For discussion **PWSC(2002-03)82**
on 15 January 2003

ITEM FOR PUBLIC WORKS SUBCOMMITTEE OF FINANCE COMMITTEE

HEAD 707 - NEW TOWNS AND URBAN AREA DEVELOPMENT
New Territories East Development
Civil Engineering - Land development
458CL - Sha Tin New Town, stage 2 – construction of Road T3

Members are invited to recommend to Finance Committee the upgrading of **458CL** to Category A at an estimated cost of $2,120.2 million in money-of-the-day prices for the construction of Road T3.

PROBLEM

The traffic carrying potential of the future Route 9 between Cheung Sha Wan and Sha Tin (R9-CSWST)[1] cannot be fully realised without Road T3. In addition, the existing capacity of Tai Po Road - Tai Wai section and its major road junctions cannot cope with the present and future traffic demand.

PROPOSAL

2. The Director of Territory Development, with the support of the Secretary for the Environment, Transport and Works, proposes to upgrade **458CL** to Category A at an estimated cost of $2,120.2 million in money-of-the-day (MOD) prices for the construction of Road T3.

/PROJECT …..

[1] **694TH** – "Route 9 between Cheung Sha Wan and Sha Tin" (R9-CSWST) was upgraded to Category A in June 2002 with an approved project estimate of $6,759.7 million in MOD prices for the construction of Route 9 between Cheung Sha Wan and Sha Tin. R9-CSWST will provide a strategic road link between Cheung Sha Wan in West Kowloon and Tai Wai in Sha Tin and will connect to another section of Route 9 between Tsing Yi and Cheung Sha Wan for direct access to the Airport in Lantau.

PROJECT SCOPE AND NATURE

3. The scope of **458CL** includes –

(a) construction of about 2 kilometres (km) of dual two-lane elevated road, with interchanges and slip roads, on the section of Tai Po Road between Sha Tin Heights and Lion Rock Tunnel Road;

(b) construction of slip roads, viaducts and an underpass to connect to R9-CSWST and provision for connection to a proposed Road T4[2];

(c) realignment of the westbound carriageway of the Tai Po Road Bridge over the existing Kowloon Canton Railway (KCR) East Rail tracks to accommodate the Road T3 viaduct;

(d) reprovisioning of a footbridge over the KCR East Rail tracks adjacent to Tai Po Road - Tai Wai section;

(e) realignment of a section of Sha Tin Heights Road and modification of Chik Wan Street;

(f) construction of a two-lane elevated road linking Tai Po Road - Sha Tin Heights section and Lower Shing Mun Road;

(g) improvement works at Tai Po Road - Sha Tin Heights section between Lok Hop Village and Tai Wai New Village including the construction of two turn-around flyovers, local road widening and slope stabilisation;

(h) improvement works at Mei Tin Road comprising the construction of –

(i) a gyratory one-way road system and a two-lane vehicular bridge over the Shing Mun River at the junctions of Mei Tin Road with Heung Fan Liu Street and Pik Tin Street;

/(ii) …..

[2] **705TH** – "Sha Tin New Town, Stage 2 - Trunk Road T4" was included in Category C in May 1997. Trunk Road T4 is a proposed elevated road connecting Road T3 in Tai Wai and Sha Tin Road in front of Pok Hong Estate. It also provides connections to Shing Mun Tunnel Road and Che Kung Miu Road. It serves as a direct connection for through traffic between Tai Wai and Ma On Shan by-passing the busy Sha Tin Town Centre area.

(ii) a footbridge for pedestrians and cyclists at the junction of Mei Tin Road and Chik Wan Street;

(iii) a footbridge for pedestrians and cyclists at the road junction west of Mei Lam Estate across Mei Tin Road; and

(iv) a subway extension for pedestrians and cyclists at the junction of Mei Tin Road and Chik Fai Street;

(i) provision of some 6 415 metres (m) of noise barriers along Road T3, including about 5 200 m of vertical barriers ranging from two to six metres high, about 1 000 m of semi-enclosures and about 215 m of full enclosures;

(j) associated traffic control and surveillance system, electrical and mechanical works, drainage, landscaped areas, footways, cycle tracks and geotechnical works; and

(k) implementation of an environmental monitoring and audit (EM&A) programme for works mentioned in items (a) to (j) above.

Site plans and proposed noise mitigation measures are at Enclosures 1 to 4.

4. We have completed the detailed design and working drawings for the works of **458CL**. We invited tender for the proposed works in August 2002 and plan to commence construction in March 2003 for completion in April 2007.

JUSTIFICATION

5. The proposed Road T3 is a dual two-lane primary distributor road in Tai Wai of the Sha Tin New Town, serving as an approach to the future R9-CSWST on the Sha Tin side. It will connect the existing Tai Po Road – Sha Tin Heights section and R9-CSWST to the existing Tai Po Road – Sha Tin section as well as to Ma On Shan via a proposed Road T4. It needs to be completed by 2007 in order to realise the full traffic carrying potential of R9-CSWST, which is

/currently …..

currently under construction for completion by 2007. R9-CSWST will relieve traffic on the existing links between Tai Wai and Kowloon, including Lion Rock Tunnel and Tate's Cairn Tunnel where traffic congestion frequently occurs during peak hours at the approaches.

6. Without Road T3, R9-CSWST could only rely on its single-lane slip roads connected to Che Kung Miu Road for reaching Sha Tin. This would greatly reduce the attractiveness of Route 9 with its function being constrained by the limited traffic capacity of the local road network. It would also cause serious traffic congestion problem on the already busy Tai Po Road. Lion Rock Tunnel as well as the local road network in Sha Tin and Tai Wai will also be overloaded and the traffic condition along Che Kung Miu Road would deteriorate significantly at its junction with Lion Rock Tunnel Road.

7. The Strategic Highway Project Review carried out in early 2002 confirms that Road T3 will be required by 2007 when R9-CSWST comes into operation. According to the latest traffic forecast, the peak hour volume to capacity (v/c) ratios[3] at critical sections of the relevant road links, with or without Road T3, are as follows –

Road Link	**v/c ratios in 2002**	**v/c ratios in 2007**		**v/c ratios in 2011**		**v/c ratios in 2016**	
		without Road T3	**with Road T3**	**without Road T3**	**with Road T3**	**without Road T3**	**with Road T3**
Road T3	-	-	0.7	-	0.8	-	0.9
R9-CSWST	-	0.3	0.6	0.3	0.6	0.4	0.7
Lion Rock Tunnel	1.2	1.2	1.1	1.2	1.1	1.3	1.1
Shing Mun Tunnel	1.0	1.0	0.8	1.1	0.9	1.1	0.9
Tai Po Road	1.0	1.1	0.8	1.2	0.8	1.3	0.9

8. In the absence of Road T3, traffic utilisation along R9-CSWST would drop significantly by more than 40% to v/c ratios of only 0.3 – 0.4 during

/the …..

[3] Volume to capacity (v/c) ratio is an indicator which reflects the performance of a road. A v/c ratio equals to or less than 1.0 means that a road has sufficient capacity to cope with the volume of vehicular traffic under consideration and the resultant traffic will flow smoothly. A v/c ratio above 1.0 indicates the onset of congestion; that above 1.2 indicates more serious congestion with traffic speed deteriorating progressively with further increase in traffic.

the morning and afternoon peaks. Lion Rock Tunnel, Shing Mun Tunnel and section of Tai Po Road would on the other hand be working above capacities at v/c ratios of 1.3, 1.1 and 1.3 respectively by 2016 as more traffic would continue to use these external routes. The provision of Road T3 will greatly improve traffic conditions, reducing the v/c ratios of most concerned road sections to within acceptable levels. Although the utilisation of the popular Lion Rock Tunnel would remain relatively high, its v/c ratio at the peak hours could be improved from the heavily congested level of 1.3 to around 1.1 by 2016.

FINANCIAL IMPLICATIONS

9. We estimate the cost of the project to be $2,120.2 million in MOD prices, made up as follows –

			$ million
(a)	Roads and drains		177.0
(b)	Elevated highway structures		903.0
	(i) slip road connection	130.0	
	(ii) footbridges	127.0	
	(iii) main bridges/viaducts	646.0	
(c)	Underpass connecting to Route 9		97.0
(d)	Subways		10.0
(e)	Retaining structures		74.0
(f)	Slope works		87.0
(g)	Environmental mitigation measures		361.0
	(i) noise barriers	358.0[4]	
	(ii) low noise road surfacing	3.0	
(h)	Landscaping works		29.0
(i)	EM&A programme		3.0
(j)	Consultants' fees for		200.1

/(i) …..

[4] Out of the estimated cost of $358.0 million, provisions for noise barriers for existing and planned developments are estimated to be $348.0 million and $10.0 million respectively.

			$ million	
	(i)	construction stage	26.1	
	(ii)	resident site staff	174.0	
(k)	Contingencies		195.0	
		Subtotal	2,136.1	(in September 2002 prices)
(l)	Provision for price adjustment		(15.9)	
		Total	2,120.2	(in MOD prices)

——— A breakdown of the estimate for consultants' fees is at Enclosure 5.

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

Year	**$ million (Sept 2002)**	**Price adjustment factor**	**$ million (MOD)**
2003 – 2004	315.7	0.99250	313.3
2004 – 2005	379.4	0.99250	376.6
2005 – 2006	553.5	0.99250	549.4
2006 – 2007	507.8	0.99250	504.0
2007 – 2008	216.5	0.99250	214.9
2008 – 2009	152.2	0.99250	151.1
Beyond 2009[5]	11.0	0.99250	10.9
Total	2,136.1		2,120.2

11. We have derived the MOD estimate on the basis of the Government's latest forecasts of trend labour and construction prices for the

/period …..

[5] Expenditure beyond 2009 is for provision of those noise barriers (inclusive of contingencies) which will be phased in to tie in with the planned developments they are intended to serve.

period 2003 to 2009. We have tendered the proposed works under a remeasurement contract because the quantities of foundation and earthworks involved may vary according to the actual ground conditions. The contract will provide for price adjustments as the construction period will exceed 21 months.

12. We estimate the annual recurrent expenditure arising from this project to be $18.1 million.

PUBLIC CONSULTATION

13. We consulted the Traffic and Transport Committee (T&TC) of the then Sha Tin Provisional District Board on the preliminary design of Road T3 in July 1996. The T&TC supported the road scheme in general. We further briefed members on the noise mitigation measures to be incorporated under the Road T3 project in September 1997. In November 2001, we presented the latest development of the project to the T&TC of the Sha Tin District Council. Members expressed support for the road project including the proposed package of noise barriers. Some suggested converting the proposed vertical noise barriers to noise enclosures for better noise protection.

14. We gazetted the road scheme for Road T3 under the Roads (Works, Use and Compensation) Ordinance on 9 January 1998. We received a total of 4 objections. Three objections were withdrawn unconditionally. The unresolved objection was from the Management Committee of Lau Pak Lok Secondary School on the following grounds –

(a) a small strip of land of about 100 square metres (m^2) in size, which is now used as a small planting area for the school, is to be resumed under the road scheme;

(b) the works may cause danger and nuisance to the staff and students of the school during the construction stage; and

(c) the road scheme may have adverse impact on the school during the operation stage.

15. We explained the following to the objector –

/(a) …..

(a) with respect to the land issue, the school site, including the small planting area to be resumed, is Government land. Therefore, there is no provision for compensation. Reprovisioning is also impossible as there is no vacant Government land in the vicinity that could be made available for the reprovisioning. We have assessed the situation and considered that the operation of the school would not be adversely affected without this small planting area;

(b) with respect to the possible danger caused by the construction activities, we would re-erect the school's fence wall prior to the commencement of the construction works in order to separate all school activities from the at-grade works. Adequate safety measures such as installation of safety nets to protect the school from small falling objects will be implemented when the above-ground works are carried out;

(c) with respect to the possible noise and nuisance during the construction, an Environmental Impact Assessment (EIA) Study had been carried out for the proposed Road T3. The EIA report concluded that potential noise impact during construction stage could be reduced through the implementation of suitable noise control measures. The EIA report also concluded that the air quality objectives could be achieved during the construction stage by implementation of dust suppression measures. An environmental team formed by independent environmental specialists will also be set up to monitor and control these environmental parameters during construction as required in the EIA report; and

(d) with respect to the impact during operation stage, the EIA report assessed that road traffic noise would be the key environmental concern. The EIA report recommended noise mitigation measures and noise reduction pavement for the section of the proposed new road adjacent to the school. With such provision, the traffic noise level to which the school will be exposed after the completion of the proposed road T3 would actually be lower than the existing noise level.

/16. …..

16. The objector maintained his objection. Having considered the objection and the road scheme, the Chief Executive-in-Council authorised the proposed road scheme without modifications on 9 October 1998.

17. During the detailed design of the project, we identified some necessary amendments to the authorised road scheme that were required. We gazetted the amendments under the Roads (Works, Use and Compensation) Ordinance in January 2002 and received no statutory objection against the revised scheme. The then Secretary for Transport authorised the amendments in April 2002.

18. We consulted the Legislative Council Panel on Transport on 20 December 2002 regarding the proposed works. Members supported the project but requested additional information on the derivation of the number of dwellings that would benefit from the provision of noise barriers and the results of EIA on the extent of reduction in noise levels as a result of the provision of noise barriers. We issued a supplementary Information Paper on 4 January 2003 providing the above information.

ENVIRONMENTAL IMPLICATIONS

19. The project is a designated project under Schedule 2 of the EIA Ordinance and an environmental permit is required for its construction and operation. We conducted an EIA study to identify and assess the potential environmental impacts arising from the project. The Director of Environmental Protection (DEP) approved the EIA report in March 1998.

20. We conducted an EIA review in early 2002 to address the environmental issues arising from the changes made in the detailed design of the project subsequent to the approval of the EIA report. The EIA report and review concluded that the environmental impact of the project could be mitigated to within statutory levels under the EIA Ordinance and the Technical Memorandum on EIA Process. DEP issued the Environmental Permit on 13 May 2002. We will implement the mitigation measures as recommended in the approved EIA report and review, the approved EM&A Manual and the Conditions stipulated in the environmental permit.

21. Traffic noise arising from the operation of the road is the key environmental concern of the project. In the EIA and the EIA review, noise

/impacts …..

impacts arising from the Road T3, which traverse the built-up area of Tai Wai, on both existing and planned developments were thoroughly assessed. A package of 5 200 m of vertical/cantilever noise barriers ranging from two to six metres high, 1 000 m of semi-enclosures and 215 m of full enclosures generally of seven metres high was proposed to protect those developments from excessive traffic noise.

22. The proposed noise barrier panels will be mounted on structural steel supports with acrylic side and roof panels and 2.5m high aluminium absorptive panels at the bottom of the side barriers. The absorptive panel will effectively absorb the wheel noise generated by the moving traffic and the acrylic panels will help reduce the bulky appearance of the noise barriers while shielding noise. The acrylic roof panels will be translucent with a non-reflective surface while those at the sides will be transparent. Drawings showing the artistic impression of the noise barriers/enclosures to be provided are at Enclosures 6 and 7. With these mitigation measures in place, noise levels will be controlled to within the statutory levels. About 3 500 existing dwellings would benefit directly from the provision of these noise barriers, including Mei Lam Estate, Tung Lo Wan Village, Tai Wai New Village and other existing residential dwellings within Tai Wai Town Centre such as Holford Garden, Grandeur Garden and Grandway Garden and along Chik Chuen Street. Some 2 000 planned dwellings at Sha Tin Heights Road, Heung Fan Liu, Tung Lo Wan Hill, and above the KCRC Tai Wai Maintenance Centre and Che Kung Miu Station together with two planned schools would also directly benefit from the proposed noise barriers, the timing of provision of which will phase in with such developments. The average cost of provision of noise barriers is estimated to be $65,000 per dwelling.

23. During the construction stage, we will control noise, dust and site surface water run-off nuisance through appropriate measures specified in the works contracts. We will implement the EM&A programme as stipulated in the EM&A Manual during the course of construction and operation to ensure that proactive mitigation measures are in place.

24. Road formation works would produce construction and demolition (C&D) materials, both rock and soil. The design has maximised the reuse of these materials on site, e.g. used as fill for the road embankment. We estimate the project will generate about 291 000 cubic metres (m^3) of C&D materials. Of these, we will reuse about 115 500 m^3 (40%) on site, about 20 000 m^3 (7%) for

/recycling …..

recycling, about 143 000 m^3 (49%) as fill in public filling areas6 and dispose of about 12 500 m^3 (4%) at landfills. The notional cost of accommodating C&D waste at landfill sites is estimated to be $1.6 million for this project (based on a notional unit cost[7] of $125/$m^3$).

25. We will require the contractor to submit a waste management plan (WMP) for approval. The WMP will include appropriate mitigation measures such as the identification of designated areas for waste segregation prior to disposal. We will ensure that the day-to-day operations on site comply with the approved WMP. We will require the contractor to re-use the excavated materials as filling materials on site or on other construction sites as far as possible to minimise the disposal of public fill to public filling facilities. We will also require the contractor to use steel instead of timber for formwork and temporary works as far as practicable to further minimise the generation of waste. We will control the disposal of the C&D materials at designated public filling facilities and landfills 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.

LAND ACQUISITION

26. We will resume about 40.5 m^2 of agricultural land. Land acquisition and clearance will affect 54 households and 103 structures. The Director of Housing will offer eligible clearees accommodation in public housing in accordance with the existing housing policy. We will charge the land acquisition and clearance costs, estimated at $6.1 million in September 2002 prices to **Head 701** – "Land Acquisition" **Subhead 1100CA** – "Compensation and ex-gratia allowances in respect of projects in the Public Works Programme".

BACKGROUND INFORMATION

27. We upgraded **458CL** to Category B in September 1995.

/28. …..

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[6] A public filling area is a designated part of a development project that accepts public fill for reclamation purpose. Disposal of public fill in a public filling area requires a license issued by the Director of Civil Engineering.

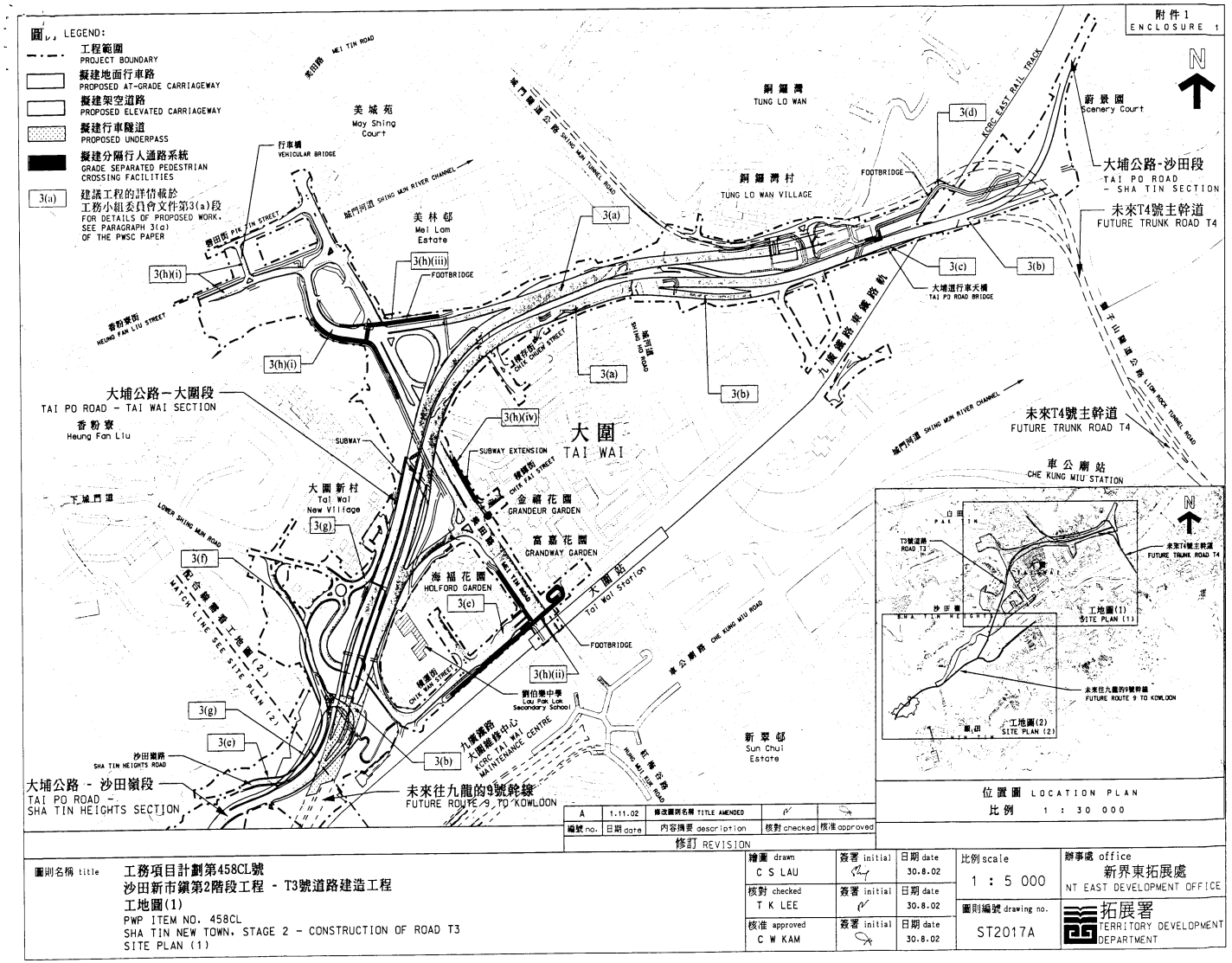
[7] This estimate has taken into account the cost for developing, operating and restoring the landfills after they are filled and aftercare required. It does not include the land opportunity cost for existing landfill sites (which is estimated at $90/$m^3$), nor the cost to provide new landfills (which 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.

28. We upgraded part of **458CL** to Category A as **475CL** – "Sha Tin New Town, stage 2 - detailed design and site investigation for Road T3" in July 1996 at an estimated cost of $51 million in MOD prices for engagement of consultants to undertake the site investigation and detailed design works. In March 2001, Finance Committee approved an increase in the Approved Project Estimate of **475CL** from $51 million by $29.1 million to $80.1 million in MOD prices for the additional fees in design and site investigation works.

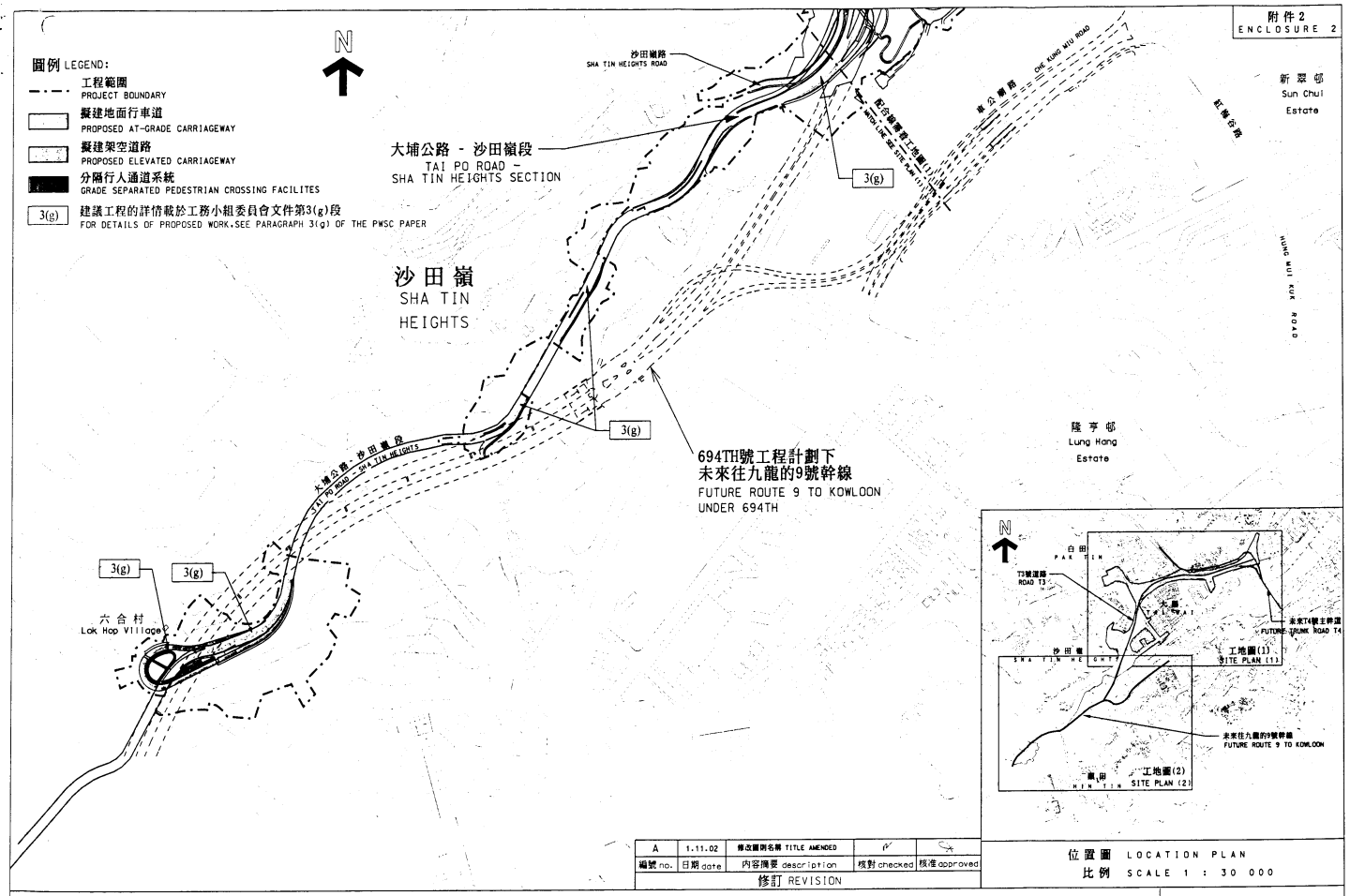
29. To minimise the disruption to existing traffic flow during construction, we will implement the necessary temporary traffic management measures. We will consult Sha Tin District Council on major temporary traffic management schemes before their implementation.

30. We estimate that this project will create 757 jobs comprising 141 professional/technical staff and 616 labourers, totalling 35 430 man-months.

Environment, Transport and Works Bureau
January 2003


附件1
ENCLOSURE 1
圖例 LEGEND:
工程範圍
PROJECT BOUNDARY
擬建地面行車路
PROPOSED AT-GRADE CARRIAGEWAY
擬建架空道路
PROPOSED ELEVATED CARRIAGEWAY
擬建行車隧道
PROPOSED UNDERPASS
擬建分隔行人通路系統
GRADE SEPARATED PEDESTRIAN CROSSING FACILITIES
3(a)
建議工程的詳情載於工務小組委員會文件第3(a)段
FOR DETAILS OF PROPOSED WORK, SEE PARAGRAPH 3(a) OF THE PWSC PAPER
N
美城苑
May Shing Court
銅鑼灣
TUNG LO WAN
銅鑼灣村
TUNG LO WAN VILLAGE
蔚景園
Scenery Court
大埔公路-沙田段
TAI PO ROAD - SHA TIN SECTION
未來T4號主幹道
FUTURE TRUNK ROAD T4
KCRC EAST RAIL TRACK
FOOTBRIDGE
行車橋
VEHICULAR BRIDGE
美林邨
Mei Lam Estate
大埔道行車天橋
TAI PO ROAD BRIDGE
大埔公路－大圍段
TAI PO ROAD - TAI WAI SECTION
香粉寮
Heung Fan Liu
大圍
TAI WAI
SUBWAY
SUBWAY EXTENSION
大圍新村
Tai Wai New Village
金禧花園
GRANDEUR GARDEN
富嘉花園
GRANDWAY GARDEN
海福花園
HOLFORD GARDEN
大圍站
Tai Wai Station
車公廟站
CHE KUNG MIU STATION
車公廟路
CHE KUNG MIU ROAD
新翠邨
Sun Chui Estate
九廣鐵路大圍維修中心
KCRC TAI WAI MAINTENANCE CENTRE
銅伯樂中學
Lau Pan Lok Secondary School
大埔公路 - 沙田嶺段
TAI PO ROAD - SHA TIN HEIGHTS SECTION
未來往九龍的9號幹線
FUTURE ROUTE 9 TO KOWLOON
MATCH LINE SEE SITE PLAN (2)
工地圖(1)
SITE PLAN (1)
工地圖(2)
SITE PLAN (2)
位置圖 LOCATION PLAN
比例 1 : 30 000
A 1.11.02 修改圖則名稱 TITLE AMENDED
編號 no. 日期 date 內容摘要 description 核對 checked 核准 approved
修訂 REVISION
圖則名稱 title
工務項目計劃第458CL號
沙田新市鎮第2階段工程 - T3號道路建造工程
工地圖(1)
PWP ITEM NO. 458CL
SHA TIN NEW TOWN, STAGE 2 - CONSTRUCTION OF ROAD T3
SITE PLAN (1)
繪圖 drawn C S LAU 簽署 initial 日期 date 30.8.02
核對 checked T K LEE 簽署 initial 日期 date 30.8.02
核准 approved C W KAM 簽署 initial 日期 date 30.8.02
比例 scale 1 : 5 000
圖則編號 drawing no. ST2017A
辦事處 office 新界東拓展處 NT EAST DEVELOPMENT OFFICE
拓展署 TERRITORY DEVELOPMENT DEPARTMENT

附件2
ENCLOSURE 2



位置圖 LOCATION PLAN
比例 SCALE 1 : 30 000

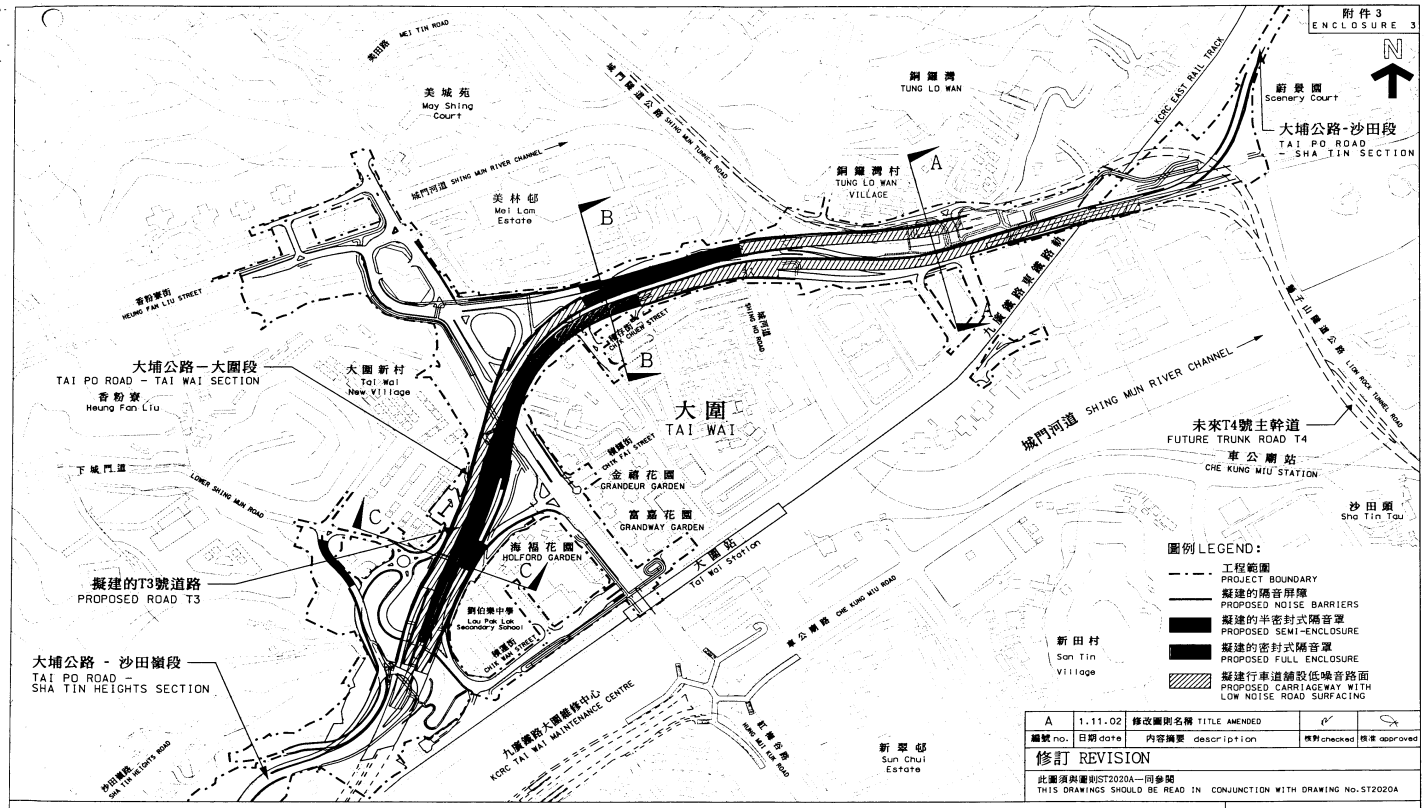
編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
A	1.11.02	修改圖則名稱 TITLE AMENDED		

修訂 REVISION

圖則名稱 title: 工務計劃項目第458CL號
沙田新市鎮第2階段工程 - T3號道路建造工程
工地圖(2)
PWP ITEM NO. 458CL
SHA TIN NEW TOWN, STAGE 2 - CONSTRUCTION OF ROAD T3
SITE PLAN (2)

繪圖 drawn	C S LAU	簽署 initial	日期 date 30.8.02
核對 checked	T K LEE	簽署 initial	日期 date 30.8.02
核准 approved	C W KAM	簽署 initial	日期 date 30.8.02

比例 scale 1 : 5 000
圖則編號 drawing no. ST2018A
辦事處 office 新界東拓展處 NT EAST DEVELOPMENT OFFICE
拓展署 TERRITORY DEVELOPMENT DEPARTMENT



編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
A	1.11.02	修改圖則名稱 TITLE AMENDED		

修訂 REVISION

此圖須與圖則ST2020A一同參閱
THIS DRAWINGS SHOULD BE READ IN CONJUNCTION WITH DRAWING No.ST2020A

圖則名稱 title

工務計劃項目第458CL號
沙田新市鎮第2階段工程 - T3號道路建造工程
擬議消減噪音措施
PWP ITEM NO. 458CL
SHA TIN NEW TOWN, STAGE 2 - CONSTRUCTION OF ROAD T3
PROPOSED NOISE MITIGATION MEASURES

繪圖 drawn	C S LAU	簽署 initial	日期 date 30.8.02
核對 checked	T K LEE	簽署 initial	日期 date 30.8.02
核准 approved	C W KAM	簽署 initial	日期 date 30.8.02

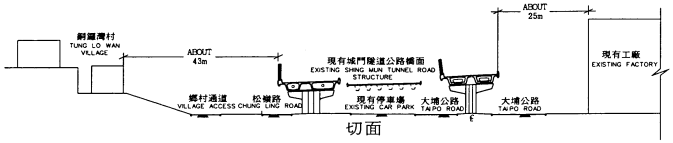
比例 scale 1 : 5000

圖則編號 drawing no. ST2019A

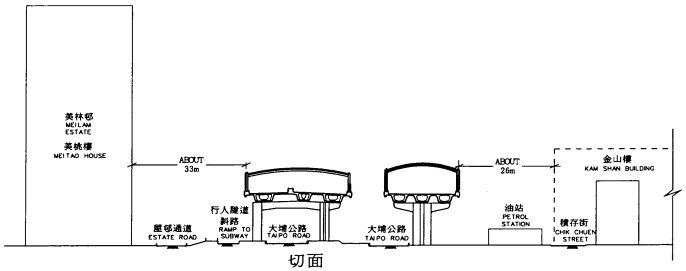
辦事處 office
新界東拓展處
NT EAST DEVELOPMENT OFFICE

拓展署
TERRITORY DEVELOPMENT DEPARTMENT

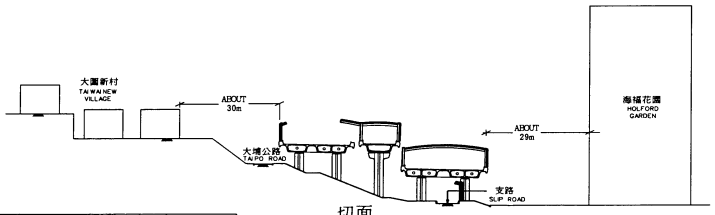
附件4
ENCLOSURE 4



切面
SECTION A - A

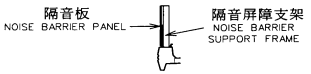


切面
SECTION B - B

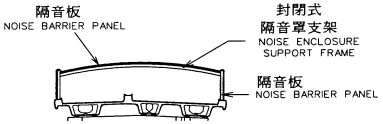


切面
SECTION C - C

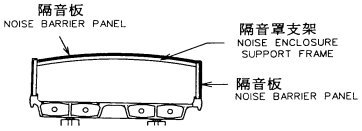
圖例
LEGEND



隔音屏障
NOISE BARRIER



密封式隔音罩
FULL ENCLOSURE



半密封式隔音罩
SEMI-ENCLOSURE

編號 no.	日期 date	內容摘要 description	核對 checked	核准 approved
A	1.11.02	修改圖則名稱及圖例修訂 TITLE AMENDED & LEGEND REVISED		

修訂 REVISION

此圖須與圖則ST2019A一同參閱
THIS DRAWINGS SHOULD BE READ IN CONJUNCTION WITH DRAWING No.ST2019A

圖則名稱 title
工務計劃項目第458CL號
沙田新市鎮第2階段工程 - T3號道路建造工程
擬議消減噪音措施 - 切面
PWP ITEM NO. 458CL
SHA TIN NEW TOWN, STAGE 2 - CONSTRUCTION OF ROAD T3
PROPOSED NOISE MITIGATION MEASURES - CROSS SECTIONS

繪圖 drawn	C S LAU	簽署 initial	日期 date 30.8.02
核對 checked	T K LEE	簽署 initial	日期 date 30.8.02
核准 approved	C W KAM	簽署 initial	日期 date 30.8.02

比例 scale 1 : 1000

圖則編號 drawing no. ST2020A

辦事處 office 新界東拓展處 NT EAST DEVELOPMENT OFFICE

拓展署 TERRITORY DEVELOPMENT DEPARTMENT

Enclosure 5 to PWSC(2002-03)82

458CL – Sha Tin New Town, stage 2 – construction of Road T3

Breakdown of the estimate for consultants' fees (in September 2002 prices)

			Estimated Man-months	Average MPS* salary point	Multiplier (Note 1)	Estimated fees ($ million)
Consultants' staff costs						
(a)	Consultants' fees for – (Note 2)					
	(i) contract administration	Professional				22.6
		Technical				2.5
	(ii) preparation of as-built drawings	Professional				0.4
		Technical				0.6
(b)	Resident site staff costs (Note 3)	Professional	933	38	1.6	86.2
		Technical	2 859	14	1.6	87.8
					Total consultants' staff costs	200.1

* 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 1.10.2002, MPS pt. 38 = $57,730 per month and MPS pt. 14 = $19,195 per month.)

2. The consultants' staff cost for construction stage (including contract administration and preparation of as-built drawings) is calculated in accordance with the existing consultancy agreement for the Sha Tin New Town, stage 2 development.

3. The consultants' staff cost for site supervision is based on estimates prepared by the Director of Territory Development. We will only know the actual man-months and actual costs after completion of the construction works.

附件 6
ENCLOSURE 6

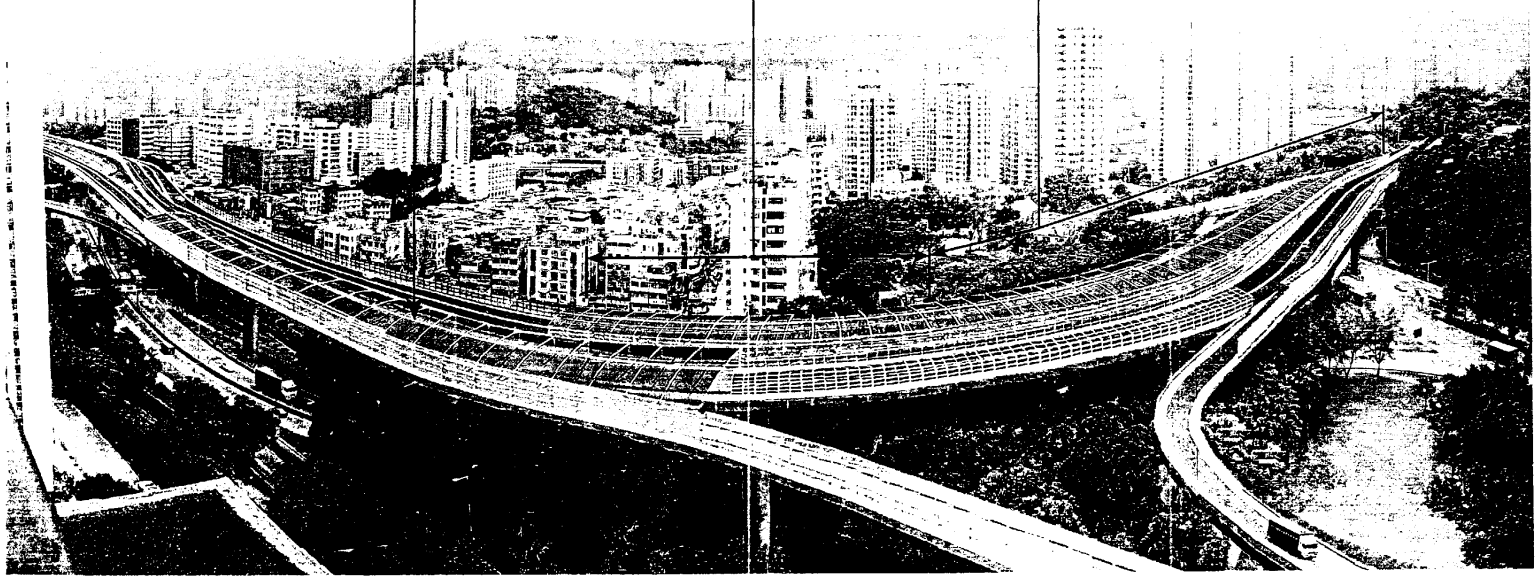
註釋: 半密封式隔音罩只於背向觀察點部分沒有遮蓋。
從這個觀察點的角度看出去，半密封式隔音罩
與密封式隔音罩外觀完全一樣。

Note: Semi Enclosure are open on side facingaway from viewpoint.
From this viewpoint angle the semi and full enclosures have
the same appearance.

半密封式隔音罩
Semi Enclosure

密封式隔音罩
Full Enclosure

半密封式隔音罩
Semi Enclosure

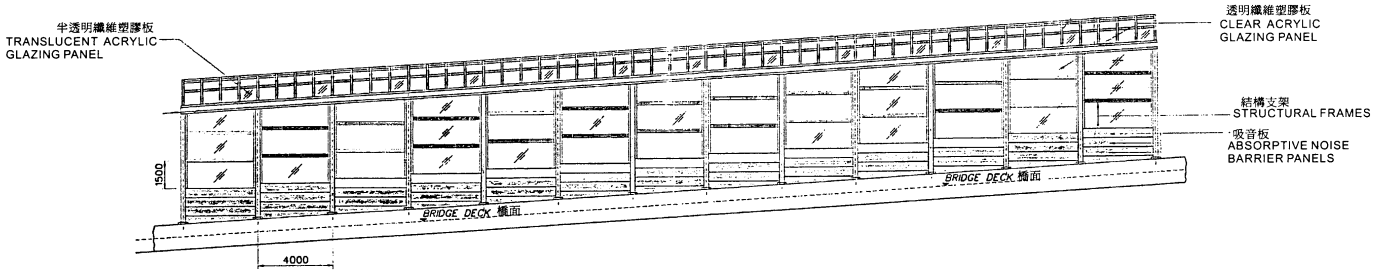


圖則名稱 title

工務計劃項目第458CL號
沙田新市鎮第2階段工程 - T3號道路建造工程
已豎設隔音屏障的電腦合成照片（從美林邨望出）
PWP ITEM NO. 458CL
SHA TIN NEW TOWN, STAGE 2 - CONSTRUCTION OF ROAD T3
PHOTOMONTAGE VIEWED FROM MEI LAM ESTATE

繪圖 drawn	簽署 initial	日期 date	比例 scale	辦事處 office
C S LAU		16.12.02	NTS	新界東拓展處
核對 checked	簽署 initial	日期 date	圖則編號 drawing no.	
T K LEE		16.12.02	ST2027	拓展署
核准 approved	簽署 initial	日期 date		
C W KAM		16.12.02		

附件 7
ENCLOSURE 7



圖則名稱 title	工務計劃項目第458CL號 沙田新市鎮第2階段工程 - T3號道路建造工程 隔音屏障的典型外視圖 PWP ITEM NO . 458CL SHA TIN NEW TOWN, STAGE 2 - CONSTRUCTION OF ROAD T3 TYPICAL EXTERNAL ELEVATION OF NOISE BARRIER			比例 scale	辦事處 office
繪圖 drawn	C S LAU	簽署 initial	日期 date 16.12.02	NTS	新界東拓展處
核對 checked	T K LEE	簽署 initial	日期 date 16.12.02	圖則編號 drawing no.	拓展署
核准 approved	C W KAM	簽署 initial	日期 date 16.12.02	ST2028	