

**For discussion
on 11 February 2009**

PWSC(2008-09)69

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 711 – HOUSING

Transport – Roads

653TH – Road improvement works in association with the proposed re-alignment of Ngau Tau Kok Fourth Street and Fifth Street and construction of nearby footbridge links

Members are invited to recommend to Finance Committee the upgrading of **653TH** to Category A at an estimated cost of \$96.1 million in money-of-the-day prices for the re-alignment of the existing Ngau Tau Kok Fourth Street and Fifth Street and the construction of two nearby footbridge links.

PROBLEM

The existing Ngau Tau Kok (NTK) Fourth Street and Fifth Street are located within the construction site for the development of a proposed Cross District Cultural Centre (CDCC) at Lower Ngau Tau Kok (LNTK). The existing footbridges spanning across NTK Road and Kwun Tong Road leading to Kowloon Bay Station need to be improved upon redevelopment of LNTK Estate.

/ PROPOSAL.....

PROPOSAL

2. The Director of Highways, with the support of the Secretary for Transport and Housing (STH), proposes to upgrade **653TH** to Category A at an estimated cost of \$96.1 million in money-of-the-day (MOD) prices for the re-alignment of the existing NTK Fourth Street and Fifth Street and the construction of two nearby footbridge links.

PROJECT SCOPE AND NATURE

3. The scope of **653TH** comprises –
- (a) re-alignment of NTK Fourth Street and Fifth Street with construction of new carriageway of about 160 metres (m) long between NTK Road and Kwun Tong Road and the associated footpaths, roundabout, run in/run out, taxi stands, public light bus and bus lay-bys and refuge islands;
 - (b) widening of a section of NTK Road and Kwun Tong Road at junctions with the re-aligned NTK Fourth Street and Fifth Street;
 - (c) construction of a covered footbridge link of about 10 m long and 6 m wide connecting the existing footbridge leading to NTK Municipal Services Building with the proposed elevated walkway to be implemented under the housing development project at LNTK Estate (footbridge link FB1);
 - (d) construction of a covered footbridge link of about 80 m long and 4 m wide connecting the existing footbridge leading to Kowloon Bay Station with the proposed elevated walkway to be implemented under the housing development project at LNTK Estate (footbridge link FB2);
 - (e) demolition of an existing footbridge staircase and provision of a new staircase connecting footbridge link FB2 with a district open space (DOS) at LNTK under planning; and

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- (f) ancillary works including drainage, sewerage, watermain laying, landscaping and electrical and mechanical (E&M) works.

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A site plan showing the proposed works is at Enclosure 1. Perspective diagrams of the proposed footbridge links FB1 and FB2 are at Enclosures 2 and 3 respectively.

4. We plan to commence the construction works in June 2009 for completion of the re-aligned roads (including closure of existing roads) and footbridge links by January 2012 and June 2012 respectively.

JUSTIFICATIONS

5. The existing LNTK Estate will be redeveloped for provision of public housing, a proposed CDCC and a DOS under planning. The Kwun Tong District Council (KTDC) supported the proposed redevelopment.

6. To make land available for implementation of the CDCC for providing more cultural and recreational facilities serving the population of Kwun Tong and the adjacent districts and to maintain/facilitate the existing traffic/transport operations, the existing NTK Fourth Street and Fifth Street have to be re-aligned. Adequate transport facilities including taxi-stands, public light bus and bus lay-bys will be provided at the re-aligned road.

7. Other than the transport facilities, it is essential to put in place an elevated pedestrian passageway with linkages between the Kowloon Bay Station, NTK Municipal Services Building, Upper NTK Estate, LNTK Estate (under redevelopment) and proposed LNTK DOS. To better serve the local residents with this provision, it is necessary to construct two footbridge links connecting the existing footbridges across NTK Road (footbridge link FB1) and Kwun Tong Road (footbridge link FB2) with the future elevated walkways within the LNTK public housing estate upon redevelopment.

8. The sites for the re-aligned road and a substantial part of footbridge link FB2 are currently occupied by the building blocks of LNTK (II) Estate, demolition of which is scheduled by Hong Kong Housing Authority (HKHA) for completion by early 2011. Implementation of the two footbridge links has to tie in with the adjoining LNTK Phase 1 public housing development, which is scheduled for completion in 2012. Upon the completion of the road re-alignment and closure of existing NTK Fourth Street and Fifth Street, the cleared site will be handed over to Architectural Services Department for the CDCC construction.

9. Taking into account the above tight implementation programme, we consider it necessary from both administrative and programming points of view to entrust the design and construction of the project to HKHA for implementation by the Housing Department. This arrangement will ensure better co-ordination of the works and the adjoining public housing development and secure timely completion of the project through incorporation of the works in HKHA's demolition/building contracts.

FINANCIAL IMPLICATIONS

10. We estimate the capital cost of the project to be \$96.1 million in MOD prices (see paragraph 11 below), made up as follows –

	\$ million
(a) Roadworks	15.0
(b) Footbridge link FB1	7.3
(i) civil works	6.6
(ii) E&M works	0.7
(c) Footbridge link FB2 (including demolition and reprovisioning of an existing footbridge staircase)	41.7
(i) civil works	40.7
(ii) E&M works	1.0
(d) Drainage, sewerage and watermain laying	9.2
(e) Landscaping works	0.4

/\$ million.....

		\$ million	
(f)	On-cost payable to HKHA ¹	9.2	
(g)	Contingencies	<u>7.4</u>	
	Sub-total	90.2	(in September 2008 prices)
(h)	Provision for price adjustment	<u>5.9</u>	
	Total	<u>96.1</u>	(in MOD prices)

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

Year	\$ million (Sep 2008)	Price adjustment factor	\$ million (MOD)
2009 – 2010	7.1	1.03200	7.3
2010 – 2011	21.6	1.05264	22.7
2011 – 2012	56.3	1.07369	60.4
2012 – 2013	5.1	1.09517	5.6
2013 – 2014	0.1	1.11707	0.1
	<u>90.2</u>		<u>96.1</u>

12. We have derived the MOD estimates on the basis of the Government's latest forecast of trend rate of change in the prices of public sector building and construction output for the period 2009 to 2014. HKHA will tender the proposed works through a standard remeasurement package because the quantities of the foundation works of footbridge links FB1 and FB2 are subject to variation upon exposure of actual ground conditions. The proposed works will be subject to price adjustment.

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¹ We will pay on-costs to the HKHA for the entrusted works at 12.5% of the estimated construction cost.

13. We estimate the annual recurrent expenditure arising from this project to be about \$0.303 million.

PUBLIC CONSULTATION

14. We consulted the Traffic and Transport Committee (T&TC) of the KTDC on the proposed re-alignment of NTK Fourth Street and Fifth Street and construction of footbridge links FB1 and FB2 on 23 January 2008. Members had no objection to the proposed works.

15. We gazetted the proposed works under the Roads (Works, Use and Compensation) Ordinance (Cap. 370) (the Ordinance) on 25 April 2008 and received no objection. The Permanent Secretary for Transport and Housing (Transport) (PS(T)), under delegated authority from the STH, authorised the proposed works under the Ordinance on 10 July 2008 and the notice of authorisation was gazetted on 18 July 2008.

16. With an objective to further improve the pedestrian flows at the connection with Kowloon Bay Station, we consulted the T&TC of KTDC on the proposed amendments to the layout of footbridge link FB2 on 29 July 2008. Members had no objection to the proposed amendments, but with a condition requiring the Administration to construct a covered walkway within the future DOS site at LNTK. The Administration undertook to include this provision in the future design of LNTK DOS.

17. We consulted the Advisory Committee on the Appearance of Bridges and Associated Structures (ACABAS)² on the aesthetic design of the footbridge links on 19 August 2008 and 16 December 2008. The ACABAS accepted the proposed aesthetic design, and requested that a consistent and harmonious approach should be adopted for the proposed footbridge link FB1 and the adjoining existing footbridge leading to NTK Municipal Services Building.

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² The ACABAS, which comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, an academic institution, Architectural Services Department, Highways Department, Housing Department, Planning Department and Civil Engineering and Development Department, is responsible for vetting the design of bridges and other structures associated with the public highway system from the aesthetic and visual impact points of view.

18. We gazetted the proposed amendments to the layout of footbridge link FB2 under the Ordinance on 17 October 2008 and received no objection. The PS(T) authorised the proposed amendments under the Ordinance on 14 January 2009 and the notice of authorisation was gazetted on 23 January 2009.

19. We consulted the Legislative Council Panel on Housing on the proposed works on 3 November 2008. Members did not raise any objection to the proposed works.

ENVIRONMENTAL IMPLICATIONS

20. The project is not a designated project under the Environmental Impact Assessment Ordinance (Cap. 499). It is unlikely to give rise to adverse environmental impact. We will implement the standard pollution control measures during construction, as promulgated by the Director of Environmental Protection.

21. We have included in the project estimate for implementing suitable mitigation measures to control short-term environmental impact during construction. HKHA will specify in the relevant contract the requirement for the contractor to implement mitigation measures to control noise, dust, and site run-off nuisances during construction within the level specified under the established standards and guidelines. 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.

22. We have optimised the design of the levels and layout of the re-aligned road and minimised the number of footbridge columns in the planning and design stages to reduce the generation of construction waste where 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, to minimise the disposal of inert construction waste to public fill reception facilities³. We will encourage the contractor to maximise the use of recycled or recyclable inert construction waste, as well as the use of non-timber formwork to further minimise the generation of construction waste.

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³ 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.

23. We will also 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 to public fill reception facilities and landfills respectively through a trip-ticket system.

24. We estimate that the project will generate in total about 5 690 tonnes of construction waste. Of these, we will reuse about 40 tonnes (0.7%) of inert construction waste on site and deliver about 5 600 tonnes (98.4%) of inert construction waste to public fill reception facilities for subsequent reuse. In addition, we will dispose of about 50 tonnes (0.9%) 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 \$157,450 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities and \$125/tonne⁴ at landfills).

HERITAGE IMPLICATIONS

25. The project will not affect any heritage site, i.e. all declared monuments, proposed monuments, graded historic sites/buildings, sites of archaeological interests and Government historic sites identified by the Antiquities and Monuments Office.

LAND ACQUISITION

26. The project does not require any land acquisition.

/BACKGROUND.....

⁴ 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.

BACKGROUND INFORMATION

27. We upgraded **653TH** to Category B in September 2008. The ground investigation for the project at an estimated cost of \$900,000 in MOD prices under **Subhead B100HX** “Minor housing development related works, studies and investigations for items in Category D of the Public Works Programme” was completed in January 2009.

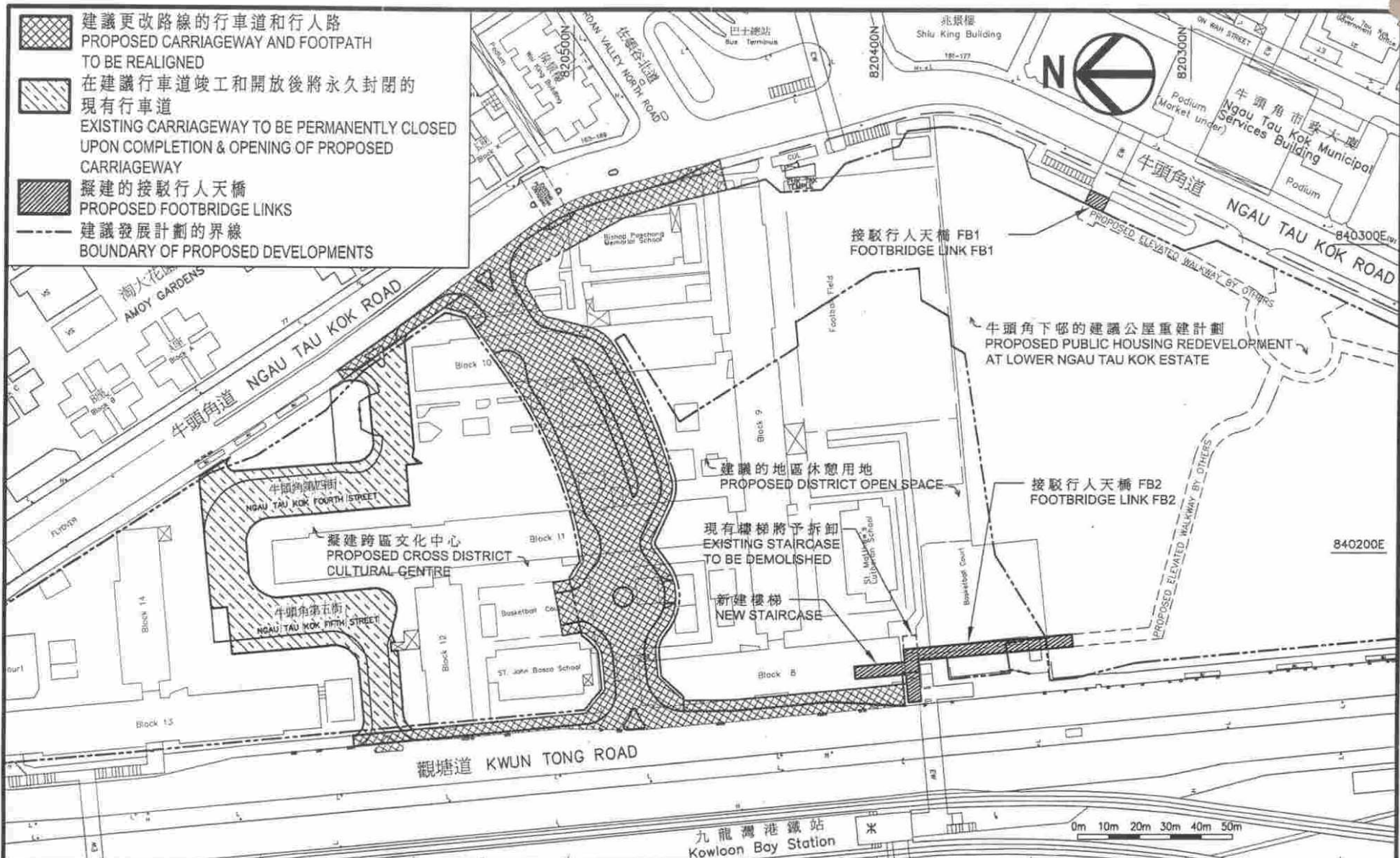
28. Of the 135 trees within the project boundary, 23 trees will be preserved. The proposed project will involve the removal of 112 trees including 37 trees to be felled and 75 trees to be transplanted outside the project site. All the trees to be removed are not important trees⁵. We will incorporate planting proposal as part of the project, including estimated quantities of 46 trees and provision of approximately 30 square metres of planters on footbridge links FB1 and FB2.

29. We estimate that the proposed works will create about 92 jobs (75 for labourers and another 17 for professional/technical staff) providing a total employment of 1 850 man-months.

Transport and Housing Bureau
February 2009

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 trees, trees 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 metre above ground level), or with height/canopy spread equal or exceeding 25 metres.



圖則名稱：
DRAWING TITLE：
牛頭角第四街及第五街擬議重新定線相關的道路改善工程和鄰近接駁行人天橋的建造工程
- 平面圖
ROAD IMPROVEMENT WORKS IN ASSOCIATION WITH THE PROPOSED RE-ALIGNMENT OF NGAU TAU KOK FOURTH STREET AND FIFTH STREET AND CONSTRUCTION OF NEARBY FOOTBRIDGE LINKS - SITE PLAN

工務計劃項目第 653TH 號
PWP ITEM NO. 653TH



現有行人天橋
EXISTING FOOTBRIDGE

接駁行人天橋FB1-採用直紋原身混凝土設計
FOOTBRIDGE LINK FB1-FAIRFACED
CONCRETE WITH FLUTE PATTERN



行人路
PEDESTRIAN FOOTPATH

工務計劃項目第653TH號 PWP ITEM No. 653TH

圖則編號 DRG NO
KL49/1/FB1/A/FB-B-SV/P03

圖則名稱 DRAWING TITLE

接駁行人天橋FB1-街景
FOOTBRIDGE LINK FB1 - STREET VIEW

AutoCAD 2000 A3 420 x 297
CAD FILE NAME: 1_10b_4_FB.dwg

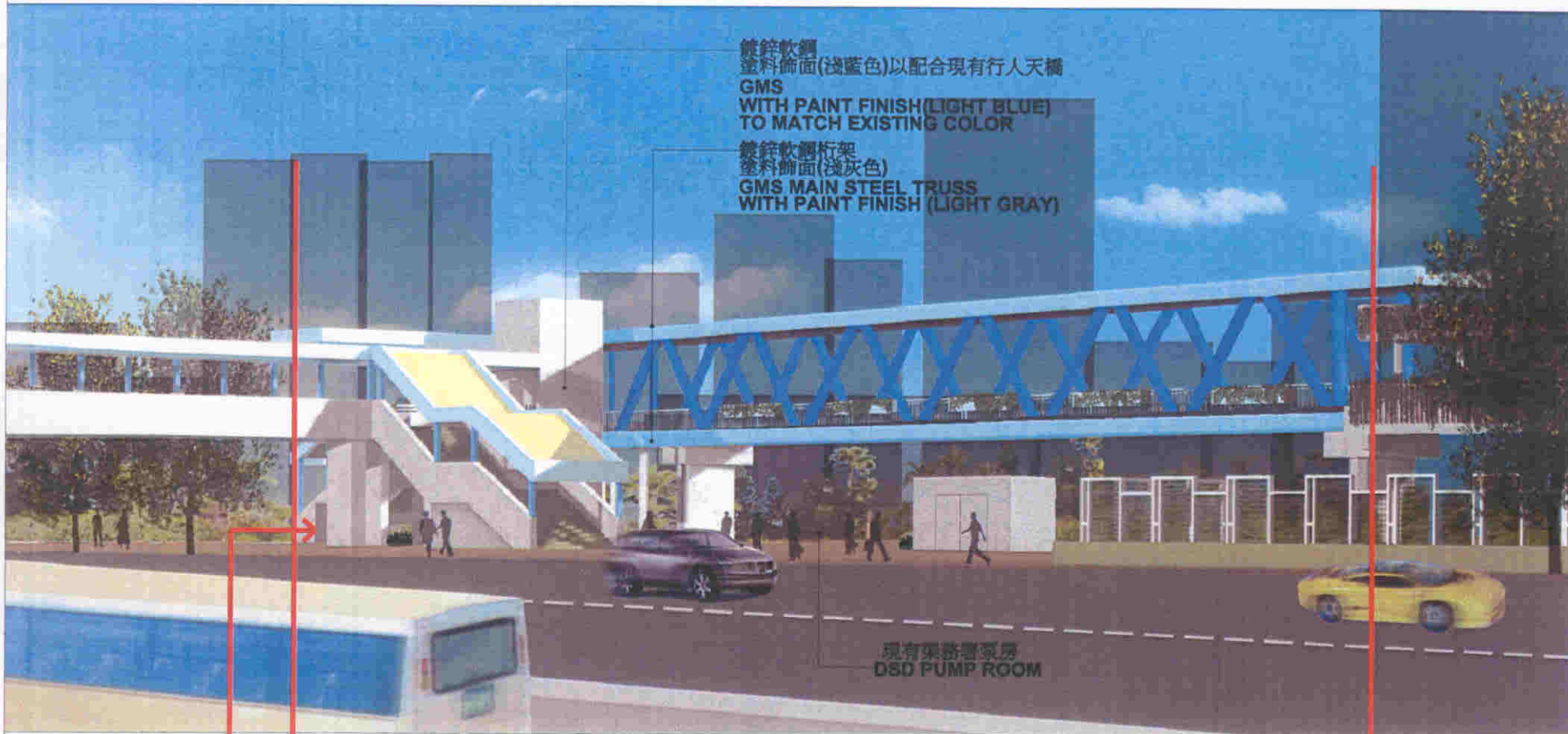


房屋署
HOUSING DEPARTMENT

現有港鐵接駁行人天橋和升降機
EXISTING MTRCL'S PEDESTRIAN
LINK BRIDGE AND LIFT

地區休憩用地
DISTRICT OPEN SPACE

牛頭角下邨第1和2期
LOWER NGAU TAU KOK ESTATE
PHASES I AND II



往港鐵接駁行人天橋的
新建樓梯
NEW STAIRS TO MTRCL'S
PEDESTRIAN LINK BRIDGE

接駁行人天橋FB2
FOOTBRIDGE LINK FB2

工務計劃項目第653TH號 PWP ITEM No. 653TH

圖則編號DRG NO
KL49/1/SITE/A/FB-C-SV/P00

圖則名稱DRAWING TITLE

接駁行人天橋FB2-從觀塘道所見的街景
FOOTBRIDGE LINK FB2 - STREET VIEW FROM KWUN TONG ROAD

AutoCAD 2000 A3 420 x 297
CAD Ref: sds_1_sdv_x_fb.dwg
房屋署
HOUSING DEPARTMENT