

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 708 – CAPITAL SUBVENTIONS AND MAJOR SYSTEMS AND EQUIPMENT

Education Subventions

27EA – Extension and conversion to St. Paul's Primary Catholic School at Wong Nai Chung Road, Happy Valley

Members are invited to recommend to Finance Committee the upgrading of **27EA** to Category A at an estimated cost of \$467.8 million in money-of-the-day prices.

PROBLEM

We need to upgrade the facilities of St. Paul's Primary Catholic School (the School) at Wong Nai Chung Road, Happy Valley, a bi-sessional primary school, for converting into whole-day schooling.

PROPOSAL

2. The Secretary for Education (SED), on the advice of the Director of Architectural Services (D Arch S), proposes to upgrade **27EA** to Category A at an estimated cost of \$467.8 million in money-of-the-day (MOD) prices.

/ **PROJECT**

PROJECT SCOPE AND NATURE

3. The project scope includes the demolition of an existing annex building to the School, the construction of a new 24-classroom extension block, and conversion works at the existing premises of the School to provide the following facilities –

- (a) 24 classrooms;
- (b) six special rooms including 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) two staff rooms and a staff common room;
- (g) two student activity centres;
- (h) a conference room;
- (i) a library;
- (j) an assembly hall;
- (k) multi-purpose areas;
- (l) a basketball court (on lower ground level);
- (m) a covered playground; and
- (n) ancillary facilities including, accessible/fireman's lifts, facilities for the disabled, a tuck shop-cum-central portioning area, stores and toilets.

4. The School falls within a private lot with a site area of about 8 000 square metres (m²). The site is shared between the School and St. Paul's Secondary School (the Secondary School)¹, both under the sponsorship of The Mother Superior of the Soeurs de Saint Paul de Chartres (Hong Kong) (the School Sponsoring Body). The proposed extension and conversion works will be carried out within the private lot, including the portions now occupied by the School and the Secondary School². A site plan, floor plans, sectional plans, artist's impressions and a barrier-free access plan for the project are at Enclosures 1 to 18.

5. Subject to the funding approval of the Finance Committee (FC) within the current legislative session, the School Sponsoring Body plans to commence the works in the fourth quarter of 2016 for completion in the second quarter of 2019.

JUSTIFICATION

6. It is the Government's policy to implement whole-day schooling for all primary school students studying at public sector primary schools. The School currently operates bi-sessional a.m. and p.m. classes at a 12-classroom premises. There is insufficient space on the School's existing premises to accommodate all students after combining the existing bi-sessional a.m. and p.m. classes. Hence, there is a need to construct a new extension and carry out conversion works at the existing premises to facilitate the School's conversion into whole-day operation.

7. The School's existing premises was constructed over 100 years ago and has been accorded with a Grade 2 historic building status. Due to spatial constraints, the School is now not equipped with certain standard facilities, such as general studies room, language room and student activity centre. The School did not benefit from the School Improvement Programme³ in the past due to technical constraints. Upon completion of the proposed works, the School premises will meet the planning target of providing 2 m² of open space per student and the facilities thereon will be improved. The project will provide the students and teachers with a quality learning and teaching environment.

/8.

¹ The areas for the School, the Secondary School, and common area shared by both schools are about 3 800 m², 3 900 m² and 300 m² respectively.

² The assembly hall, covered playground and some multi-purpose areas will be constructed on top of the existing Secondary School's hall block. The existing lift at the Secondary School's hall block will be extended and will be shared by both schools.

³ School Improvement Programme was carried out in five phases between 1994 and 2006. It was introduced at that time to progressively upgrade the teaching and learning environment of schools so as to provide additional space and facilities for teaching, out-of-class activities and supporting services for both teachers and students.

8. Upon completion of **27EA**, the a.m. and p.m. sessions of the School will be combined and the School will be converted into whole-day operation. After combining the two sessions, the School will run 24 classes, i.e. the same number of classes as the existing arrangement. The overall supply of primary school places will not be affected. During construction, the School will temporarily operate at the vacant school premises of former Chai Wan Star of The Sea Catholic Primary School in Hing Wah Estate (II) in Chai Wan.

FINANCIAL IMPLICATIONS

9. The estimated project cost of \$467.8 million in MOD prices (please see paragraph 12 below) is calculated having regard to the reference cost⁴ of a 24-classroom primary school of standard design. The estimated project cost of \$467.8 million in MOD prices is broken down as follows –

	\$ million
(a) Demolition works	5.7
(b) Site formation	70.2
(c) Piling	68.8
(d) Building	99.3
(e) Building services	30.9
(f) Drainage	4.8
(g) External works	15.4
(h) Conversion of existing school premises	43.8
(i) Additional energy conservation measures	3.3
(j) Noise mitigation measures	4.4

/(k)

⁴ The reference cost is based on an uncomplicated site with no unusual environmental or geotechnical constraints.

	\$ million	
(k) Furniture and equipment (F&E) ⁵	2.5	
(l) Consultants' fees for	6.3	
(i) contract administration	6.0	
(ii) management of resident site staff (RSS)	0.3	
(m) Remuneration of RSS	6.2	
(n) Contingencies	36.2	
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Sub-total	397.8	(in September 2015 prices)
(o) Provision for price adjustment	70.0	
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Total	467.8	(in MOD prices)
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10. The School Sponsoring Body proposes to engage consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimate for consultants' fees and resident site staff costs by man-months is at Enclosure 19.

11. The construction floor area (CFA) of the extension block of **27EA** is about 7 654 m². The estimated construction unit cost, represented by the building and building services costs, is \$17,011 per m² of CFA in September 2015 prices. This is comparable to similar projects built by the Government. A comparison of the reference cost for a standard 24-classroom primary school based on an uncomplicated site with no unusual environmental or geotechnical constraints with the estimated costs for **27EA** is at Enclosure 20.

/12.

⁵ The estimated cost of F&E is prepared with reference to the standard F&E reference list prepared by the Education Bureau for a new 24-classroom primary school adopting the standard of accommodation. The actual cost will be subject to a survey on the conditions of the existing F&E.

12. Subject to approval, the School Sponsoring Body will phase the expenditure as follows –

Year	\$ million (Sept 2015)	Price adjustment factor	\$ million (MOD)
2016 – 17	36.7	1.05775	38.8
2017 – 18	120.7	1.12122	135.3
2018 – 19	141.1	1.18849	167.7
2019 – 20	88.4	1.25980	111.4
2020 – 21	10.9	1.33539	14.6
	397.8		467.8

13. The MOD estimates are derived 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 2016 to 2021. The School Sponsoring Body will deliver the construction works through two separate lump-sum contracts because the School can clearly define the scope of the works in advance. The contracts will provide for price adjustments.

14. The cost of F&E for **27EA**, estimated to be \$2.5 million, will be borne by the Government according to the existing policy for redevelopment and reprovisioning of schools. The recurrent expenditure of the School in the 2014/15 school year was \$30.4 million.

PUBLIC CONSULTATION

15. We consulted the Development, Planning and Transport Committee of the Wan Chai District Council on 23 February 2016. Members supported this project.

16. We consulted the Legislative Council Panel on Education on 11 April 2016. Members supported the proposed project.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

17. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). The School Sponsoring Body engaged a consultant to conduct the “Class Assessment Document for Standard Schools” (CAD) for 27EA in February 2015. CAD recommends installation of insulated windows and air-conditioning for rooms exposed to traffic noise exceeding the limits recommended in the Hong Kong Planning Standards and Guidelines. With such mitigation measures in place, the School would not be exposed to long-term adverse environmental impacts. The School Sponsoring Body has included the cost of the above mitigation measures as part of the building services in the project estimate and will implement these mitigation measures.

18. During construction, the School Sponsoring Body will control noise, dust and site run-off nuisances to within established standards and guidelines through the implementation of mitigation measures in the relevant contracts. These include the use of silencers, mufflers, acoustic lining or shields and the building of barrier wall for noisy construction activities, frequent cleaning and watering of the project site, and the provision of wheel-washing facilities.

19. At the planning and design stage, the School Sponsoring Body has 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, the School Sponsoring Body will require the contractor to reuse inert construction waste (e.g. use of excavated materials for filling within the project 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 facilities⁶. The School Sponsoring Body 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.

⁶ Public fill reception facilities are specified in Schedule 4 of the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N). Disposal of inert construction waste in public fill reception facilities requires a licence issued by the Director of Civil Engineering and Development.

20. At the construction stage, the School Sponsoring Body 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. The School Sponsoring Body will ensure that the day-to-day operations on site comply with the approved plan. The School Sponsoring Body will require the contractor to separate the inert portion from non-inert construction waste on site for disposal at appropriate facilities. The School Sponsoring Body 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. The School Sponsoring Body estimates that the project will generate in total 11 491 tonnes of construction waste. Of these, the School will reuse 2 440 tonnes (21.2%) of inert construction waste on site and deliver 7 551 tonnes (65.7%) of inert construction waste to public fill reception facilities for subsequent reuse. The School Sponsoring Body will dispose of the remaining 1 500 tonnes (13.1%) 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 \$0.4 million for this project (based on a unit charge rate of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne at landfills as stipulated in the Waste Disposal (Charges for Disposal of Construction Waste) Regulation (Cap. 354N)).

ENERGY CONSERVATION MEASURES

22. This project will adopt various forms of energy efficient features, including heat recovery fresh air pre-conditioners for heat energy reclaim of exhaust air.

23. For renewable energy technologies, the School Sponsoring Body will adopt photovoltaic system.

24. For recycled features, the School Sponsoring Body will adopt rain water harvesting system for irrigation purpose.

25. The total estimated additional cost for adoption of the above features is about \$3.3 million, which has been included in the cost estimate of this project. The energy efficient features will achieve 5.8% energy savings in the annual energy consumption with a payback period of about 6.4 years.

HERITAGE IMPLICATIONS

26. The main building of St. Paul's Primary Catholic School is a Grade 2 historic building. Pursuant to the Development Bureau Technical Circular (Works) No. 6/2009, this project is subject to a Heritage Impact Assessment (HIA). The findings of the HIA were accepted by the Antiquities and Monuments Office (AMO) of the Leisure and Cultural Services Department and generally supported by the Antiquities Advisory Board (AAB) at its meeting on 10 November 2010. The School Sponsoring Body will ensure that the construction works and further maintenance will comply with the mitigation measures, recommendations and requirements stipulated in the HIA report⁷. In case of any amendments to the scheme or the detailed design, the School Sponsoring Body will further consult the AMO and the AAB as necessary to formulate additional mitigation measures to ensure that any possible impact on the heritage site is acceptable from the conservation perspective.

LAND ACQUISITION

27. The project will not require any land acquisition.

/BACKGROUND

⁷ Examples of mitigation measures proposed in the HIA report include -

- (a) When carrying out demolition works and construction of the extension, original constructional and decorative elements will be reused in the reinstatement of the balustrades. Building structure and links to the main building will be recorded. All useful original fabric will be retained for reuse in conservation work on the historic building at a later stage.
- (b) Appropriate conservation of the east elevation will be undertaken prior to the construction of the extension. Appropriate offset from the eastern elevation will be ensured to allow for appreciation of architectural qualities from Ventris Road. A new vehicle and pedestrian entry area will be designed to allow for full appreciation of the arcaded verandahs. Effective system of site drainage will be ensured which will assist in reducing rising damp in the eastern walls.
- (c) Structural stability of the historic building will be monitored, including pre-works recording by registered geotechnical and structural engineers. Protection or reinforcement should be installed prior to works and at any stage during construction when deemed necessary.
- (d) When demolishing the annex building located at the back, the removal of the link at each level must have as little impact as possible on the existing fabric. New support columns in modern materials and in line with the original arcading, designed to reflect the form of the original historic columns, will be provided.

BACKGROUND INFORMATION

28. We upgraded **27EA** to Category B in March 2005. The School Sponsoring Body engaged a lead consultant in March 2013 to undertake the detailed design and CAD, including a topographical survey and a quantity surveying consultant in March 2013 to prepare tender documents. The total cost of the consultancy services and works is about \$11 million. We have charged this amount to block allocation Subhead **8100QX** “Alterations, additions, repairs and improvements to education subvented building”. The consultants have completed all of the above services except preparation of tender documents which are being finalised.

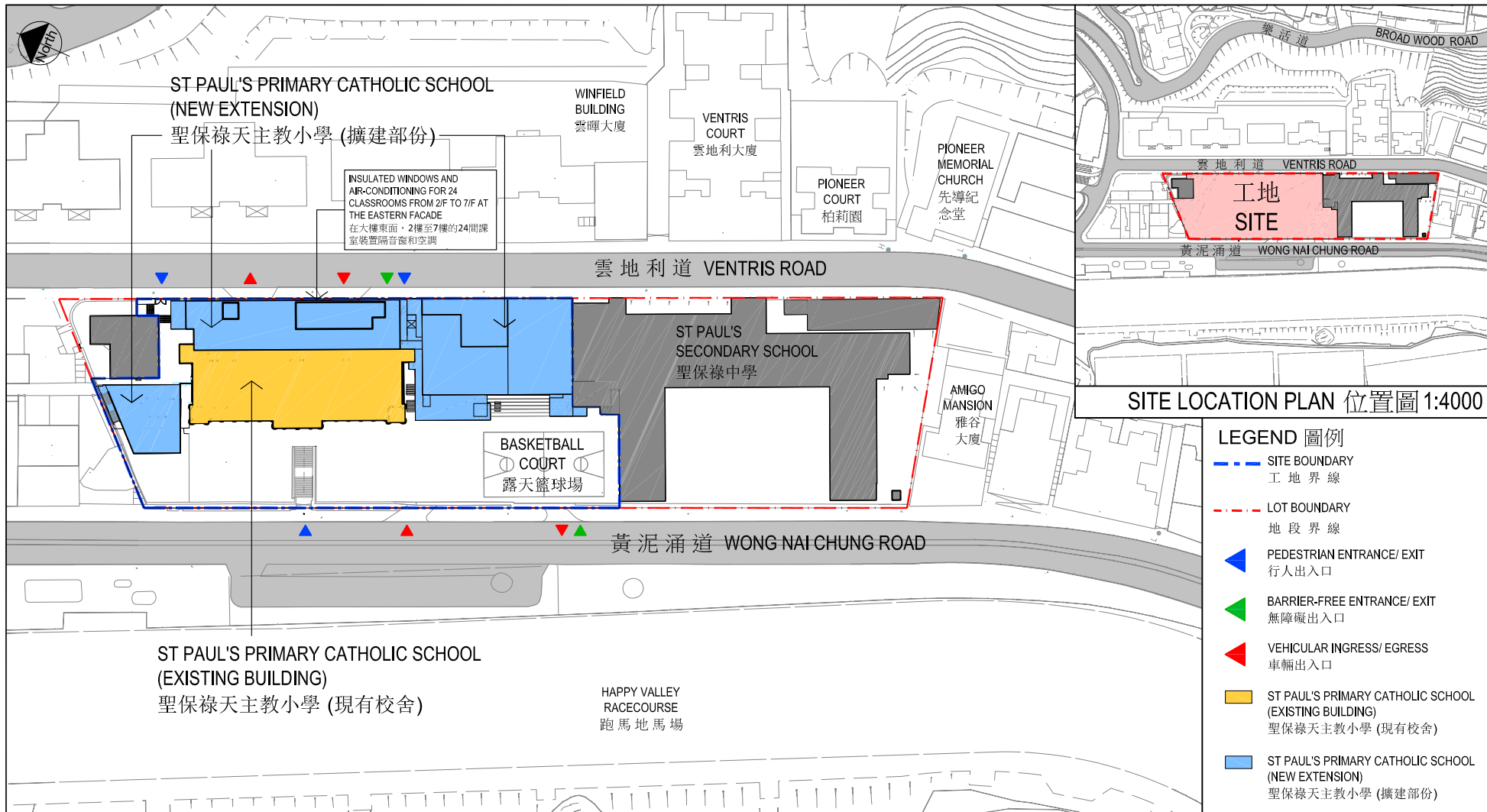
29. There are a total of five trees identified within the project boundary. Two trees within the project boundary have been removed by the School Sponsoring Body in July 2014 due to unsatisfactory health in accordance with a tree survey report. Besides, to facilitate the improvement works of ingress and egress at Wong Nai Chung Road, two trees outside the project boundary will be felled. All trees removed or to be removed are not important trees⁸. The remaining three trees in the project boundary will be preserved in their existing locations. The School Sponsoring Body will incorporate planting proposals as part of the project, including the planting of six compensatory trees (i.e. three trees within the project boundary and three trees outside the project boundary) as recommended by the tree survey report.

30. We estimate that the proposed works will create about 270 jobs (240 for labourers and another 30 for professional/technical staff), providing a total employment of 3 760 man-months.

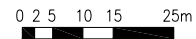
Education Bureau
April 2016

⁸ “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 –

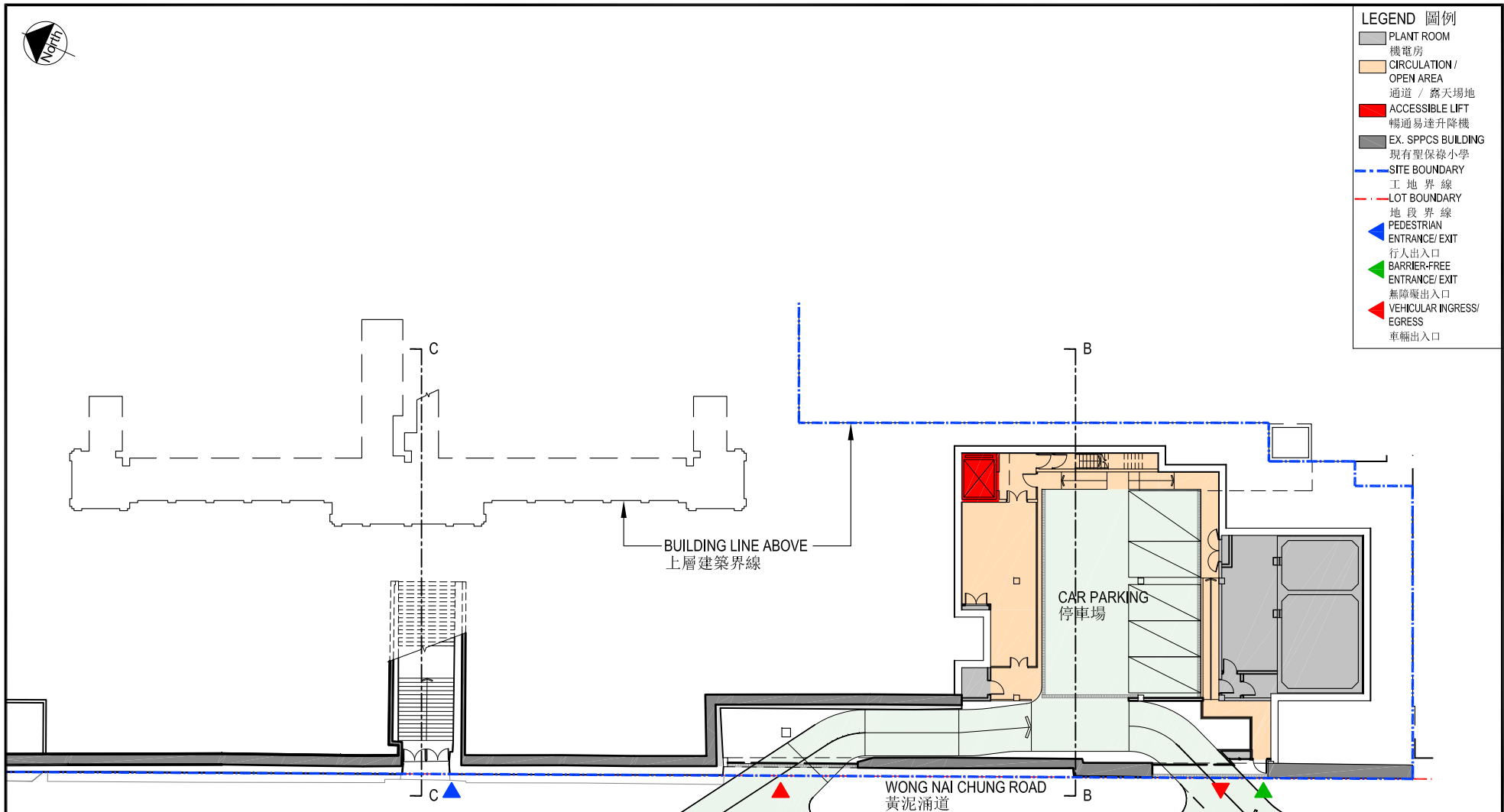
- (a) trees of 100 years old or above;
- (b) trees of cultural, historical or memorable significance e.g. Fung Shui tree, tree as landmark of monastery or heritage monument, and trees in memory of an important person or event;
- (c) trees of precious or rare species;
- (d) trees of outstanding form (taking 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 (m) (measured at 1.3 m above ground level), or with height/canopy spread equal or exceeding 25 m.



SITE PLAN
工地平面圖



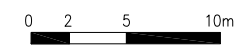
27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY
27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學



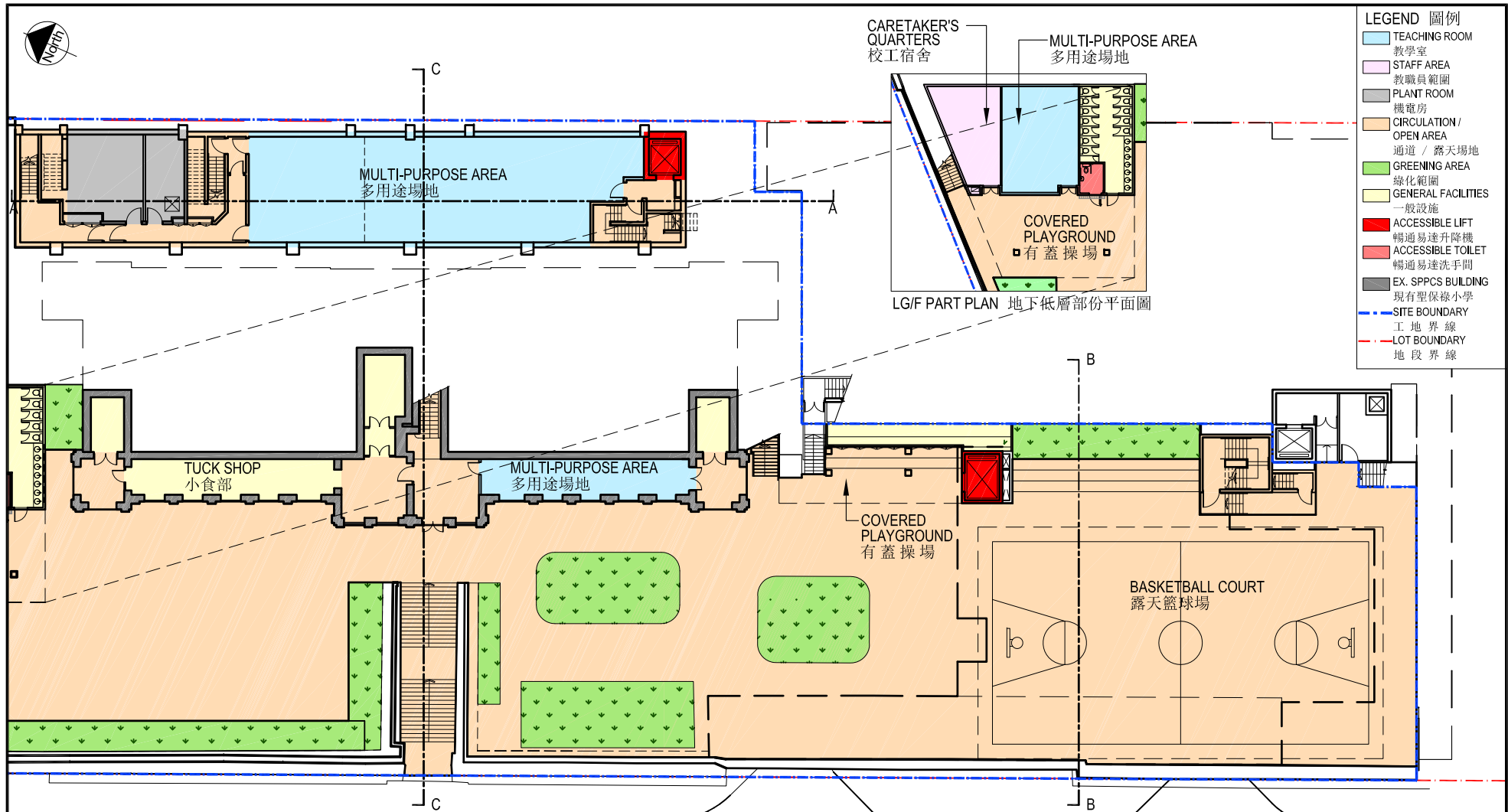
LEGEND 圖例

	PLANT ROOM 機電房
	CIRCULATION / OPEN AREA 通道 / 露天場地
	ACCESSIBLE LIFT 暢通易達升降機
	EX. SPPCS BUILDING 現有聖保祿小學
	SITE BOUNDARY 工地界線
	LOT BOUNDARY 地段界線
	PEDESTRIAN ENTRANCE/EXIT 行人出入口
	BARRIER-FREE ENTRANCE/EXIT 無障礙出入口
	VEHICULAR INGRESS/ EGRESS 車輛出入口

BASEMENT FLOOR PLAN
地庫平面圖

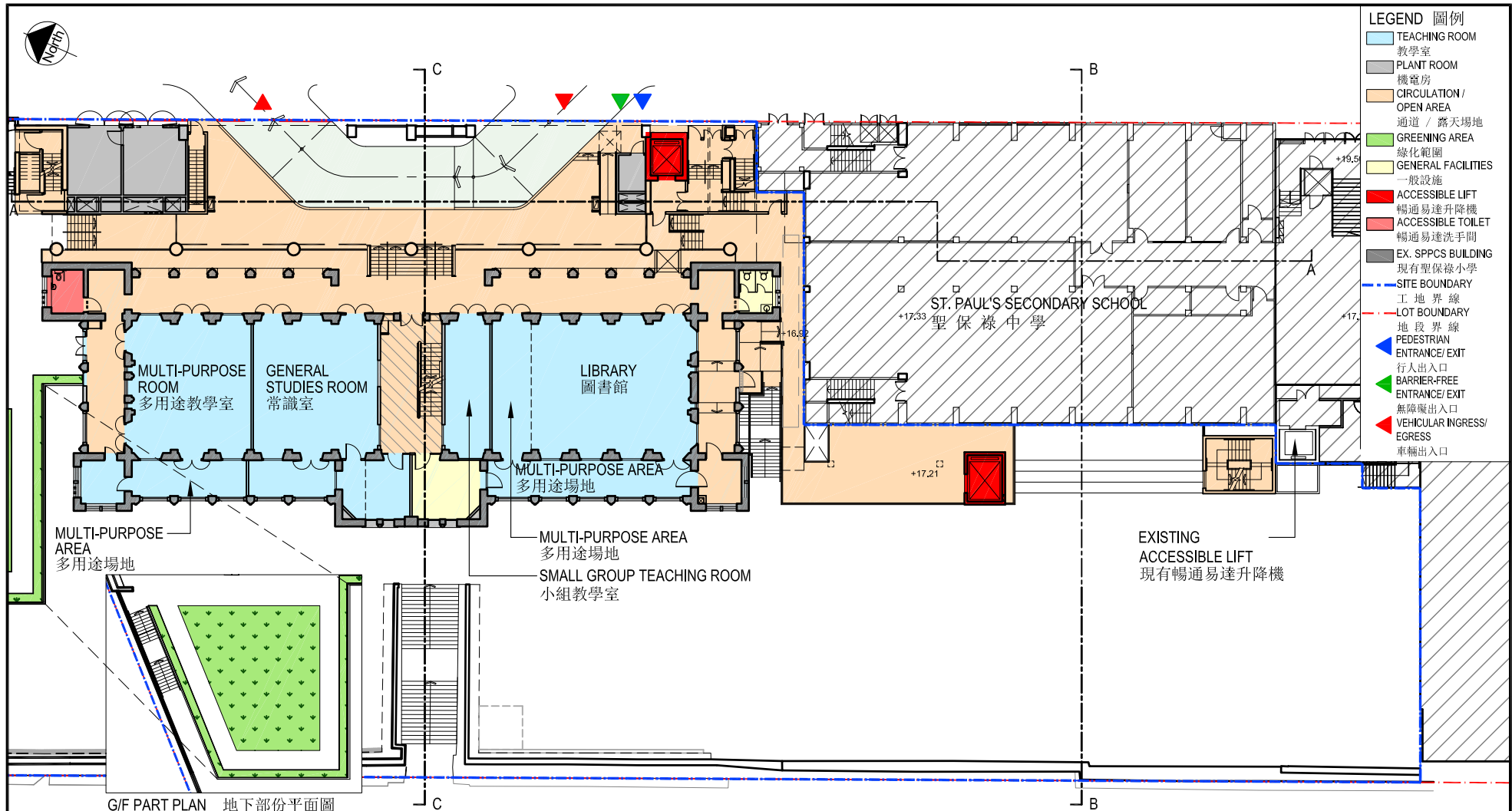


27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY
27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學



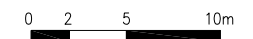
LOWER GROUND FLOOR PLAN
地下低層平面圖

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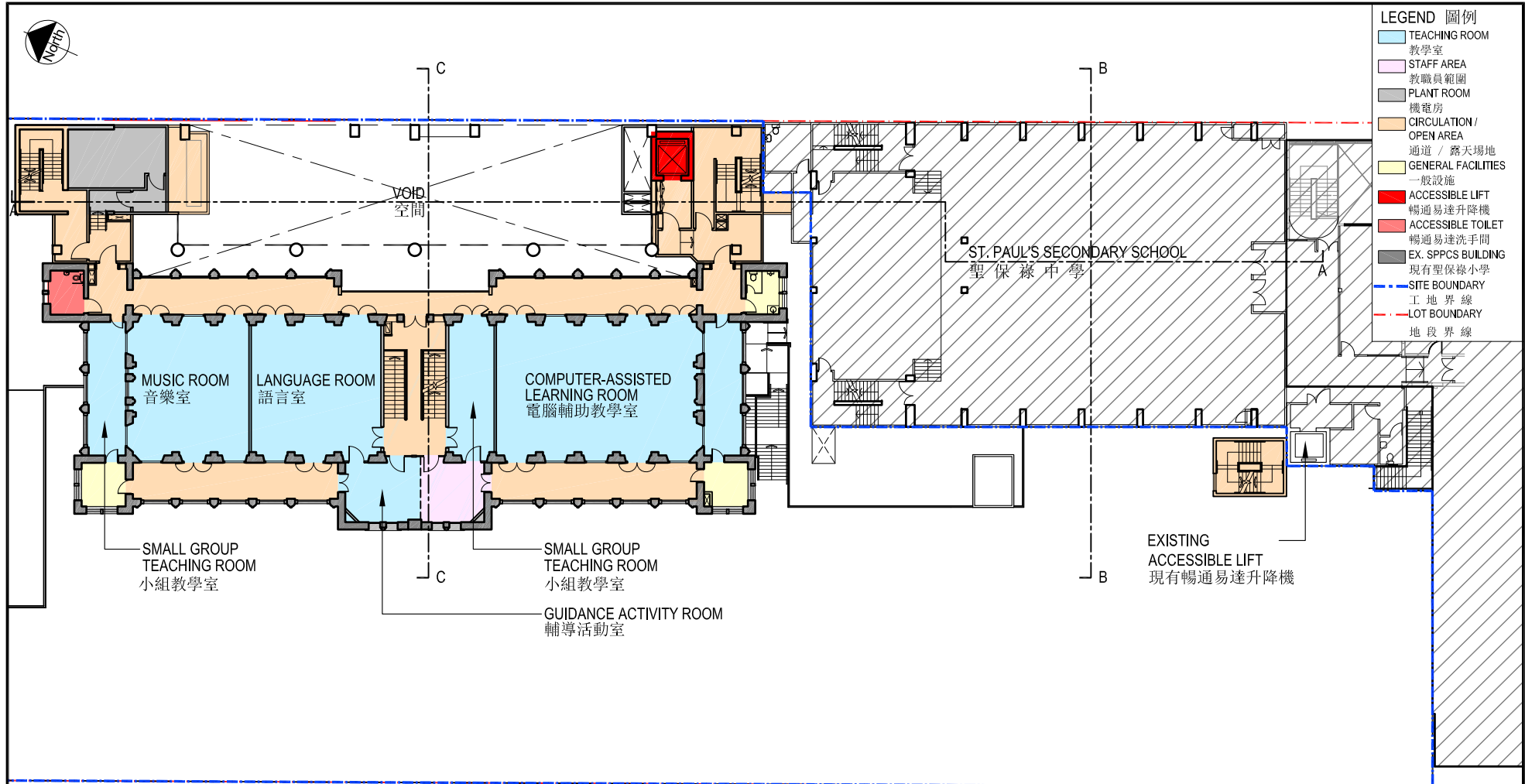


GROUND FLOOR PLAN

地下平面圖

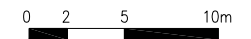


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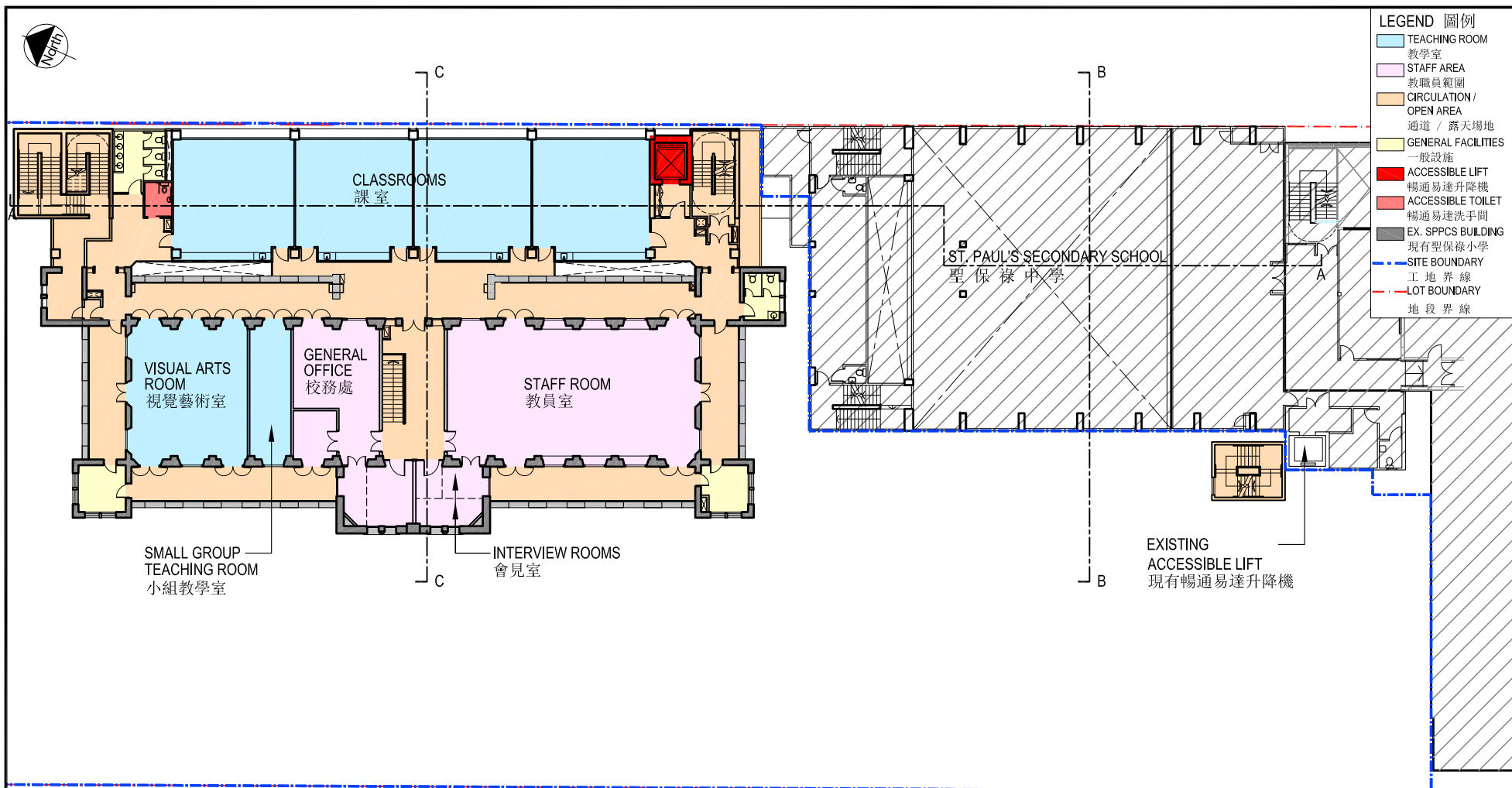
FIRST FLOOR PLAN

一樓平面圖



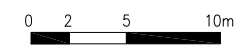
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27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學

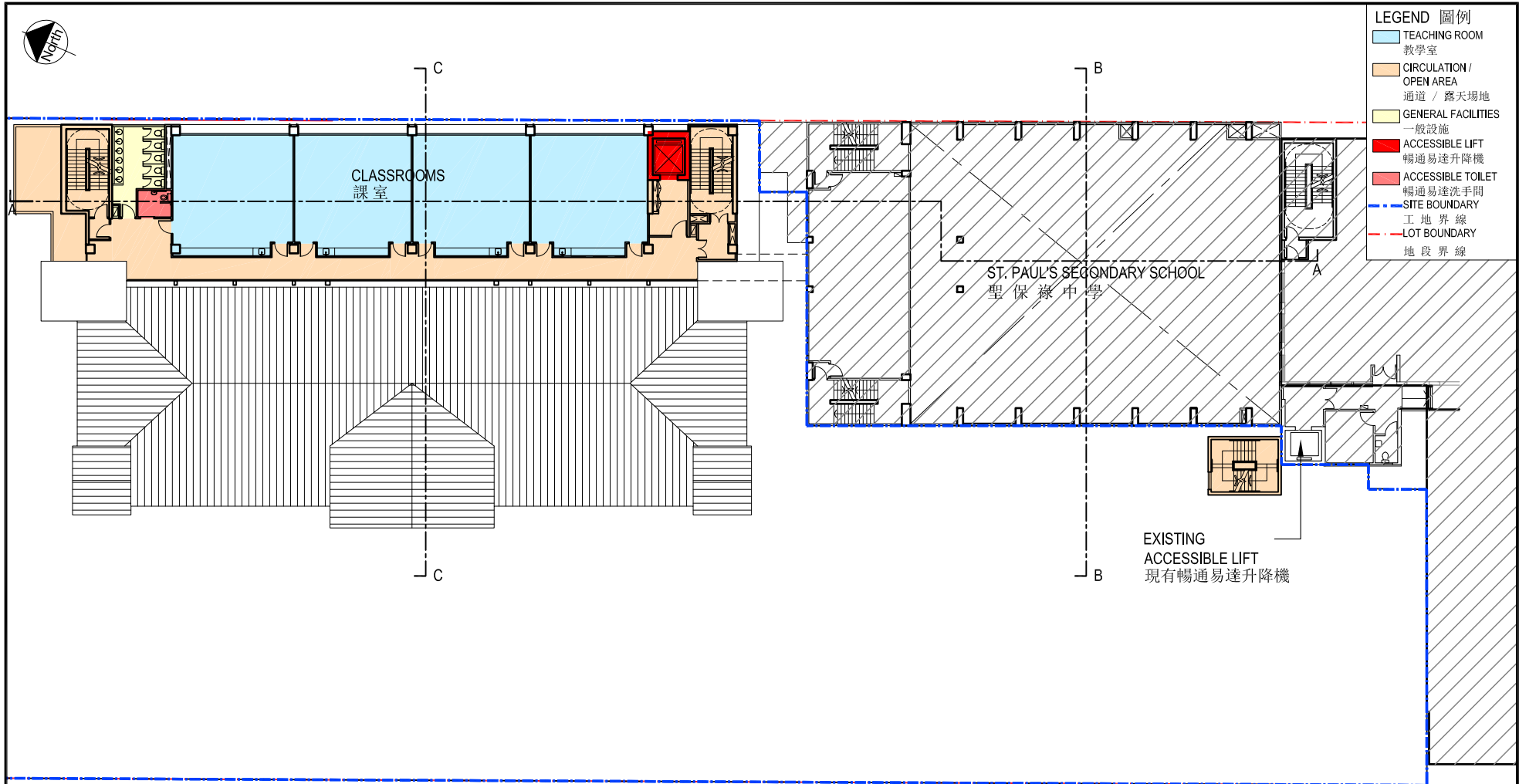


SECOND FLOOR PLAN

二樓平面圖

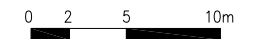


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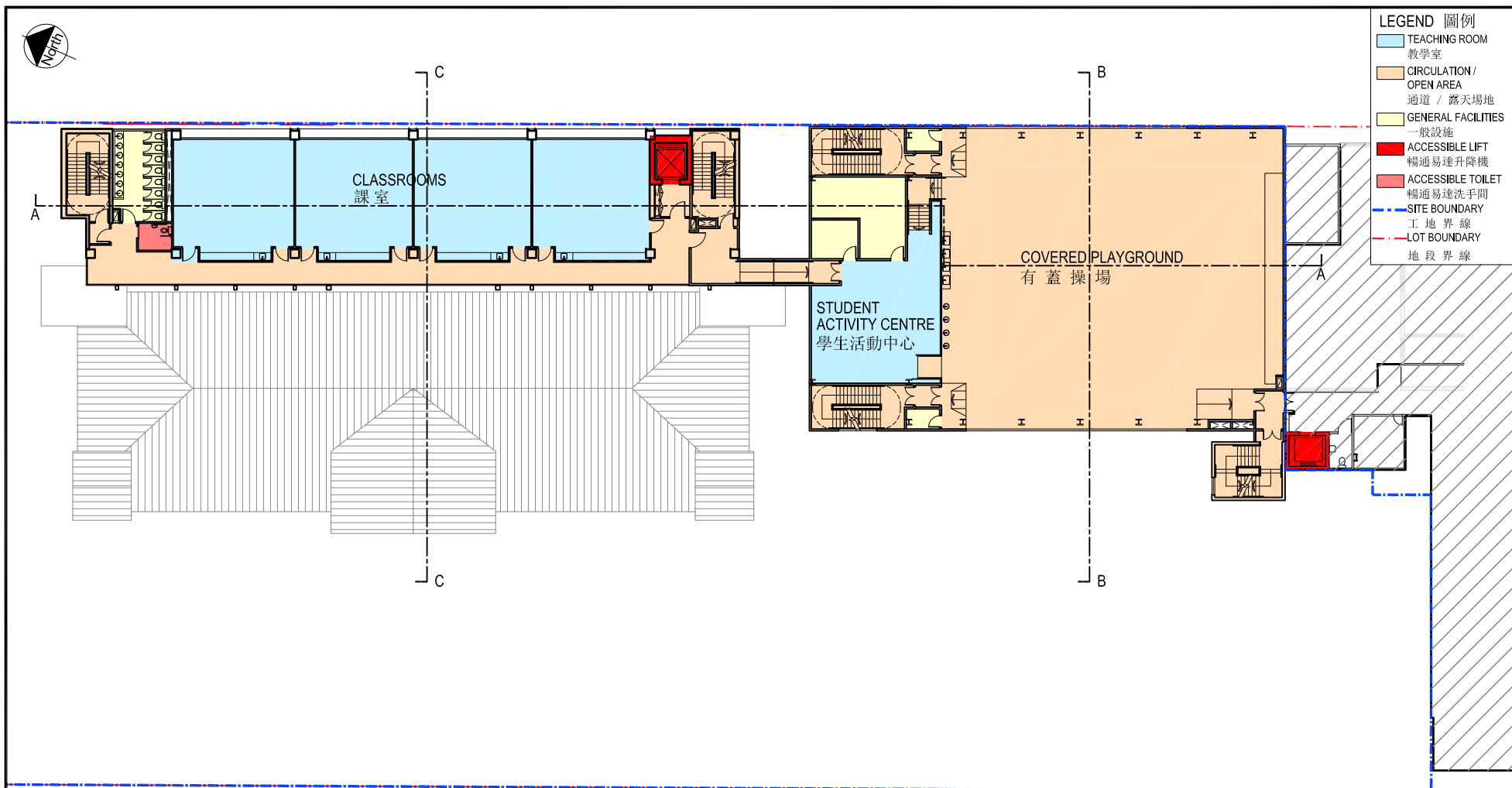
THIRD FLOOR PLAN

三樓平面圖

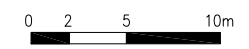


27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY

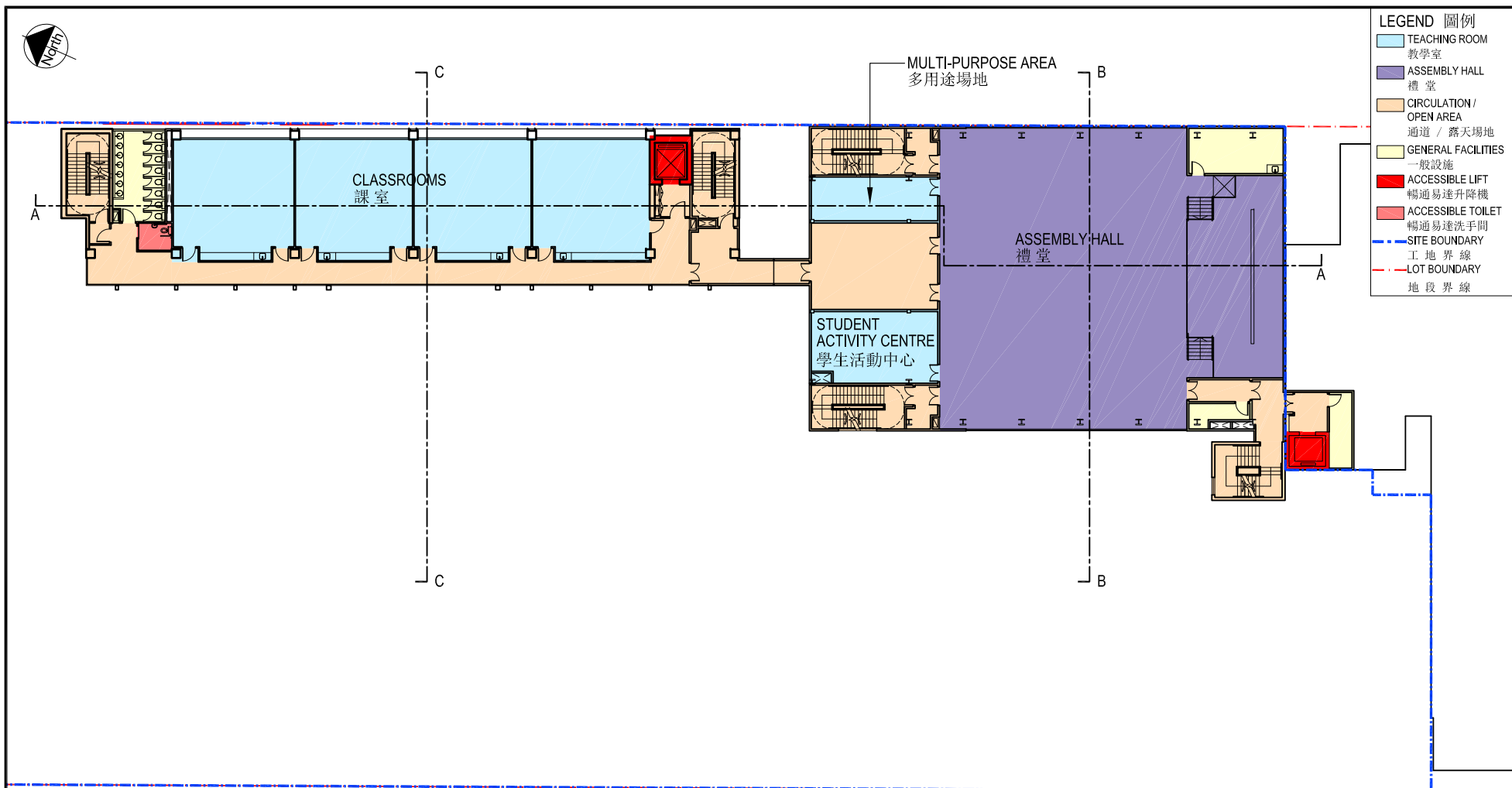
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FOURTH FLOOR PLAN
四樓平面圖

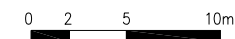


27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY
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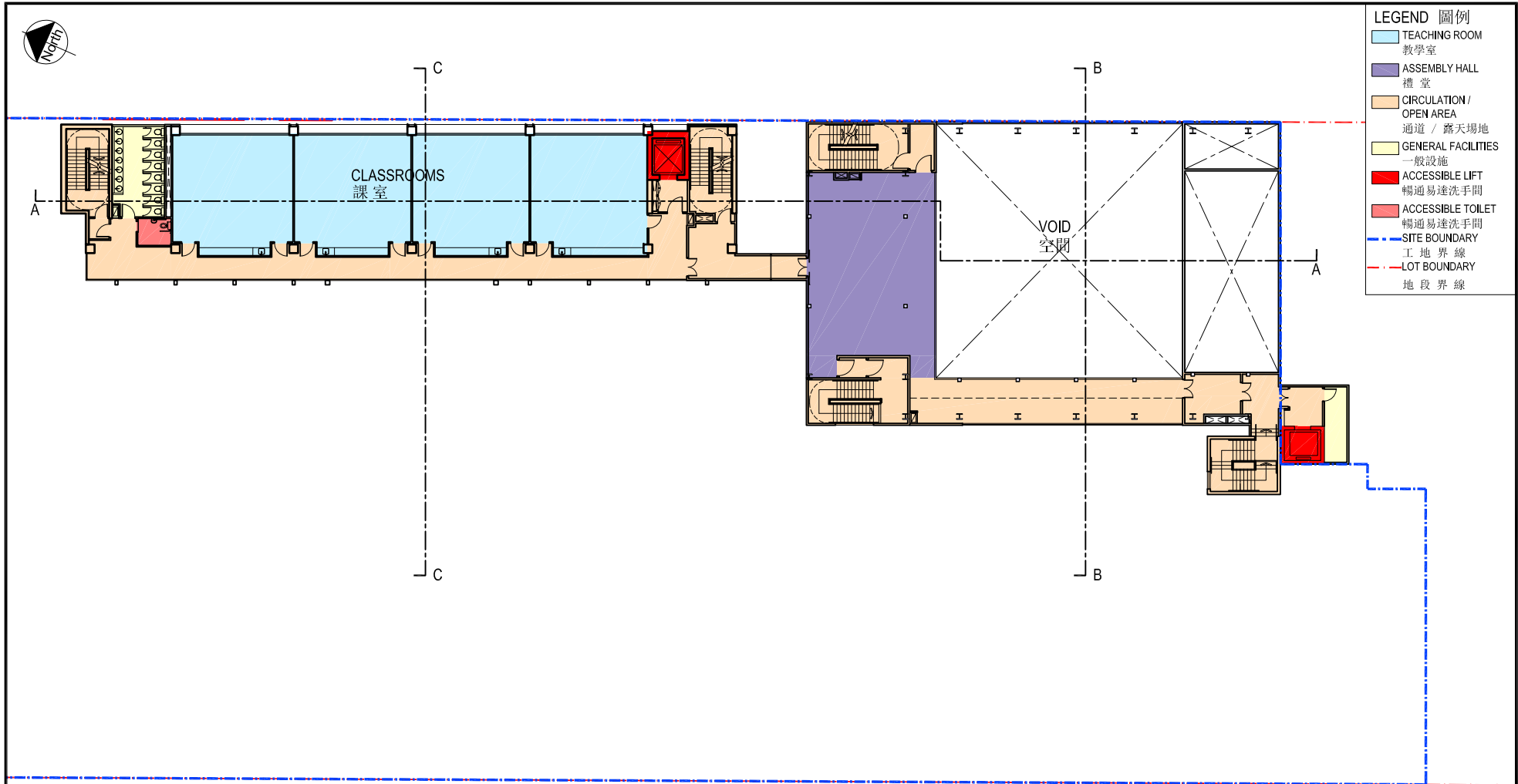


FIFTH FLOOR PLAN

五樓平面圖

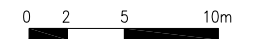


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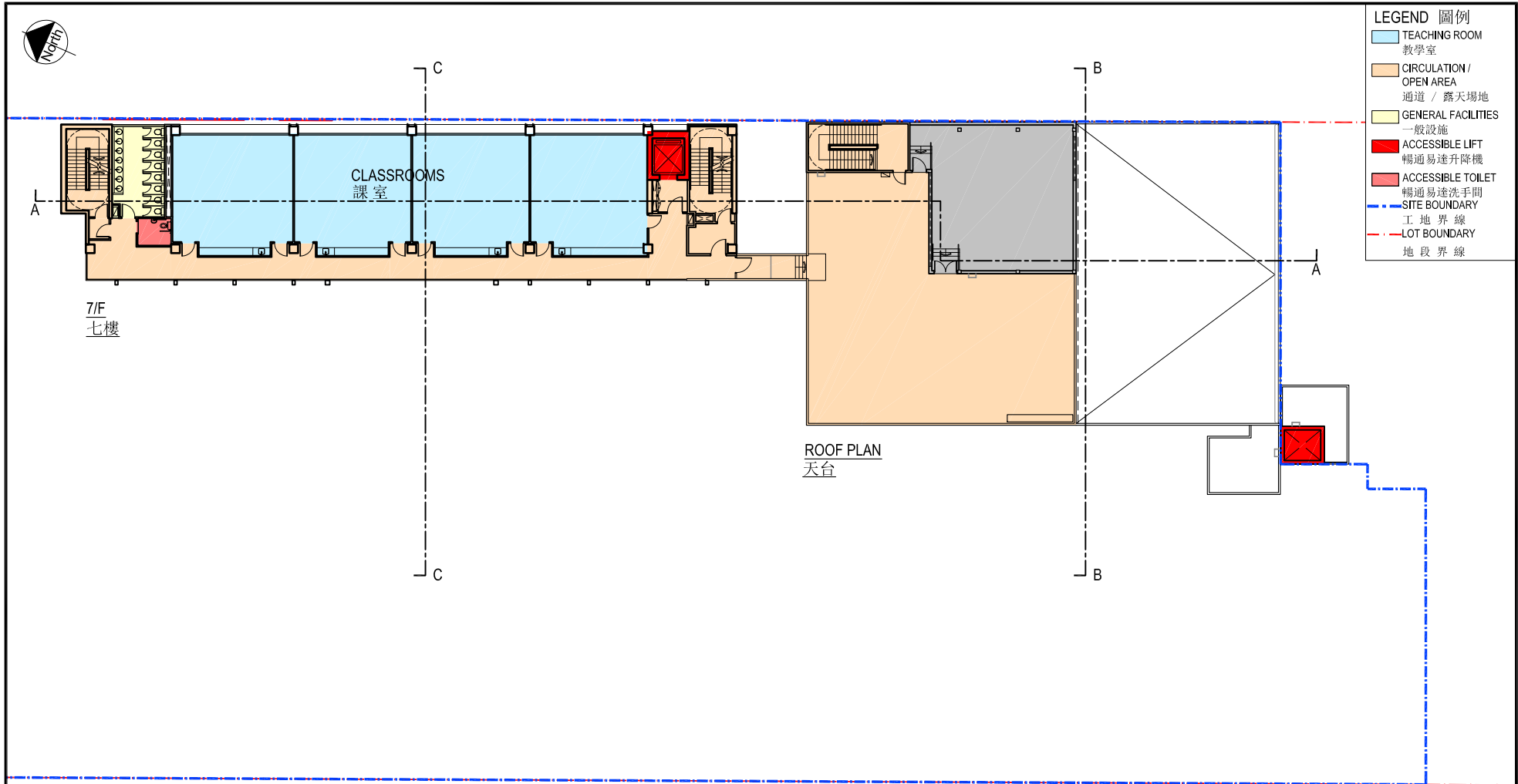
SIXTH FLOOR PLAN

六樓平面圖



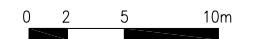
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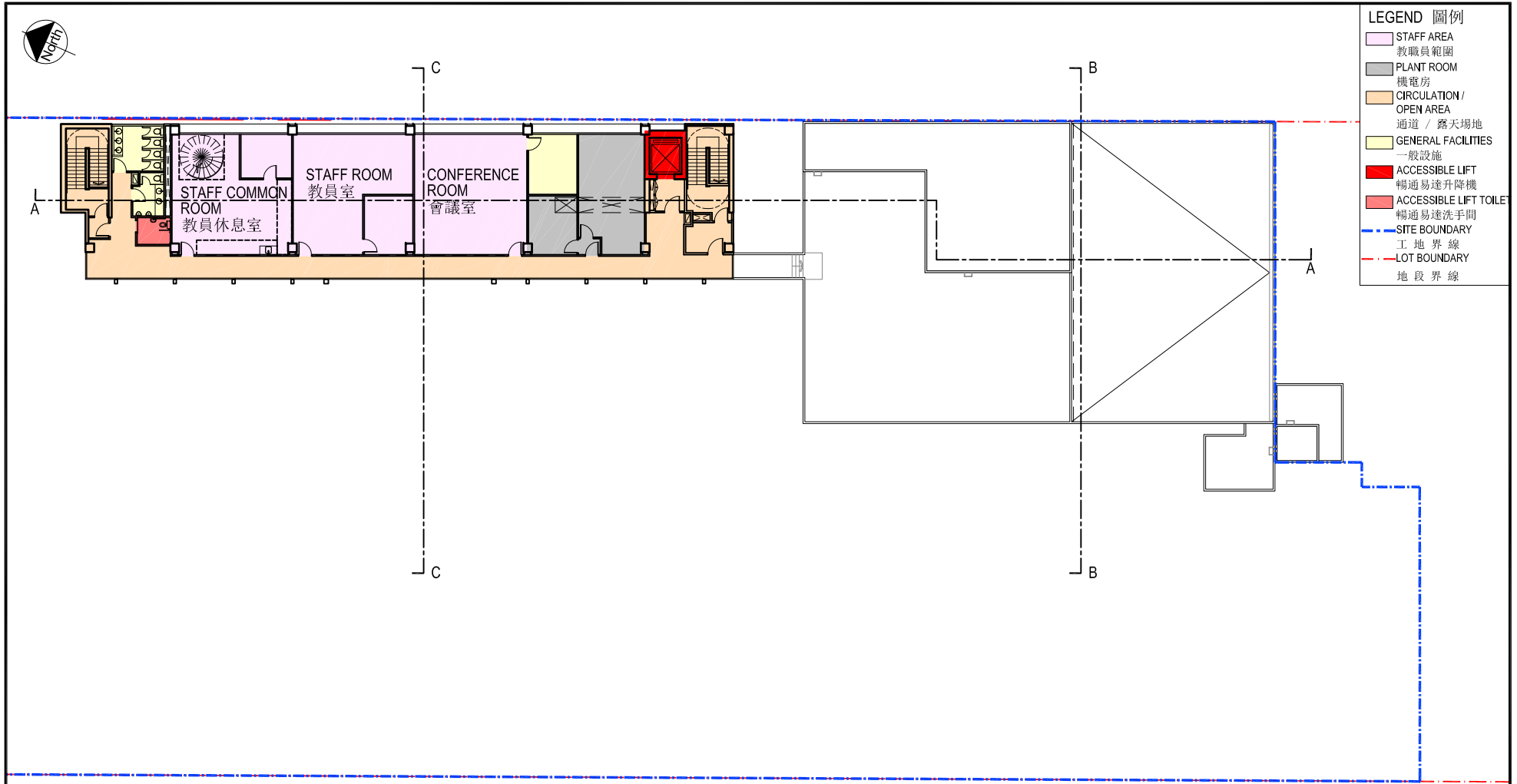
SEVENTH FLOOR PLAN & ROOF PLAN

七樓平面圖及天台平面圖



27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY

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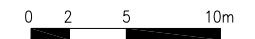


LEGEND 圖例

	STAFF AREA 教職員範圍
	PLANT ROOM 機電房
	CIRCULATION / OPEN AREA 通道 / 露天場地
	GENERAL FACILITIES 一般設施
	ACCESSIBLE LIFT 暢通易達升降機
	ACCESSIBLE LIFT TOILET 暢通易達洗手間
	SITE BOUNDARY 工地界線
	LOT BOUNDARY 地段界線

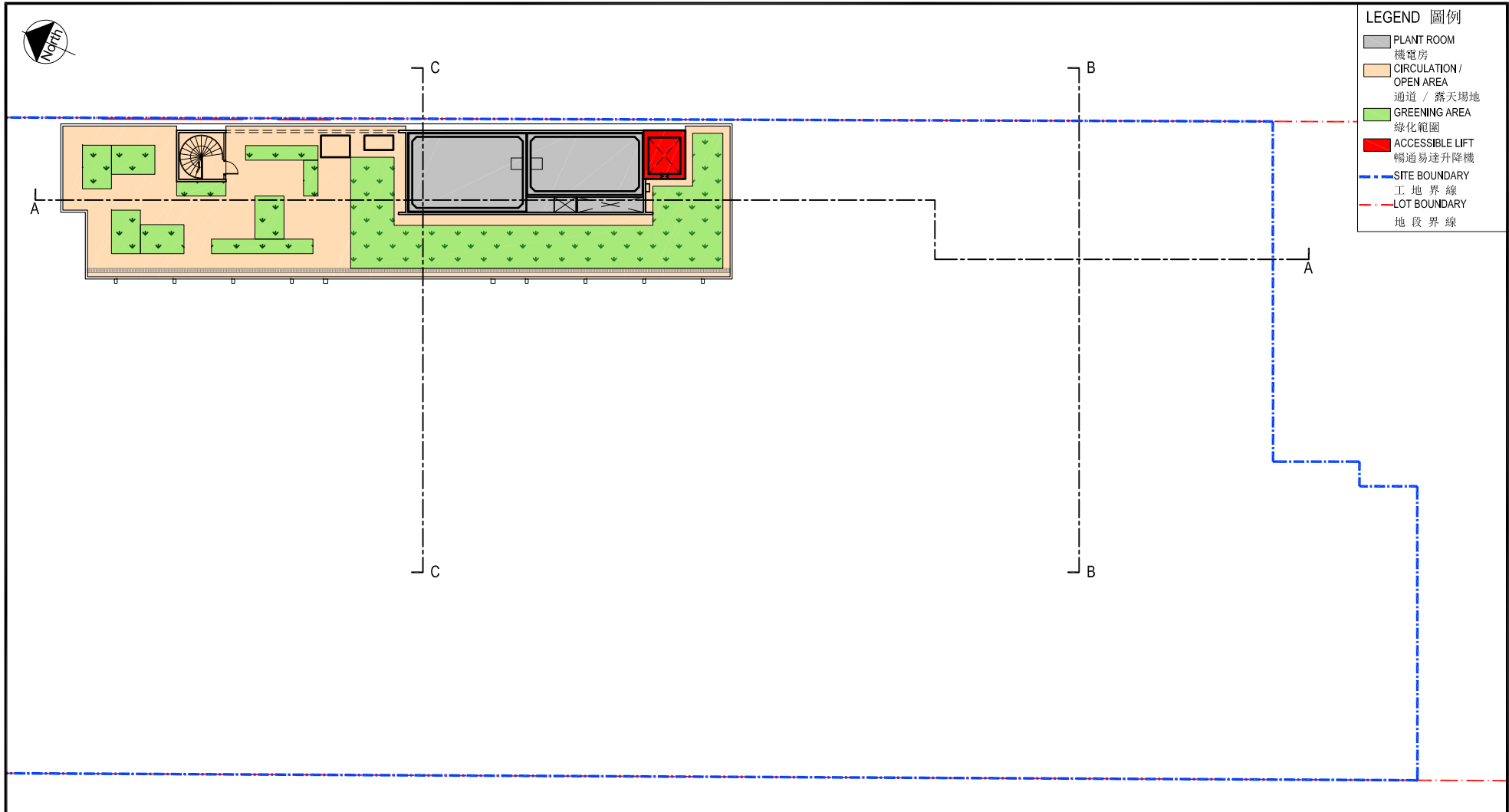
EIGHTH FLOOR PLAN

八樓平面圖

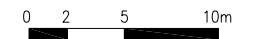


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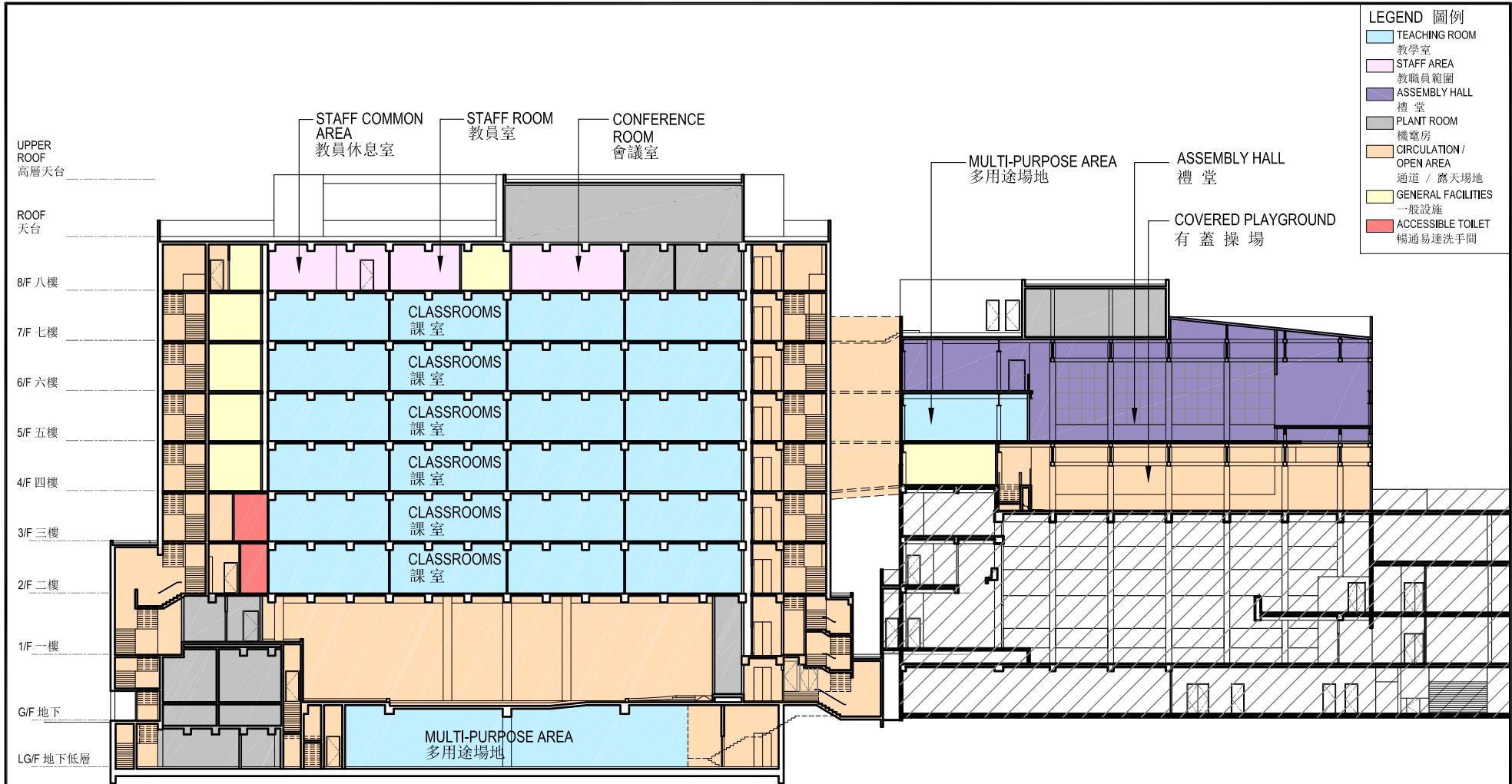


ROOF PLAN
天台平面圖

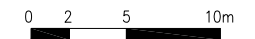


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CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY

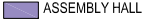

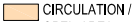

27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學

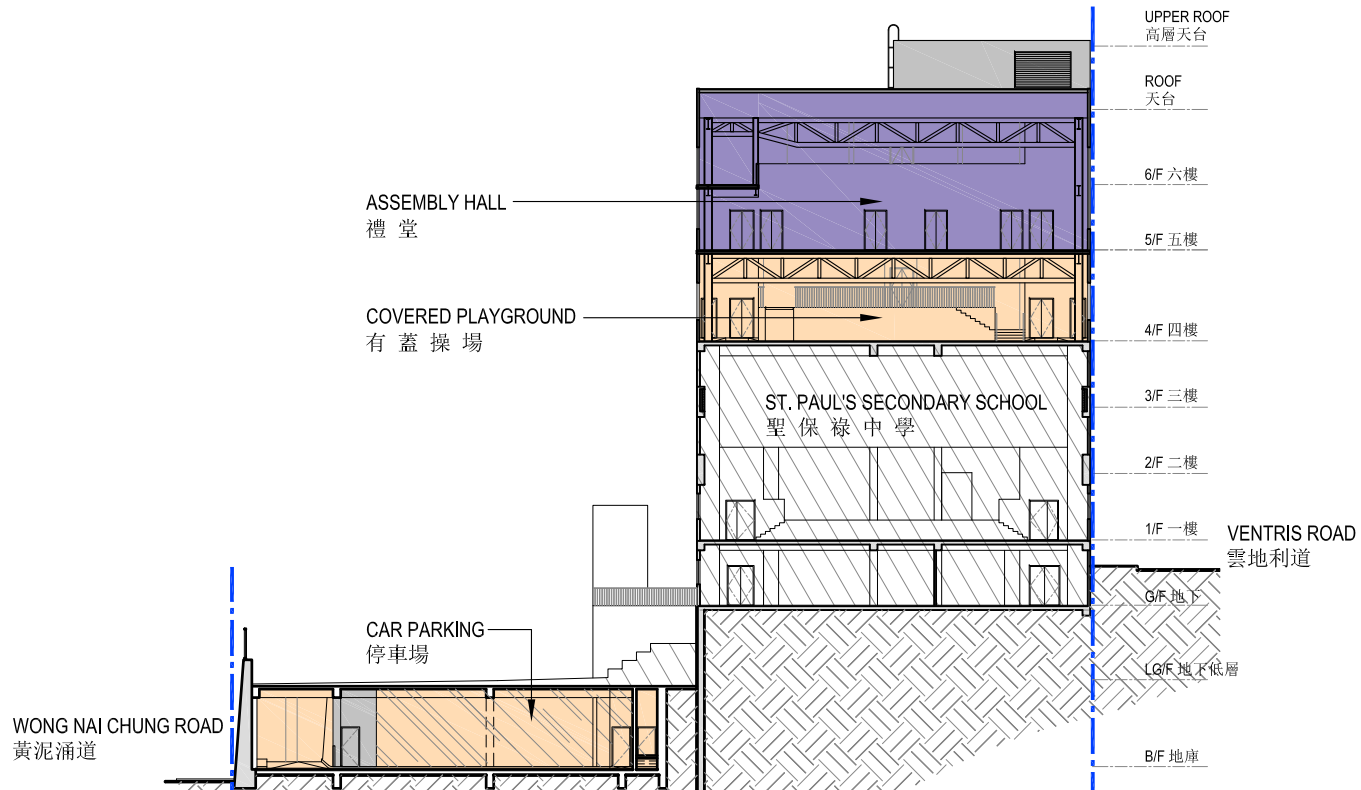


SECTION A-A
剖面圖 A-A

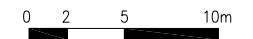


27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY
27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學

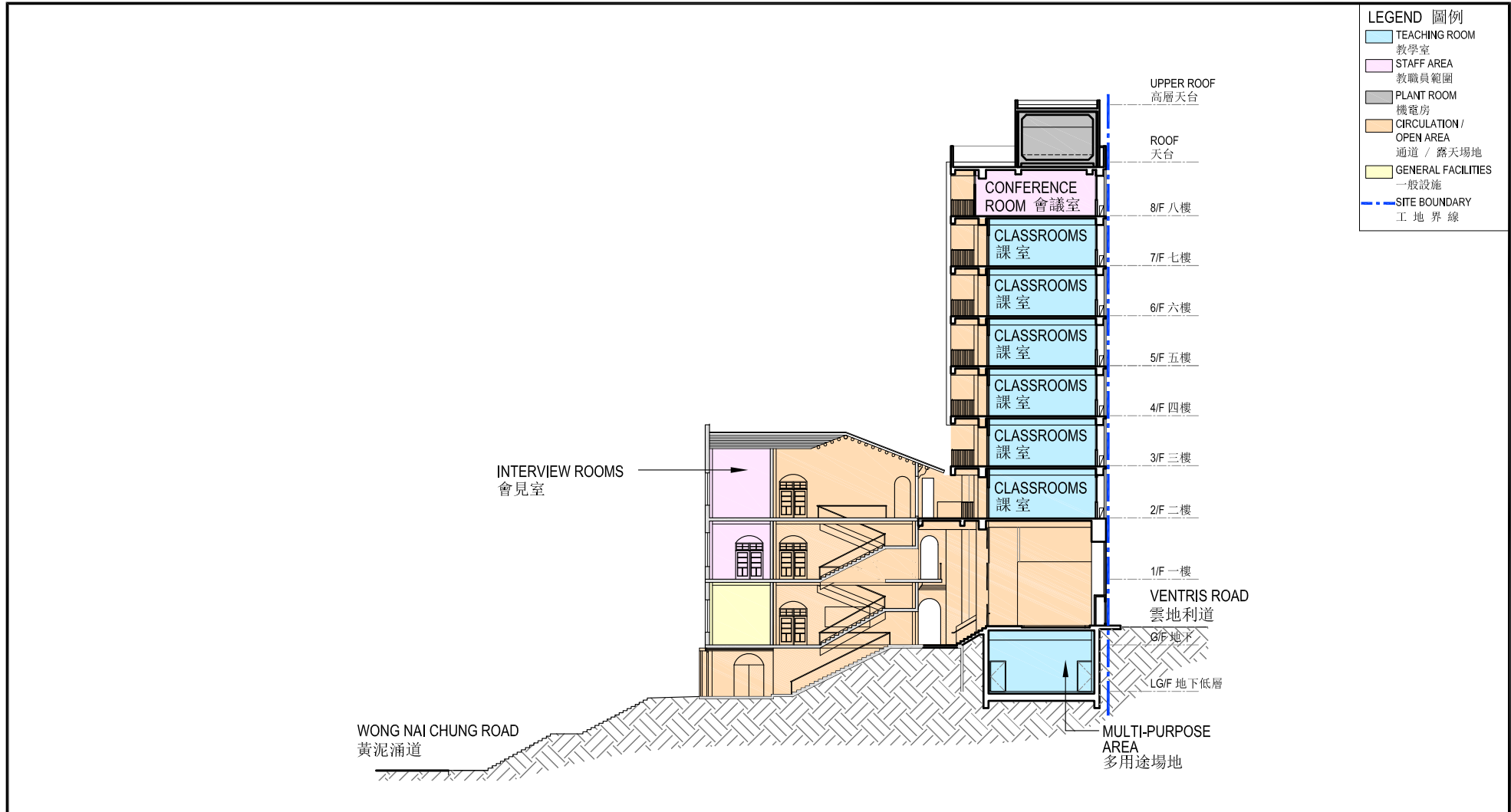
LEGEND 圖例	
	ASSEMBLY HALL 禮堂
	PLANT ROOM 機電房
	CIRCULATION / OPEN AREA 通道 / 露天場地
	SITE BOUNDARY 工地界線



SECTION B-B
剖面圖 B-B



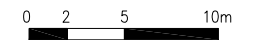
27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY
27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學



LEGEND 圖例

 TEACHING ROOM 教學室
 STAFF AREA 教職員範圍
 PLANT ROOM 機電房
 CIRCULATION / OPEN AREA 通道 / 露天場地
 GENERAL FACILITIES 一般設施
 SITE BOUNDARY 工地界線

SECTION C-C
剖面圖 C-C



27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY
27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學

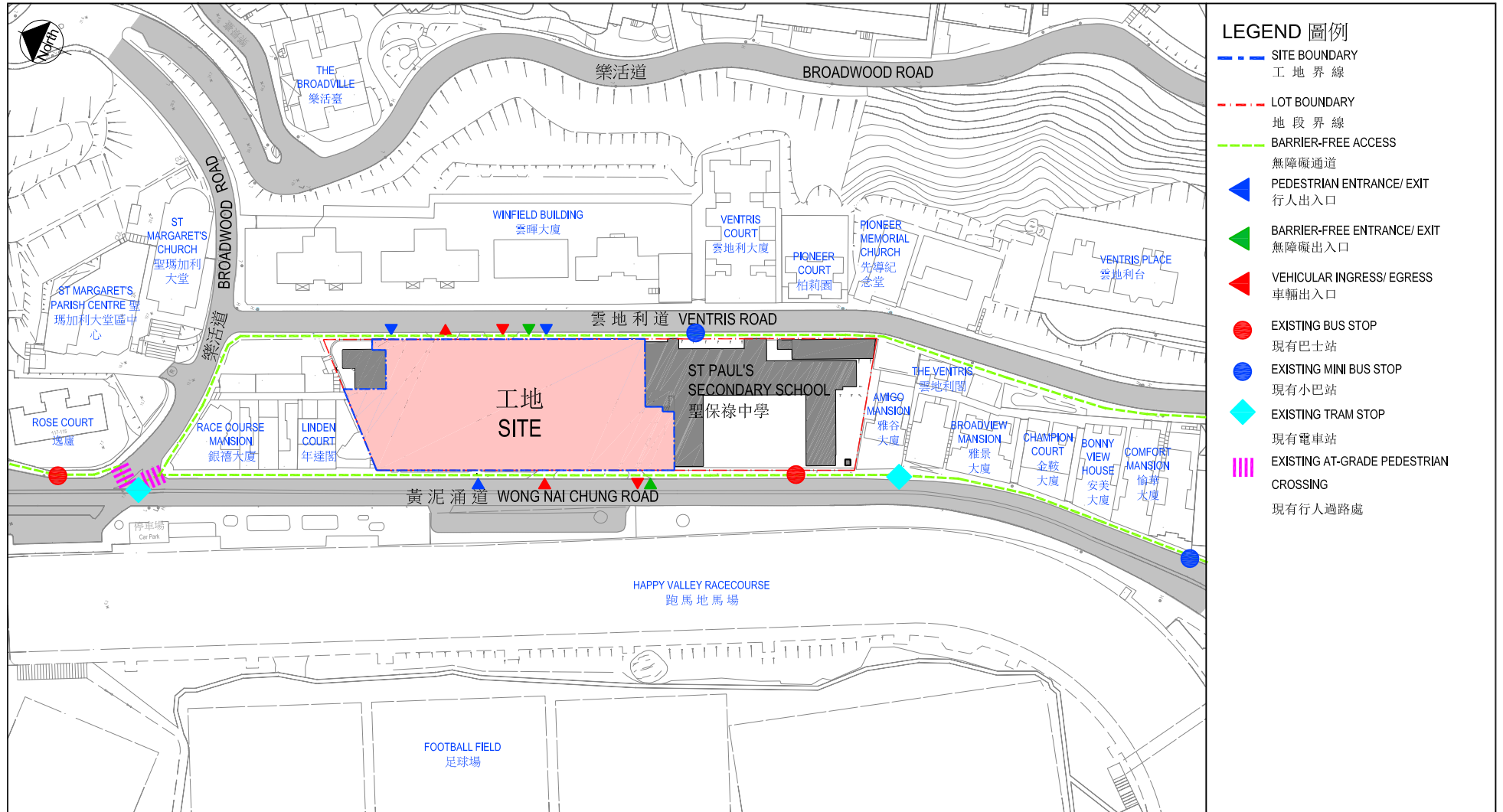


VIEW FROM WONG NAI CHUNG ROAD (ARTIST'S IMPRESSION)

從黃泥涌道望向學校的構思圖

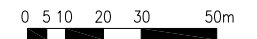
27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY
CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY

27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學



PLAN OF BARRIER-FREE ACCESS

無障礙通道平面圖



27EA - EXTENSION AND CONVERSION TO ST. PAUL'S PRIMARY CATHOLIC SCHOOL AT WONG NAI CHUNG ROAD, HAPPY VALLEY

27EA - 擴建及改建跑馬地黃泥涌道聖保祿天主教小學

27EA – Extension and conversion to St. Paul’s Primary Catholic School at Wong Nai Chung Road, Happy Valley

Breakdown of the estimates for consultants’ fees and resident site staff costs (in September 2015 prices)

		Estimated man-months	Average MPS [*] salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants’ fees for contract administration (Note 2)	Professional	—	—	—	6.0
				Sub-total	6.0
(b) Resident site staff (RSS) costs (Note 3)	Technical	160	14	1.6	6.5
				Sub-total	6.5
Comprising –					
(i) Consultants’ fees for management of RSS				0.3	
(ii) Remuneration of RSS				6.2	
				Total	12.5

* 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 = \$25,505 per month).
2. The consultants’ fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of 27EA. The assignment will only be executed subject to FC’s funding approval to upgrade 27EA to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.

**A comparison of the reference cost of
a standard 24-classroom primary school project
with the estimated cost of 27EA**

\$ million (in Sept 2015 prices)

	Reference cost*	27EA	
(a) Demolition works	–	5.7	(See note A)
(b) Site formation	–	70.2	(See note B)
(c) Piling	16.7	68.8	(See note C)
(d) Building	124.3	99.3	(See note D)
(e) Building services	35.6	30.9	(See note E)
(f) Drainage	5.9	4.8	(See note F)
(g) External works	19.0	15.4	(See note G)
(h) Conversion of existing school premises	–	43.8	(See note H)
(i) Additional energy conservation measure	–	3.3	(See note I)
(j) Noise mitigation measure	–	4.4	(See note J)
(k) Furniture and equipment (F&E)	–	2.5	(See note K)
(l) Consultants' fees and remuneration of resident site staff	–	12.5	(See note L)
(m) Contingencies	20.2	36.2	
	Total	221.7	397.8
(n) Construction floor area	9 580 m ²	7 654 m ²	
(o) Construction unit cost {[(d) + (e)] ÷ (n)}	\$16,691/m ²	\$17,011/m ²	

*** Assumptions for reference cost**

1. The estimation is based on the assumption that the school site is uncomplicated and without unusual environmental restrictions. No allowance is reserved for specific environmental restrictions such as the provision of insulated windows, air-conditioning and boundary walls to mitigate noise impacts on the school.
2. No site formation works/geotechnical works are required as they are normally carried out by other government departments under a separate engineering vote before handing over the project site for school construction.
3. Piling cost is based on the 105 steel H-piles at an average depth of 30 metres (m), assuming that percussive piling is permissible. It also includes costs for pile caps, strap beams and testing. No allowance is reserved for the effect of negative skin friction due to fill on reclaimed land.
4. Cost for drainage and external works is for a standard 24-classroom primary school site area 4 700 square metres (m²) built on an average level site without complicated geotechnical conditions, utility diversions, etc. (i.e. a “greenfield” site).
5. No consultancy services are required.
6. Furniture and equipment costs are excluded as they are usually borne by the sponsoring bodies of new schools.
7. The reference cost for comparison purpose is subject to review regularly. We will review, and revise if necessary, the reference cost which should be adopted for future projects.

Notes

- A. Additional cost is required for demolition of the existing annex building.
- B. Additional cost is required for site formation works for constructing the extension and the drop-off area facing Wong Nai Chung Road.
- C. The piling cost is much higher because of the need to adopt protection measures for the Grade 2 historic building, such as the use of pre-bored socketed steel H-piles. Besides, mini-piles will also be used for constructing the extension, the drop-off area facing Wong Nai Chung Road and the toilet block.
- D. The building cost is lower because **27EA** will have a smaller CFA as compared to a standard 24-classroom primary school.
- E. The building services cost is lower because **27EA** will have a smaller CFA as compared to a standard 24-classroom primary school.
- F. The cost of drainage is lower because **27EA** will have a smaller external area as compared to a standard 24-classroom primary school.
- G. The cost of external works is lower because **27EA** will have a smaller external area as compared to a standard 24-classroom primary school.
- H. Additional cost is required for carrying out conversion works to the School's existing premises. There is also a need to adopt protection measures for the Grade 2 historic building when carrying out the conversion works therein, such as avoidance of using large machineries.
- I. Additional cost is required for the provision of energy conservation. The energy efficient features will achieve energy saving in the annual consumption with a payback period of about 6.4 years.
- J. Additional cost is required for noise mitigation measures to all 24 classrooms as recommended by CAD.
- K. The cost of F&E, which is estimated to be \$2.5 million, will be borne by the Government. This is in line with the existing policy on redevelopment and reprovisioning of schools.
- L. Additional cost is required for meeting the cost of contract administration and site supervision consultancy services, and reimbursing the consultants for their out-of-pocket expenses.