
- 工地界線 SITE BOUNDARY
- 小巴站 MINIBUS STOP
- 巴士站 BUS STOP
- 導光管 LIGHT TUBE

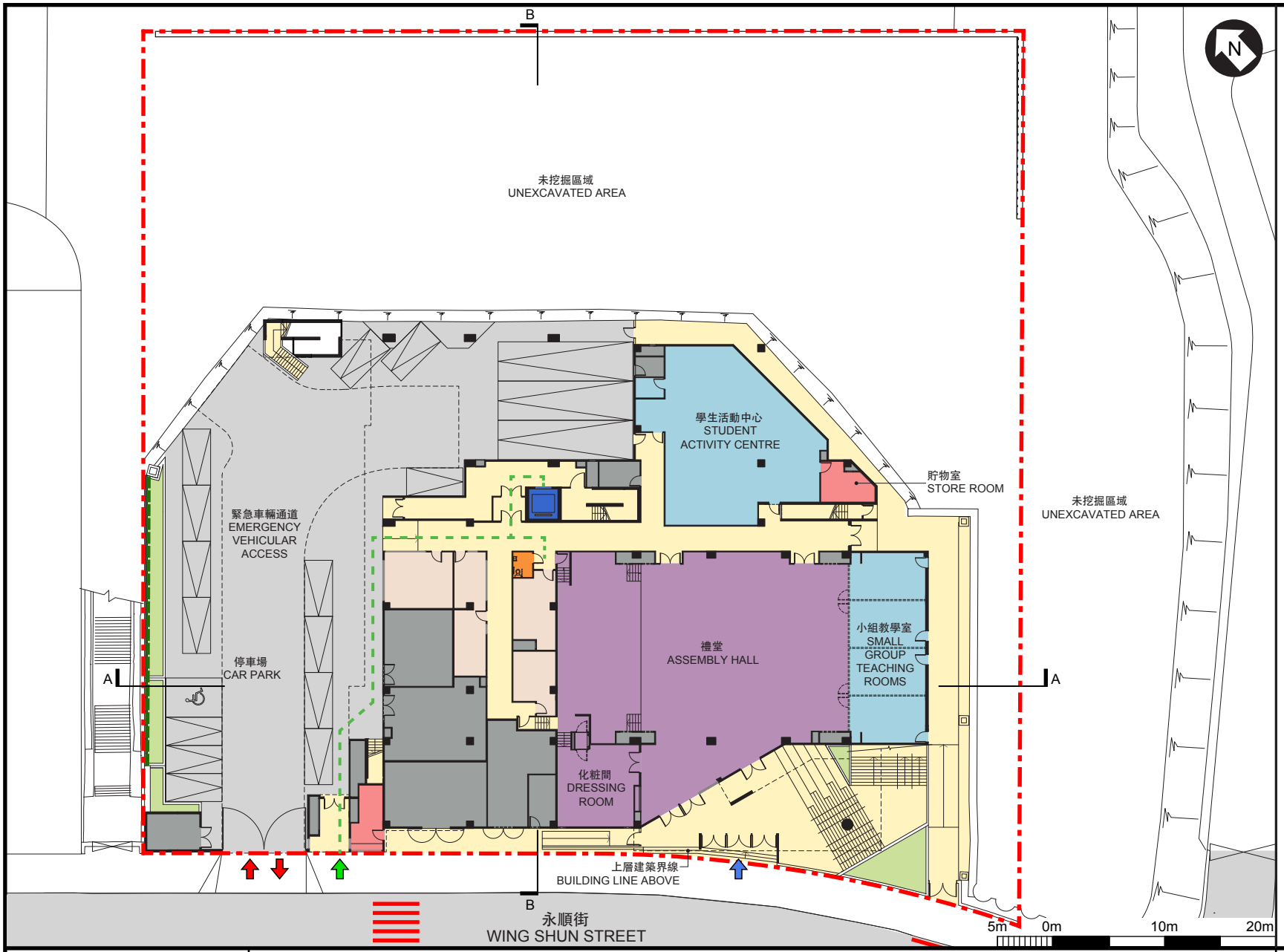


工地平面圖
SITE PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

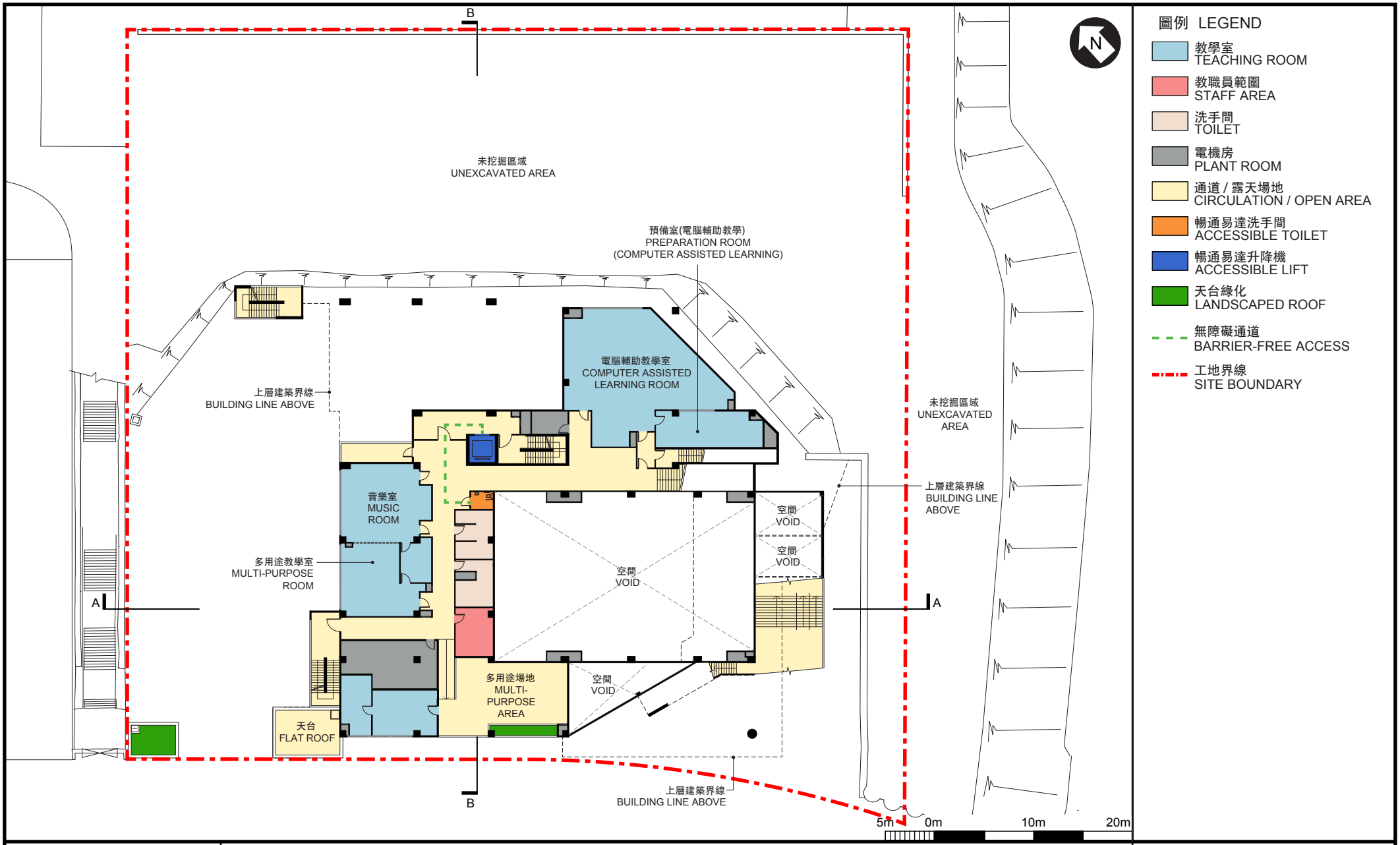
- 教學室 TEACHING ROOM
- 教職員範圍 STAFF AREA
- 洗手間 / 更衣室 TOILET/ CHANGING ROOM
- 電機房 PLANT ROOM
- 通道 / 露天場地 CIRCULATION / OPEN AREA
- 暢通易達洗手間 ACCESSIBLE TOILET
- 暢通易達升降機 ACCESSIBLE LIFT
- 地面綠化 AT-GRADE GREENING
- 禮堂 ASSEMBLY HALL
- 行人出入口 PEDESTRIAN ENTRANCE / EXIT
- 車輛出入口 VEHICULAR INGRESS / EGRESS
- 無障礙出入口 BARRIER-FREE ENTRANCE / EXIT
- 無障礙通道 BARRIER-FREE ACCESS
- 垂直綠化 VERTICAL GREENING
- 行人過路處 AT-GRADE PEDESTRIAN CROSSING
- 工地界線 SITE BOUNDARY

地下平面圖
GROUND FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

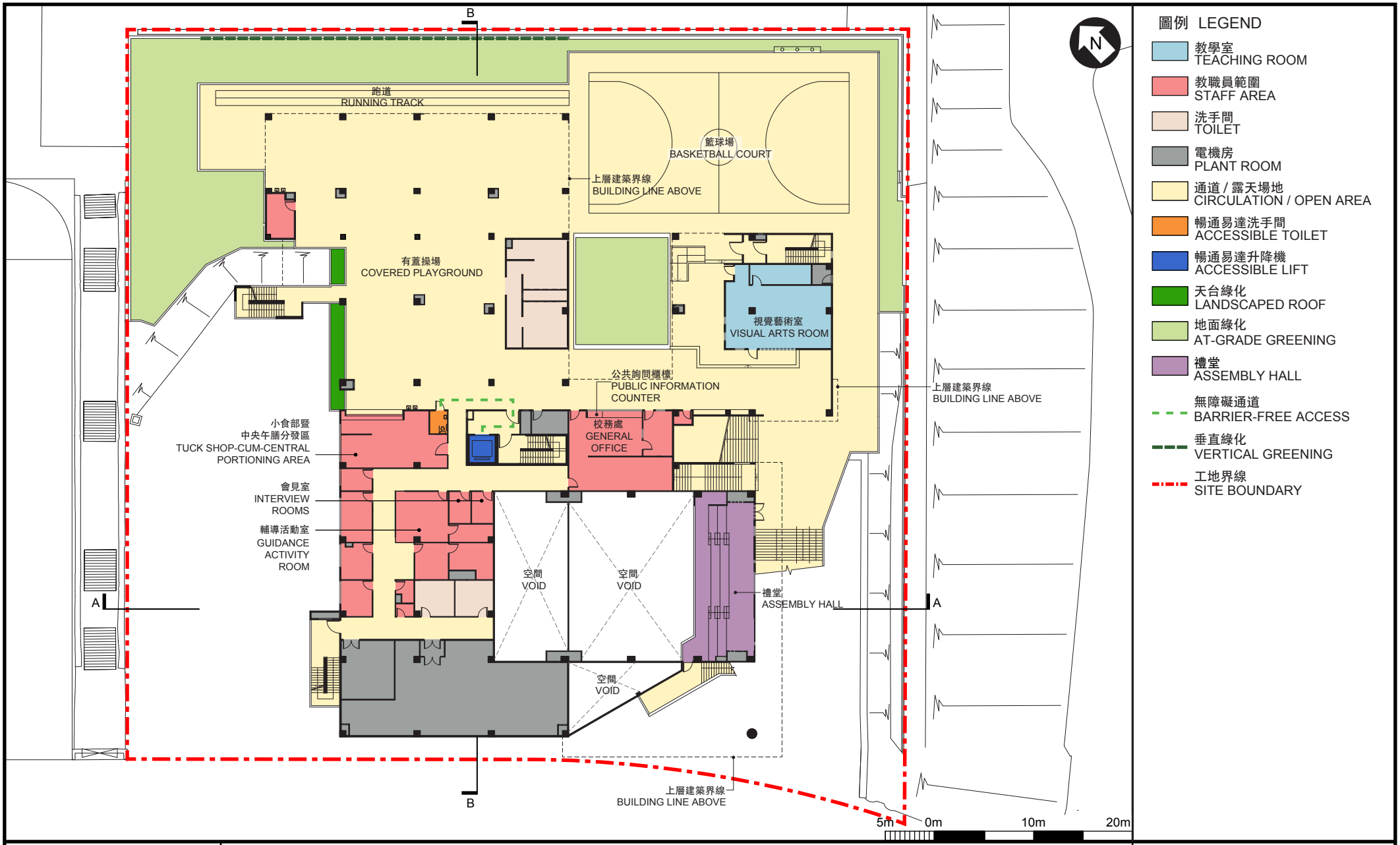
- 教學室 TEACHING ROOM
- 教職員範圍 STAFF AREA
- 洗手間 TOILET
- 電機房 PLANT ROOM
- 通道 / 露天場地 CIRCULATION / OPEN AREA
- 暢通易達洗手間 ACCESSIBLE TOILET
- 暢通易達升降機 ACCESSIBLE LIFT
- 天台綠化 LANDSCAPED ROOF
- 無障礙通道 BARRIER-FREE ACCESS
- 工地界線 SITE BOUNDARY

一樓平面圖
FIRST FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署

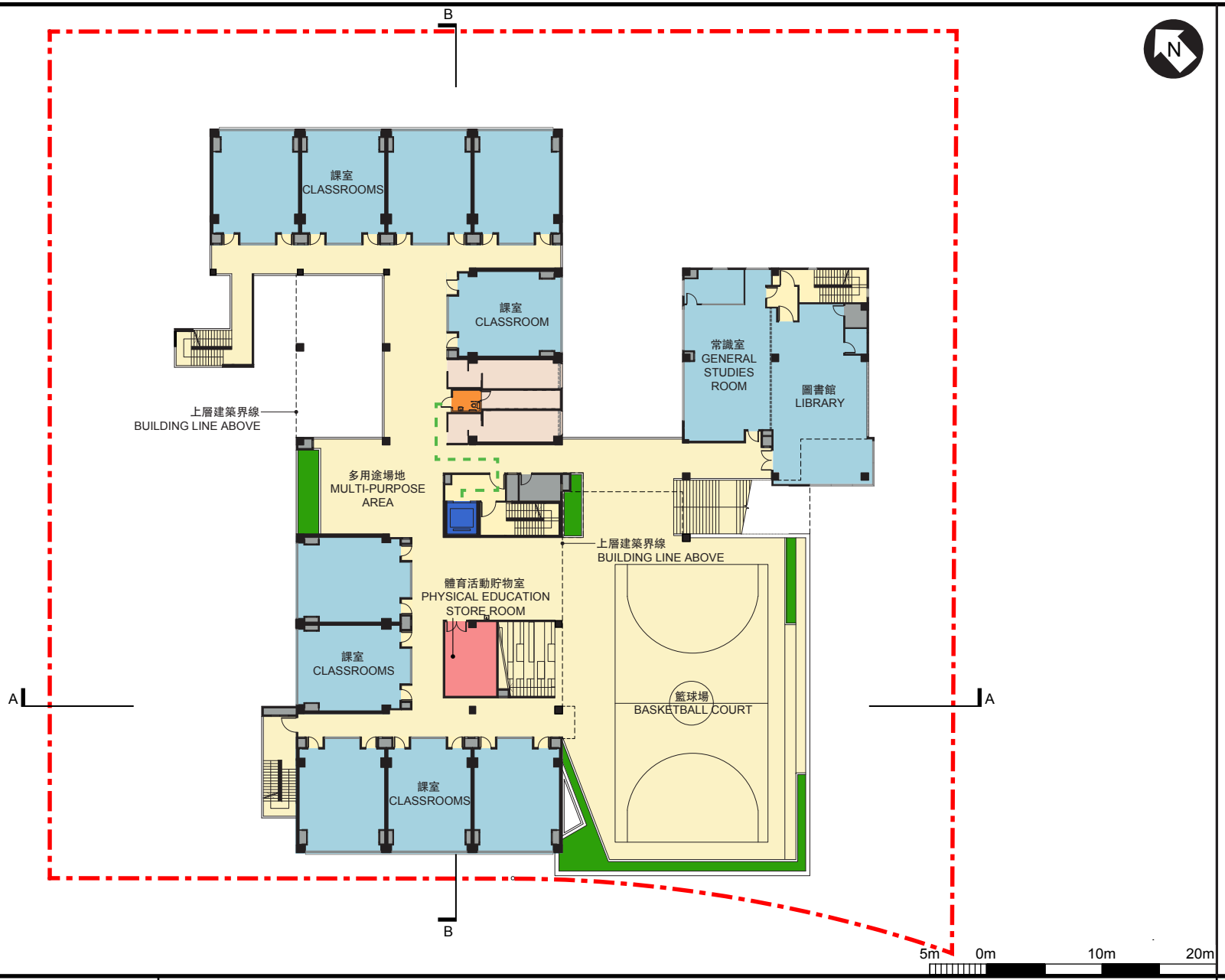


二樓平面圖
SECOND FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

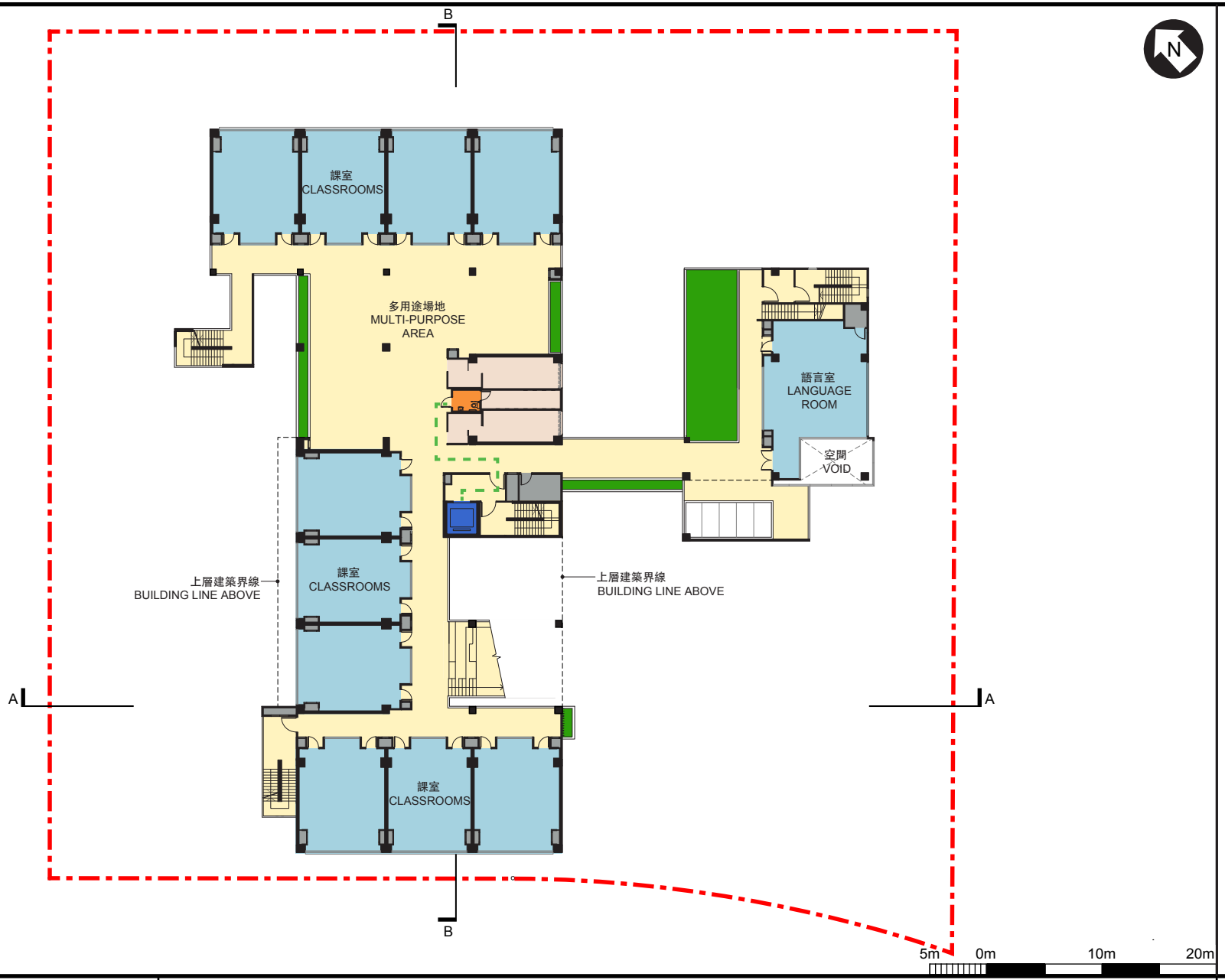
- 教學室 TEACHING ROOM
- 教職員範圍 STAFF AREA
- 洗手間 TOILET
- 電機房 PLANT ROOM
- 通道 / 露天場地 CIRCULATION / OPEN AREA
- 暢通易達洗手間 ACCESSIBLE TOILET
- 暢通易達升降機 ACCESSIBLE LIFT
- 天台綠化 LANDSCAPED ROOF
- 無障礙通道 BARRIER-FREE ACCESS
- 工地界線 SITE BOUNDARY

三樓平面圖
THIRD FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

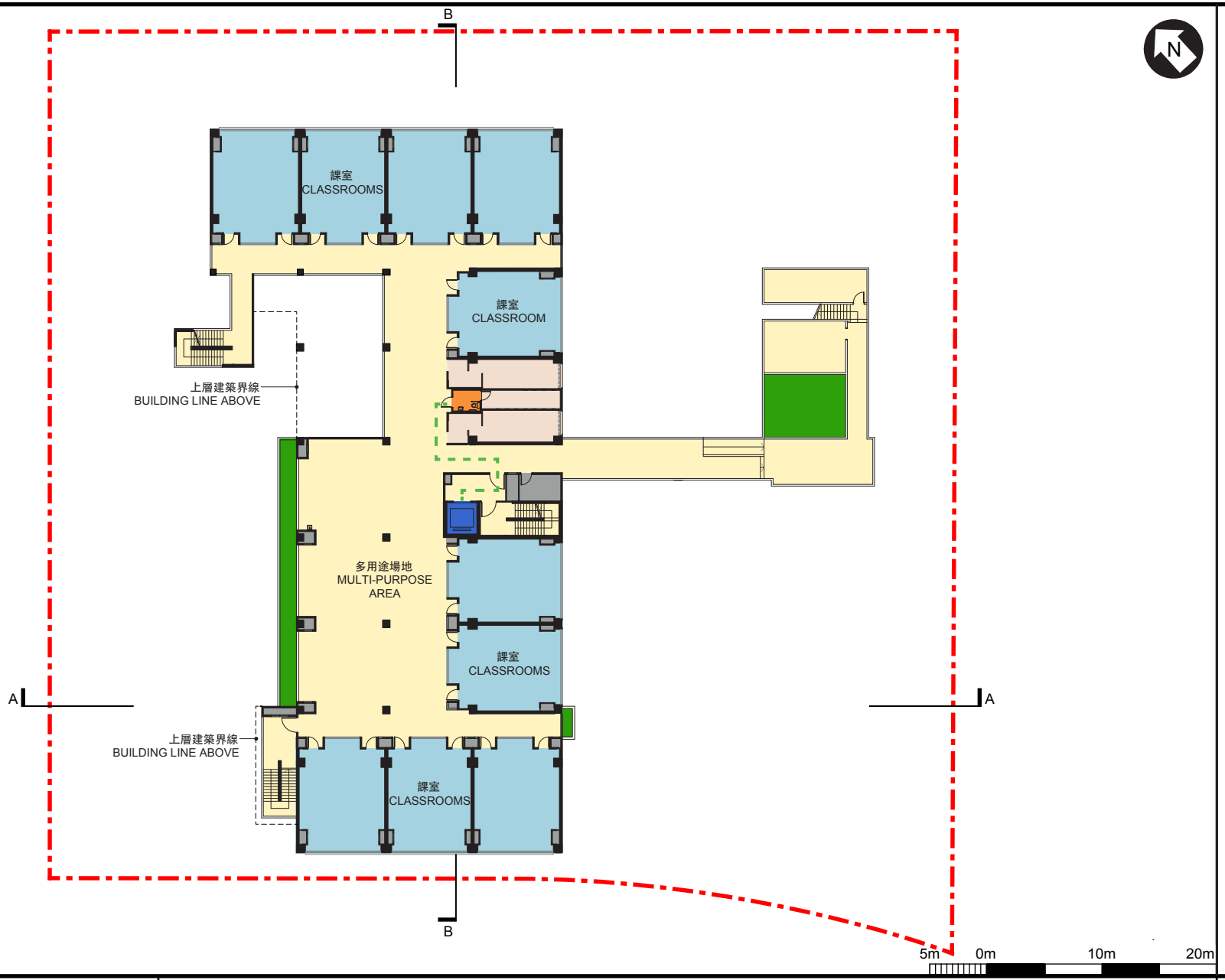
- 教學室 TEACHING ROOM
- 洗手間 TOILET
- 電機房 PLANT ROOM
- 通道 / 露天場地 CIRCULATION / OPEN AREA
- 暢通易達洗手間 ACCESSIBLE TOILET
- 暢通易達升降機 ACCESSIBLE LIFT
- 天台綠化 LANDSCAPED ROOF
- 無障礙通道 BARRIER-FREE ACCESS
- 工地界線 SITE BOUNDARY

四樓平面圖
FOURTH FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

- 教學室 TEACHING ROOM
- 洗手間 TOILET
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- 通道 / 露天場地 CIRCULATION / OPEN AREA
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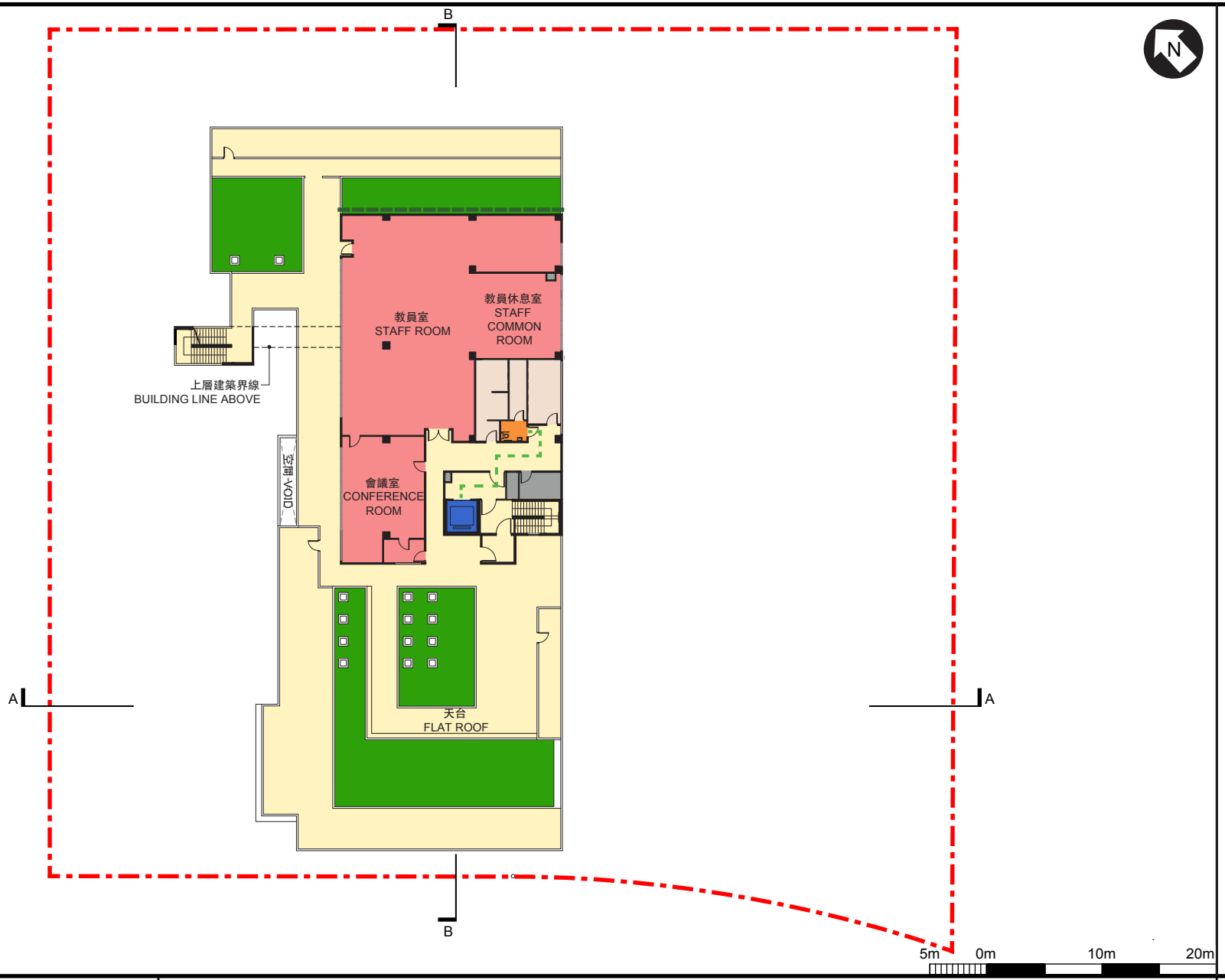
- 暢通易達升降機 ACCESSIBLE LIFT
- 天台綠化 LANDSCAPED ROOF
- 無障礙通道 BARRIER-FREE ACCESS
- 工地界線 SITE BOUNDARY

五樓平面圖
FIFTH FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

- 教職員範圍 STAFF AREA
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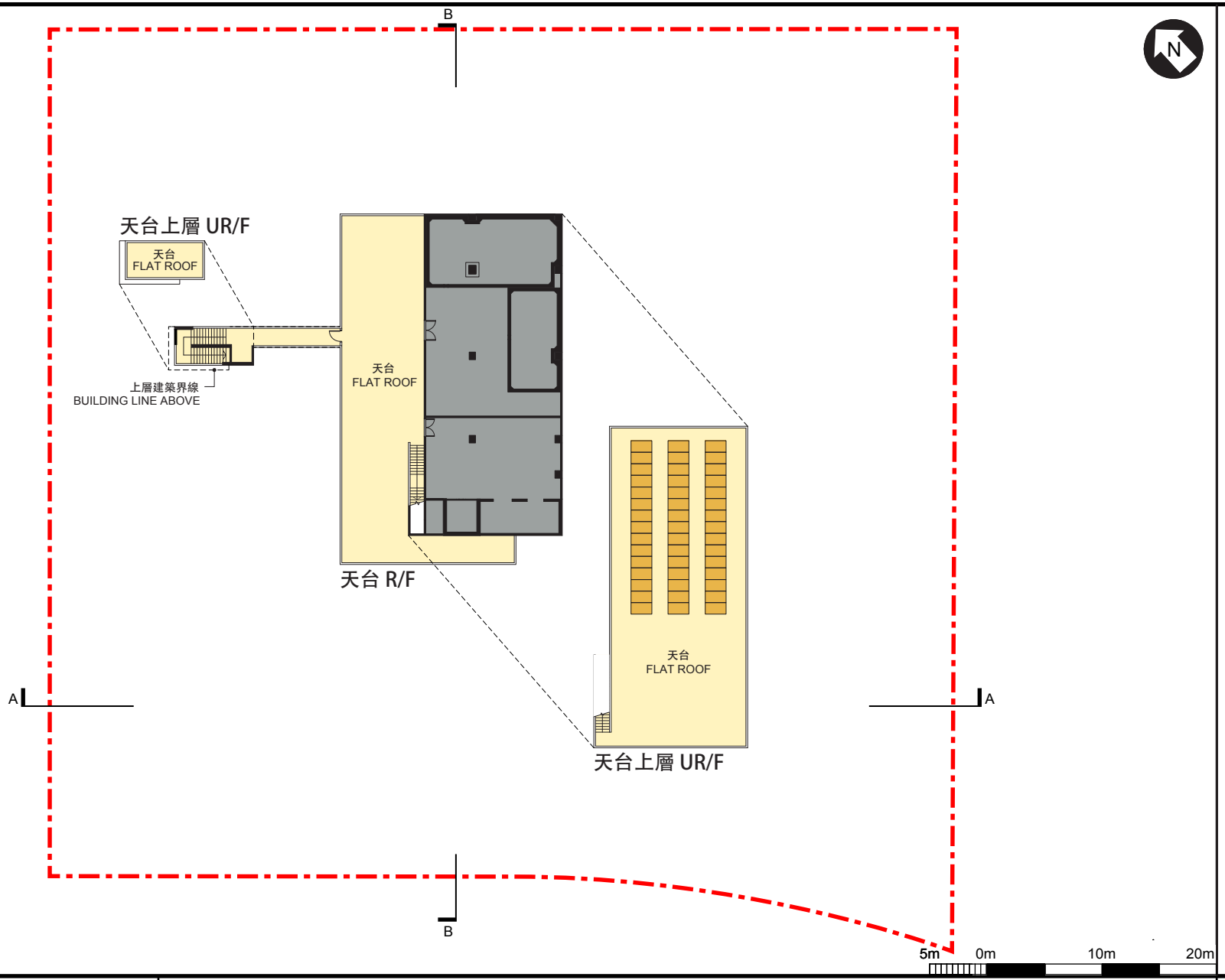
- 天台綠化 LANDSCAPED ROOF
- 無障礙通道 BARRIER-FREE ACCESS
- 垂直綠化 VERTICAL GREENING
- 工地界線 SITE BOUNDARY
- 導光管 LIGHT TUBE

六樓平面圖
SIXTH FLOOR PLAN

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

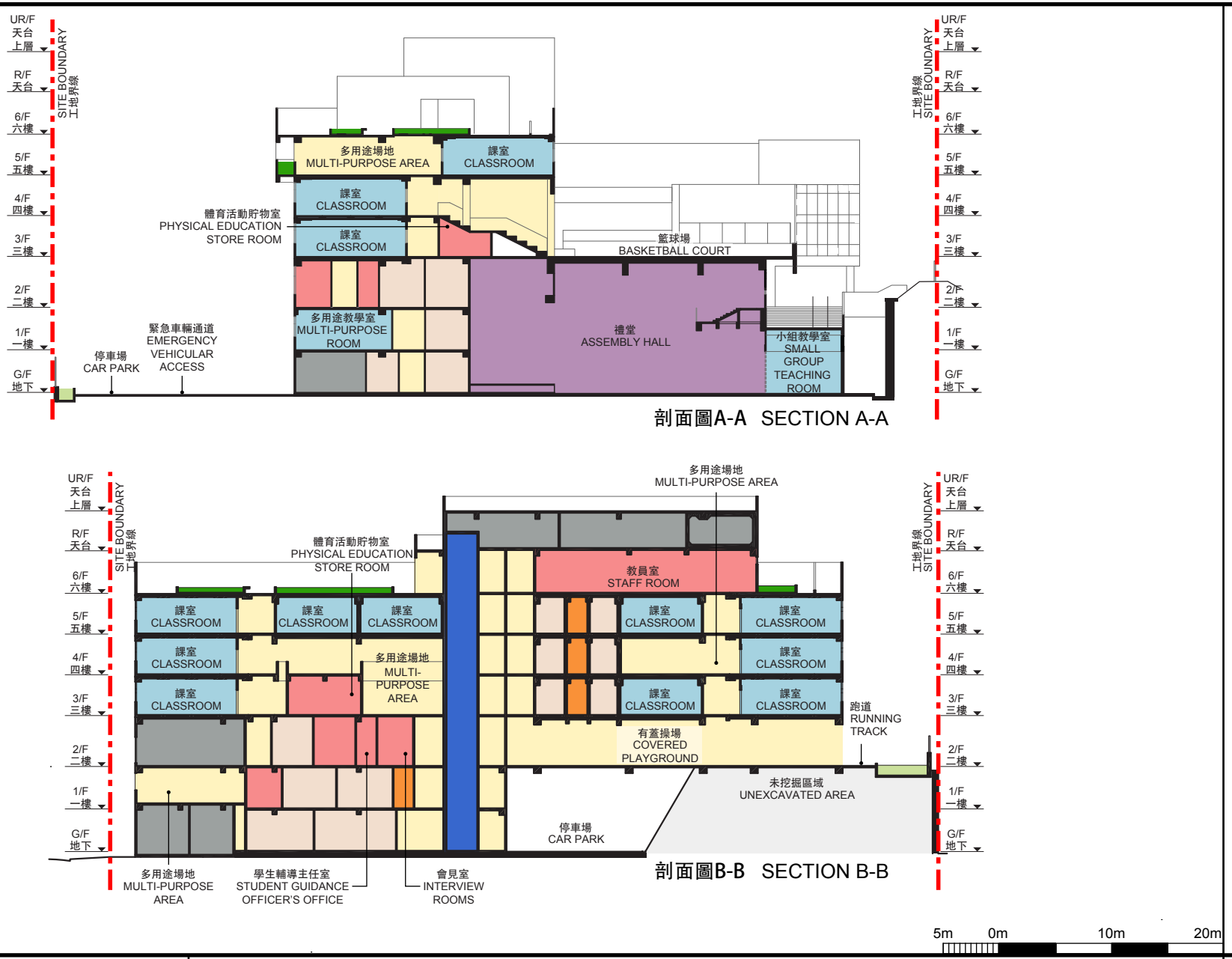
- 電機房 PLANT ROOM
- 通道 / 露天場地 CIRCULATION / OPEN AREA
- 太陽能光伏板 PHOTOVOLTAIC PANEL
- 工地界線 SITE BOUNDARY

天台及天台上層平面圖
ROOF FLOOR AND UPPER ROOF FLOOR PLANS

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

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- 天台綠化 LANDSCAPED ROOF
- 地面綠化 AT-GRADE GREENING
- 禮堂 ASSEMBLY HALL
- 工地界線 SITE BOUNDARY

剖面圖
SECTIONS

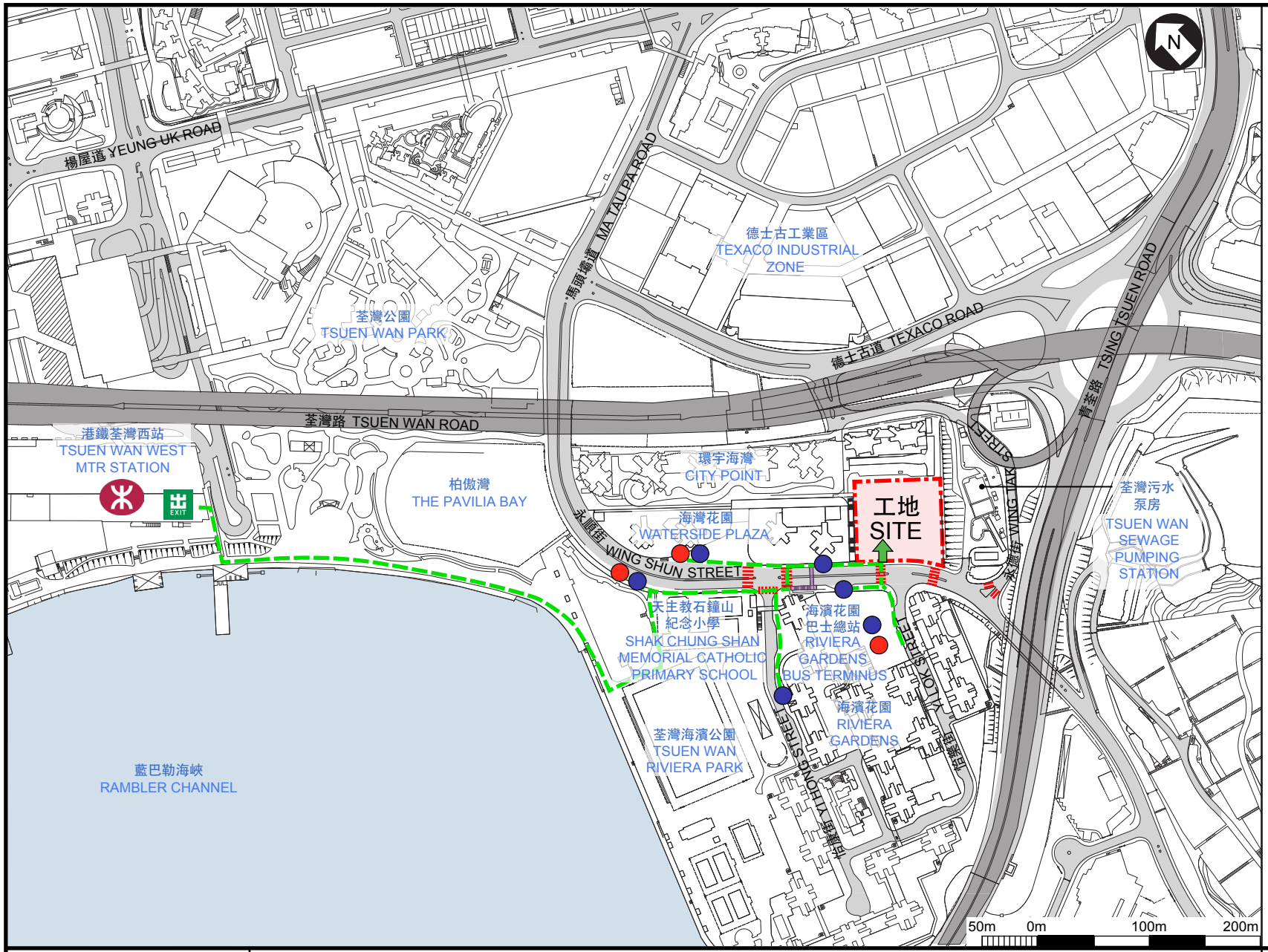
356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署

從南面望向小學的構思圖
PERSPECTIVE VIEW FROM SOUTHERN DIRECTION (ARTIST'S IMPRESSION)

構思圖 ARTIST'S IMPRESSION	356EP 荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學 A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN	ARCHITECTURAL SERVICES DEPARTMENT 建築署



圖例 LEGEND

- 無障礙出入口 BARRIER-FREE ENTRANCE / EXIT
- 有蓋行人天橋 COVERED FOOTBRIDGE
- 行人過路處 AT-GRADE PEDESTRIAN CROSSING
- 港鐵站出入口 MTR STATION ENTRANCE / EXIT
- 工地界線 SITE BOUNDARY
- 無障礙通道 BARRIER-FREE ACCESS
- 小巴站 MINIBUS STOP
- 巴士站 BUS STOP

無障礙通道平面圖
PLAN OF BARRIER-FREE ACCESS

356EP

荃灣荃灣西站(TW7)發展項目1所設有30間課室的小學
A 30-CLASSROOM PRIMARY SCHOOL IN TSUEN WAN WEST STATION (TW7) DEVELOPMENT, TSUEN WAN

ARCHITECTURAL SERVICES DEPARTMENT 建築署

Enclosure 6 to PWSC(2021-22)24

356EP – A 30-classroom primary school in Tsuen Wan West Station (TW7) Development, Tsuen Wan

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

			Estimated man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee ($ million)
(a)	Consultants' fees for contract administration (Note 2)	Professional	–	–	–	6.1
		Technical	–	–	–	0.5
					Sub-total	6.6 #
(b)	Resident site staff (RSS) costs (Note 3)	Professional	24	38	1.6	3.3
		Technical	234	14	1.6	11.3
					Sub-total	14.6
	Comprising -					
	(i) Consultants' fees for management of RSS				0.9#	
	(ii) Remuneration of RSS				13.7#	
					Total	**21.2**

* 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 38 = $85,870 per month and MPS salary point 14 = $30,235 per month).

2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **356EP**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade the project to Category A.

3. The actual man-months and actual costs will only be known after completion of the construction works.

Remarks

The figures in this Enclosure are shown in constant prices 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.