

**For discussion
on 26 February 2007**

LEGISLATIVE COUNCIL PANEL ON ENVIRONMENTAL AFFAIRS

PWP Item Nos. 764TH – Retrofitting of noise barriers on Tsing Tsuen Bridge at Tsing Yi and Tsuen Wan approaches

765TH – Retrofitting of noise barriers on Tseung Kwan O Road

776TH – Retrofitting of noise barriers on Yuen Shin Road, Tai Po

PURPOSE

This paper seeks Members' support for the submission of proposals to upgrade **764TH** "Retrofitting of noise barriers on Tsing Tsuen Bridge at Tsing Yi and Tsuen Wan approaches", **765TH** "Retrofitting of noise barriers on Tseung Kwan O Road", and **776TH** "Retrofitting of noise barriers on Yuen Shin Road, Tai Po" to Category A at the estimated costs of \$120.5 million for **764TH**, \$129.1 million for **765TH**, and \$18.4 million for **776TH** in money-of-the-day (MOD) prices, prior to submission to the Public Works Subcommittee for consideration with a view to seeking the Finance Committee's funding approval.

PROPOSAL AND JUSTIFICATION

2. In November 2000, the Administration introduced a policy to address the noise impact of existing roads on neighbouring residents. Under this policy, direct engineering solutions by way of retrofitting of barriers and enclosures and resurfacing with low noise material will be implemented where practicable on existing roads with a traffic noise level exceeding the limit of 70 dB(A) L₁₀(1 hour)¹.

¹ L₁₀(1 hour) is the noise level exceeded for 10% of a one-hour period, generally used for road noise at peak traffic flow. The noise limit of 70 dB(A) for residential premises as stipulated in the Hong Kong Planning Standards and Guidelines is adopted as the administrative guideline for retrofitting projects identified under the policy introduced in 2000.

3. At present, about 2 000 dwellings adjacent to the section of Tsing Tsuen Bridge near Cheung On Estate at Tsing Yi and Riviera Gardens at Tsuen Wan are exposed to excessive traffic noise of up to 79 dB(A) L₁₀(1 hour). About 4 500 dwellings adjacent to the section of Tseung Kwan O Road near Tsui Ping South Estate, Hing Tin Estate, Hong Yat Court and Hong Wah Court at Lam Tin are exposed to excessive traffic noise of up to 83 dB(A) L₁₀(1 hour). About 380 dwellings adjacent to the section of Yuen Shin Road near Wang Fuk Court and Kwong Fuk Estate at Tai Po are exposed to traffic noise of up to 73 dB(A) L₁₀(1 hour). In line with the policy, we propose to retrofit noise barriers on these road sections in order to mitigate the noise impact. These projects would reduce the existing traffic noise levels on the affected noise sensitive receivers as follows:

- (a) 1 to 21 dB(A) L₁₀ (1 hour) benefiting 1 700 dwellings at Cheung On Estate at Tsing Yi and Riviera Gardens at Tsuen Wan;
- (b) 1 to 18 dB(A) L₁₀ (1 hour) benefiting 3 800 dwellings at Tsui Ping South Estate, Hing Tin Estate, Hong Yat Court and Hong Wah Court at Lam Tin; and
- (c) 1 to 14 dB(A) L₁₀ (1 hour) benefiting 370 dwellings at Wang Fuk Court and Kwong Fuk Estate at Tai Po.

4. The scope of **764TH** comprises –

- (a) retrofitting of vertical noise barriers of about 160 metres (m) in length and 5 m in height, and single-leaf cantilevered noise barriers of about 160 m in length and 6 m in height along the footpath of the eastbound section of Tsing Tsuen Bridge near Cheung On Estate at Tsing Yi;
- (b) retrofitting of single-leaf cantilevered noise barriers of about 320 m in length and 6 m in height along the central divider and the slow lane of the eastbound section of Tsing Tsuen Bridge near Cheung On Estate at Tsing Yi;
- (c) retrofitting of single-leaf cantilevered noise barriers of a total length of about 590 m and 7 m in height, and 270 m and 6 m in height along the central divider and the footpath of the eastbound Tsing Tsuen Bridge near Riviera Gardens at Tsuen Wan;
- (d) associated road, drainage, street lighting and landscaping works; and
- (e) implementation of an environmental monitoring and audit (EM&A) programme for works mentioned in items (a) to (d) above.

5. The scope of **765TH** comprises –
- (a) retrofitting of vertical noise barriers of about 90 m in length and 4 m in height on the northern side of the eastbound flyover section of Tseung Kwan O Road, and single-leaf cantilevered noise barriers of about 350 m in length and 7 m in height along the footpath of Tseung Kwan O Road eastbound outside Tsui Ping South Estate;
 - (b) retrofitting of single-leaf cantilevered noise barriers of about 530 m in length and 7 m in height along the central divider of the section of Tseung Kwan O Road near Hing Tin Estate and Hong Wah Court;
 - (c) retrofitting of doubled-leaf cantilevered noise barriers of about 100 m in length and 7 m in height along the central divider of the section of Tseung Kwan O Road near Tsui Ping South Estate;
 - (d) laying of low noise surfacing materials of about 370 m in length on each of the eastbound and westbound carriageway of Tseung Kwan O Road near Hing Tin Estate and Hong Wah Court;
 - (e) associated road, drainage, street lighting and landscaping works; and
 - (f) implementation of an EM&A programme for works mentioned in items (a) to (e) above.
6. The scope of **776TH** comprises:
- (a) retrofitting of single-leaf cantilevered noise barriers of about 250 m in length and 7 m in height along the verge of the northbound carriageway of Yuen Shin Road near Wang Fuk Court and Kwong Fuk Estate;
 - (b) associated road, drainage and landscaping works; and
 - (c) implementation of an EM&A programme for works mentioned in items (a) to (b) above.

Layout plans with cross sections of the proposed works under **764TH**, **765TH** and **776TH** are at **Enclosures 1, 2 and 3** respectively. We plan to commence the construction works for **764TH** and **765TH** in September 2007 for completion in December 2010 and December 2009 respectively. For **776TH**, we plan to commence the construction works in December 2007 for completion in June 2009.

FINANCIAL IMPLICATIONS

7. We estimate the capital costs² of the proposed works to be \$120.5 million for **764TH**, \$129.1 million for **765TH**, and \$18.4 million for **776TH** in MOD prices and the annual recurrent costs upon their completion to be \$350,000, \$420,000 and \$37,000 respectively.

8. We estimate that the proposed works will create about 80 jobs (60 for labourers and another 20 for professional/technical staff) for **764TH**, 128 jobs (95 for labourers and another 33 for professional/technical staff) for **765TH**, and 28 jobs (24 for labourers and another 4 for professional/technical staff) for **776TH**, providing a total employments of about 6,300 man-months.

INTERIM TRAFFIC ARRANGEMENT

9. Interim traffic arrangement will have to be introduced to facilitate the construction works. For **764TH**, both eastbound and westbound carriageways of Tsing Tsuen Bridge and its approach roads at Tsing Yi and Tsuen Wan will be temporarily reduced from two lanes to one lane when necessary during the construction period. The contractor will be required to maintain one lane for each bound of carriageway at all times during the construction period. Full closure at nighttime for the eastbound and westbound carriageway for a section of Tsing Yi North Coastal Road above Tam Kon Shan Interchange is required to facilitate the concreting works of noise barriers footing and/or the safe installation of the noise barriers. Such nighttime closures will be minimized as far as practicable. During these closures, the eastbound traffic from Tsing Yi North Coastal Road will be diverted via Tam Kon Shan Interchange back to Tsing Tsuen Bridge while the westbound traffic from Tsing Tsuen Bridge will be diverted via Tam Kon Shan Interchange back to Tsing Yi North Coastal Road.

10. For **765TH**, both eastbound and westbound carriageway of Tseung Kwan O Road will be temporarily reduced from three lanes to two lanes when necessary during the construction period. The contractor will be required to maintain two lanes for each bound of carriageway at all times during the construction period. Closure of two traffic lanes at nighttime for eastbound carriageway of Tseung Kwan O Road and full closure at nighttime for the eastbound flyover carriageway of Tseung Kwan O Road are required to facilitate the concreting works of noise barrier footing and/or the safe installation of the noise barriers. Such nighttime closures will be minimized as far as practicable. During these closures, the eastbound traffic from Kwun Tong Bypass will be diverted via Lei Yue Mun Road back to Tseung Kwan O Road eastbound.

² These are the latest estimates. We will finalize the project costs and estimated new job opportunities and include a cost breakdown prior to submitting the proposals to the Public Works Subcommittee for consideration.

11. For **776TH**, the northbound carriageway of Yuen Shin Road may be temporarily reduced from two lanes to one lane when necessary during the construction period. The contractor will be required to maintain one lane for northbound traffic at all times during the construction period. The southbound traffic will not be affected. Lane closures will be arranged at off-peak hours as far as possible. Temporary traffic measure will be arranged to facilitate the road users.

12. We have conducted traffic impact assessments for **764TH**, **765TH** and **776TH** to assess the impacts of the temporary traffic diversion during the construction of the works. The traffic impact assessments have concluded that the proposed temporary traffic arrangement will not cause significant adverse impacts to road users.

ENVIRONMENTAL IMPLICATIONS

13. **764TH**, **765TH** and **776TH** are not designated projects under the Environmental Impact Assessment Ordinance. We completed the environmental studies for the projects in January 2007. We concluded that the projects would not cause adverse long-term environmental impact.

14. The aesthetic designs of the vertical type and cantilevered type noise barriers are compatible with the environment. The proposed noise barrier panels for cantilevered type noise barriers are generally of transparent type and non-transparent type at the upper and lower parts respectively. For vertical type noise barriers, the proposed noise barrier panels are generally of transparent type. In line with the prevailing greening policy of the Government, we propose to use green wall with embedded plants for the lower parts of a section of noise barriers along the slow lane of eastbound Tsing Tsuen Bridge near Riviera Gardens in Tsuen Wan for **764TH**. Along the footpath of the eastbound Tseung Kwan O Road outside Tsui Ping South Estate, we propose to use green wall with embedded plants for the lower parts of a section of noise barriers, and to convert a portion of the same footpath into planter for **765TH**. We will alienate a planting reserve of 1 m wide alongside the noise barriers for **776TH**. Drawings showing the perspective view of the noise barriers under **764TH**, **765TH** and **776TH** are at **Enclosures 4, 5 and 6** respectively. The initial aesthetic designs were supported by the District Councils and the Advisory Committee on the Appearance of Bridges and Associated Structures³ (ACABAS) as described in paragraphs 24 to 26 below.

³ The Advisory Committee on the Appearance of Bridges and Associated Structures, which comprises representatives of the Hong Kong Institute of Architects, the Hong Kong Institution of Engineers, Architectural Services Department, Highways Department, Housing department, Planning Department, and Civil Engineering and Development Department, is responsible for vetting the design of bridges and

15. For short-term construction impacts, we will control the noise, dust and site run-off nuisances to within the established standards and guidelines through the implementation of mitigation measures. We will also carry out the EM&A programme to ensure proper implementation of the recommendations of the environmental assessment.

16. On landfill gas hazard arising from the nearby restored Ma Yau Tong Landfill site for **765TH**, we will implement appropriate landfill gas protection, precautionary and monitoring measures during both the construction and operation phases of the project. With such measures in place and properly implemented, the safety of site personnel will be safeguarded and there would be no adverse impact anticipated.

17. We have considered measures in the planning and design stages to reduce the generation of construction and demolition (C&D) materials where possible. In the design of the pile caps, we have raised the levels of the pile caps in order to minimize the quantity of C&D materials generated from excavation of pile caps. In addition, we will require the contractor to reuse suitable excavated materials and demolition materials as filling materials on site as far as possible in order to minimize their disposal to public fill reception facilities. We will encourage the contractor to maximize the use of recycled or recyclable C&D materials, as well as the use of non-timber formwork to further minimize the generation of construction waste.

18. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures to avoid, reduce, reuse and recycle C&D materials. We will require the contractor to ensure that the day-to-day operations on site comply with the approved WMP. We will control the disposal of public fill, C&D materials and C&D waste to public filling facilities and landfills respectively through a trip-ticket system. We will require the contractor to separate public fill from C&D waste for disposal at appropriate facilities. We will record the disposal, reuse and recycling of C&D materials for monitoring purposes.

19. We estimate that the project **764TH** will generate about 21 000 tonnes of C&D materials. Of these, we will reuse about 11 900 tonnes (56.7%) on site, deliver 5 500 tonnes (26.2%) to public fill reception facilities⁴ for subsequent reuse. In addition, we will dispose of 3 600 tonnes (17.1%) at landfills. The total

other structures associated with the public highway system, including noise barriers and semi-enclosures, from the aesthetic and visual impact points of view.

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

cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$598,500 for this project (based on a unit cost of \$27/tonne for disposal at public fill reception facilities, and \$125/tonne⁵ at landfills).

20. We estimate that the project **765TH** will generate about 31 500 tonnes of C&D materials. Of these, we will reuse about 12 600 tonnes (40%) on site, deliver 13 900 tonnes (44.1%) to public fill reception facilities for subsequent reuse. In addition, we will dispose of 5 000 tonnes (15.9%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$1,000,300 for this project (based on the unit costs in paragraph 19 above).

21. We estimate that the project **776TH** will generate about 1 500 tonnes of C&D materials. Of these, we will reuse about 600 tonnes (40%) on site, deliver 450 tonnes (30%) to public fill reception facilities for subsequent reuse. In addition, we will dispose of 450 tonnes (30%) at landfills. The total cost for accommodating C&D materials at public fill reception facilities and landfill sites is estimated to be \$68,400 for this project (based on the unit costs in paragraph 19 above).

22. The proposed retrofitting of noise barriers will involve removal of 17 trees (to be transplanted) for **764TH**, 5 trees (to be felled) for **765TH**, and 61 trees (including 48 trees to be felled and 13 trees to be transplanted) for **776TH**. All the trees to be removed are not important trees⁶. We will incorporate planting proposals as part of the projects, including estimated quantities of 20 and 50 trees for **765TH** and **776TH** respectively, 4 700, 14 200 and 1 500 shrubs for **764TH**, **765TH** and **776TH** respectively (including shrubs on green walls and planters), and 420 and 250 square metres of grassed area for **764TH** and **765TH** respectively. The planting proposals would more than compensate for the trees to be felled.

⁵ The 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 are likely to be more expensive) when the existing ones are filled. The notional cost estimate is for reference only and does not form part of this project estimate.

⁶ Important trees include trees on the Register of Old and Valuable Trees and any other trees which meet one or more of the following criteria:

- (a) trees over 100 years old;
- (b) trees of cultural historical or memorable significance;
- (c) trees of precious or rare species;
- (d) trees of outstanding form; or
- (e) trees with trunk diameter exceeding one metre (measured at one metre above ground level).

LAND ACQUISITION

23. The proposed works do not require land resumption.

PUBLIC CONSULTATION

24. We consulted the Tsuen Wan District Council on 27 September 2005 and the Housing and Development Committee of the Kwai Tsing District Council on 4 October 2005 on **764TH**. We consulted the Environment and Hygiene Committee of the Kwun Tong District Council on **765TH** on 18 October 2005. We briefed Members of the above District Councils and Committees on the details of the projects, including the scope and design of the noise barrier panels, and the implementation programmes. Members of the above District Councils and Committees supported the respective projects.

25. On 23 June 2003, the LegCo Joint Panels on Environmental Affairs and Transport was consulted and supported the reuse of noise barrier materials recovered from the Tolo Widening Project for the **776TH** project. On 17 March 2006, the Environment, Housing and Works Committee of the Tai Po District Council supported the proposed barrier scheme.

26. We also consulted the ACABAS on the aesthetic designs of the noise barriers on 19 December 2006. The Committee accepted the proposed aesthetic designs.

27. We gazetted the road schemes of **764TH** and **765TH** under the Roads (Works, Use and Compensation) Ordinance (the Ordinance) on 9 June 2006 and received no objection. The Permanent Secretary for the Environment, Transport and Works (Transport) (PST), under the delegated authority from the Secretary for the Environment, Transport and Works (SETW), authorised the road schemes of **764TH** and **765TH** under the Ordinance on 31 August 2006. The notices of authorisation were gazetted on 8 September 2006.

28. We gazetted the road scheme of **776TH** under the Ordinance on 11 August 2006 and received no objection. The PST, under the delegated authority from the SETW, authorised the road scheme of **776TH** under the Ordinance on 26 October 2006. The notice of authorisation was gazetted on 3 November 2006.

ADVICE SOUGHT

29. Members are invited to support our proposals to seek the Public Works Subcommittee's support in April 2007 for upgrading **764TH**, **765TH** and **776TH** to Category A, with a view to seeking Finance Committee's funding approval in May 2007.

ATTACHMENT

- Enclosure 1 – Drawing Nos. HMW6764TH-SP0005 & CS0002
- Enclosure 2 – Drawing Nos. HMW6765TH-SP0019 & CS0002
- Enclosure 3 – Drawing No. HWDTP063A-SK0002
- Enclosure 4 – Drawing No. HMW6764TH- SP0004
- Enclosure 5 – Drawing No. HMW6765TH-SP0018
- Enclosure 6 – Drawing No. HWDTP063A-SK0003

Environmental Protection Department
February 2007



圖例
LEGEND :

- 施工範圍
LIMIT OF WORKS AREA
- 擬建5米高垂直式隔音屏障
PROPOSED 5m HIGH
VERTICAL NOISE BARRIER
- 擬建6米高懸臂式隔音屏障
PROPOSED 6m HIGH SINGLE-LEAF
CANTILEVERED NOISE BARRIER
- 擬建7米高懸臂式隔音屏障
PROPOSED 7m HIGH SINGLE-LEAF
CANTILEVERED NOISE BARRIER

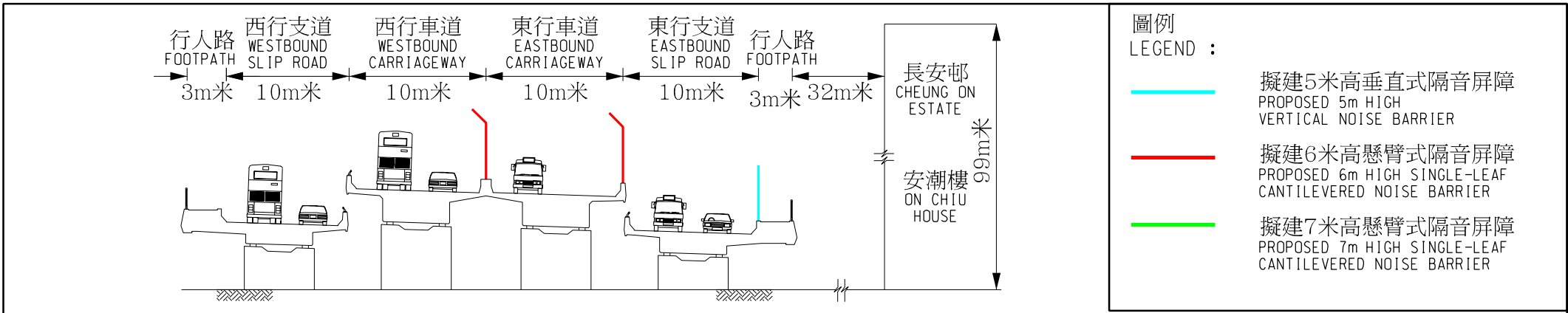
索引圖 KEY PLAN
比例 SCALE 1 : 50000



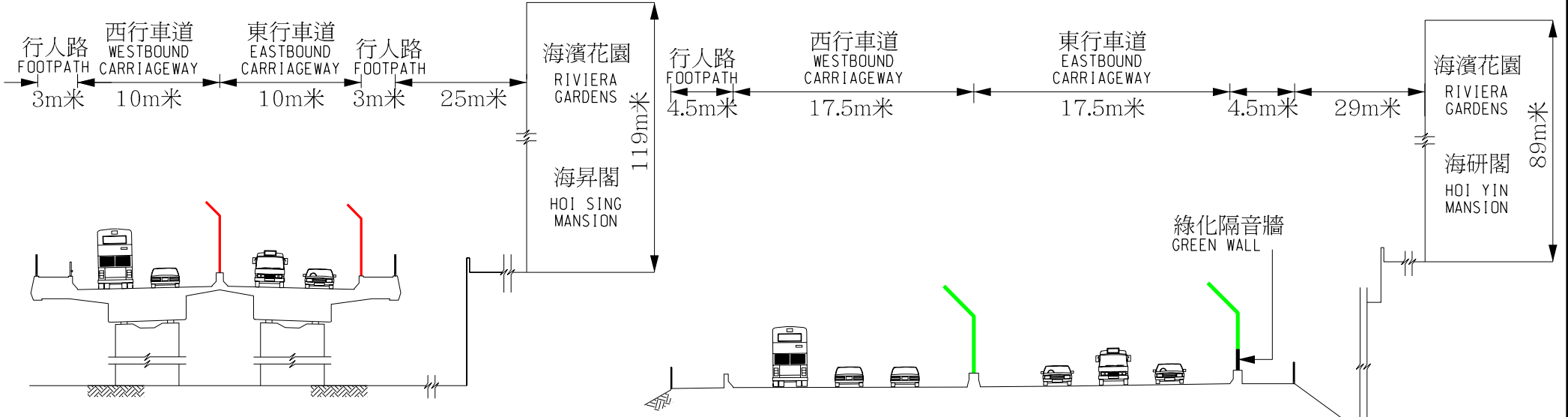
圖則名稱 drawing title
工務計劃項目第764TH號 -
位於青衣及荃灣引道之青荃橋的隔音屏障加建工程 - 平面圖
PMP ITEM NO. T64TH RETROFITTING OF NOISE BARRIER ON TSING TSUEN BRIDGE AT TSING YI AND TSUEN WAN APPROACHES - LAYOUT PLAN

設計 DESIGNED T.J. TAN 09/03/07	校核 CHECKED S.W. CHANG 09/03/07	繪圖 DRAWN L.Y. LEUNG 09/03/07	批准 APPROVED W.Y. WAI 09/03/07
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圖則編號 drawing no. HMM764TH-SP0005	比例 scale 1:3000 OR AS SHOWN
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HIGHWAYS DEPARTMENT 路政處 HONG KONG	



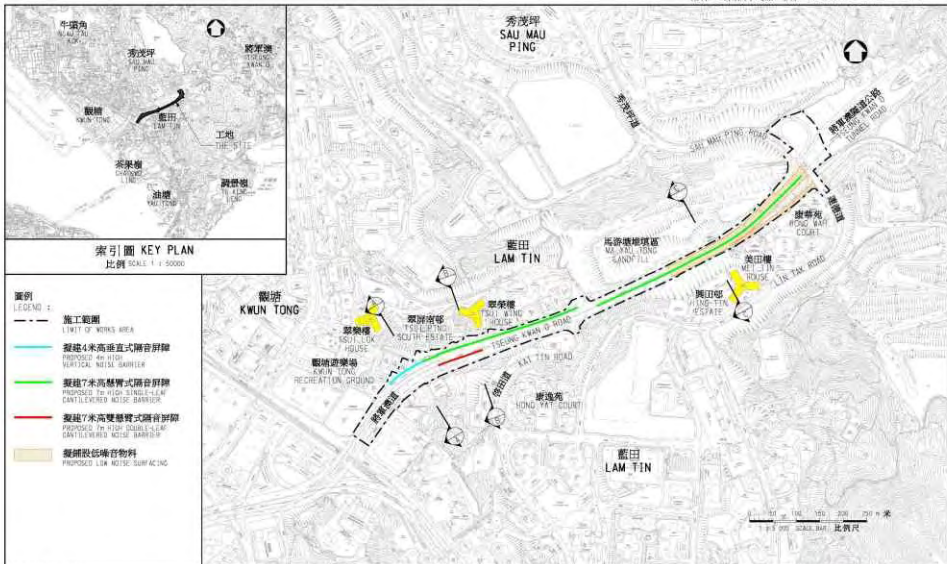
切面 SECTION A-A



切面 SECTION B-B

切面 SECTION C-C

圖則名稱 drawing title 工務計劃項目第764TH號 - 位於青衣及荃灣引道之青荃橋的隔音屏障加建工程 - 切面圖 PWP ITEM NO. 764TH RETROFITTING OF NOISE BARRIERS ON TSING TSUEN BRIDGE AT TSING YI AND TSUEN WAN APPROACHES - SECTIONS	設計 designed SIGNED Y.F.KAN 09/02/07	繪圖 drawn SIGNED L.Y.LEUNG 09/02/07	圖則編號 drawing no. HMW6764TH-CS0002	比例 scale 示意圖 DIAGRAMMATIC
	覆核 checked SIGNED S.M.CHUNG 09/02/07	批准 approved SIGNED M.Y.MA 09/02/07	© 版權所有 COPYRIGHT RESERVED	
主要工程管理處 MAJOR WORKS PROJECT MANAGEMENT OFFICE			HIGHWAYS DEPARTMENT HONG KONG 路政署	

圖例
LEGEND :

- 施工範圍
LIMIT OF WORKS AREA
- 擬建4米高垂直式隔音屏障
PROPOSED 4m HIGH VERTICAL NOISE BARRIER
- 擬建7米高懸臂式隔音屏障
PROPOSED 7m HIGH CANTILEVERED SINGLE-LEAF NOISE BARRIER
- 擬建7米高雙懸臂式隔音屏障
PROPOSED 7m HIGH CANTILEVERED DOUBLE-LEAF NOISE BARRIER
- 擬鋪設低噪音物料
PROPOSED LOW NOISE SURFACING

圖則名稱 DRAWING NO.

工務計劃項目第765TH號 -
將軍澳道的隔音屏障加建工程 - 平面圖
PW ITEM NO. 765TH RETROFITTING OF NOISE BARRIERS ON TSEUNG KWAN O ROAD
- LAYOUT PLAN

圖則編號 DRAWING NO.

設計 DRAWN S106B
S.L.W.H.K. 28/02/07
校核 CHECKED S106B
S.L.W.H.K. 28/02/07

繪圖日期 DATE

繪圖 DRAWN S106B
S.L.W. 28/02/07
校核 APPROVED S106B
S.L.W. 28/02/07

圖則編號 DRAWING NO.

HWK/765TH-SP0019

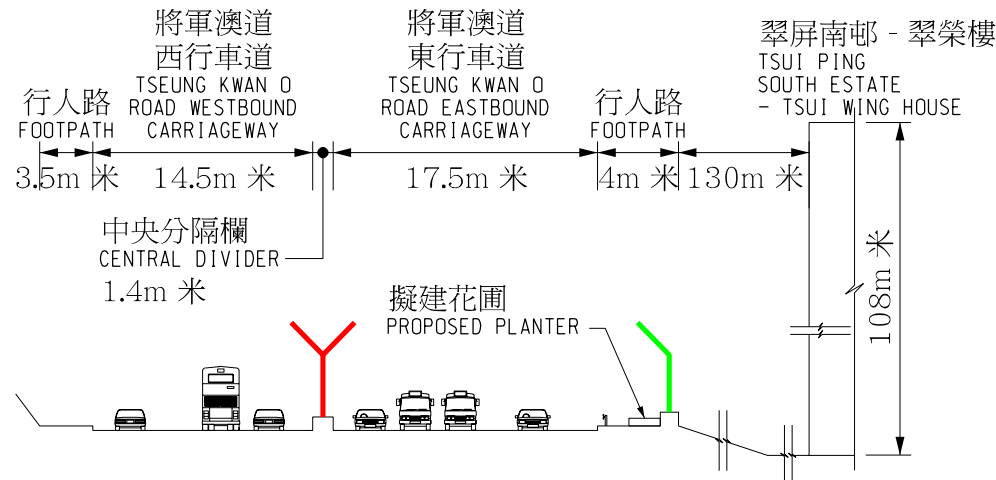
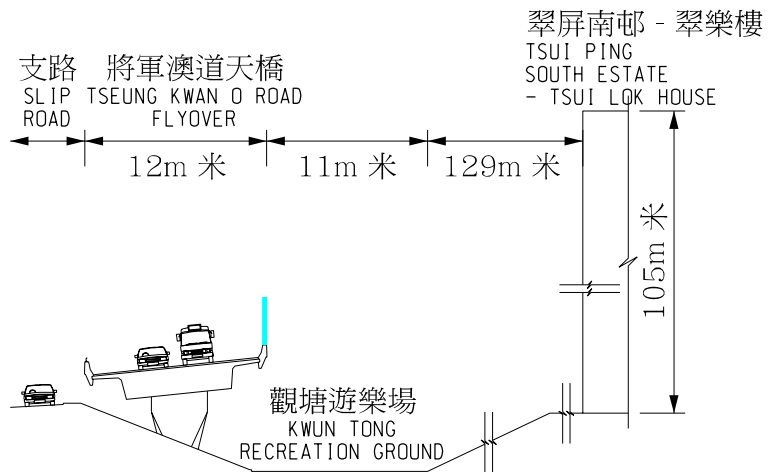
比例 SCALE

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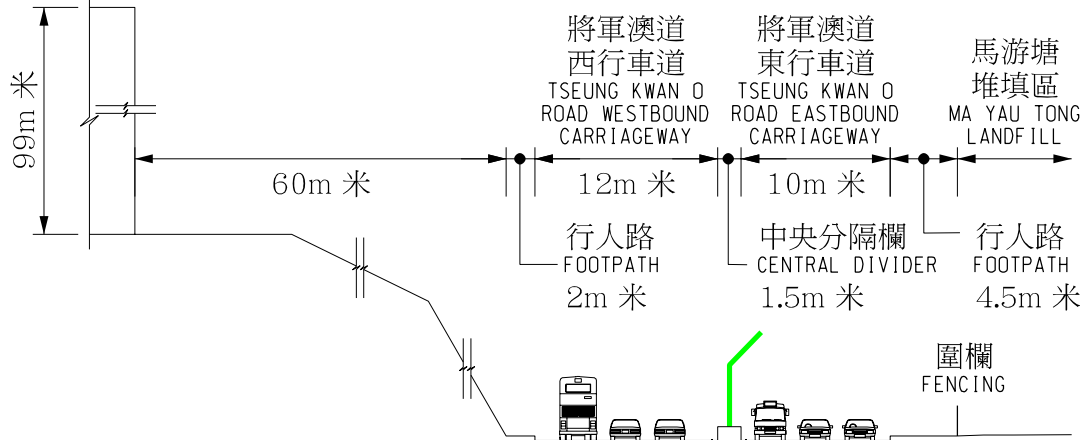
主要工程管理處
MAJOR WORKS PROJECT MANAGEMENT OFFICE



興田邨 - 美田樓
HING TIN ESTATE
- MEI TIN HOUSE

切面 SECTION A-A

切面 SECTION B-B



切面 SECTION C-C

圖例

LEGEND :

- 擬建4米高垂直式隔音屏障
PROPOSED 4m HIGH VERTICAL NOISE BARRIER
- 擬建7米高懸臂式隔音屏障
PROPOSED 7m HIGH SINGLE-LEAF CANTILEVERED NOISE BARRIER
- 擬建7米高雙懸臂式隔音屏障
PROPOSED 7m HIGH DOUBLE-LEAF CANTILEVERED NOISE BARRIER
- 擬建防撞欄
PROPOSED BEAM BARRIER

圖則名稱 plan title

工務計劃項目第765TH號 -
將軍澳道的隔音屏障加建工程 - 切面圖
PWP ITEM NO. 765TH
RETROFITTING OF NOISE BARRIERS ON TSEUNG KWAN O ROAD - SECTIONS

設計 designed

繪圖 drawn

圖則編號 plan no.

比例 scale

SIGNED
S.M.CHUNG 09/02/07

SIGNED
S.K.WONG 09/02/07

HMW6765TH-CS0002

示意圖
DIAGRAMMATIC

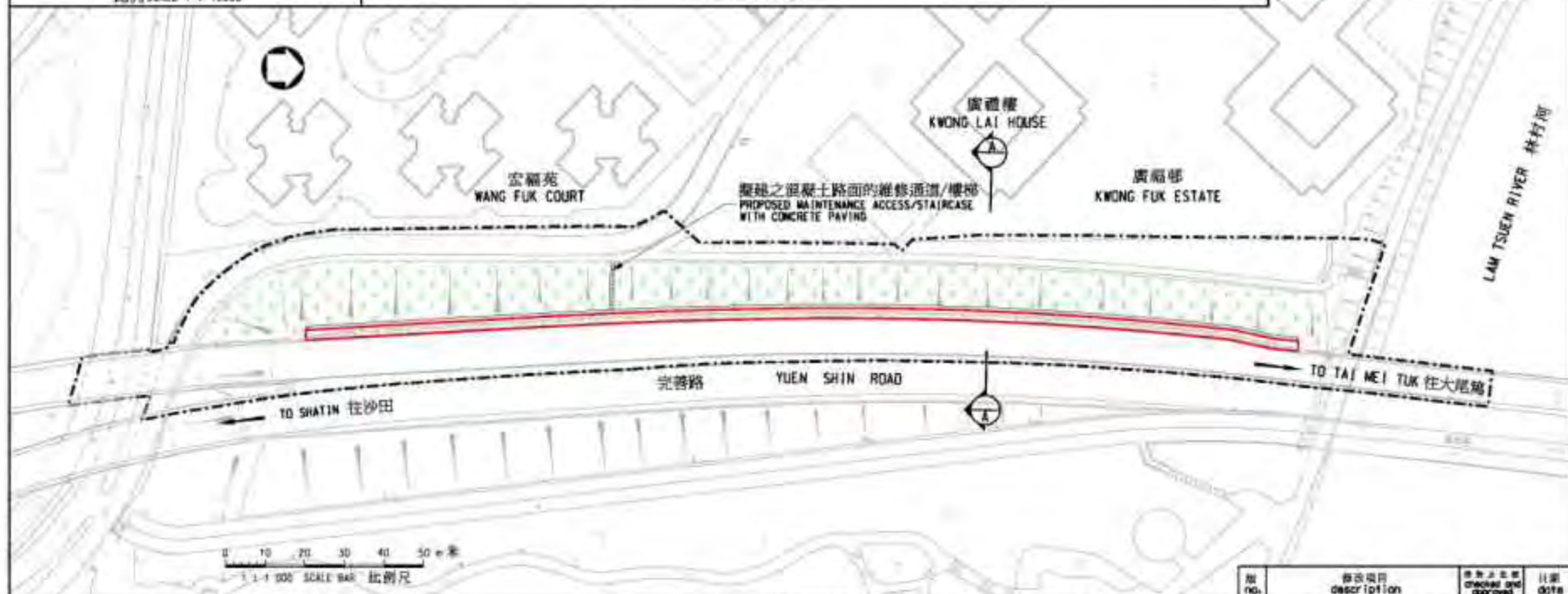
覆核 checked
SIGNED
S.M.CHUNG 09/02/07

批准 approved
SIGNED
M.Y.MA 09/02/07

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主要工程管理處
MAJOR WORKS
PROJECT MANAGEMENT OFFICE

HIGHWAYS DEPARTMENT 路
HONG KONG 政 署



圖則名稱 drawing title

工務計劃項目第776TH號 -
大埔完善路的隔音屏障加建工程 - 平面圖
PWP ITEM NO. 776TH - RETROFITTING OF
NOISE BARRIERS ON YUEN SHIN ROAD, TAI PO - LAYOUT PLAN

職位 post	姓名 name	簽署 signature	日期 date
設計 designed	E/N2-3	S.K. LAI	SIGNED FEB 2007
繪圖 drawn	TD/3-1	S.C. CHAN	SIGNED FEB 2007
核對 checked	E/N2-3	S.K. LAI	SIGNED FEB 2007
批准 approved	SE/N2	Y.S. CHAN	SIGNED FEB 2007

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圖則 no.	修訂項目 description	修訂日期 checked and approved date	比例 scale
			不設比例 N.T.S.

圖則編號 drawing no.
HWTP063A-SK0002

HIGHWAYS
DEPARTMENT
HONG KONG

港
政
署



圖則名稱 drawing title

工務計劃項目第764TH號 - 位於青衣及荃灣引道之青荃橋的隔音屏障加建工程
- 透視觀景於擬建隔音屏障

PWP ITEM No. 764TH - RETROFITTING OF NOISE BARRIERS ON TSING TSUEN BRIDGE
AT TSING YI AND TSUEN WAN APPROACHES
- PERSPECTIVE VIEW TO PROPOSED NOISE BARRIERS

設計 designed SIGNED Y.F.KAN 09/02/07	繪圖 drawn SIGNED S.K.WONG 09/02/07
覆核 checked SIGNED S.M.CHUNG 09/02/07	批准 approved SIGNED M.Y.MA 09/02/07

圖則編號 drawing no. HMW6764TH-SP0004	比例 scale 示意圖 DIAGRAMMATIC
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主要工程管理處
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PROJECT MANAGEMENT OFFICE



HIGHWAYS
DEPARTMENT
HONG KONG
路政署
香港



圖則名稱 drawing title

**工務計劃項目第765TH號 - 將軍澳道的隔音屏障加建工程
- 透視觀景於擬建隔音屏障**

PWP ITEM No. 765TH - RETROFITTING OF NOISE BARRIERS ON TSEUNG KWAN D ROAD
- PERSPECTIVE VIEW TO PROPOSED NOISE BARRIERS

設計 designed

S.M.CHUNG 09/02/07

覆核 checked

S.M.CHUNG 09/02/07

繪圖 drawn

L.V.LEUNG 09/02/07

裝准 approved

M.Y.MA 09/02/07

圖則編號 drawing no.

HMW6765TH-SPO018

比例 scale

示意圖

DIAGRAMMATIC

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主要工程管理處
MAJOR WORKS
PROJECT MANAGEMENT OFFICE



**HIGHWAYS
DEPARTMENT
HONG KONG**

路成署
HONG KONG



圖則名稱 drawing title 工務計劃項目第776TH號 大埔完善路的隔音屏障加建工程 -透視觀景於擬建隔音屏障 PWP ITEM NO. 776TH - RETROFITTING OF NOISE BARRIERS ON YUEN SHIN ROAD, TAI PO -PERSPECTIVE VIEW TO PROPOSED NOISE BARRIERS		職位 post	姓名 name	簽署 signature	日期 date	版權所有不得翻印 COPYRIGHT RESERVED	比例scale 示意圖 DIAGRAMMATIC	圖則編號 drawing no. HWDTPO63A-SK0003
	設計 designed	E/HK2-3	S.K. LAI	SIGNED	FEB 2007		辦事處 office 工程部 WORKS DIVISION	 HIGHWAYS DEPARTMENT HONG KONG
	繪圖 drawn	TD/3-3	H.S. LAM	SIGNED	FEB 2007			
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