

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 – NEW TOWNS AND URBAN AREA DEVELOPMENT

Transport – Ferry piers

49TF – Construction of additional floors at Central Piers Nos. 4, 5 and 6

Members are invited to recommend to the Finance Committee the upgrading of **49TF** to Category A at an estimated cost of \$609.7 million in money-of-the-day prices for the construction of additional floors at Central Piers Nos. 4, 5 and 6.

PROBLEM

We need to construct additional floors at each of Central Piers Nos. 4, 5 and 6 for dining, retail and other waterfront related uses, in addition to their original function to support ferry operation.

PROPOSAL

2. The Director of Civil Engineering and Development, with the support of the Secretary for Transport and Housing, proposes to upgrade 49TF to Category A at an estimated cost of \$609.7 million in money-of-the-day (MOD) prices for the construction of additional floors at Central Piers Nos. 4, 5 and 6.

/PROJECT

PROJECT SCOPE AND NATURE

3. The scope of the project comprises the construction of one-and-a-half additional floors at, and improvement of the existing facilities for, each of Central Piers Nos. 4, 5 and 6 for dining, retail and other waterfront related uses, in addition to their original function to support ferry operation. The following works items are included –

- (a) building works for the additional floors and the existing floors to provide a total of 12 600 square metres (m²) of commercial gross floor area;
- (b) building service provisions for the additional floors and retrofitting/modifying works on the existing floors;
- (c) improvement of accessibility for people with disabilities within the piers;
- (d) improvement of the existing pier facade and rooftop to integrate with the design of the additional floors; and
- (e) landscaping works and upgrading of external roads, sewerage and electricity supply systems.

_____ The site plan of the proposed works is at Enclosure 1. An artist's impression
_____ showing the piers concerned after completion of the proposed works is at
_____ Enclosure 2. Floor plans and typical sections of the piers are at Enclosures 3 to 6.
_____ The overall view of the piers and Central Harbourfront is at Enclosure 7.

4. Subject to the funding approval of the Finance Committee, we plan to commence the proposed works in November 2013 for phased completion between the third quarter of 2015 and the first quarter of 2018 (Pier No. 5 works would be completed first, followed by those for Pier No. 4 and Pier No. 6).

JUSTIFICATION

5. The project is one of the recommendations endorsed under the Urban Design Study (UDS) for the new Central Harbourfront in November 2009. Amongst other things, the UDS recommends the construction of one-and-a-half additional floors at Central Piers Nos. 4, 5 and 6 with a maximum height of +25mPD for dining, retail and other waterfront related uses with half of the new rooftop serving as open space for public enjoyment. We anticipate that the improvement works on these piers can further enhance the vibrancy of the harbourfront.

6. The project is also a longer-term helping measure to further improve the financial viability of the six major outlying island ferry routes¹ on a sustainable basis. These ferry services are unique in that they are the most essential and indeed, in most cases, the only means of public transport for the outlying islands². Given low patronage and high operating costs of these services, there is a need to provide assistance to the ferry operators to sustain the financial viability of the ferry services and to maintain fare stability.

7. The Government has been providing various helping measures to enhance the viability of these services. One of these helping measures is to allow ferry operators to sublet premises of Central Piers Nos. 4, 5 and 6 for commercial and retail activities and generate non-fare box revenue to cross-subsidise the ferry services. The proposed additional floors at the piers, which will be used for commercial activities, will provide an additional source of non-fare box revenue and enhance the financial viability of ferry services.

8. A retail feasibility study was carried out in late 2011 to ascertain the market positioning and retail trade mix of the additional commercial areas. Depending on the length of the lease, mode of operation (single or different managers for the three piers) and business mix, as well as the progress of the further development of the Central Harbourfront, the annual rental revenue for the three piers is estimated to be in the range of \$27 million to \$69 million³.

/9.

¹ They are: “Central – Cheung Chau”, “Inter-Islands” serving Peng Chau, Mui Wo, Chi Ma Wan and Cheung Chau, “Central – Mui Wo”, “Central – Peng Chau”, “Central – Yung Shue Wan” and “Central – Sok Kwu Wan”.

² Only Lantau Island is also linked by a road network to the New Territories, but its cross-district land-based public transport services are limited.

³ Based on the estimated range of annual rental revenue, and assuming that there would be a 3% rental increase per year, it is estimated that the Economic Internal Rate of Return (EIRR) of the project will be in the range of 5.8% to 14.0% over a period of 30 years. The EIRR is the discounted rate used in capital budgeting that makes the net present value of all cash flows from a particular project equal to zero. Generally speaking, the higher a project’s EIRR, the more desirable it is to undertake the project.

9. The design of the project has taken into account the majority of the public views collected during public engagement that a more translucent and green design be adopted. It also aims to be modern and simple with a streamlined feature in order to be in harmony with its surrounding area as endorsed under the UDS. Open space will be provided at different levels of the piers for public enjoyment and for carrying out various activities to enhance the vibrancy of the harbourfront. Improvements to the existing facilities, including provision of barrier-free access for people with disabilities and enhancement of the facilities in ferry passenger waiting areas, etc., will also be made.

10. The piers will be modified one at a time. The existing vacant berths at Central Piers Nos. 2 and 8 will be used for temporary relocation of the ferry services during construction. It is expected that impact on ferry services will be minimal.

FINANCIAL IMPLICATIONS

11. We estimate the cost of the project to be \$609.7 million in MOD prices (please see paragraph 13 below), broken down as follows –

	\$ million
(a) Building works	240.9
(b) Building services	116.0
(c) Local traffic improvement and sewerage upgrading works	3.0
(d) Furniture and equipment ⁴	3.7
(e) Landscaping works	12.2
(f) Upgrading of electricity supply systems	8.8
(g) Additional energy conservation measures	8.9

/(h)

⁴ The cost item includes general provision for pier operation such as retrofitting of turnstile system with associated ducting and cabling works, seating and furniture at waiting areas, security and telecommunication systems, and general office furniture.

	\$ million	
(h) Temporary relocation of existing ferry services ⁵	13.9	
(i) Consultants' fee for	4.6	
(i) contract administration	3.5	
(ii) management of resident site staff	1.1	
(j) Remuneration of resident site staff	38.5	
(k) Contingencies	45.1	
	<hr/>	
Sub-total	495.6	(in September 2012 prices)
(l) Provision for price adjustment	114.1	
	<hr/>	
Total	609.7	(in MOD prices)
	<hr/>	

12. On paragraph 11(i) above, due to insufficient in-house resources, we propose to engage consultants to undertake contract administration and site supervision of the project. A detailed breakdown of the estimates for the consultants' fees and resident site staff costs by man-months is at Enclosure 8. The construction floor area (CFA) of this project is about 27 550 m² which comprises 9 900 m² for works at the additional floors and 17 650 m² for works at the existing floors. The estimated construction unit cost, represented by the building and the building services costs, is \$12,961 per m² of CFA in September 2012 prices. We consider this unit cost reasonable as compared with that of similar projects, including Piers Nos. 7 and 8 in Central and the new ferry pier being constructed at Wan Chai Development Phase II project.

/13.

⁵ The cost item includes refurbishment of vacant berths at eastern side of Central Pier No. 2 and western side of Central Pier No. 8 for reprovisioning of ferry services during construction.

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

Year	\$ million (Sept 2012)	Price adjustment factor	\$ million (MOD)
2013 - 2014	30.0	1.06225	31.9
2014 - 2015	110.0	1.12599	123.9
2015 - 2016	125.0	1.19354	149.2
2016 - 2017	106.0	1.26516	134.1
2017 - 2018	80.0	1.34107	107.3
2018 - 2019	39.0	1.41147	55.0
2019 - 2020	5.6	1.48205	8.3
	495.6		609.7

14. We have derived the MOD estimate 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 2013 to 2020. We will implement the works under a standard lump sum contract because the quantities of the works are certain. The contract will provide for price adjustments.

15. We estimate the annual recurrent expenditure arising from this project to be about \$2.6 million.

/PUBLIC

PUBLIC CONSULTATION

16. A two-stage public engagement (PE) exercise was carried out in 2011 to 2012 for the project. Stage one of the PE exercise, which included two public forums, was carried out from January to May 2011 to gauge public views on the design requirements of the additional floors and the appearance of the piers. Key stakeholders were consulted, including the Islands District Council (IsDC), the Central and Western District Council (C&WDC), Transport Department's Working Group on Access to Public Transport by People with Disabilities, Mui Wo Rural Committee, Lamma Island (North) Rural Committee, Lamma Island (South) Rural Committee, Peng Chau Rural Committee, Cheung Chau Rural Committee, Harbourfront Commission's Task Force on Harbourfront Developments on Hong Kong Island (HKTF), the incumbent ferry operators, and nearby shop owners. They generally supported the project.

17. During stage two of the PE exercise, we again consulted the IsDC and C&WDC in July 2011, and HKTF in August 2011 and May 2012 on bringing forward the project as well as the design and the proposed use of the additional floors. Both DCs and HKTF supported the project.

18. Submission to the Town Planning Board (TPB) under Section 16 of the Town Planning Ordinance (Cap. 131) for rezoning the piers as "Comprehensive Development Area(2)" was made in early July 2012. Approval from TPB with conditions was given on 3 May 2013.

19. We consulted the Panel on Transport on 24 May 2013. Members generally supported the proposal. Some members requested the Administration to implement the project as soon as possible. Some members asked about the financial return and business model of the project, and we have provided the information in paragraph 8 above. A member asked for additional details of construction cost, and these are set out in paragraphs 11 to 15 above.

ENVIRONMENTAL IMPLICATIONS

20. While the project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499), we nonetheless conducted a Preliminary Environmental Review (PER) in June 2011. The PER Report indicated that the project would not cause any long-term adverse environmental impact with implementation of mitigation measures. We have subsequently included in the project estimate the cost for implementation of the environmental mitigation measures recommended in the PER Report to control the short-term impacts.

21. Environmental mitigation measures include the use of quiet construction plant and temporary noise barriers to mitigate noise generation from construction activities, frequent cleaning and watering of the site, as well as covering of materials on trucks and barges.

22. We have considered various construction methods for the proposed works in the planning and design stages to reduce generation of construction waste wherever possible. In addition, we will require the contractor to reuse inert construction waste (e.g. excavated soil) 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 also encourage the contractor to maximise use of recycled/recyclable inert construction waste, as well as use of non-timber formwork to further minimise generation of construction waste.

23. 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.

24. We estimate that the project will generate about 10 000 tonnes of construction waste in total. Of these, we will reuse about 4 200 tonnes (42%) of inert construction waste on site and deliver 5 320 tonnes (53%) of inert construction waste at public fill reception facilities for subsequent reuse. We will dispose of the remaining 480 tonnes (5%) of non-inert construction waste at landfills. The total cost for accommodating construction waste at public fill reception facilities and landfill sites is estimated to be \$0.2 million for the project (based on a unit cost of \$27 per tonne for disposal at public fill reception facilities and \$125 per tonne⁷ at landfills).

/25.

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

⁷ This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and the aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at \$90/m³), nor the cost to provide new landfills (which is likely to be more expensive) when the existing ones are filled.

ENERGY CONSERVATION, GREEN AND RECYCLED FEATURES

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

- (a) seawater cooling system for air-conditioning appliances;
- (b) automatic demand control of chilled water circulation system;
- (c) demand control of fresh air supply with carbon dioxide sensors;
- (d) high efficiency direct current fan coil units are used in common area air conditioning system; and
- (e) building integrated photovoltaic system.

26. For greening features, there will be greening on appropriate roof areas.

27. The total estimated additional cost for adoption of the above features is around \$8.9 million (including \$5.4 million for energy efficient features), which has been included in the cost estimate of the project. The energy efficient features will achieve 9% energy savings in the annual energy consumption with a payback period at about 4.2 years.

HERITAGE IMPLICATIONS

28. 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

29. The project does not require any land acquisition.

/BACKGROUND

BACKGROUND INFORMATION

30. We upgraded **49TF** to Category B in October 2009.

31. We engaged consultants in July 2010 to undertake the detailed design of the project at an estimated cost of \$14.9 million in MOD prices under **Subhead 7100CX** “New towns and urban area works, studies and investigations for items in Category D of the Public Works Programme”. We have completed the detailed design of the project.

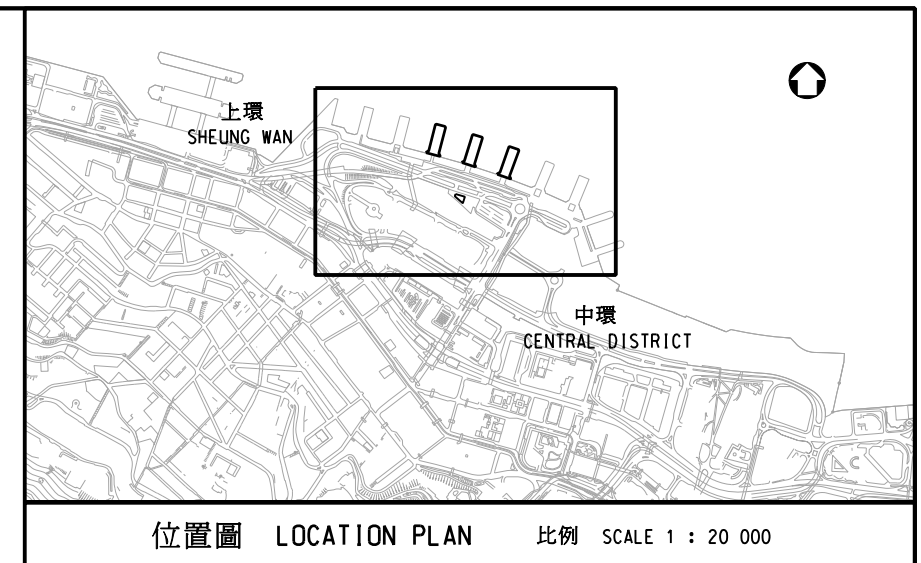
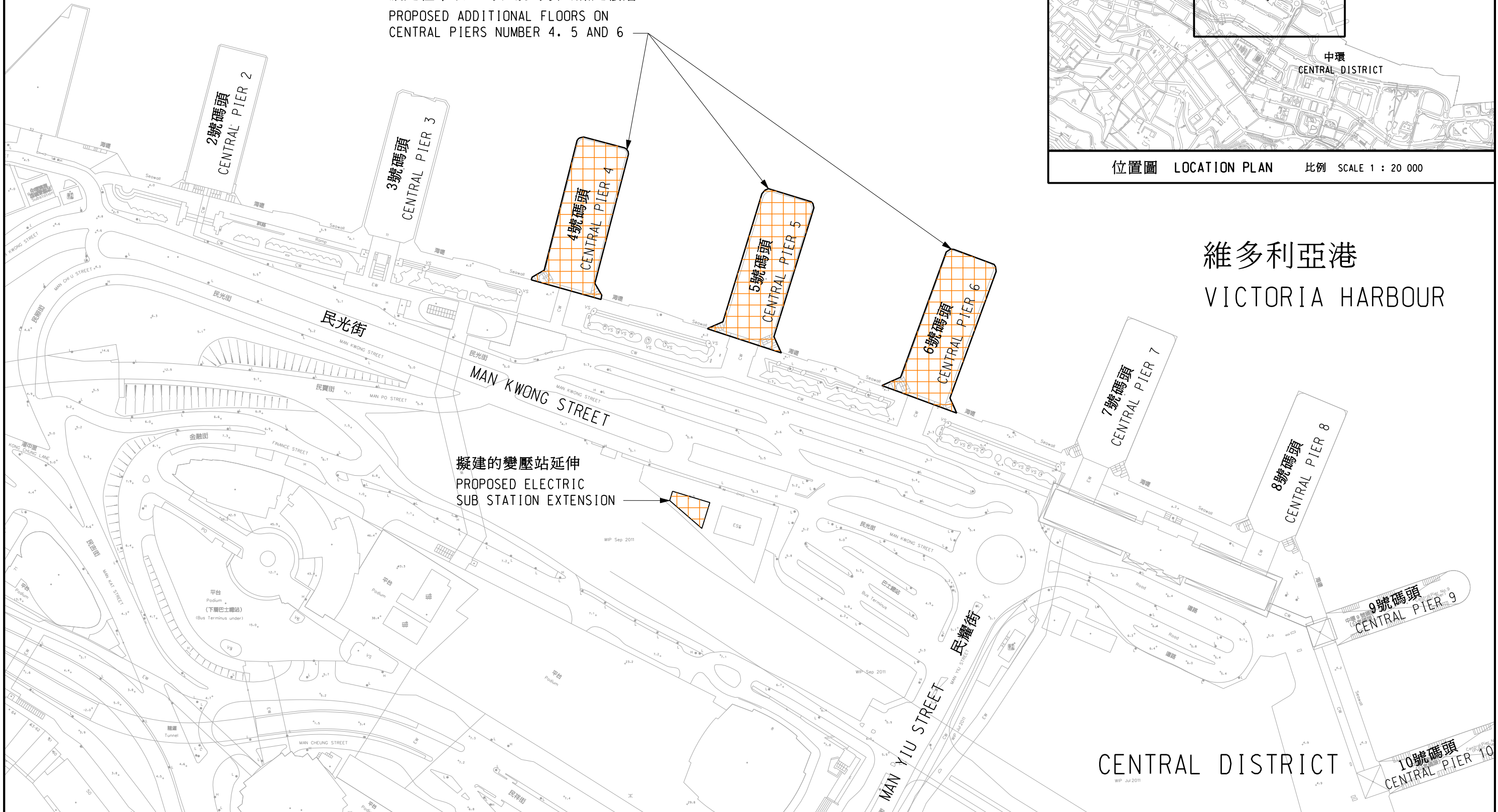
32. The proposed works will not involve any tree removal. We will incorporate planting proposal as part of the project, including estimated quantities of 17 540 shrubs and 250 m² of grassed area.

33. We estimate that the proposed works will create about 130 jobs (113 for labourers and another 17 for professional/technical staff), providing a total employment of 4 840 man-months.

Transport and Housing Bureau
June 2013



擬建在中環4.5及6號碼頭的加建樓層
 PROPOSED ADDITIONAL FLOORS ON
 CENTRAL PIERS NUMBER 4, 5 AND 6



位置圖 LOCATION PLAN 比例 SCALE 1 : 20 000

維多利亞港
 VICTORIA HARBOUR

圖則名稱 drawing title 加建樓層計劃平面圖 GENERAL LAYOUT FOR CONSTRUCTION OF ADDITIONAL FLOOR PROJECT	繪圖 drawn W.F. LEE	簽署 initial	日期 date 06.02.12	項目編號 item no. 7049TF	辦事處 office 港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE
	核對 checked K.S. CHAN	簽署 initial	日期 date 06.02.12	比例 scale 1 : 200	
	核准 approved	簽署 initial	日期 date	圖則編號 drawing no. HKI-Z1863	 土木工程拓展署 CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT



圖則名稱 drawing title

碼頭外觀設計(構思圖)

PIER OUTLOOK (ARTIST IMPRESSION)

繪圖 drawn

W.M. AU-YEUNG

簽署 initial

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項目編號 item no.

7049TF

比例 scale

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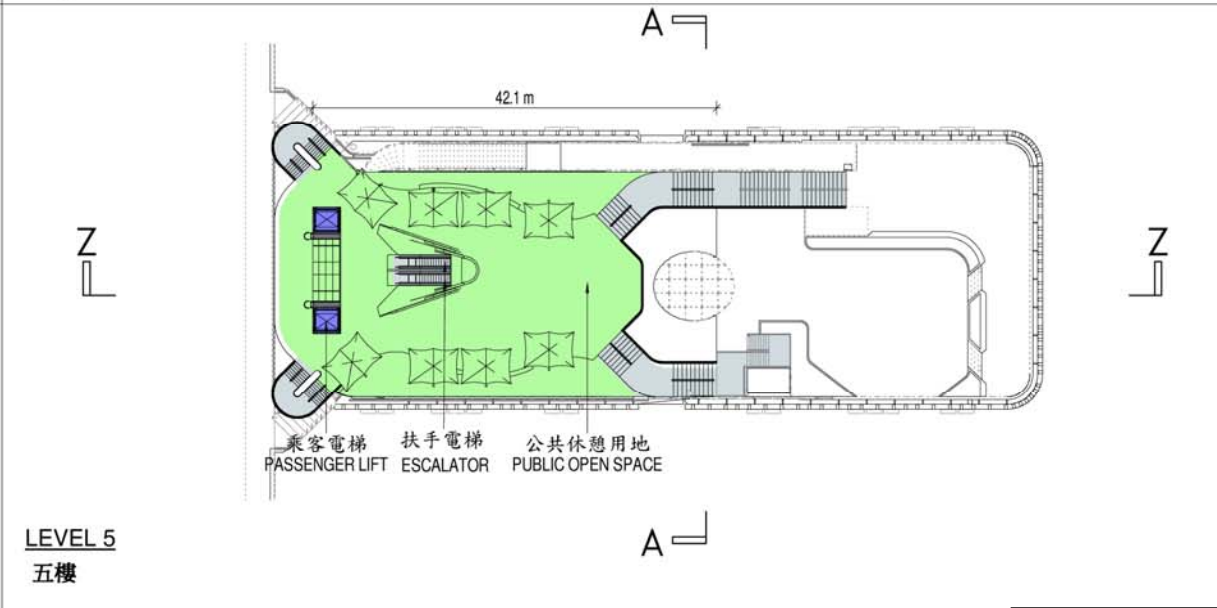
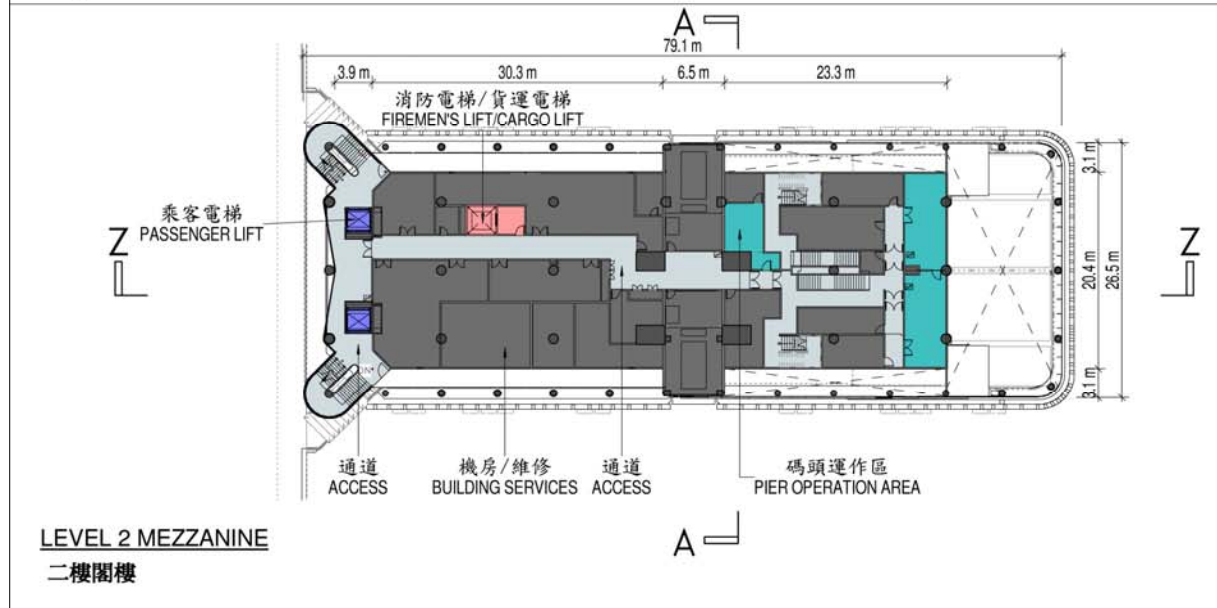
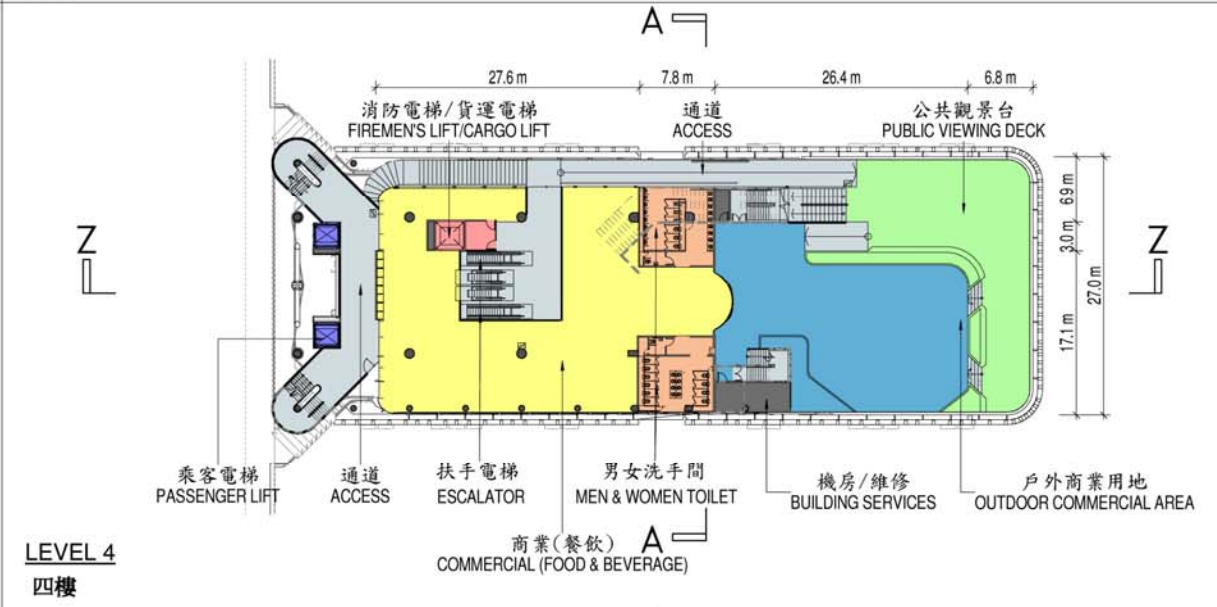
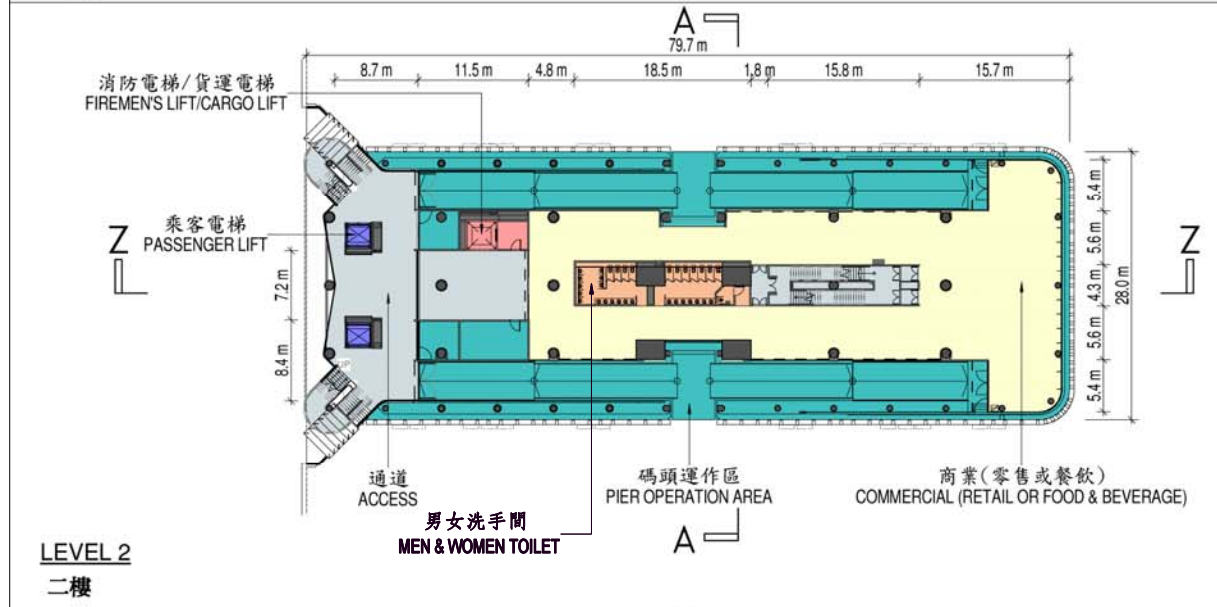
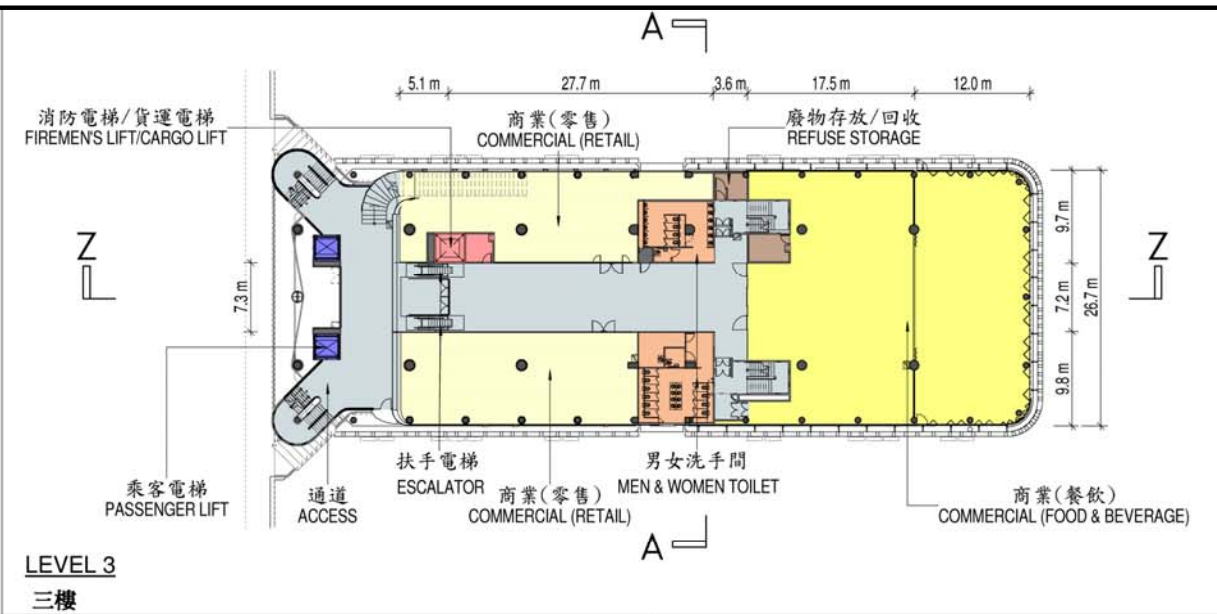
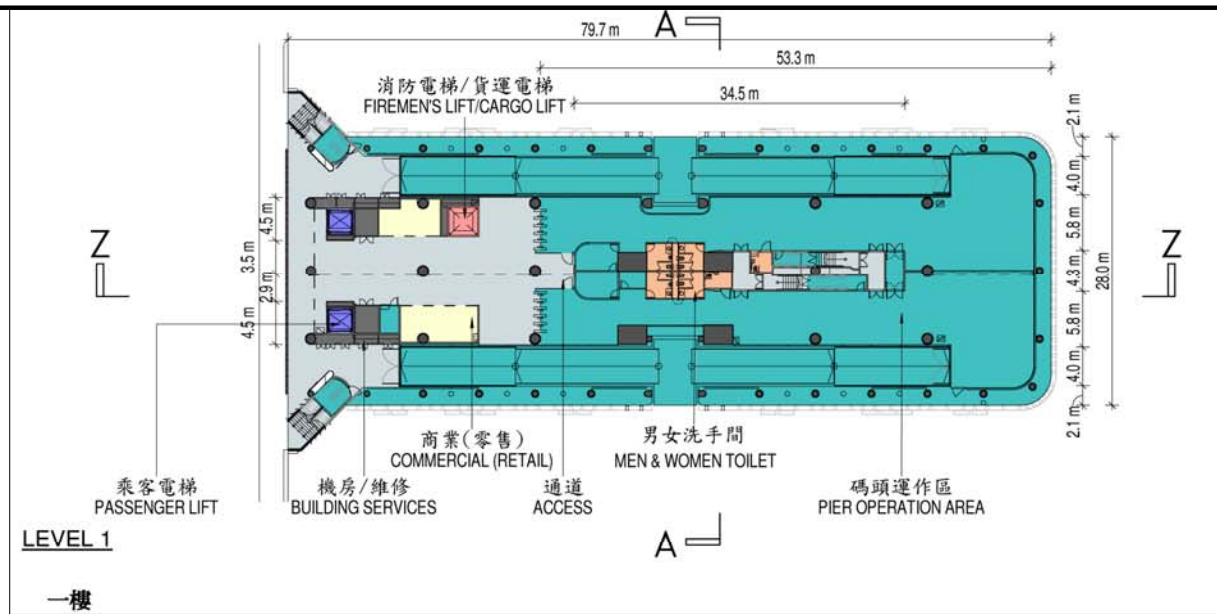
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HK I-Z1864

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HONG KONG ISLAND AND ISLANDS
DEVELOPMENT OFFICE

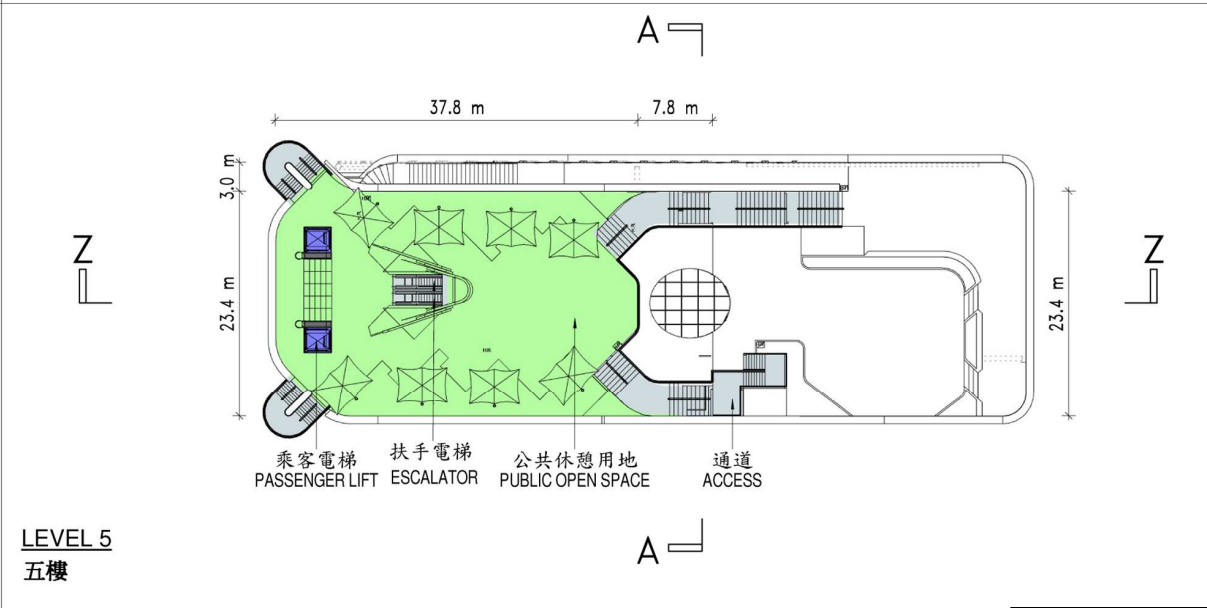
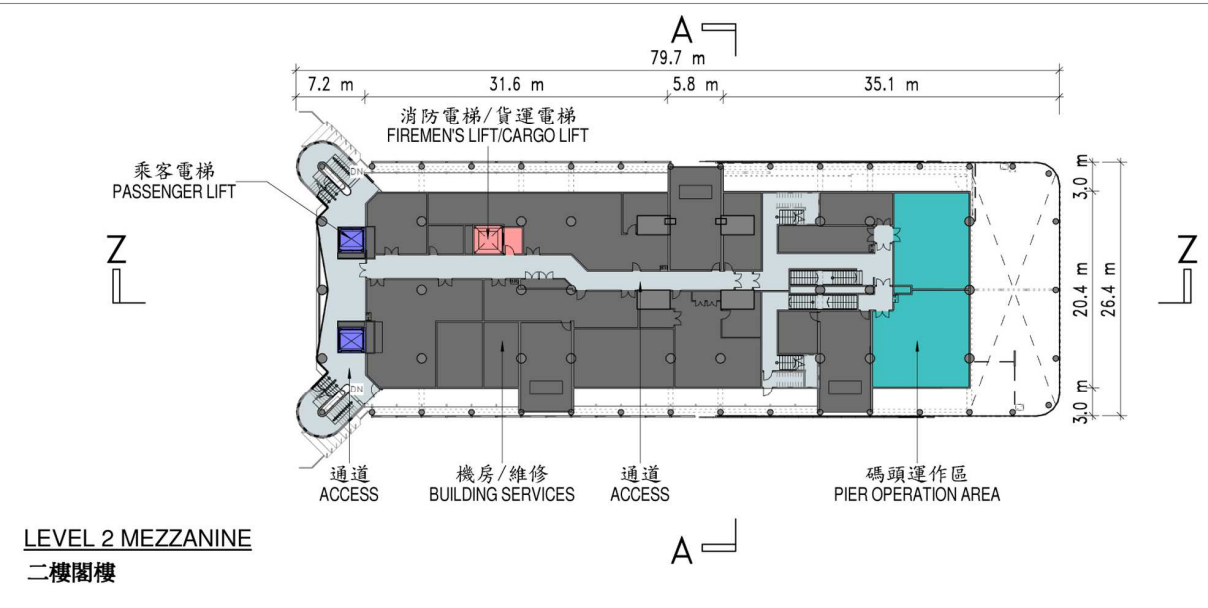
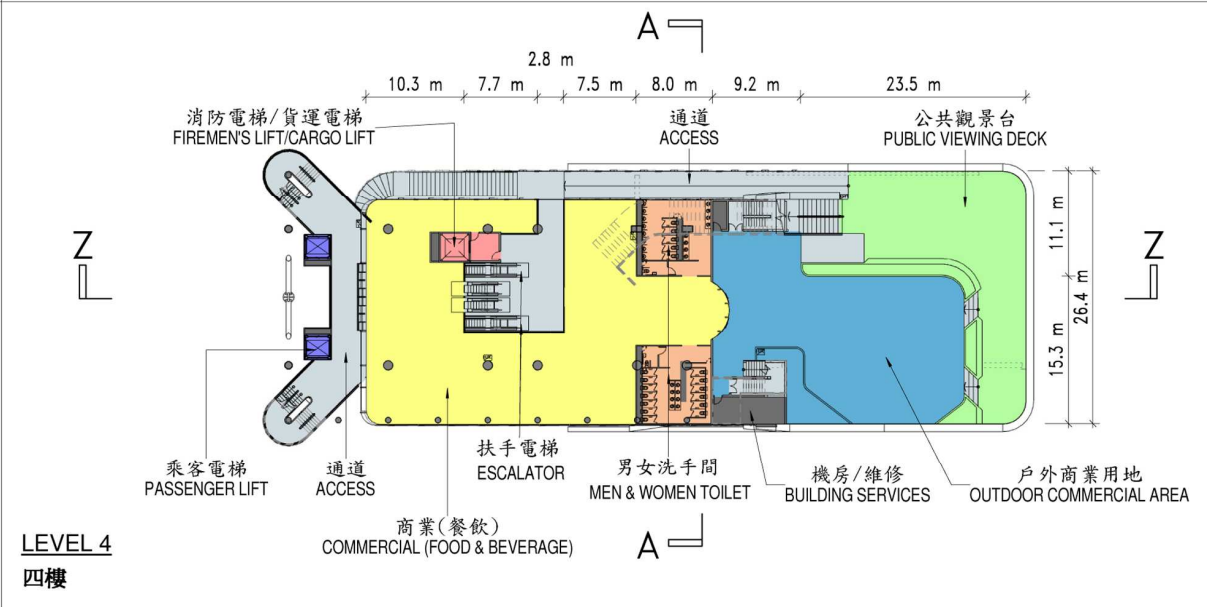
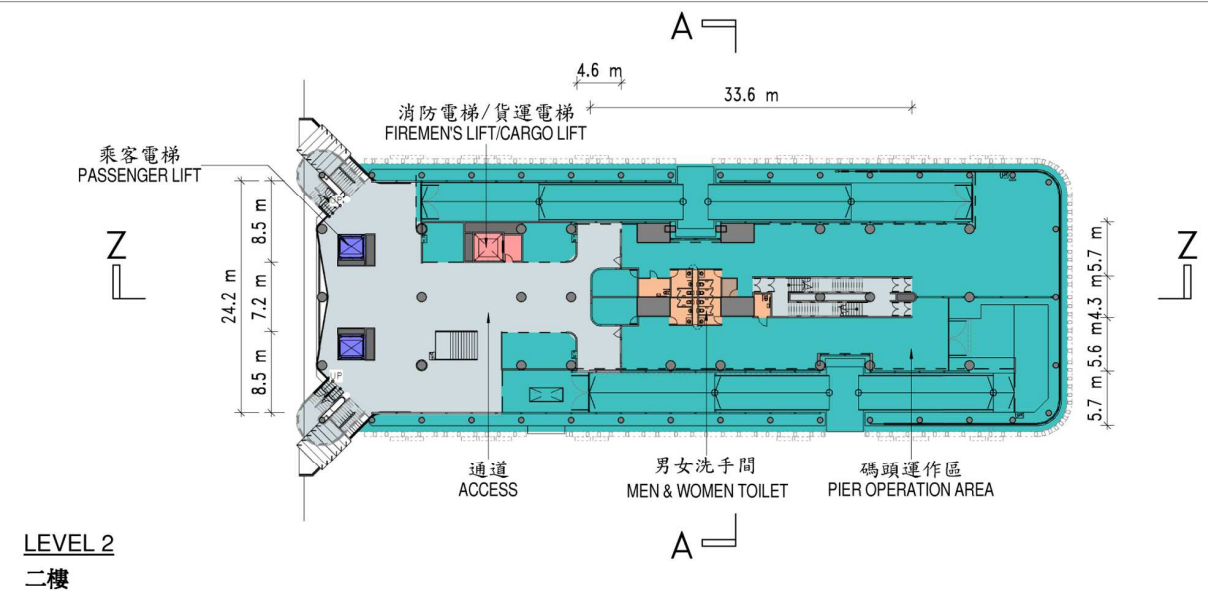
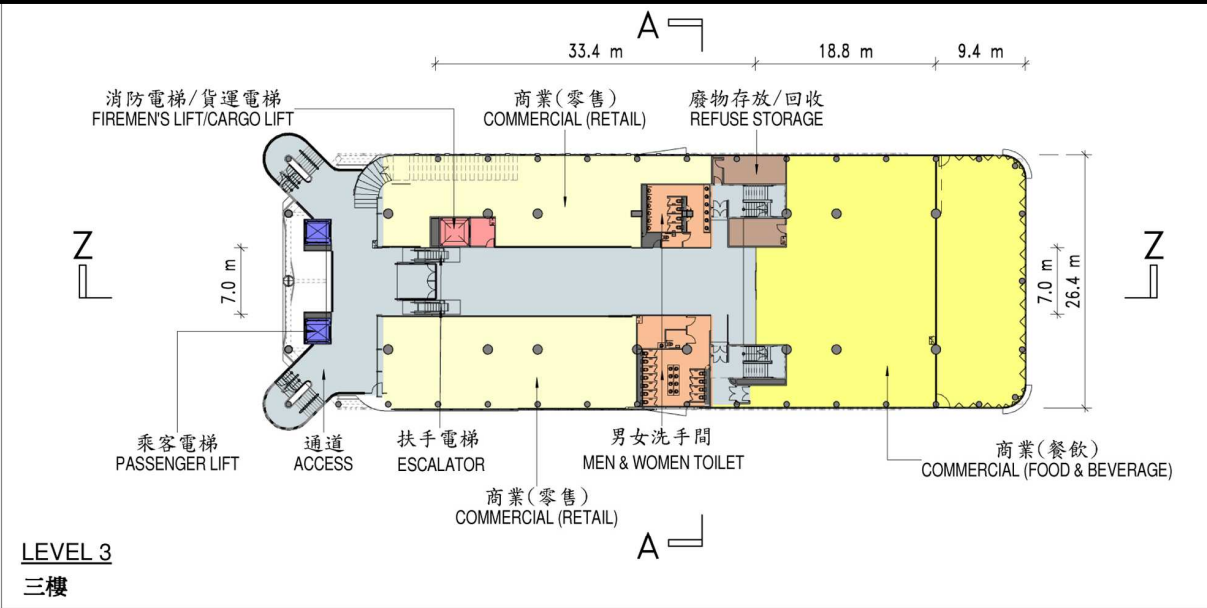
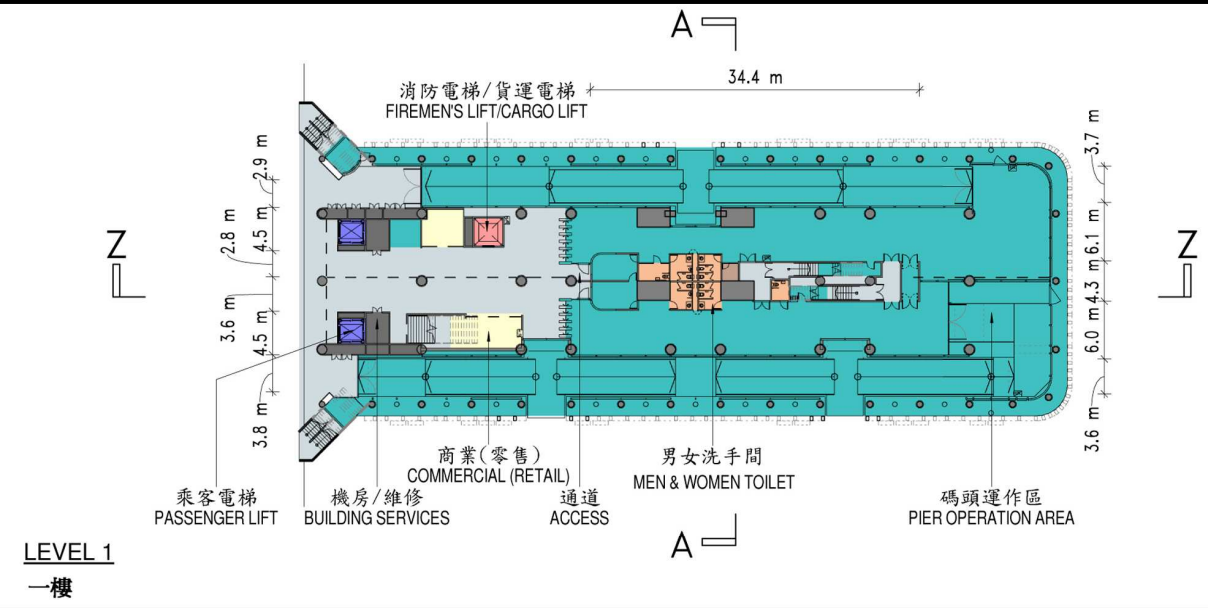
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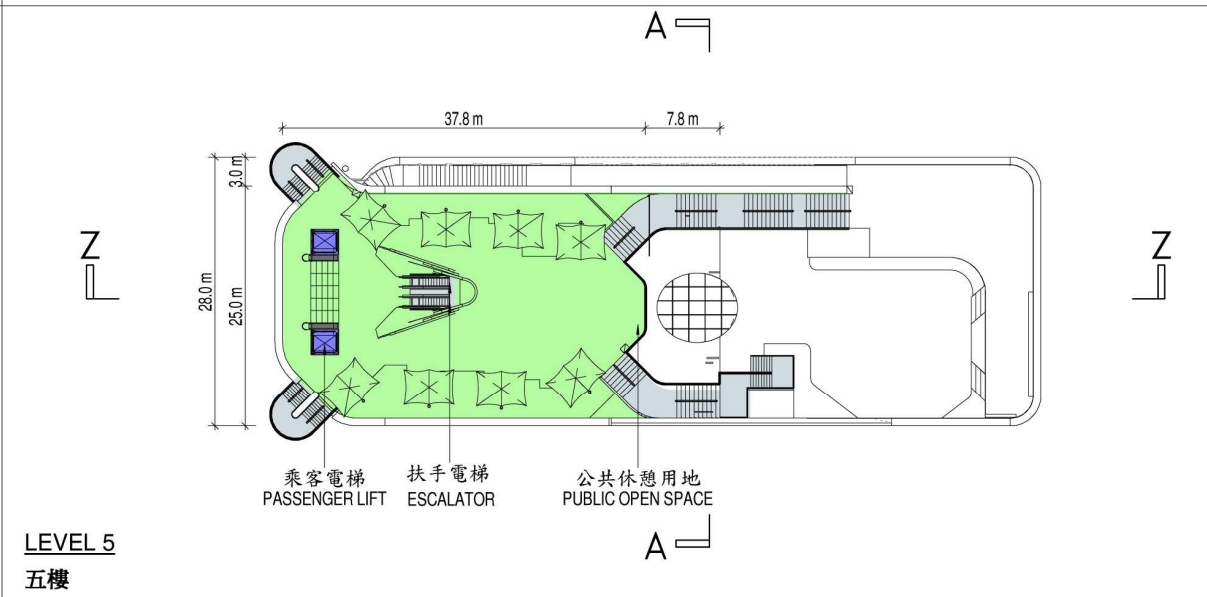
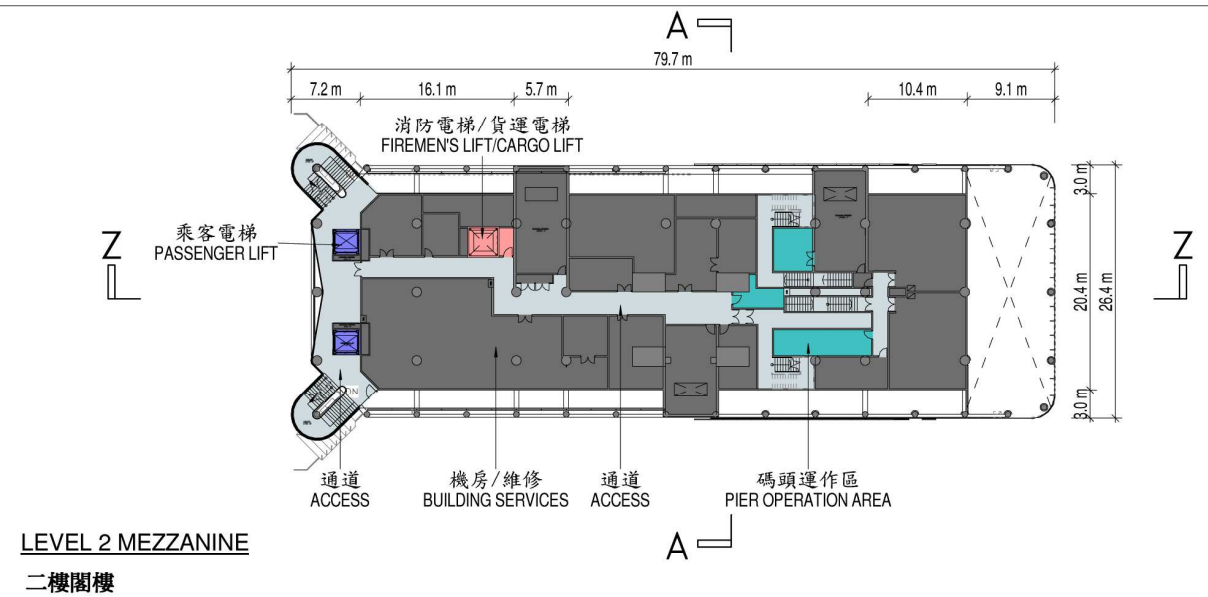
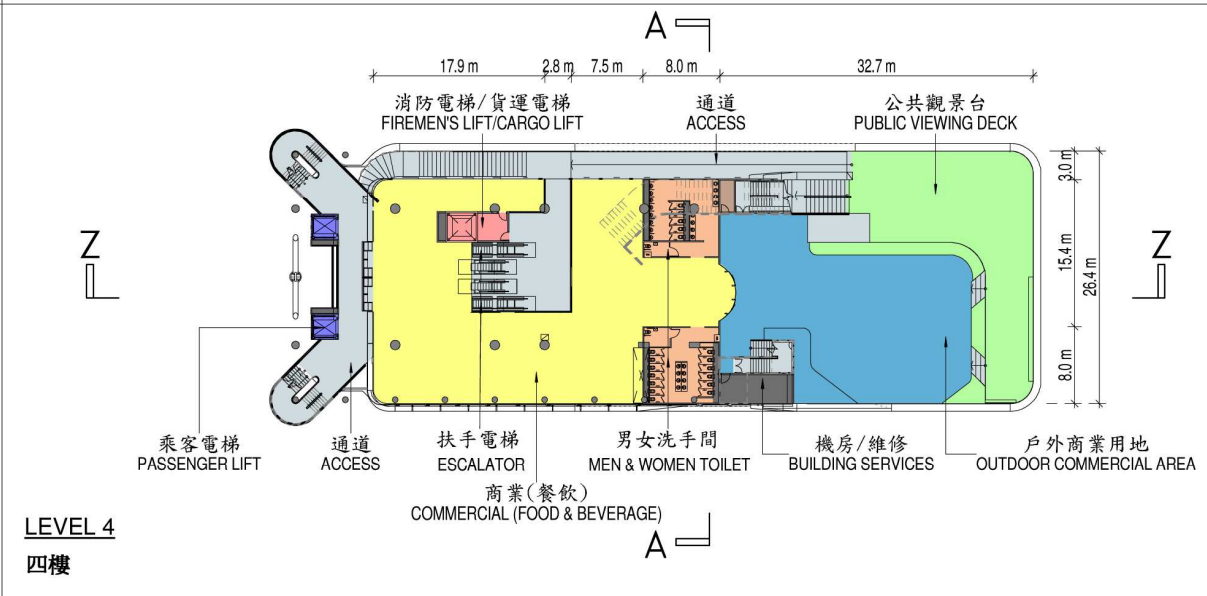
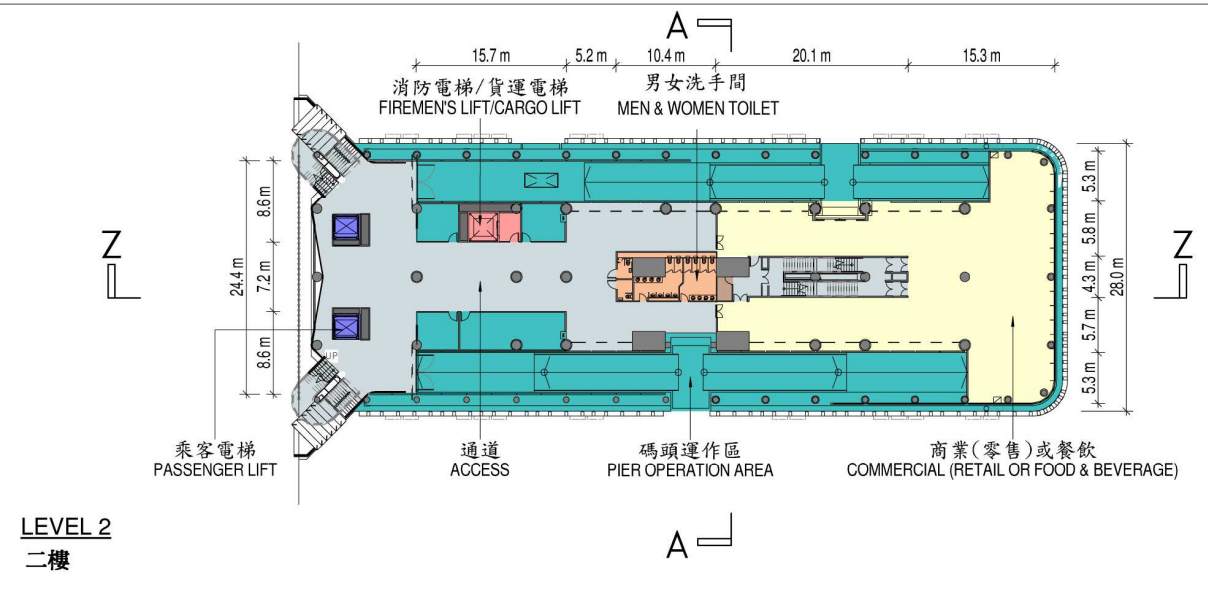
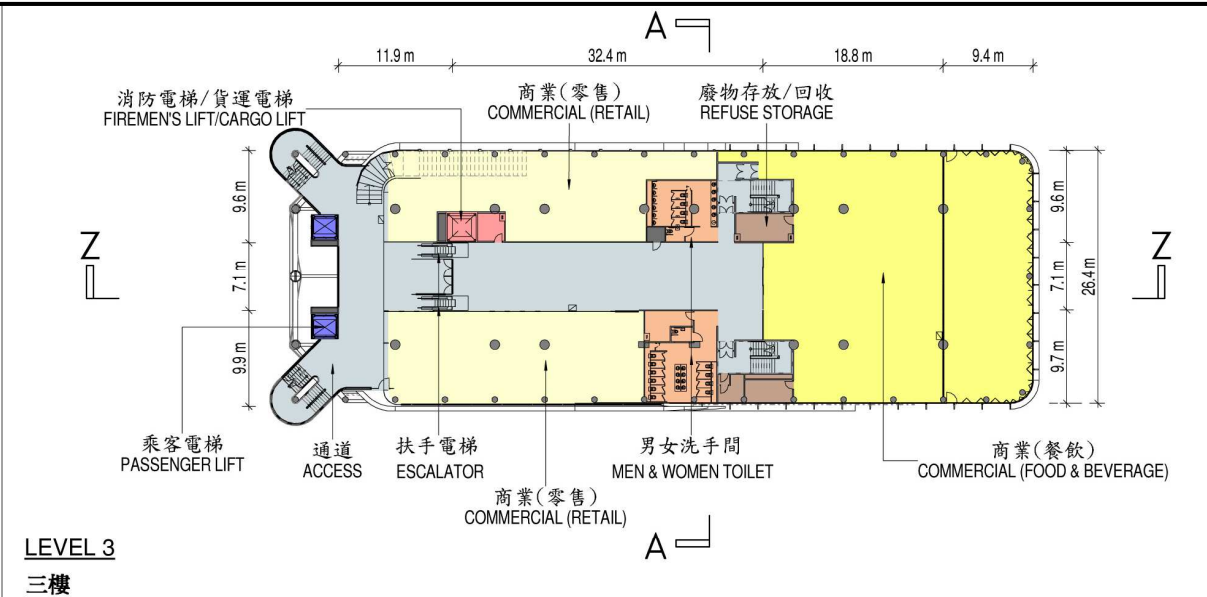
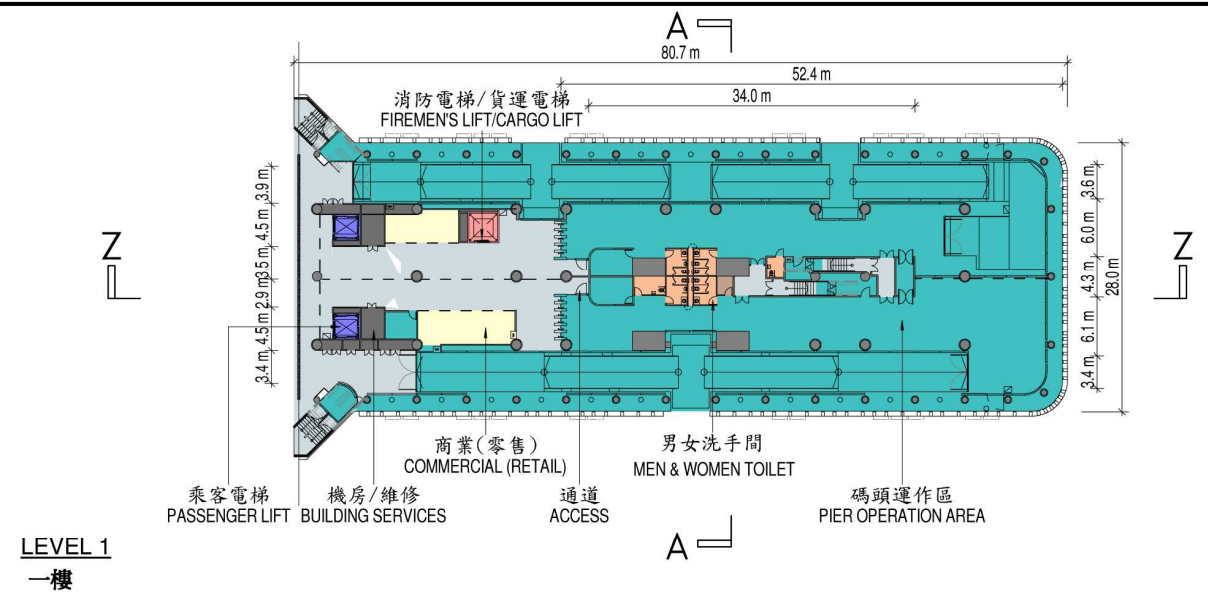
圖則名稱 drawing title

中環4號碼頭的各樓層平面圖
FLOOR PLANS OF CENTRAL PIER NO. 4

繪圖 drawn H.S. CHAN	簽署 initial	日期 date 29.05.13	項目編號 item no. 7049TF	辦事處 office 港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE 土木工程拓展署 CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
核對 checked K.S. CHAN	簽署 initial	日期 date 29.05.13	比例 scale N.T.S.	
核准 approved	簽署 initial	日期 date	圖則編號 drawing no. HK I-Z1895	



圖則名稱 drawing title 中環5號碼頭的各樓層平面圖 FLOOR PLANS OF CENTRAL PIER NO. 5	繪圖 drawn	簽署 initial	日期 date	項目編號 item no.	辦事處 office 港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE
	H.S. CHAN		29.05.13	7049TF	
	核對 checked	簽署 initial	日期 date	比例 scale	
	K.S. CHAN		29.05.13	N.T.S.	
	核准 approved	簽署 initial	日期 date	圖則編號 drawing no.	土木工程拓展署 CEDD CIVIL ENGINEERING AND DEVELOPMENT DEPARTMENT
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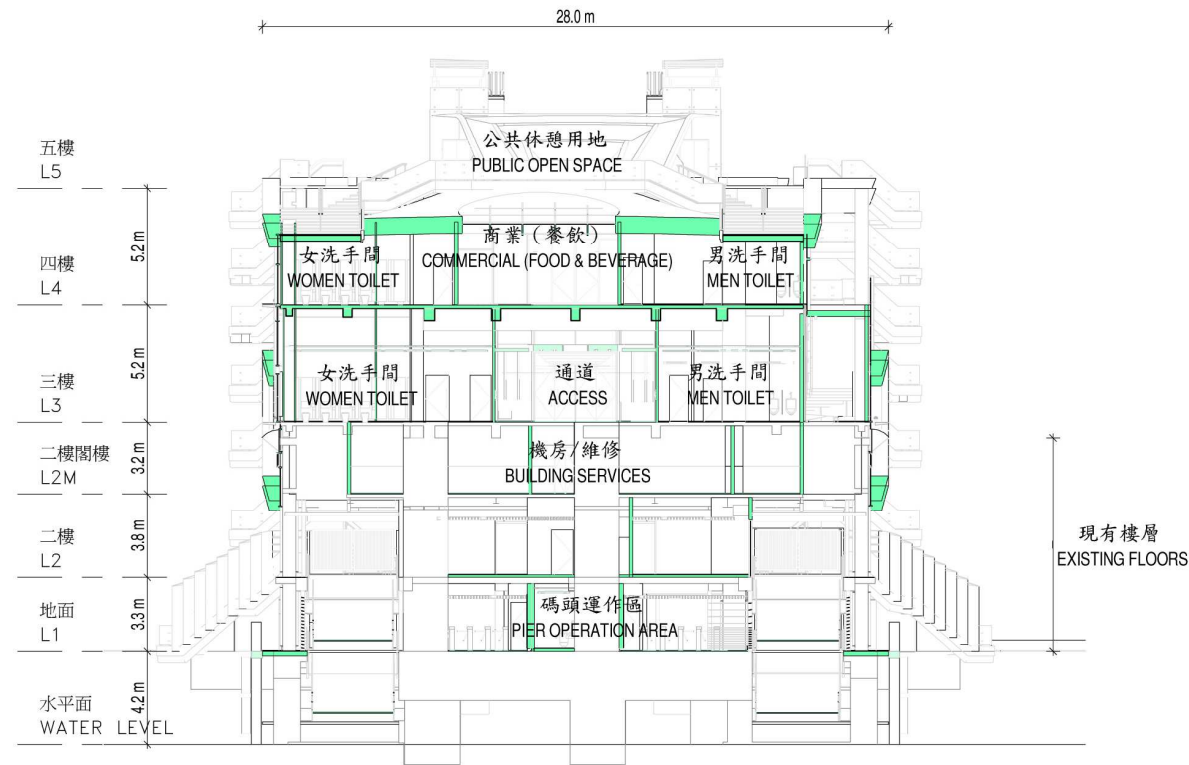


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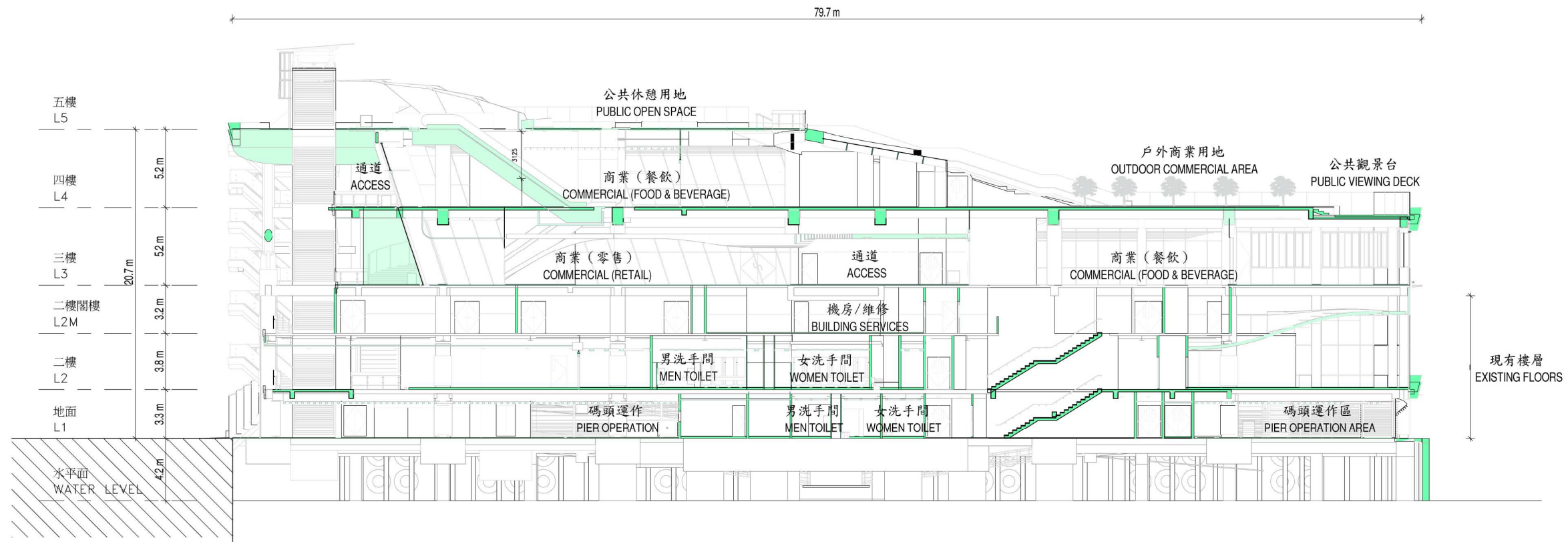
中環6號碼頭的各樓層平面圖
FLOOR PLANS OF CENTRAL PIER NO. 6

繪圖 drawn H.S. CHAN	簽署 initial	日期 date 29.05.13	項目編號 item no. 7049TF	辦事處 office 港島及離島拓展處 HONG KONG ISLAND AND ISLANDS DEVELOPMENT OFFICE
核對 checked K.S. CHAN	簽署 initial	日期 date 29.05.13	比例 scale N.T.S.	
核准 approved	簽署 initial	日期 date	圖則編號 drawing no. HK I-Z1897	





SECTION A - A 剖面圖 A-A



SECTION Z - Z 剖面圖 Z-Z

圖則名稱 drawing title

中環4、5及6號碼頭的剖面圖

TYPICAL SECTIONS OF CENTRAL PIER NOS. 4, 5 AND 6

繪圖 drawn

H.S. CHAN

簽署 initial

日期 date

29.05.13

項目編號 item no.

7049TF

辦事處 office

港島及離島拓展處
HONG KONG ISLAND AND ISLANDS
DEVELOPMENT OFFICE

核對 checked

K.S. CHAN

簽署 initial

日期 date

29.05.13

比例 scale

N.T.S.

核准 approved

簽署 initial

日期 date

圖則編號 drawing no.

HK I-Z1898

土木工程拓展署
CEDD CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT



圖則名稱 drawing title

碼頭及中環海濱綜覽 (構思圖)

OVERALL VIEW OF THE PIERS AND CENTRAL HARBOURFRONT (ARTIST IMPRESSION)

繪圖 drawn

W.M. AU-YEUNG

簽署 initial

簽署 initial

K.S. CHAN

核准 approved

簽署 initial

日期 date

02.05.13

日期 date

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項目編號 item no.

7049TF

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圖則編號 drawing no.

HK I-Z1882

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CIVIL ENGINEERING AND
DEVELOPMENT DEPARTMENT

Enclosure 8 to PWSC(2013-14)23

49TF – Construction of additional floors at Central Piers Nos. 4, 5 and 6

**Breakdown of the estimates for consultants’ fees and resident site staff costs
(in September 2012 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	–	–	–	–	2.6
	Technical	–	–	–	–	0.9
					Sub-total	3.5
(b) Resident site staff costs <small>(Note 3)</small>	Professional	169	38	1.6	1.6	17.8
	Technical	608	14	1.6	1.6	21.8
					Sub-total	39.6
Comprising –						
	(i) Consultants’ fees for management of resident site staff				1.1	
	(ii) Remuneration of resident site staff				38.5	
					Total	43.1

* MPS = Master Pay Scale

Notes

1. A multiplier of 1.6 is applied to the average MPS point to estimate the cost of resident site staff supplied by the consultants. (As at now, MPS salary point 38 = \$65,695 per month and MPS salary point 14 = \$22,405 per month.)
2. The consultants’ fees for contract administration are calculated in accordance with the existing consultancy agreement for the design and construction of the project. The construction phase of the assignment will only be executed subject to Finance Committee’s approval to upgrade **49TF** to Category A.
3. The actual man-months and actual costs will only be known after completion of the construction works.