

Legislative Council Panel on Transport

Castle Peak Road improvement between Area 2 and Ka Loon Tsuen, Tsuen Wan

Purpose

This paper seeks Members' view on the proposed implementation of the project "Castle Peak Road Improvement between Area 2 and Ka Loon Tsuen, Tsuen Wan".

Background

2. The existing 8.7 kilometres long Castle Peak Road (CPR) between Area 2 and Ka Loon Tsuen in Tsuen Wan is a single two-lane carriageway, serving mainly the residential developments along the road and those in Tsuen Wan West and Tuen Mun. As CPR runs parallel to Tuen Mun Road (TMR), it also supplements TMR to serve the east-west traffic movements in the West New Territories.

3. This section of CPR is sub-standard from the traffic engineering point of view. For a considerable length, the width of the carriageway is below the standard 7.3 metres currently required for a single two-lane carriageway. There are about 12 sharp bends with curvature less than the minimum standard along the road causing severe sightline restrictions. Besides, roadside footpaths are either unavailable or too narrow, posing a safety hazard to pedestrians.

4. The road will also be unable to cope with the increasing traffic demand upon the completion of planned residential development¹ in Tsuen Wan West and Tuen Mun over the next few years. The projected traffic volume to capacity (V/C)² ratios in 2000, 2005 and 2011 under the scenarios of with and without the proposed widening at critical sections of CPR are as follows -

¹ The planned residential developments include 16 000 new flats to be built at TMTL 423 and TMTL 429, Tuen Mun Area 56 Phase I and II and San Miguel Site Redevelopment. Furthermore, according to the latest planning data, the population in the Northwest New Territories will increase from 970 000, by 550 000, to 1 510 000 from 2001 to 2016.

² The capacity here refers to the design capacity of the road. A V/C ratio equal to or less than 1.0 means that the road has sufficient capacity to cope with the volume of vehicular traffic under consideration. A V/C ratio above 1.0 indicates the onset of mild congestion; above 1.2 indicates more serious congestion with traffic speeds progressively deteriorating with further increase in traffic.

Year	CPR at its Junction with Hoi On Road		CPR west of Sham Tseng Interchange	
	Without improvements	With improvements	Without improvements	With improvements
2001	0.80	-	1.42	-
2005	1.69	0.58	2.46	0.85
2011	2.62	0.91	3.38	1.17

The Proposal

5. In view of the above considerations, we propose to widen and upgrade the section of Castle Peak Road (CPR) between Area 2 and Ka Loon Tsuen in Tsuen Wan under two projects, namely 365TH (between Area 2 and Sham Tseng) and 553TH (between Sham Tseng and Ka Loon Tsuen). A site plan of the two projects is attached. The scope of works will include –

365TH –

- (a) widening and realignment of the 4.6 kilometres long section of CPR between Area 2 and Sham Tseng in Tsuen Wan to a dual two-lane carriageway with a 3 metres wide footpath on both sides, including construction of elevated structures of a total length of one kilometre;
- (b) construction of a 300-metre two-lane lane flyover in Ting Kau and six covered footbridges;
- (c) reclamation of 0.8 hectare of land and construction of a 310 metres long seawall;
- (d) installation of 1.1 kilometres long 0.8 metre high noise barriers, 300 metres long 5 metres high noise barriers, 430 metres long partial noise enclosures, and air-conditioning with window insulation to about 800 dwellings along the route;
- (e) provision of recreational facilities at three beaches to compensate for permanent alienation of 4 050 square metres and temporary alienation of 12 020 square metres of beach space; and
- (f) associated works on road reconstruction, junction modification, slope stabilization, geotechnical, landscape,

lighting and drainage.

553TH

- (a) widening and realignment of 3.7 kilometres long CPR between Sham Tseng and Ka Loon Tsuen to a dual two-lane standard, carriageway with a three-metre wide footpath on both sides, including construction of elevated highway structures of a total length of 300 metres;
- (b) construction of five covered footbridges;
- (c) reclamation of 2 hectares of land including construction of a 970 metres long seawall;
- (d) installation of 40 metres long 5 metres high noise barriers, 170 metres long 3.5 metres high noise barriers, 520 metres long partial noise enclosures, and air-conditioning with window insulation to about 1100 dwellings along the route;
- (e) provision of recreational facilities at two beaches to compensate for permanent alienation of 2 700 square metres and temporary alienation of 600 square metres of beach space and reprovisioning of a sitting-out area; and
- (f) associated works on road reconstruction, junction modification, slope stabilization, geotechnical, landscape, lighting and drainage.

6. At Area 2, Sham Tseng and Tsing Lung Tau, there are existing residential developments flanking the northern side of the road. To minimise resumption of these residential developments, we have to form space for road widening through limited reclamation on the seaward side.

7. Associated with the proposed road widening works, we will form local slip roads, including a two-lane flyover at Ting Kau, to link CPR with the existing residential developments. We will also construct eleven footbridges across CPR near major residential developments and beaches.

8. We will improve the roadside slopes in conjunction with the road widening works. There are many potentially unstable slopes adjacent to this stretch of CPR. If left unattended, these slopes may pose serious threats to the safety of the local residents and commuters. Landslip incidents with injuries have happened during the last few years.

9. The proposed road works will require permanent alienation of 6 750 square metres and temporary alienation of 12 620 square metres of land from six

gazetted beaches³ along CPR. We will provide compensatory recreational facilities including beach stores and barbecue areas at five of these beaches⁴ and reprovide a sitting out area on a like-with-like basis at Ka Loon Tsuen.

10. As a result of the proposed widening works and the predicted increase in traffic flow, the residents along the widened carriageway will be exposed to noise levels higher than the upper limit stipulated in the Hong Kong Planning Standards and Guidelines (HKPSG). We will install noise barriers and partial noise enclosures along the road section to directly mitigate traffic noise. However, in some areas, due to site constraints, direct mitigation measures are neither effective nor practical to keep the traffic noise within acceptable level. We will provide indirect noise mitigation measures for 1 900 dwelling units in the form of window insulation and air-conditioning.

11. To mitigate the visual impact of the works, we will hydroseed and plant creepers and shrubs at the slopes. We will also plant trees along the footpaths and shrubs in the central reserve.

Financial Implications

12. We estimate the capital costs of **365TH** and **553TH** to be \$2,528.3 million and \$1,232.3 million respectively, made up as follows -

		\$ million	
(a)	Roads and drains	300.7	
(b)	Elevated highway structures	463.6	
(c)	Slopeworks	819.2	
(d)	Reclamation and seawall	11.5	
(e)	Noise mitigation measures	232.2	
(f)	Recreational facilities	5.7	
(g)	Landscaping works	39.6	
(h)	Consultants' fees	213.3	
(i)	Construction stage	46.6	
	(ii) site staff costs	166.7	
(i)	Contingencies	210.9	
	Sub-total	2,296.7	(at September 2000 prices)
(j)	Provision for price adjustment	231.6	

³ The six affected beaches are Approach Beach, Lido Beach, Casam Beach, Hoi Mei Beach, Gemini Beach and Anglers' Beach.

⁴ The five beaches are Approach Beach, Ting Kau Beach, Lido Beach, Casam Beach, and Hoi Mei Beach.

		\$ million	
	Total	2,528.3	(in MOD prices)
553TH			
		\$ million	
(a)	Roads and drains	181.5	
(b)	Elevated highway structures	62.6	
(c)	Slopeworks	404.5	
(d)	Reclamation and seawall	43.6	
(e)	Noise mitigation measures	198.6	
(f)	Recreational facilities	7.9	
(g)	Landscaping works	15.7	
(h)	Consultants' fees	102.5	
	(i) construction stage	22.8	
	(ii) site staff costs	79.7	
(i)	Contingencies	102.8	
	Sub-total	1,119.7	(at September 2000 prices)
(j)	Provision for price adjustment	112.6	
	Total	1,232.3	(in MOD prices)

13. We estimate the annual recurrent expenditure arising from the proposed works to be \$23.7 million.

Public Consultation

14. We consulted the then Tsuen Wan District Board on 4 March 1997; the Traffic and Transport Committee of the Tsuen Wan Provisional District Board on 16 January 1998 and its Environmental and Health Affairs Committee (EHAC) on 19 January 1998 and 16 July 1998. While they supported the projects, the EHAC of TWPDB has requested for inclusion of a cycle track in the projects. The Administration considered the proposal not viable on account that substantial land resumption and demolition of buildings would be required for a continuous cycle track along the road. Even if it were to be constructed, the gradient of the cycle track at some locations will be substandard.

15. The proposed works will fall within the gazetted boundaries of six beaches and a sitting-out area under the purview of the then Regional Council. We consulted the then Regional Council on 27 March 1997 and the Tsuen Wan District Committee of the then Provisional Regional Council on 6 November 1997 and 19 January 1998. They supported the proposed improvements and agreed to the required land alienation from the six beaches as well as the proposed compensatory provision of recreational facilities at five affected beaches and a sitting-out area.

16. In connection with the land use review by the Planning Department for Tsuen Wan West, we presented the project to the Metro Planning Committee

(MPC) of the Town Planning Board on 17 December 1999 and 17 March 2000. The MPC expressed concerns about the potential impact of the scheme on the surrounding environment, particularly on the scenic and landscape value of the coastal area. The MPC requested the Administration to consider ways to improve the design of the road alignment to minimise the impact on the recreational uses along the coast. We explained to the MPC that the main objectives of the project were to enhance the safety of road users by upgrading the road to present day standards and to increase its capacity to cater for future traffic demand. As CPR is heavily constrained by existing developments along both sides of the road, the present scheme was the optimum solution taking into consideration the engineering design requirements and the need to minimise land resumption and environmental impacts. We would implement extensive landscaping works to ameliorate the visual impact.

17. We gazetted the proposed works and the amendments to **365TH** under the Roads (Works, Use and Compensation) Ordinance (Chapter 370) on 10 July 1998 and on 28 May 1999 respectively. We received sixteen objections from fifteen objectors. Two objectors withdrew their objections unconditionally⁵ and fourteen objections remained unresolved. Details of the unresolved objections are as follows –

- (a) Five objectors objected to the land resumption for the proposed works. We have modified the proposed works to minimize the land resumption at 4 locations for 4 objectors and explained to the fifth objector that moving the proposed road alignment to avoid land resumption was not feasible as the CPR near his lot was bounded by residential developments on both sides. Four objectors withdrew their objections subject to the modifications while the fifth objector maintained his objection.
- (b) Five objectors objected to the proposed road layout. Three of them are concerned about the potential hazard of errant vehicles falling from a proposed flyover. We explained to them that 1.5 metres high reinforced concrete parapet would be constructed along the bend of the flyover to prevent such happening. However, these three objectors maintained their objections. The fourth objector objected that a proposed roundabout in front of his lot would affect the traffic movements from the lot. We explained to him that the roundabout location was the most desirable in terms of

⁵ Under the Roads (Works, Use and Compensation) Ordinance (Chapter 370), an objection that is withdrawn unconditionally is treated as if the objector had not lodged the objection. An objection which is not withdrawn or withdrawn with conditions is treated as unresolved objection and will be submitted to the Chief Executive-in-Council for consideration.

minimising land resumption. The fourth objector maintained his objection. The fifth objector requested for provisioning of transport and pedestrian crossing facilities. We have revised the design to fulfill his requests. The fifth objector withdrew his objection subject to the modifications.

- (c) Two objectors objected to the termination of their government land licences. The first objector lodged two objections concerning the termination of a government land licence and the possible environmental impacts to his lot. We informed him that we would implement compensatory planting to promote a friendly environment but the land covered by the government licence was necessary for the implementation of the project. The objector maintained his objections. The second objector used the licensed government land as a garage. We informed him that we would not be able to avoid the land acquisition by modification to the proposed works. We discussed with him possible options to ease his concerns. He opted to apply to the Director of Lands for a direct vehicular access to his lot. As the Director of Lands was still processing his application, he maintained his objection.
- (d) One objector expressed that the Administration did not respect the 'private rights of property' and did not consider the 'redevelopment potential of the affected lands' when assessing land resumption compensation. We explained to the objector that the implementation of proposed works was in compliance with the current policy and statutory procedures. Nonetheless, the objector maintained his objection.

18. We gazetted the proposed works, the first and second amendments to **553TH** under the Roads (Works, Use and Compensation) Ordinance (Chapter 370) on 26 June 1998, on 21 May 1999 and on 14 April 2000 respectively. We received 20 objections from 19 objectors. Six objectors withdrew their objections unconditionally and 14 objections remained unresolved. Details of the unresolved objections are as follows -

- (a) One objector lodged two objections to the resumption of his house, which was covered by a government land licence. He was also concerned about the environmental impacts of the proposed works especially due to the marine works. He counter-proposed to construct a coastal road at Tsing Lung Tau to meet the future traffic demand. We explained to him that termination of the government land licence and the marine works were necessary and that the coastal road was not feasible as it could not serve the residential developments

alongside the CPR. We further explained to the objector that environmental mitigation measures would be implemented at appropriate locations. The objector maintained his objection.

- (b) Five objectors objected to the proposed locations and layouts of some footbridges, the environmental impacts of the proposed works and the banning of right turning movement. One of them also requested the Administration to connect the proposed footbridge to his lot and was concerned about the impacts of the proposed footbridge on his loading and unloading activities during the construction period. We advised the objector that future connection to the footbridge to be built by him would be possible and we would maintain continuous passage to his lot. The objector did not withdraw his objection. In response to objections by the other four objectors, we deleted a proposed footbridge and kept an existing signalized crossing that is located nearer to Sham Tseng centre. We informed them that noise mitigation measures would be implemented to mitigate traffic noise and the air quality after the road improvement was within the acceptable levels. We also advised the objectors that the banning of right turning movement was necessary to improve traffic flow and safety of the road. They did not withdraw their objections.
- (c) One objector objected to a proposed noise enclosure in front of his lot as it would prohibit his vehicular access from CPR. We explained to the objector that he was not legally entitled to the vehicular access. He maintained his objection.
- (d) Three objectors opined that the proposed works were unnecessary and objected to the impact on the beaches. We informed them that the proposed works were necessary to cater for the future developments and had been designed to minimize the impacts on the beaches. The objectors maintained their objections.
- (e) Three objectors were concerned about the impacts of the proposed works on their livelihood and the adequacy of future transport and pedestrian crossing facilities. Although we will construct an additional footbridge near their house and reprovision the bus stops and laybys at appropriate locations, the objectors maintained their objections.

19. Having considered the unresolved objections and the proposed modifications to the projects, the Chief Executive-in-Council authorised **365TH**

and **553TH** under the Ordinance on 23 May 2000 and 10 October 2000 respectively.

Environmental Implication

20. The reclamation and dredging works under the two projects are designated elements under the Environmental Impact Assessment (EIA) Ordinance (Cap 499) and an environmental permit is required for their construction and operation. As part of the Feasibility Study for the project, an EIA report was prepared and was lodged on the Register established under the EIA Ordinance. The EIA identified traffic noise as a major concern. The findings indicated that by the year 2011 many of the existing residents along CPR would be exposed to traffic noise exceeding the standards set out in the Hong Kong Planning Standards and Guidelines (HKPSG). Modelling of air quality impacts indicated that identified sensitive receivers along the proposed route would not be subject to air quality impacts which exceeded the Air Quality Objectives, established under the Air Pollution Control Ordinance, for hourly Nitrogen Dioxide and daily Respirable Suspended Particulate⁶ for the design year of 2011. A recent review of the EIA Report indicates that the findings are relevant and that the environmental impact of the project including construction impacts and operational noise impacts can be controlled to within the established standards and guidelines. We will implement an Environmental Monitoring and Audit (EM&A) programme to ensure timely and effective implementation of the recommended mitigation measures. We have included in the overall project estimate a cost of \$12.9 million for implementing the EM&A.

21. The EIA and the subsequent review recommend a package of direct technical remedies comprising noise barriers and partial enclosures along the study area to alleviate the noise impact. The reduction in traffic noise levels will be up to 16 dB(A) with all these noise barriers and enclosures in place.

22. At some sections of the road, we found that direct mitigation measures are impracticable. At those locations, we cannot provide noise screens due to space constraints; or we need to maintain adequate sightlines and access for fire engines. We consider the alternative option of providing noise-reducing road surfacing material to be unsuitable for this road section as frequent start-stops at the run-ins and junctions would lead to quick wear and tear requiring frequent and costly maintenance.

23. According to the ongoing Noise Insulation Work Study for the projects, we estimate that about 1 900 dwellings are eligible for indirect technical remedies for the projects. We estimate the cost of implementing the indirect

⁶ The peak hour concentration for Nitrogen Dioxide would be 263 µg/m³ and the daily average Respirable Suspended Particulate would be 89 µg/m³, which are below the Air Quality Objectives of 300 and 180 µg/m³ respectively.

technical remedies to be \$51.0 million. We have included this cost in the project estimate.

24. We consulted the ACE on 21 April 1997. The ACE endorsed the EIA report without conditions. For short term impacts during construction, we will control noise, dust and site run-off nuisance to comply with established criteria through the implementation of appropriate mitigation measures in the works contracts. The EIA also studied ways to reduce the generation of construction and demolition material (C&DM). It was estimated that approximately 1 250 000 cubic metres of C&DM will be generated. We will reuse/recycle C&DM on site to reduce waste generation. About 500 cubic metres of C&DM will be disposed of at landfills and 550 000 cubic metres of filling materials will be delivered to public filling facilities. We shall require the contractor to submit a waste management plan under the contract to the Engineer for approval. The waste management plan will include appropriate mitigation measures including the allocation of an area for waste segregation. We shall require the Engineer to ensure that the day-to-day operations on site comply with the waste management plan submitted. We shall require the contractor to separate public fill from C&D waste for disposal at appropriate locations and to sort the C&DM by category on-site to facilitate reuse/recycling. The reused/recycled materials shall include paper/cardboard, timber and metal. We shall control the disposal of these materials through a trip-ticket system. We shall record the disposal, reuse and recycling of C&DM for monitoring purposes.

Land Acquisition

25. We shall resume approximately 15 989 square metres of private land. The clearance for the projects will affect 49 families. The Director of Housing will offer these families accommodation in public housing or temporary housing areas in line with the existing housing policy. We will charge land acquisition and clearance costs, estimated at \$248.5 million, to **Head 701** – Land Acquisition.

26. For the proposed road improvement works, we shall permanently alienate about 6 750 square metres and temporarily alienate 12 620 square metres of land from the affected beaches.

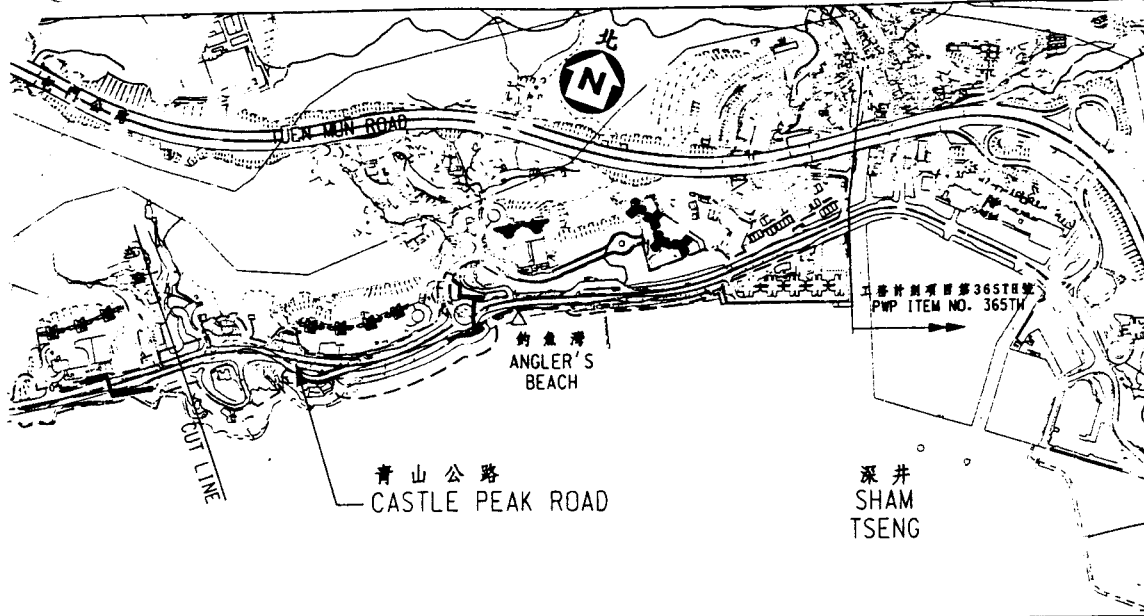
The Way Forward

27. We will seek the approval of the Public Works Sub-Committee of the Finance Committee on 6 December 2000 to upgrade the project to Category A. We plan to start the works in August 2001 for completion in July 2005.

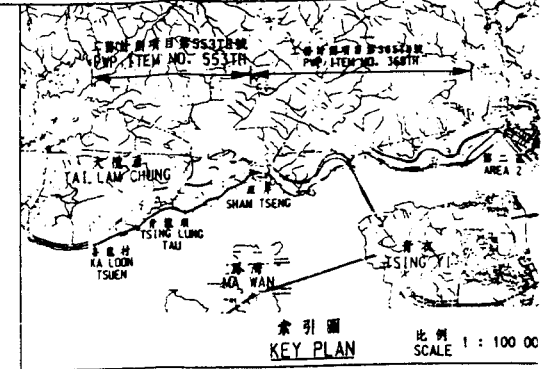
Advice Sought

28. Members are invited to provide comments on the project before we seek the approval of the Public Works Sub-Committee.

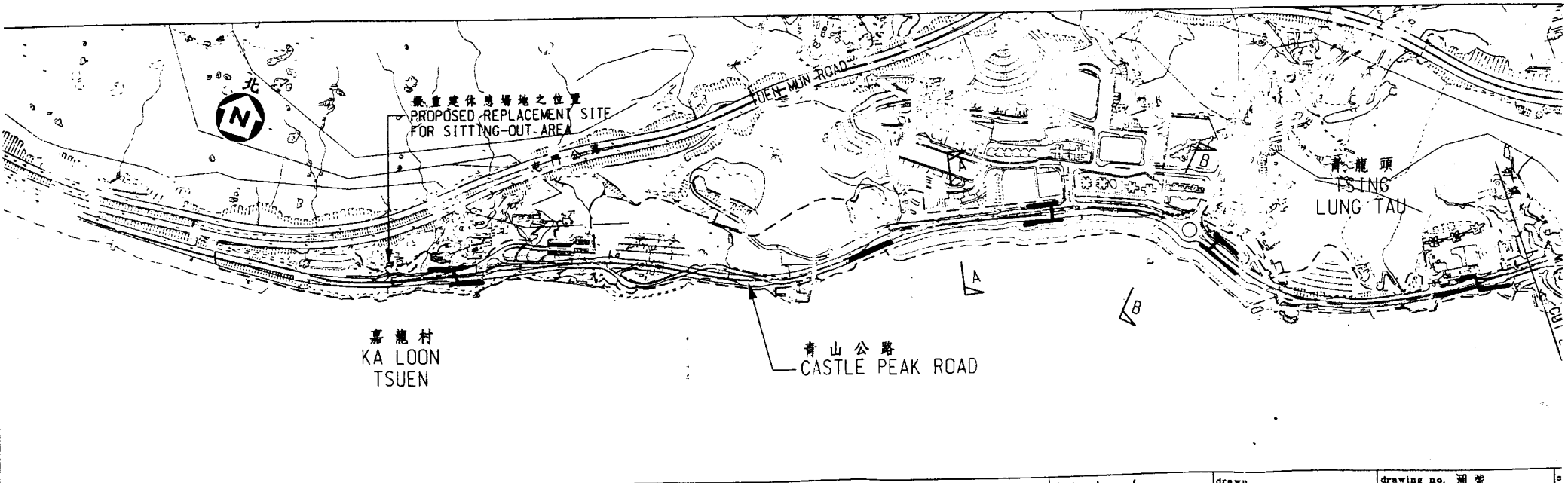
Transport Bureau
November 2000



- 圖例 LEGEND:**
- 施工區界限
LIMIT OF WORKS AREA
 - == 擬建行車道
PROPOSED CARRIAGEWAY
 - 擬建架空結構
PROPOSED ELEVATED STRUCTURE
 - 擬建填海區
PROPOSED RECLAMATION
 - 擬建海堤
PROPOSED SEAWALL
 - △ 受工程影響的泳灘
BEACH AFFECTED BY THE PROJECT
 - ▭ 擬建斜坡工程
PROPOSED SLOPEWORK
 - |— 擬建行人天橋
PROPOSED FOOTBRIDGE
 - |— 擬建 3.5 米高隔音屏障
PROPOSED 3.5m HIGH NOISE BARRIER
 - |— 擬建 5 米高隔音屏障
PROPOSED 5m HIGH NOISE BARRIER
 - ▭ 擬建半封閉式隔聲罩
PROPOSED PARTIAL NOISE ENCLOSURE
 - 隔音改善工程包括安裝冷氣機及改善窗戶的隔音效能
INDIRECT TECHNICAL REMEDIES INCLUDING AIR CONDITIONING AND WINDOW INSULATION



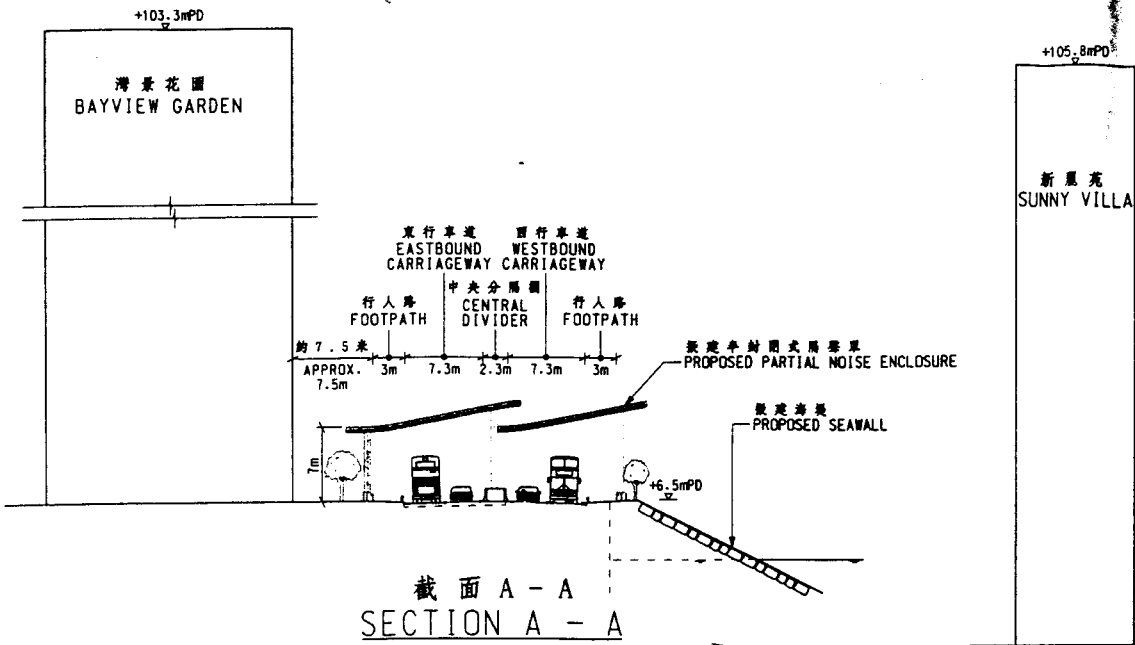
- 註釋 NOTES:**
- 此圖需與圖則 PMH6553/1PS/108 一同參閱。
THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING NO. PMH6553/1PS/108.



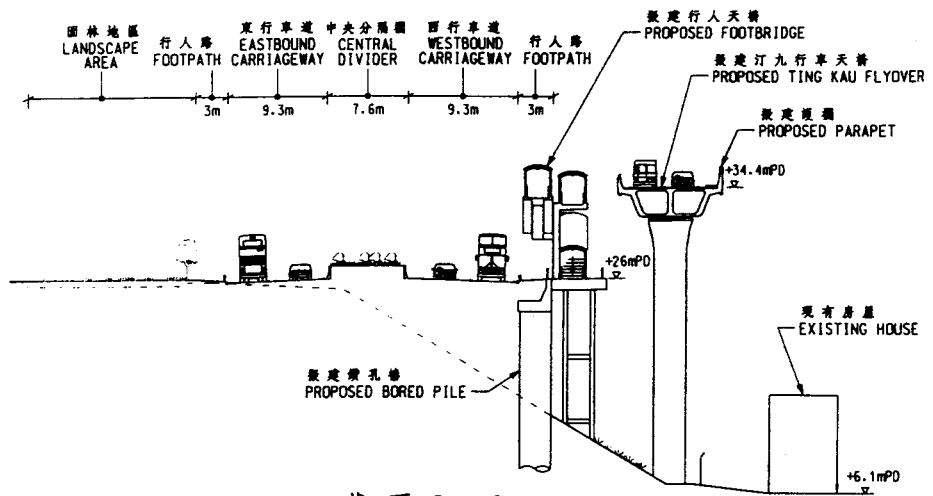
圖則名稱
工務計劃項目第553TH號
荃灣深井與嘉龍村之間的青山公路改善工程 - 位置圖

PWP ITEM NO. 553TH
CASTLE PEAK ROAD IMPROVEMENT BETWEEN SHAM TSENG AND KA LOON TSUEN, TSUEN WAN - LOCATION PLAN

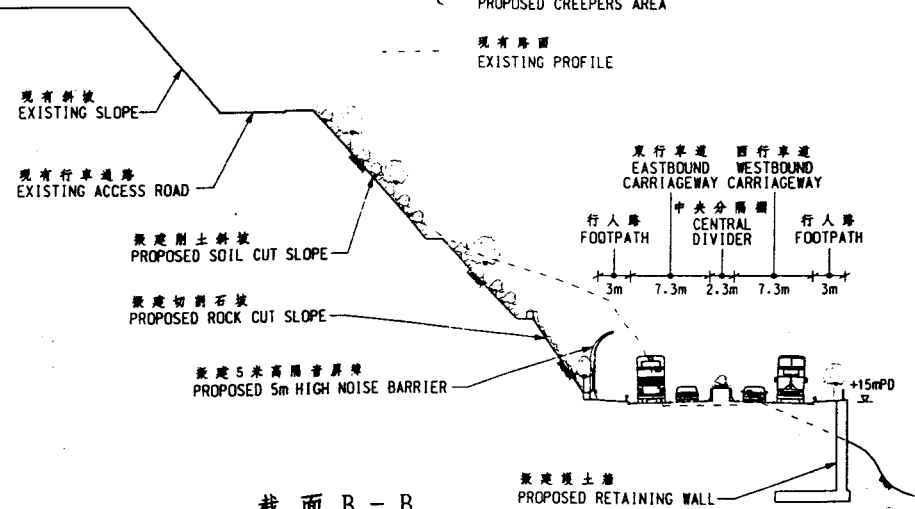
designed S.W.CHUNG 10/00	drawn S.H.CHENG 10/00	drawing no. 圖號 PMH6553/1PS/107
checked S.W.CHUNG 10/00	approved JOHN.K.H.LI 10/00	
office MAJOR WORKS PROJECT MANAGEMENT OFFICE 主要工程管理處		HIGHWAYS DEPARTMENT HONG KONG



截面 A - A
SECTION A - A



截面 C - C
SECTION C - C



截面 B - B
SECTION B - B

註釋
NOTES:

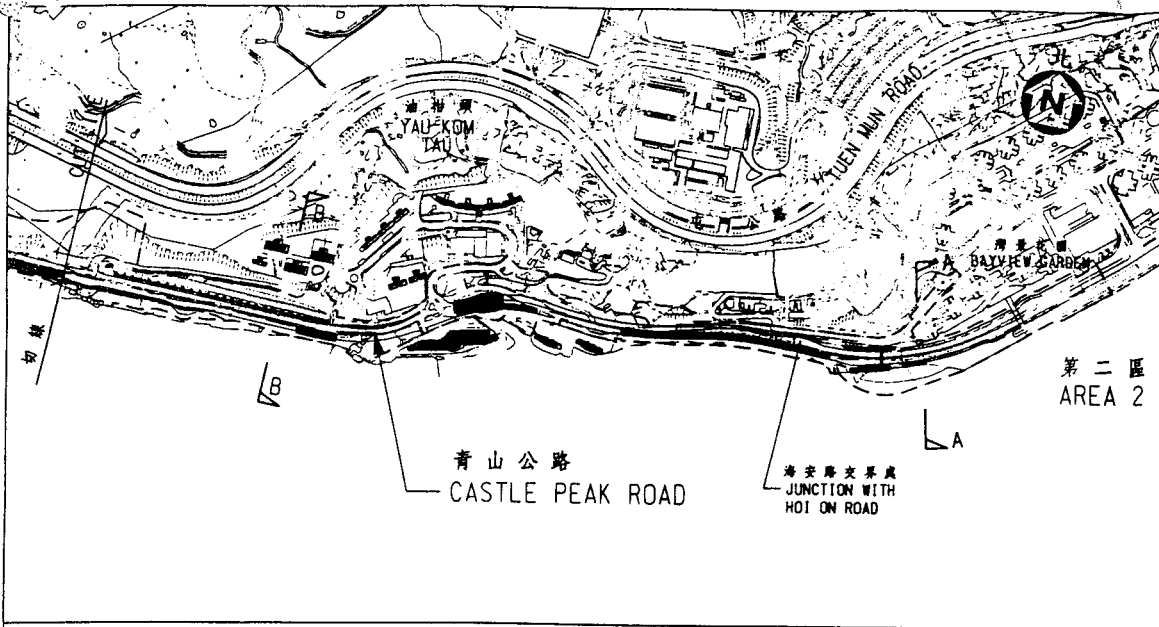
- 此圖與圖號 PMH6365/1PS/105 一同參閱。
THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH
DRAWING NO. PMH6365/1PS/105.

圖例
LEGEND:

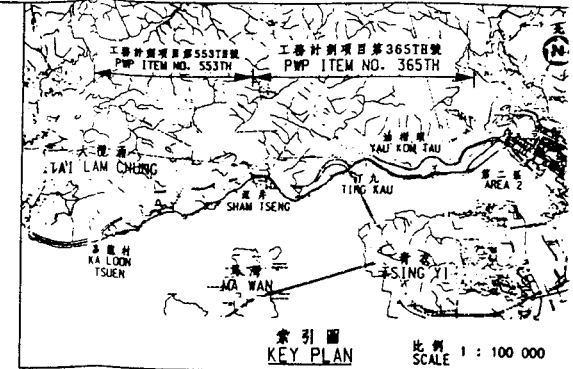
- 擬建 5 米高隔音屏障
PROPOSED 5m HIGH NOISE BARRIER
- 擬建半封閉式隔聲罩 (有聲障)
PROPOSED PARTIAL NOISE ENCLOSURE
(WITH NOISE BARRIER PANEL)
- 擬建半封閉式隔聲罩支柱, 每支相隔 3 米
PROPOSED SUPPORT TO PARTIAL
NOISE ENCLOSURE AT 3m CENTRES
- 擬栽植的樹木
PROPOSED TREES
- 擬栽植的綠樹木
PROPOSED SHRUBS
- 擬植草範圍
PROPOSED HYDROSEEDED AREA
- 擬植攀緣植物範圍
PROPOSED CREEPERS AREA
- 現有路面
EXISTING PROFILE

圖則名稱
工務計劃項目第 365TH 號
荃灣第二區與深井之間的青山公路改善工程 - 截面圖
PWP ITEM NO. 365TH
CASTLE PEAK ROAD IMPROVEMENT BETWEEN AREA 2 AND SHAM TSENG, TSUEN WAN - SECTIONS

designed S. W. CHUNG	10/00	drawn S. H. CHENG	10/00	drawing no. 圖號 PMH6365/1PS/106	scale 1:50
checked S. W. CHUNG	10/00	approved JOHN. K. H. LI	10/00		
office MAJOR WORKS PROJECT MANAGEMENT OFFICE 主要工程管理處					



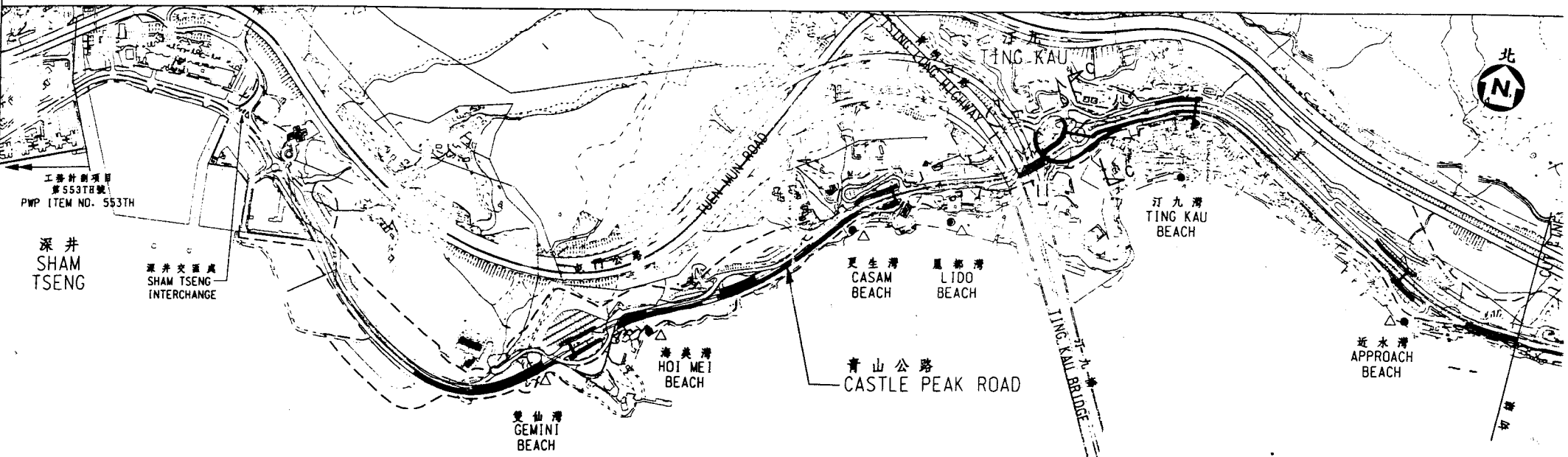
- 圖例 LEGEND:**
- 施工區界限
LIMIT OF WORKS AREA
 - == 擬建行車道
PROPOSED CARRIAGEWAY
 - 擬建架空橋樑
PROPOSED ELEVATED STRUCTURE
 - 擬建汀九行車天橋
PROPOSED TING KAU FLYOVER
 - 擬建填海區
PROPOSED RECLAMATION
 - 擬建海堤
PROPOSED SEAWALL
 - 擬建改善文化康樂設施的植化設施
PROPOSED LCSO COMPENSATORY FACILITIES
 - △ 受工程影響的泳灘
BEACH AFFECTED BY THE PROJECT
 - ▨ 擬建斜坡工程
PROPOSED SLOPEWORK
 - 擬建行人天橋
PROPOSED FOOTBRIDGE
 - 擬建0.8米高隔音屏障
PROPOSED 0.8m HIGH NOISE BARRIER
 - 擬建5米高隔音屏障
PROPOSED 5m HIGH NOISE BARRIER
 - 擬建半封閉式隔聲罩
PROPOSED PARTIAL NOISE ENCLOSURE



隔音改善工程包括安裝冷氣機及改善窗戶的隔音效能
INDIRECT TECHNICAL REMEDIES INCLUDING AIR CONDITIONING AND WINDOW INSULATION

註釋 NOTES:

1. 此圖需與圖則PMH6365/1PS/106一併參閱。
THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH DRAWING NO. PMH6365/1PS/106.










圖則名稱
工務計劃項目第365TH號
荃灣第二區與深井之間的青山公路改善工程 - 位置圖
PWP ITEM NO. 365TH
CASTLE PEAK ROAD IMPROVEMENT BETWEEN AREA 2 AND SHAM TSENG, TSUEN WAN - LOCATION PLAN

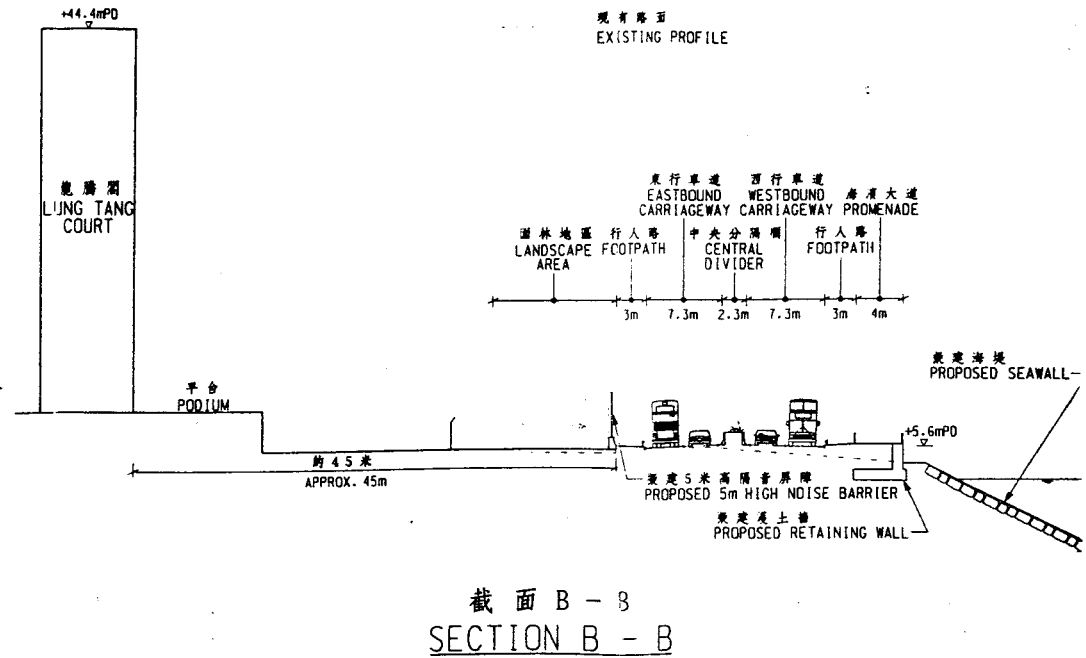
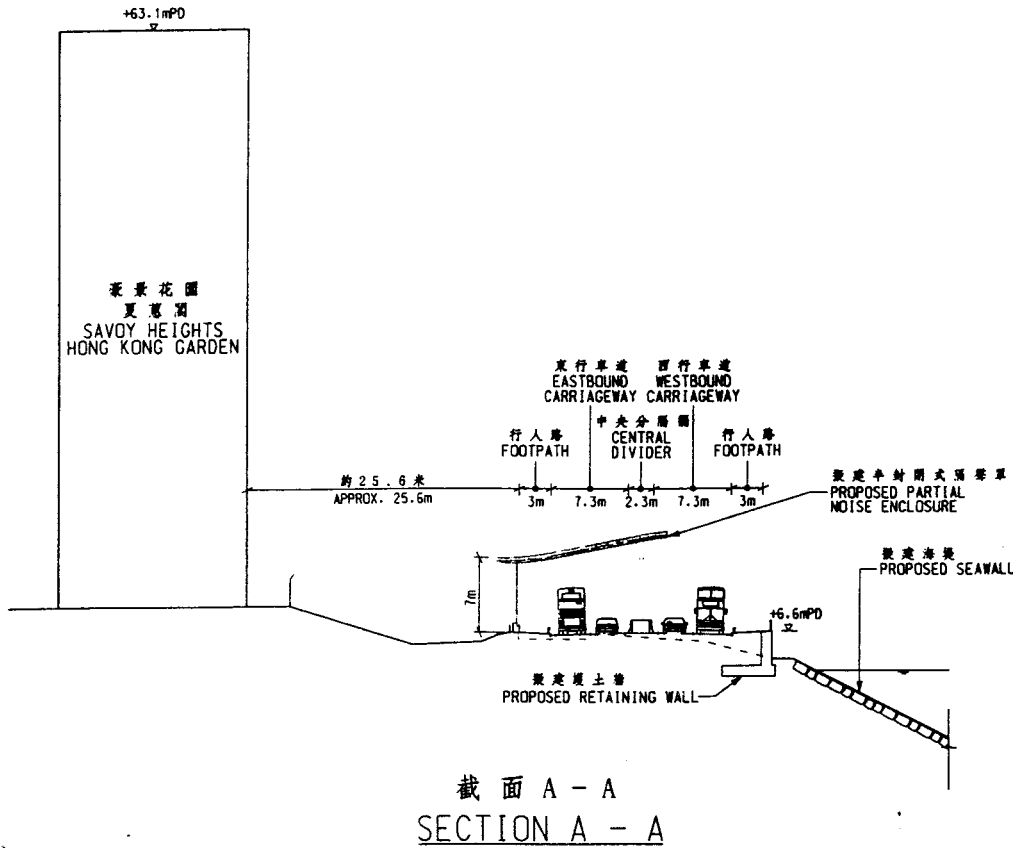
designed S.W. CHUNG 10/00	drawn S.H. CHENG 10/00	drawing no. 圖號 PMH6365/1PS/105	scale 比 1:7500 或如圖 DR AS SHD
checked S.W. CHUNG 10/00	approved JOHN.K.H.LI 10/00	HIGHWAYS DEPARTMENT HONG KONG 路政署	
office MAJOR WORKS PROJECT MANAGEMENT OFFICE 主要工程管理處			

註釋
NOTES:


1. 此圖與圖則PMH6553/1PS/107一同參閱。
THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH
DRAWING NO. PMH6553/1PS/107.

圖例
LEGEND:

-  擬建5米高隔音屏障
PROPOSED 5m HIGH NOISE BARRIER
-  擬建半封閉式隔音罩(有聲障)
PROPOSED PARTIAL NOISE ENCLOSURE
(WITH NOISE BARRIER PANEL)
-  擬建半封閉式隔音罩支柱, 每支柱隔3米
PROPOSED SUPPORT TO PARTIAL
NOISE ENCLOSURE AT 3m CENTRES
-  擬建植的樹木
PROPOSED TREES
-  擬建植的矮樹木
PROPOSED SHRUBS
-  擬植草範圍
PROPOSED HYDROSEEDED AREA
-  現有路面
EXISTING PROFILE



圖則名稱
工務計劃項目第553TH號
荃灣深井與嘉龍村之間的青山公路改善工程-截面圖
PWP ITEM NO. 553TH
CASTLE PEAK ROAD IMPROVEMENT BETWEEN SHAM TSENG AND KA LOON TSUEN, TSUEN WAN - SECTIONS

designed S.W.CHUNG checked S.W.CHUNG office MAJOR WORKS PROJECT MANAGEMENT OFFICE 主要工程管理處	drawn S.H.CHENG approved JOHN.K.H.LI	drawing no. 圖號 PMH6553/1PS/108	scale 比例 1:500
 HIGHWAYS DEPARTMENT HONG KONG			路政署