

**For Discussion  
16 November 2012**

**Legislative Council Panel on Transport**

**Bus-bus Interchanges on Tuen Mun Road**

**PURPOSE**

This paper seeks Members' view on the proposal to increase the approved project estimate for **76TI** (bus-bus interchanges on Tuen Mun Road), by \$43.0 million from \$162.3 million to \$205.3 million in money-of-the-day (MOD) prices in order to: (i) expand the scope of the project for additional permanent toilet facilities at the bus-bus interchanges; (ii) carry out additional works to overcome unforeseen difficult ground conditions and suit the actual site conditions; and (iii) increase provision for price adjustment.

**BACKGROUND**

2. In February 2010, the Finance Committee (FC) of the Legislative Council (LegCo) approved the upgrading of **76TI** to Category A at an estimated cost of \$162.3 million in MOD prices. The approved scope of works under **76TI** comprises –

- (a) construction of a bus-bus interchange (BBI) on Tuen Mun Road (TMR) Kowloon-bound near Siu Lam Interchange comprising mainly –
  - (i) construction of a road of about 220 metres (m) long and 8.5 m wide parallel to TMR;
  - (ii) construction of a bus drop-off facility and a sheltered passenger holding area with floor area of about 1 040 square metres (m<sup>2</sup>) and 680 m<sup>2</sup> respectively;
  - (iii) modification of the signalised junction of Castle Peak Road (CPR) and the slip road from TMR Kowloon-bound and the junction of CPR and an unnamed road;

- (iv) widening of the unnamed road of about 150 m long to a two-lane carriageway to connect to the bus drop-off area mentioned in paragraph (a)(ii) above;
  - (v) widening and realignment of a section of CPR of about 300 m in length; and
  - (vi) reprovisioning of the single-lane road between CPR and TMR Kowloon-bound;
- (b) construction of a BBI on TMR Tuen Mun-bound near Tai Lam Kok roundabout comprising mainly –
- (i) construction of a road of about 280 m long and 8.5 m wide parallel to the TMR with a sheltered passenger holding area of about 560 m<sup>2</sup> in size;
  - (ii) construction of a U-shaped road of a minimum width of 6 m at Tai Lam Kok roundabout together with a sheltered passenger holding area of about 250 m<sup>2</sup> in size;
  - (iii) construction of a link bridge of 2.5 m clear width and about 30 m long with two lifts to connect the two sheltered passenger holding areas mentioned in paragraphs (b)(i) and (b)(ii) above; and
  - (iv) widening of Brothers' Bridge by about 17 m to form part of the road mentioned in paragraph (b)(i);
- (c) associated works including road reconstruction, provision of shelters, drainage, landscaping, traffic aids and street lighting, and slope works; and
- (d) implementation of an environmental monitoring and audit programme for the works mentioned in paragraphs (a) to (c) above.

\_\_\_\_\_ 3. A plan showing the proposed works is at **Enclosure**.

## **PROGRESS OF WORKS**

4. The Highways Department (HyD) started the construction works in July 2010 and the progress of works has been satisfactory. As at end September 2012, we have completed majority of the works at the Kowloon-bound BBI, and the remaining minor works are mainly shelter erection, pavement, road junctions and landscaping works. We anticipated that the works at the BBI on TMR (Kowloon-bound) will be substantially completed and opened to the public by December 2012. As regards the works for the other direction, that is the BBI on the Tuen Mun-bound TMR, the progress has also been satisfactory. The remaining works are mainly bridgeworks, lifts installation, shelters erection, pavement/footpath, ancillary and landscaping works. We anticipate that the Tuen Mun-bound BBI will be completed and commenced in the second quarter of 2013.

5. The Transport Department (TD) has consulted Tuen Mun District Council (TMDC) on the bus routes observing the BBIs since beginning of the year and has reached an agreement with the TMDC that upon commissioning of the first phase (Kowloon-bound) of the BBIs, there will be 12 bus routes observing the BBI.

6. In order to provide comfortable and convenient services, the TD has been liaising with the bus companies concerned to study the provision of relevant facilities, including queue railing with seating facilities, wind panels and bus information etc.

## **ADJUSTMENT OF PROJECT ESTIMATE**

7. During the construction period, we have listened to public opinions concerning the hygiene facilities in the BBIs in Tuen Mun. On the other hand, the HyD also needed to overcome the actual site conditions and costs of works are higher than expected. Following a detailed review of the development and financial position of the project, we consider it necessary to increase the APE of **76TI** by \$43.0 million in MOD prices to cover the additional costs arising from the following factors -

- (a) expansion of the scope of the project for additional permanent toilet facilities (\$20.2 million);

- (b) additional works to overcome unforeseen difficult ground conditions and to suit the actual site conditions (\$12.7 million)<sup>1</sup>; and
- (c) increase in provision for price adjustment (\$17.4 million).

The additional costs arising from the above factors amount to \$50.3 million. As this can be offset by drawing down the contingencies by \$7.3 million, we propose to increase the approved project estimate by \$43.0 million in MOD prices.

### **Additional Permanent Toilet Facilities**

8. During the discussions of the “bus-bus interchanges on Tuen Mun Road” project in the Public Works Sub-committee meeting held in January 2010, some Members requested to provide toilet facilities at the BBIs. We therefore proposed to provide three portable toilets at each of the BBIs (one for male, one for female and one for the disabled). At the meeting, we advised that the Administration would assess the need for permanent toilet facilities after taking into consideration patronage of the portable toilets. We would also consider the opinions of the members of the TMDC and the local communities.

9. During the construction of the BBIs, we have continued to receive TMDC members’ and the public’s opinions on the provision of permanent toilet facilities. The TMDC members and the public opined that permanent toilet facilities, with better hygienic conditions and facilities, should be provided at the TMR BBIs as a long term solution since there were no toilet facilities available for public use or public toilet facilities in the vicinity. The TMDC members also raised the issue at their meeting with LegCo Members on 28 June 2012. We notice that the LegCo Members who attended the meeting concurred with the opinions of TMDC members.

10. In view of the strong public demand for permanent public toilet facilities at the TMR BBIs as well as the special locality of the BBIs and the lack of toilet facilities in the vicinity, we propose to expand the scope of **76TI** to provide permanent toilet facilities at a cost of \$20.2 million in MOD prices. The proposed locations of the permanent toilet facilities are as shown in **Enclosure**. If the proposal is approved by the FC, we will commence the design work and proceed with construction work as soon as possible. It is expected that the permanent toilet facilities will be completed in the fourth quarter of 2014. We will continue to provide portable toilets before the commissioning of the permanent

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<sup>1</sup> Part of the increase in project cost is charged under contingency.

toilet facilities.

### **Additional Works to Overcome Unforeseen Difficult Ground Conditions and to Suit the Actual Site Conditions**

11. In general, during the design stage of projects, we will assess the geotechnical conditions of the site based on available site investigation information in the vicinity as well as new site investigation information. During the construction of the bridge foundations and retaining walls, further detailed site investigations will be conducted to double check the geotechnical conditions. During the works of the TMR BBIs, it was found during detailed investigation that the geotechnical conditions varied widely and were worse than expected. The rock levels were lower than expected and this required deeper piles to be provided for the bridge foundation. Moreover, changes were made to the design of the retaining walls to suit the actual ground profile and to overcome the unexpected poor sub-soil conditions so that the design of the retaining walls and the associated slopes meet with current design and safety standards.

12. The total cost of the additional works mentioned above is \$12.7 million which includes \$5.6 million for earthworks and slopeworks and \$7.1 million for bridge widening works and link bridges.

### **Increase in Provision for Price Adjustment**

13. According to existing Government practice, monthly payments to contractors for most construction contracts are adjusted to cover market fluctuation in labour and material costs, which are known as contract price fluctuation (CPF) payment. When we sought FC's approval for the funding of **76TI** project in February 2010, on the basis of the forecast of trend rate of change in the prices of public sector building and construction output in October 2009 as well as the anticipated project cash flow, a provision of \$6.3 million was allowed for price adjustment in the original APE.

14. Upon review of the latest situation, the CPF payment is expected to increase by \$17.4 million from the originally budgeted \$6.3 million to \$23.7 million because of the need for increased provision for price adjustment due to the net increase in construction cost of \$43.0 million mentioned in paragraph 7 above and the revised cash flow pattern. According to the updated forecast on the trend rate of change in the prices of public sector building and construction output, the rate of change for 2012 and beyond has been revised from 2% to 3% per annum

when funding was sought for the project in February 2010 to 7% and 6% per annum<sup>2</sup>.

15. The detailed cost breakdown and latest cash flow are outlined in paragraph 17 and paragraph 18 respectively.

### **Reduction of Contingencies**

16. As mentioned in paragraph 4 above, a large portion of the works for the TMR BBIs have been completed, and the remaining works are relatively simple and are expected to have less uncertainties. The design and construction works for the additional permanent toilet facilities are relatively smaller in scale and less complex than the TMR BBIs. Upon detailed review, we therefore consider that the contingency could be reduced by \$7.3 million.

### **Review of Financial Position**

17. We consider it is necessary to increase the approved project estimate for **76TI** from \$162.3 million by \$43.0 million to \$205.3 million in MOD prices to cover the additional costs of the project. A summary of the proposed increase of \$43.0 million is as follows –

<b>Factors</b>	<b>Proposed increased amount/savings in MOD prices (\$ million)</b>	<b>% of the total increased amount/savings</b>
<b>Increase due to –</b>		
(a) cost of additional permanent toilet facilities	20.2	40.2
(i) permanent toilet facilities (including building	15.1	

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<sup>2</sup> The price deflator for public sector building and construction output adopted for the original funding application approved by FC in February 2010 are 2% between 2010 and 2013 and 3% per annum from 2014 onwards. According to the actual statistics, the price deflator between 2010 and 2011 were 2.9% and 5.7% respectively. Based on latest information/assumption, the price deflator is forecast to be 7% in 2012, 6% per annum between 2013 and 2016.

<b>Factors</b>	<b>Proposed increased amount/savings in MOD prices (\$ million)</b>	<b>% of the total increased amount/ savings</b>
works and E&M works)		
(ii) additional consultancy fee	1.7	
(iii) remuneration of resident site staff	0.9	
(iv) provision for price adjustment	2.5	
(b) cost of additional works to overcome unforeseen difficult ground conditions and actual site conditions	12.7	25.2
(c) increase in provision for price adjustment	17.4	34.6
(d) Total increase (d) = (a) + (b) + (c)	50.3	100.0
<b>Partly offset by –</b>		
(e) Contingencies (part)	7.3	
(f) Proposed increase (f) = (d) – (e)	43.0	

## **FINANCIAL IMPLICATIONS**

18. Subject to FC's approval, we will phase the expenditure as follows –

<b>Year</b>	<b>\$ million (in MOD prices)</b>
Up to 31 March 2012	97.3
2012 – 2013	49.1

<b>Year</b>	<b>\$ million (in MOD prices)</b>
2013 – 2014	26.3
2014 – 2015	28.5
2015 – 2016	4.1
	<hr/>
	205.3
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19. We estimate the additional annual recurrent expenditure upon completion of the project (including provision of the permanent toilet facilities) to be increased from about \$1.0 million to \$1.9 million.

## **PUBLIC CONSULTATION**

20. The HyD has maintained continued communication with and report works progress to the TMDC and arranged TMDC to inspect the progress of works on site. We consulted the Working Group on Tuen Mun External Traffic under the Traffic and Transport Committee of the TMDC on provision of the permanent toilet facilities on 17 October 2012. Members of the Committee supported the proposed provision of permanent toilet facilities unanimously. We will continue liaison with the TMDC and the local community.

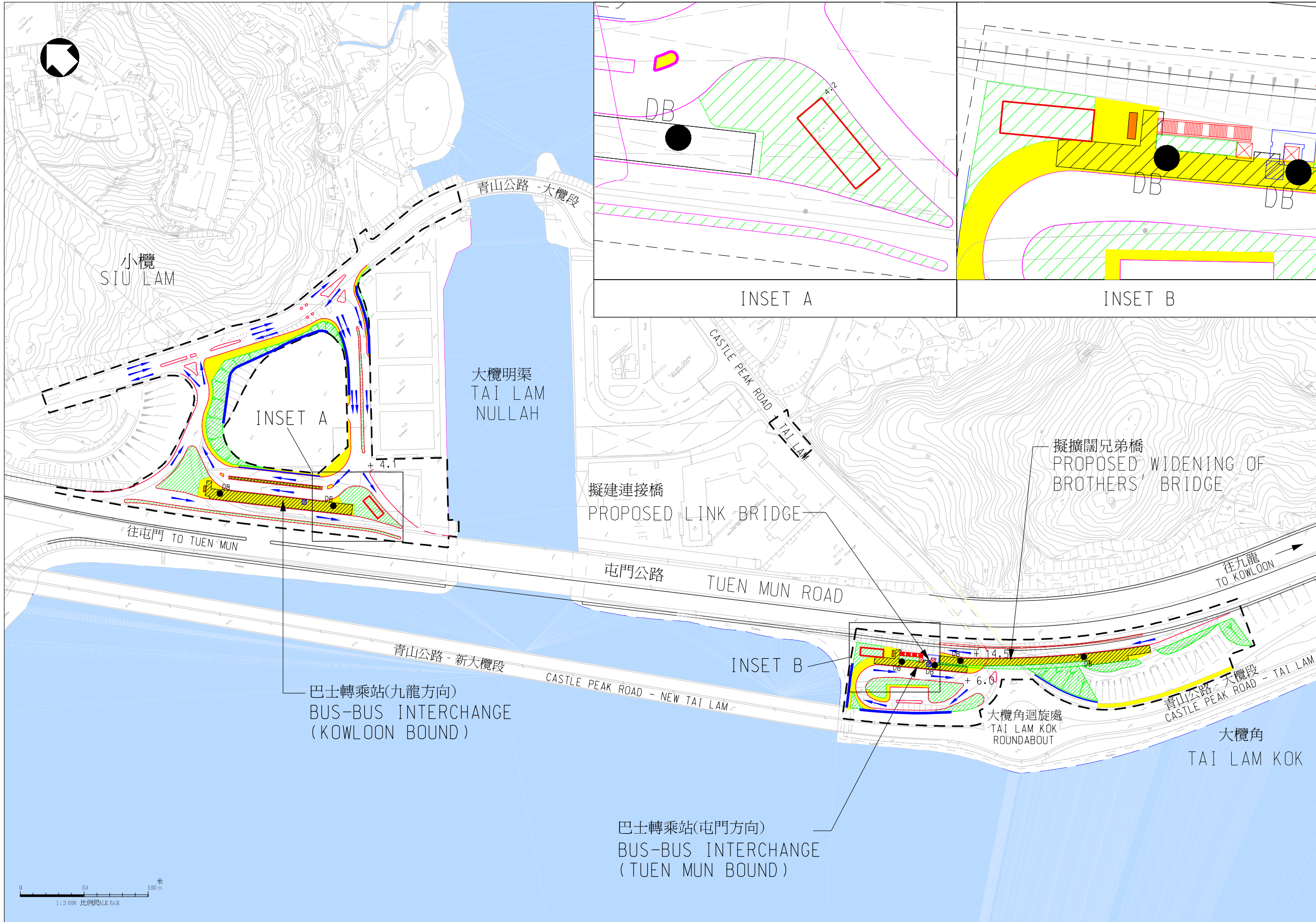
## **WAY FORWARD**

21. Subject to the support of the Panel, we intend to submit the proposal to the Public Works Subcommittee on 19 December 2012. If the proposal is approved by the Subcommittee, we will submit our funding application to the Finance Committee of the Legislative Council on 11 January 2013.

## **ADVICE SOUGHT**

22. Members are invited to comment on and support our funding proposal.





註釋:  
NOTES:  
1. 所有水平均以米為單位, 並在香港主水平基準上。  
ALL LEVELS ARE IN METRES ABOVE HONG KONG PRINCIPAL DATUM.

- 圖例:  
LEGEND:
- 施工區界限  
LIMIT OF WORKS AREA
  - 擬修改的行人道路線  
PROPOSED ROAD ALIGNMENT
  - YY 擬建填土斜坡  
PROPOSED FILL SLOPE
  - 擬建擋土牆  
PROPOSED RETAINING WALL
  - ☒ 擬建升降機  
PROPOSED LIFT
  - 擬建樓梯  
PROPOSED STAIRCASE
  - 擬建乘客等候處 / 行人路  
PROPOSED PASSENGER HOLDING AREA / FOOTPATH
  - 擬建遮蔽處  
PROPOSED SHELTER
  - 擬建環境美化地帶  
PROPOSED LANDSCAPING AREA
  - 行車線數  
NO. OF TRAFFIC LANE
  - 流動洗手間  
PORTABLE TOILET
  - DB 電子顯示屏  
ELECTRONIC DISPLAY BOARD
  - 資訊亭  
INFORMATION KIOSK
  - 擬建永久洗手間  
PROPOSED PERMANENT TOILET FACILITIES

圖則名稱 drawing title  
工務計劃項目第76TI號 - 屯門公路巴士轉乘站 - 平面圖

PWP ITEM NO. 76TI - BUS-BUS INTERCHANGES ON TUEN MUN ROAD - LAYOUT PLAN

圖則編號 drawing no. HMW6076TI-SK0036	比例 scale 1:3000 OR AS SHOWN
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