ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 703 – BUILDINGS Education – Others 108ET – Two special schools at Sung On Street, To Kwa Wan

Members are invited to recommend to Finance Committee the upgrading of **108ET** to Category A at an estimated cost of \$484.0 million in money-of-the-day prices.

PROBLEM

We need to improve the teaching and learning environment of two existing special schools through reprovisioning.

PROPOSAL

2. The Director of Architectural Services, with the support of the Secretary for Education, proposes to upgrade **108ET** to Category A at an estimated cost of \$484.0 million in money-of-the-day (MOD) prices for the construction of two special schools at Sung On Street, To Kwa Wan (the site), for reprovisioning of Po Leung Kuk Anita L.L. Chan (Centenary) School (Centenary School) and Chi Yun School.

/PROJECT

PROJECT SCOPE AND NATURE

- 3. The proposed scope of works under the project includes
 - (a) a 12-classroom school for children with moderate intellectual disability (MoID) with the following facilities
 - (i) 12 classrooms;
 - (ii) two small group teaching rooms;
 - (iii) six special rooms, comprising a music room, a visual arts room, a multi-purpose room, a computer room, a design and technology room and a home economics room;
 - (iv) two interview rooms;
 - (v) an optional subject room¹;
 - (vi) a computer assisted learning room;
 - (vii) four speech therapy rooms;
 - (viii) a staff room;
 - (ix) a staff common room;
 - (x) a conference room;
 - (xi) two social worker's rooms;
 - (xii) a student activity centre;
 - (xiii) a library;
 - (xiv) a multi-purpose area;

/(xv)

Optional subject room is for training on the practical and independent living skills to prepare the senior secondary students for taking courses under the Vocational Training Council and Skills Training Centre after they finish secondary education.

- (xv) a basketball court;
- (xvi) an assembly hall;
- (xvii) a green corner²; and
- (xviii) other ancillary facilities including a disabled/ fireman's lift, facilities for the disabled, store rooms, toilets, etc.;
- (b) a 12-classroom school for children with severe intellectual disability (SID) with 60 boarding places with the following facilities –

School section

- (i) 12 classrooms;
- (ii) two small group teaching rooms;
- (iii) four special rooms, comprising a music room, a visual arts room, a multi-purpose room and a computer room;
- (iv) two interview rooms;
- (v) a special room for practical subjects³;
- (vi) a multi-media activity room;
- (vii) a physiotherapy room;
- (viii) an occupational therapy room;
- (ix) three speech therapy rooms;
- (x) a staff room;

/(xi)

A green corner is a designated area inside the campus to encourage students to develop an interest in horticulture and natural environment. The green corner may include planting beds.

Practical subjects refer to subjects such as life skills training, e.g. preparation of meal setting, independent living training, home decoration etc.

- (xi) a staff common room;
- (xii) a social worker's room;
- (xiii) a conference room;
- (xiv) a student activity centre;
- (xv) a library;
- (xvi) a multi-purpose area;
- (xvii) a basketball court;
- (xviii) an assembly hall;
- (xix) a green corner; and
- (xx) other ancillary facilities including a disabled/ fireman's lift, facilities for the disabled, store rooms, toilets, etc.

Boarding section

- (xxi) bedrooms to accommodate 60 boarders and study area;
- (xxii) a TV/ common room;
- (xxiii) a dining/ multi-purpose room;
- (xxiv) a kitchen and a kitchen store;
- (xxv) a laundry room;
- (xxvi) a drying area;
- (xxvii) a warden's office;
- (xxviii) a houseparents' and programme workers' office;

- (xxix) a nurse duty room / a sick bay;
- (xxx) two sleep-in rooms for staff on night shift; and
- (xxxi) other ancillary facilities including stores, toilets, bathrooms, relevant facilities for the disabled, etc.

Upon completion, the MoID school will occupy the western half of the site and the SID school will be located at the eastern half. The assembly hall block in the middle of the site will adopt an interlocking design with the assembly hall of the SID school on the first and second floors (in light of the limited mobility of the SID children) and that of the MoID school on the third and fourth floors. The two schools will have independent facilities, individual entrances and barrier-free accesses. The two new schools will meet the planning target of providing two square metres (m²) of open space per student. A site plan, floor plans, a sectional plan, artist's impressions of the school premises and a barrier-free access plan for the project are at Enclosures 1 to 13. Subject to the funding approval of the Finance Committee, we plan to commence construction in June 2015 for completion in September 2017.

JUSTIFICATION

- 4. Centenary School and Chi Yun School, currently occupying sites with areas of only 1 740 m² in Wong Tai Sin and 1 450 m² in Sham Shui Po, were built in 1978 and 1962 respectively, with an extension block added to each school in 2000 under the School Improvement Programme. In the 2014/15 school year, Centenary School is operating nine classes, while Chi Yun School is operating ten classes and providing 51 boarding places. Both schools are operating beyond their design capacity to meet the demand and do not have any additional space for infrastructure upgrading or in-situ redevelopment due to physical constraints. Both schools are critically in need of reprovisioning.
- 5. Centenary School is sharing the same school premises with a local primary school under the same school sponsoring body without its own open playground and lacks essential facilities such as assembly hall, student activity centre, conference room, etc. The premises of Chi Yun School, originally designed for a mainstream primary day school, cannot meet the requirements of barrier-free access. There are no ramps for access to various floors within the building and it lacks essential facilities such as parking spaces, assembly hall, music room, printing room in the school section, and dining area and common

area in the boarding section. Many of the facilities such as classrooms, art room, library, multi-purpose room, occupation therapy room, physiotherapy room, resource room, speech therapy rooms, conference room, general office, medical inspection room, staff room, etc., are undersized.

- 6. Over the years, the two schools have met their operational needs and safety standard through major and emergency repairs. However, due to site constraints, substantial infrastructure upgrading or in-situ redevelopment of the two schools is not technically feasible. The reprovisioning project is therefore necessary to upgrade the facilities of the two schools and improve the teaching and learning environment.
- 7. The two new school premises, comprising only low-rise buildings, will not block the view or cause any ventilation problem to residents nearby. Most of the students will take school buses or use Rehabus services. They will use the parking lots inside the school premises for getting on and off the buses. The operation of these two schools will not cause any traffic congestion to Sung On Street and the future road of L19.
- 8. The projected demand and supply of school places of MoID schools and school places and boarding places of SID schools in Kowloon and Tseung Kwan O Region⁴, as at March 2014, are as follows –

MoID school places

	School Year					
	2014/15	2015/16	2016/17	2017/18	2018/19	
Demand	740	750	770	800	840	
Supply	570	570	570	570	570	
Shortfall	170	180	200	230	270	

SID school places

	School Year					
	2014/15	2015/16	2016/17	2017/18	2018/19	
Demand	240	250	250	250	260	
Supply	232	232	232	232	232	
Shortfall	8	18	18	18	28	

/SID

Kowloon and Tseung Kwan O is one of the seven regions for analysis of provision of school places and boarding places in special schools. The other six regions are Hong Kong Island, Shatin & Sai Kung (excluding Tseung Kwan O), Tai Po & North, Kwai Tsing & Tsuen Wan, Tuen Mun & Yuen Long, and Outlying Islands.

SID boarding places

	School Year					
	2014/15	2015/16	2016/17	2017/18	2018/19	
Demand	150	150	150	150	160	
Supply	145	145	145	145	145	
Shortfall	5	5	5	5	15	

9. Upon completion of the reprovisioning project in 2017, it will provide an additional 70 MoID and 64 SID school places and 35 SID boarding places. This will help ease the projected shortage of MoID places and ensure the adequate supply of SID school and boarding places.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the project to be \$484.0 million in MOD prices (please see paragraph 11 below), broken down as follows –

		\$ million
(a)	Site formation	1.8
(b)	Piling	67.3
(c)	Building	192.0
(d)	Building services	42.6
(e)	Drainage	8.2
(f)	External works	31.0
(g)	Additional energy conservation, green and recycled features	6.2
(h)	Furniture and equipment ⁵	5.0
(i)	Consultants' fees for (i) contract administration (ii) management of resident site staff (RSS)	9.8 0.4

/(j)

⁵ The estimated cost is based on an indicative list of furniture and equipment.

	\$ million	
Remuneration of RSS	8.0	
Contingencies	37.2	
Sub-total	409.5	(in September 2014 prices)
Provision for price adjustment	74.5	1 ,
Total	484.0	(in MOD prices)
	Contingencies Sub-total Provision for price adjustment	Remuneration of RSS 8.0 Contingencies 37.2 Sub-total 409.5 Provision for price adjustment 74.5

We propose 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 14. The construction floor area (CFA) of the proposed project is about 13 042 m². The estimated construction unit cost, represented by the building and building services costs, is \$17,988 per m² of CFA in September 2014 prices. We consider this comparable to that of similar projects built by the Government.

11. Subject to funding approval, we will phase the expenditure as follows –

Year	\$ million (Sept 2014)	Price adjustment factor	\$ million (MOD)
2015 – 16	30.0	1.06000	31.8
2016 – 17	145.0	1.12360	162.9
2017 – 18	150.0	1.19102	178.7
2018 – 19	40.0	1.26248	50.5
2019 – 20	30.0	1.32876	39.9
2020 - 21	14.5	1.39519	20.2
	409.5		484.0

- 12. 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 2015 to 2021. 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 adjustments.
- 13. The cost of furniture and equipment for the project, estimated to be \$5.0 million, will be borne by the Government according to the existing policy. The annual recurrent expenditures for the MoID and SID schools arising from this project are estimated to be \$24.8 million and \$40.5 million respectively upon reprovisoning to the new premises in 2017.

PUBLIC CONSULTATION

- 14. The two schools have consulted the parents of their students on the reprovisioning project and the design of the new school premises through seminars and meeting with the school representatives. We consulted the Housing and Infrastructure Committee of the Kowloon City District Council on 9 January 2014 regarding the reprovisioning project. While members did not have any objection to the proposal, they were concerned about the traffic arising from the two special schools and requested the Government to conduct local consultation. A survey form was circulated to the local residents and stakeholders to collect their views in February 2014. While majority of the respondents have no comment or no objection to the proposal, some raised concerns on possible pollution resulting from the construction work, the building height of the school halls, as well as the greening aspect of the buildings. Their concerns have already been addressed and mitigated in the construction plan and design of the school premises.
- 15. We also consulted the Legislative Council Panel on Education on 14 April 2014. Members supported the Administration's proposal to seek funding from the Public Works Subcommittee (PWSC). The supplementary information requested by Members was submitted to the Panel on 18 June 2014.

/ENVIRONMENTAL

ENVIRONMENTAL IMPLICATIONS

- 16. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). We engaged a consultant to conduct a Preliminary Environmental Review (PER) for the proposed project in August 2013. The PER recommended installation of insulated windows and airconditioning for 12 classrooms on the 1/F and 2/F, two small group teaching rooms on 2/F and four special rooms (Home Economics Room, Design and Technology Room, Visual Arts Room and Music Room) on the 3/F of the MoID School Block. With the mitigation measures in place, noise affecting the teaching and learning environment of the reprovisioned schools will be reduced to the minimum. The estimated cost of the mitigation measures is \$3.8 million in September 2014 prices. We have included the cost of the above mitigation measures as part of the building and building services works in the project estimate.
- 17. 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 include the use of silencers, mufflers, acoustic lining or shields for noisy construction activities, frequent cleaning and watering of the site, and the provision of wheel-washing facilities. These measures would address concerns raised by some local residents on the possible problem of pollution arising from the construction works.
- 18. 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 facilities⁶. We will encourage the contractor to maximise the use of recycled/ recyclable inert construction waste, and the use of non-timber formwork to further reduce generation of construction waste.

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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.

- 19. 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 construction waste and non-inert construction waste at public fill reception facilities and landfills respectively through a trip-ticket system.
- 20. We estimate that the project will generate in total about 15 550 tonnes of construction waste. Of these, we will reuse about 10 760 tonnes (69.2%) of inert construction waste on site and deliver 2 790 tonnes (17.9%) of inert construction waste to public fill reception facilities for subsequent reuse. We will dispose of the remaining 2 000 tonnes (12.9%) 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 \$0.3 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).

HERITAGE IMPLICATIONS

21. 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

22. The project does not require any land acquisition.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

- 23. This project has adopted various forms of energy efficient features, including
 - (a) heat recovery fresh air pre-conditioners in the airconditioned space for heat energy reclaim of exhaust air;
 - (b) photovoltaic system; and
 - (c) solar hot water system.

- 24. For greening features, we will provide landscaping, vertical greening and roof greening in appropriate areas for environmental and amenity benefits.
- 25. For recycled features, we will adopt rainwater recycling system for landscape irrigation with a view to conserving water.
- 26. The total estimated additional cost for adoption of the above features is around \$6.2 million (including \$0.5 million for energy efficient features), which has been included in the cost estimate of this project. The energy efficient features will achieve 6.2% energy savings in the annual energy consumption with a payback period of about 8.2 years.

BACKGROUND INFORMATION

- We upgraded the project to Category B in September 2011. We engaged a lead consultant in August 2013 to undertake the detailed design and PER, a term contractor to carry out site investigation in September 2013 and a quantity surveying consultant in March 2014 to prepare tender documents. The total cost of the consultancy services and works is about \$14.7 million. The services and works by the consultants and contractor are 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 consultants and contractor have completed all the above consultancy services and works.
- 28. There are 17 trees identified within the project boundary. The proposed works will involve the removal of all these 17 trees. All trees to be removed are not important trees⁷. We will incorporate planting proposals as part of the project, including the planting of about 17 trees, 5 000 shrubs and 8 000 groundcovers

/29.

⁷ "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;

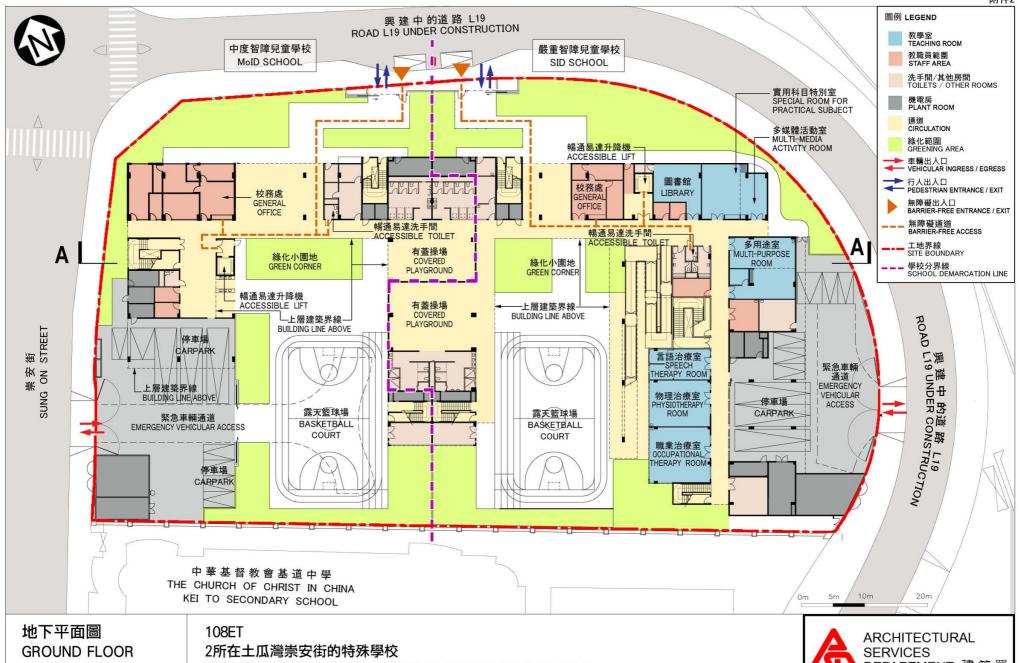
⁽d) trees of outstanding form (taking account of overall tree sizes, shape and any special features) e.g. trees with curtain like aerial roots, trees growing in unusual habitat; or

⁽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.

- 29. We estimate that the proposed works will create about 267 jobs (239 for labourers and another 28 for professional/technical staff) providing a total employment of 4 740 man-months.
- 30. This paper supersedes PWSC(2014-15)27 which was not discussed by the PWSC during the 2013-14 legislative session. The programme, phasing of expenditure and estimated cost of the project have been updated due to the lapse of time.

Education Bureau October 2014

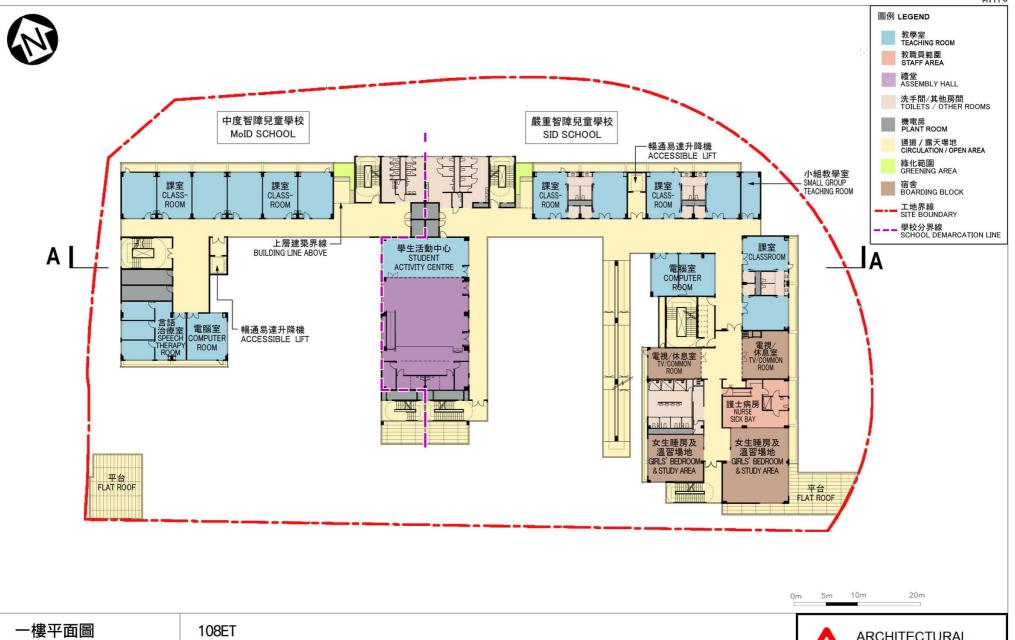




PLAN

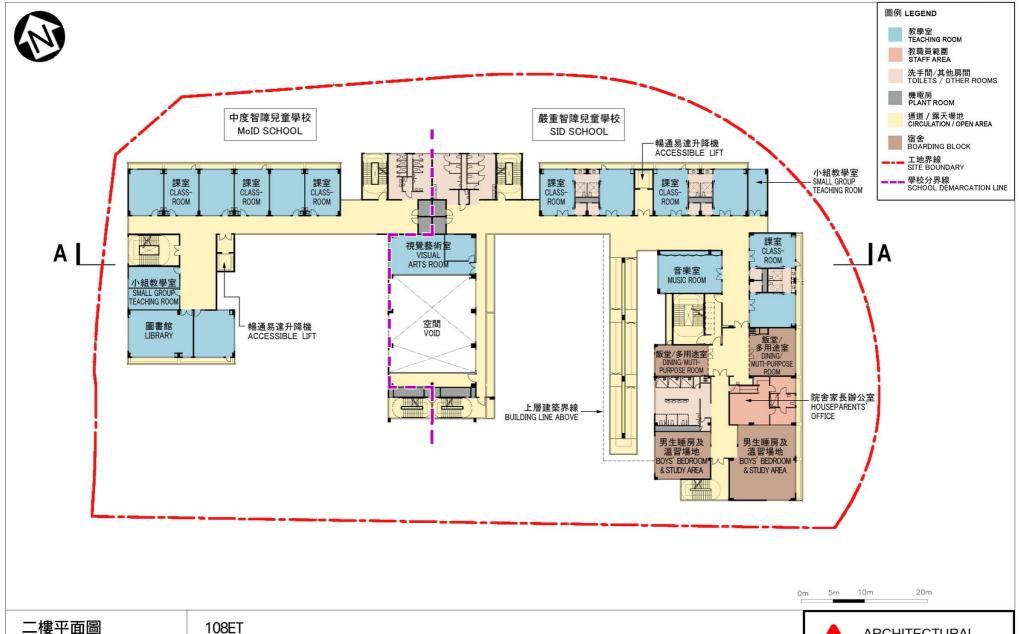
TWO SPECIAL SCHOOLS AT SUNG ON STREET, TO KWA WAN





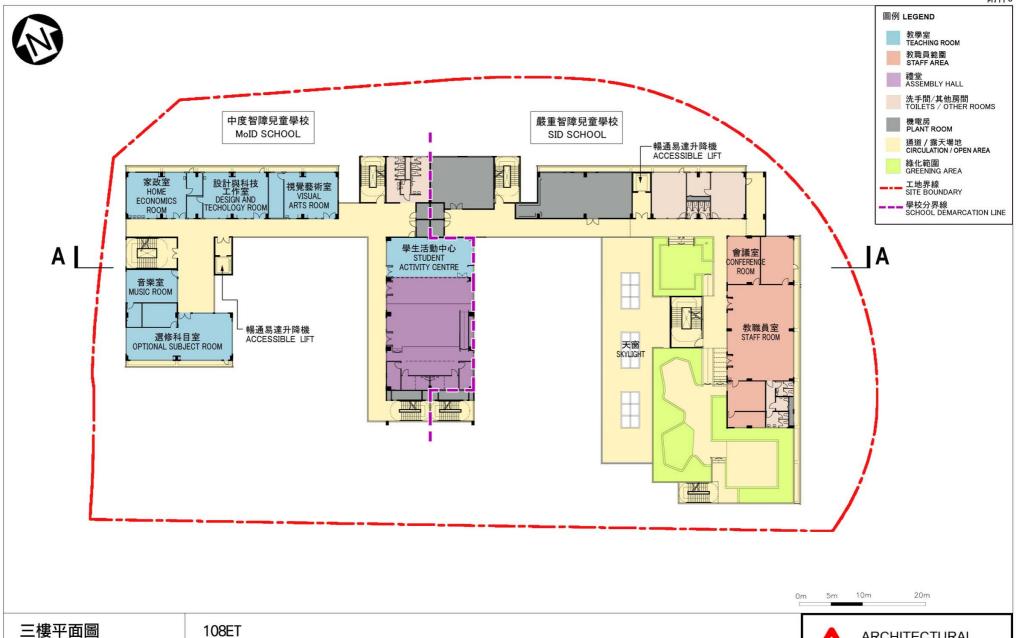
一樓平面圖 FIRST FLOOR PLAN





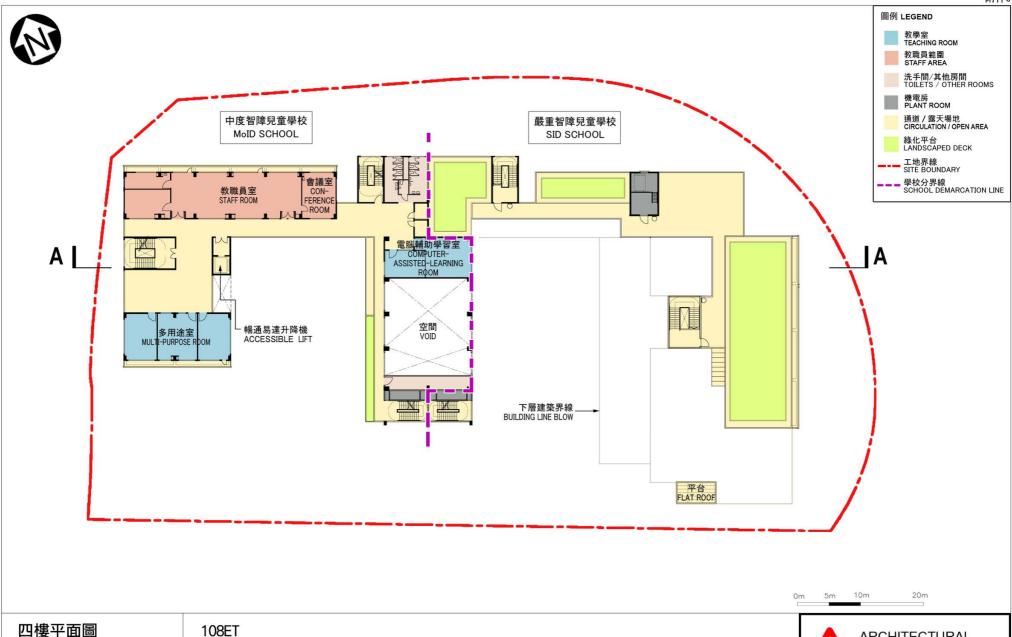
一樓半面圖 SECOND FLOOR PLAN





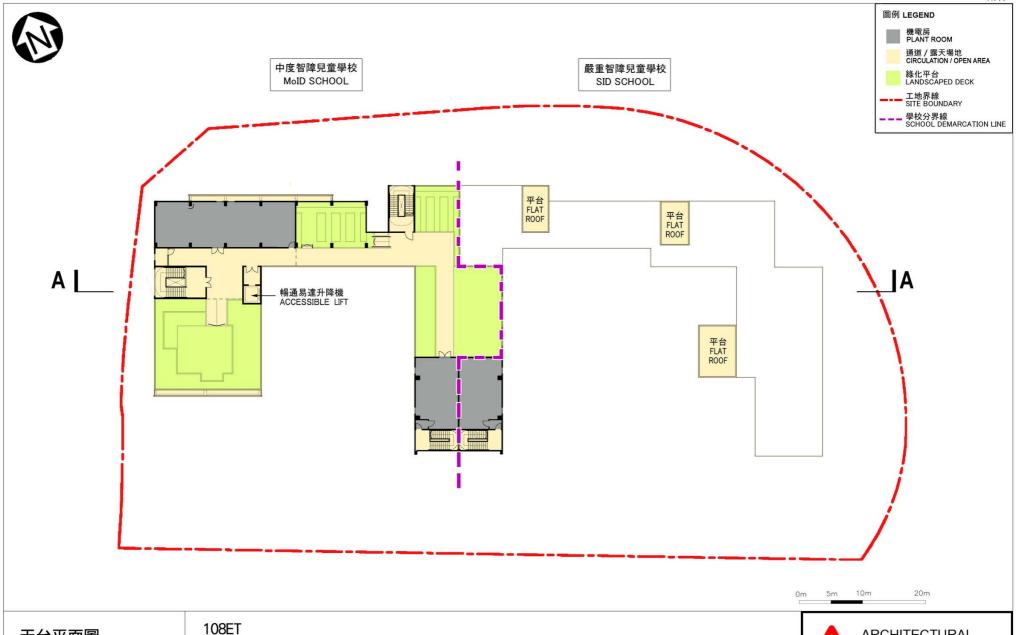
三樓半面圖 THIRD FLOOR PLAN





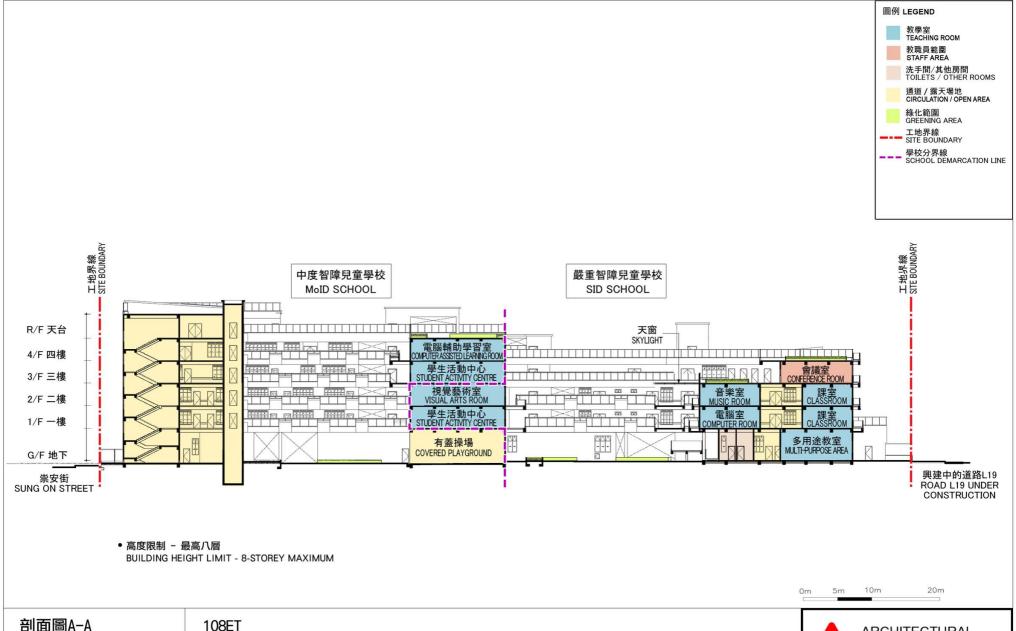
四樓平面圖 FOURTH FLOOR PLAN





天台平面圖 ROOF PLAN





剖面圖A-A SECTION A-A





從西北面望向中度智障兒童學校的構思透視圖 PERSPECTIVE VIEW TO MoID SCHOOL FROM NORTH WESTERN DIRECTION

構思圖 ARTIST'S IMPRESSION





從東北面望向嚴重智障兒童學校的構思透視圖 PERSPECTIVE VIEW TO SID SCHOOL FROM NORTH EASTERN DIRECTION

構思圖 ARTIST'S IMPRESSION





嚴重智障兒童學校 SID SCHOOL

從西南面望向兩所學校的構思鳥瞰圖 AERIAL VIEW FROM SOUTH WESTERN DIRECTION

構思圖 ARTIST'S IMPRESSION





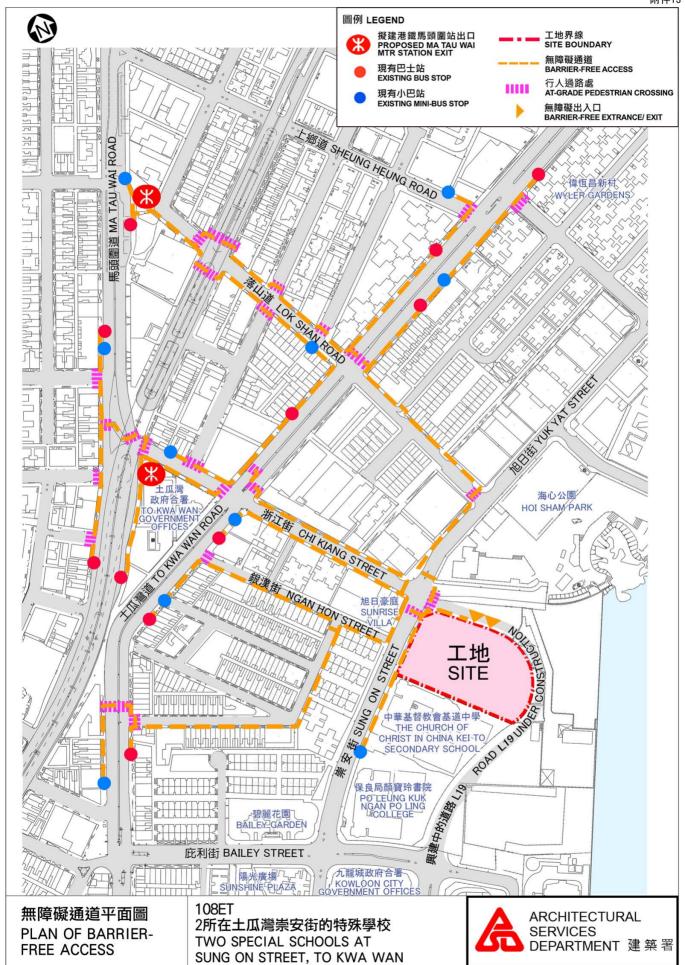
嚴重智障兒童學校 SID SCHOOL

中度智障兒童學校 MoID SCHOOL

從北面望向兩所學校的構思透視圖 PERSPECTIVE VIEW FROM NORTHERN DIRECTION

構思圖 ARTIST'S IMPRESSION





108ET - Two special schools at Sung On Street, To Kwa Wan

Breakdown of the estimates for consultants' fees and resident site staff costs (in September 2014 prices)

		Estimated man- months	Average MPS* salary point	Multiplier (Note 1)	Estimated fee (\$ million)
(a) Consultants' fees f	or Professional	_	_	_	5.9
contract administration (Note	Technical 2)	_	_	_	3.9
				Sub-total	9.8
(b) Resident site staff	Professional	14	38	1.6	1.6
(RSS) costs (Note 3)	Technical	175	14	1.6	6.8
				Sub-total	8.4
Comprising -					
(i) Consultants' for manageme of RSS				0.4	
(ii) Remuneration RSS	of			8.0	
				Total	18.2

^{*} 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. (Subject to approval of the Finance Committee, MPS salary point 38 = \$71,385 per month and MPS salary point 14 = \$24,380 per month)
- 2. The consultants' fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of **108ET**. The assignment will only be executed subject to Finance Committee's funding approval to upgrade **108ET** to Category A.
- 3. The actual man-months and actual costs will only be known after completion of the construction works.