

## **CHAPTER 3**

**Transport and Housing Bureau  
Highways Department  
Civil Engineering and Development Department**

**Retrofitting of barrier-free access facilities  
for grade-separated walkways**

**Audit Commission  
Hong Kong  
5 April 2016**

*This audit review was carried out under a set of guidelines tabled in the Provisional Legislative Council by the Chairman of the Public Accounts Committee on 11 February 1998. The guidelines were agreed between the Public Accounts Committee and the Director of Audit and accepted by the Government of the Hong Kong Special Administrative Region.*

Report No. 66 of the Director of Audit contains 8 Chapters which are available on our website at <http://www.aud.gov.hk>

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# RETROFITTING OF BARRIER-FREE ACCESS FACILITIES FOR GRADE-SEPARATED WALKWAYS

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# **RETROFITTING OF BARRIER-FREE ACCESS FACILITIES FOR GRADE-SEPARATED WALKWAYS**

## **Executive Summary**

1. Under the Disability Discrimination Ordinance (Cap. 487) effective from 1996, it is unlawful for a person to discriminate against another person with a disability (PWD) by refusing to allow that other person access to, or the use of, any premises or facilities that the public is entitled, except where any alteration to the premises to provide such access or provision of such facilities would impose unjustifiable hardship on the provider of such access or facilities. According to the Highways Department (HyD), footbridges, elevated walkways and subways (hereinafter referred to as grade-separated walkways — GS walkways) are facilities governed under the Ordinance.

2. In September 2000, the then Transport Bureau (now the Transport and Housing Bureau — THB) stipulated in a circular that access for the PWDs had to be provided for all GS walkways either by the provision of ramps or lifts. In December 2001, the then Transport Bureau informed the Legislative Council (LegCo) that the Government would retrofit ramps or lifts for existing public footbridges according to an order of priorities (hereinafter referred to as the 2001 Retrofitting Initiative). As of December 2010, of the 1,540 GS walkways under its purview, the HyD had taken actions from 2001 to 2010 on investigation and retrofitting works for 94 walkways. In April 2011, the Labour and Welfare Bureau (LWB) informed LegCo that a total of 295 GS walkways in the territory were not provided with lifts, ramps or alternative at-grade crossings (hereinafter referred to as barrier-free access facilities). In June 2011, the THB informed LegCo that retrofitting works for barrier-free access facilities for GS walkways would be completed by 2017-18. In the same year, the HyD commenced a programme for carrying out investigation and retrofitting works for the remaining 201 (295 less 94) walkways not being provided with barrier-free access facilities (hereinafter referred to as the 2011 Retrofitting Programme, which formed part of the 2001 Retrofitting Initiative).

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3. In August 2012, in order to bring further convenience to the elderly, PWDs and the general public in using public GS walkways, the Government promulgated a new policy on “universal accessibility”, stating that, as long as site conditions permitted, it would consider installing lifts for walkways even when standard ramps had already been installed (hereinafter referred to as the 2012 Expanded Programme). Subsequently, in response to the Government’s invitation, members of the public submitted proposals for 253 walkways for lift retrofitting works. In November 2012, the THB informed LegCo that each of the 18 District Councils (DCs) would be invited to select three walkways from the List of Public Proposed Walkways (PPW List) for priority lift retrofitting works, which were to be carried out by the Civil Engineering and Development Department (CEDD — known as the First Phase of the 2012 Expanded Programme).

4. According to the HyD, the design, investigation, construction and supervision cost of retrofitting one lift each at both ends of a GS walkway was about \$40 million (or \$20 million for each lift) and the estimated annual operation and maintenance cost of each lift was about \$310,000. The total estimated cost of implementing the 2001 Retrofitting Initiative and the 2012 Expanded Programme from 2012-13 to 2021-22 would be about \$8.6 billion. The Audit Commission (Audit) has recently conducted a review to examine the retrofitting of barrier-free access facilities for GS walkways through implementation of the 2001 Retrofitting Initiative and the 2012 Expanded Programme.

### Implementation of 2001 Retrofitting Initiative

5. *Understatement of walkways requiring retrofitting works.* In April 2011, the LWB informed LegCo that 295 GS walkways were not provided with barrier-free access facilities (see para. 2). However, according to the HyD’s records, in fact 328 GS walkways were not provided with barrier-free access facilities. Accordingly, the number of walkways not having been provided with barrier-free access facilities were understated by 33 (328 less 295) (para. 2.2).

6. *Slow progress in implementing 2011 Retrofitting Programme.* As of February 2016, twenty years had lapsed since the effective date of the Disability Discrimination Ordinance in 1996. In June 2011, the THB informed LegCo that the majority of the retrofitting works for barrier-free access facilities for GS walkways under the 2011 Retrofitting Programme were scheduled for completion by 2016-17 and the remaining walkways by 2017-18. Of the 328 walkways not having been

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provided with barrier-free access facilities (see para. 5), 184 (56%) were found to be feasible for retrofitting works and carried out under the 2001 Retrofitting Initiative. However, Audit examination revealed that, of the 184 GS walkways as of December 2015, retrofitting works for: (a) only 60 (33%) had been completed; (b) 94 (51%) were in progress; (c) 17 (9%) were under detailed design and public consultation; and (d) 13 (7%) had not commenced. Furthermore, as of December 2015, of the total approved funding of \$4.03 billion for the lift/ramp retrofitting works under the 2011 Retrofitting Programme, only \$1.15 billion (29%) had been spent (paras. 1.3, 1.13, 2.2, 2.3 and 2.6).

7. ***Significant time and cost overrun in implementing retrofitting works items.*** Of the 60 GS walkways for which lift retrofitting works had been completed as of December 2015, works for 34 (57%) walkways were completed from 2001 to 2010 and the remaining 26 (43%) walkways under the 2011 Retrofitting Programme. For the 34 walkways, Audit examination revealed that, in one case, the approved project estimate of implementing retrofitting works for two subways had increased by 16% to \$67 million, partly due to additional works for utility diversions. In another two cases, the actual completion dates of implementing retrofitting works had been delayed by 1,088 and 730 days respectively. The works delay of the latter case was mainly caused by works interfacing problems related to a water-pipe replacement project in the vicinity. For the remaining 26 walkways, Audit examination revealed that the actual works completion dates of 20 (77%) had been delayed by 14 to 422 days (on average 156 days), in some cases due to utility diversion problems found after awarding works contracts (paras. 2.4, 2.10 and 2.12).

8. ***Some retrofitting works originally found to be infeasible by the HyD but later found to be feasible by the CEDD.*** Subsequent to the effective date of the Disability Discrimination Ordinance in 1996, the Government commenced to carry out lift/ramp retrofitting works for GS walkways not being provided with barrier-free access facilities. From 2001 to 2013, the HyD's feasibility studies under the 2001 Retrofitting Initiative found that 95 walkways were not feasible for carrying out lift/ramp retrofitting works mainly due to site constraints or existence of underground utilities, including a footbridge in Sham Shui Po, and a footbridge and a subway in Wan Chai. However, the CEDD's feasibility studies under the 2012 Expanded Programme found that it was technically feasible to carry out retrofitting works for these three walkways by adopting alternative solutions. Audit also noted that the HyD had not issued guidelines on determining whether a walkway is feasible for carrying out lift/ramp retrofitting works (paras. 1.5, 2.19, 2.23, 2.25 and 2.26).

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9. ***Lack of directional signs on nearby barrier-free access facilities.*** In March 2009, the THB informed LegCo that, to facilitate PWDs who were unable to use footbridges not being provided with barrier-free access facilities, the Government would consider installing signs near the footbridges providing information on nearby at-grade crossing facilities having regard to the actual situation. However, Audit site visits to 15 GS walkways not being provided with barrier-free access facilities found that no directional sign was erected near all the 15 walkways to advise needy persons of nearby barrier-free access facilities (paras. 2.28 and 2.29).

### Implementation of 2012 Expanded Programme

10. As of December 2015, the 18 DCs had nominated a total of 53 walkways (49 nominated from the PPW List and 4 outside the List) for priority lift retrofitting works under the 2012 Expanded Programme (paras. 3.7 and 3.8).

11. ***Low pedestrian flow of some nominated walkways.*** While the 18 DCs were each invited to nominate three walkways from the PPW List, the number of walkways included in individual PPW List for nomination by DCs varied from 1 to 28. For example, whereas the PPW List provided to Tuen Mun and Sha Tin DCs respectively contained 28 and 21 walkways, the List provided to Central and Western, Sham Shui Po and Sai Kung DCs each contained four walkways, and to Islands DC only one walkway. In this connection, Sham Shui Po and Islands DCs together nominated three walkways outside the PPW List for lift retrofitting works. Audit noted that the peak-hour pedestrian flow of some nominated walkways was relatively low. For example, an elevated walkway nominated in Southern District and a footbridge in Sai Kung District only respectively recorded peak-hour pedestrian flow of 69 and 112 (paras. 3.7 and 3.10).

12. ***Some useful information not provided to DCs for facilitating informed decision.*** Audit noted that the HyD had only provided to DCs some useful information of 219 walkways proposed by the public but omitted to include information of 32 walkways in the PPW List. Audit also noted that, in providing DCs with information for nominating walkways for lift retrofitting works, the HyD only provided three DCs (Tuen Mun, Kwai Tsing and Kwun Tong DCs) with



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information on nearby facilities for the elderly and PWDs, and alternative at-grade crossings within 100 metres, but did not provide such information to the remaining 15 (18 less 3) DCs. Furthermore, Audit examination revealed that the CEDD provided significant pedestrian-flow statistics to Wong Tai Sin DC relating to a footbridge only after the DC's nomination of the footbridge for retrofitting works (paras. 3.16, 3.17 and 3.21).

### Management information system and way forward

13. ***Information system not capable of generating important information.*** The HyD established an Integrated Structures Information System (ISI System) in 2002 for maintaining information of ramps, lifts, staircases and other furniture of walkways under its maintenance. However, Audit noted that the ISI System could not generate management reports on the locations and availability of ramps or lifts of GS walkways under the HyD's purview (paras. 4.2 and 4.6).

14. ***Some GS walkways constructed after effective date of Disability Discrimination Ordinance not being provided with barrier-free access facilities.*** Audit examination of the information provided by the HyD revealed that 11 GS walkways constructed from 1999 to 2005 (after the effective date of the Disability Discrimination Ordinance of 1996) were not provided with barrier-free access facilities at the time of walkway construction (para. 4.10).

15. ***Significant increase in average unit cost of lift retrofitting works.*** Audit noted that the average construction cost of retrofitting a lift for a walkway had significantly increased from \$6.7 million between 2002 and 2011 by 124% to \$15.0 million in 2015 (para. 4.21).

16. ***Second Phase of the 2012 Expanded Programme.*** In the Policy Address of January 2016, the Government said that, from the fourth quarter of 2016, the Government would again invite DCs to further nominate not more than three existing GS walkways in each district for lift retrofitting works under the Second Phase of the 2012 Expanded Programme (para. 4.18).

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### Audit recommendations

17. Audit recommendations are made in the respective sections of this Audit Report. Only the key ones are highlighted in this Executive Summary. Audit has *recommended* that the Government should:

#### *Implementation of 2001 Retrofitting Initiative*

- (a) expedite actions to complete the outstanding retrofitting works under the 2011 Retrofitting Programme (para. 2.15(a));
- (b) for works requiring utility diversions in implementing a works project in future, endeavour to find solutions before letting related works contracts (para. 2.15(c));
- (c) in implementing a works project in future, take measures to avoid unnecessary contract variations after contract award (para. 2.15(d));
- (d) conduct reviews of completed GS walkway retrofitting works items involving significant cost overrun or works slippages with a view to drawing lessons for improvement (para. 2.15(f));
- (e) re-examine the justifications for not carrying out retrofitting works for walkways found under the 2001 Retrofitting Initiative to be infeasible for such works, and inform LegCo and the related DCs of the examination findings (para. 2.30(e));
- (f) issue guidelines on determining whether a public GS walkway is feasible for carrying out lift/ramp retrofitting works (para. 2.30(f));
- (g) erect directional signs providing information on nearby barrier-free access facilities near GS walkways not being provided with such facilities (para. 2.30(g));

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### ***Implementation of 2012 Expanded Programme***

- (h) **provide DCs with useful information for making informed decisions in nominating GS walkways for implementation of lift retrofitting works (para. 3.22);**

### ***Management information system and way forward***

- (i) **make enhancements to the ISI System for generating management reports on important information of GS walkways under the HyD's purview (para. 4.12(a));**
- (j) **conduct a review of GS walkways constructed after the effective date of the Disability Discrimination Ordinance in 1996 which were not provided with barrier-free access facilities to ascertain whether such facilities should have been provided at the time of walkway construction, and take necessary remedial measures (para. 4.12(c));**
- (k) **ascertain the reasons for the omission of 33 GS walkways in reporting to LegCo in April 2011 the number of walkways not having been provided with barrier-free access facilities (para. 4.12(d));**
- (l) **take into account observations in this Audit Report in implementing lift retrofitting works for GS walkways in future (para. 4.22); and**
- (m) **conduct a review to ascertain whether the implementation of a large quantity of lift retrofitting works within a few years has created pressure on the related trade and driven up the cost of works, and take necessary improvement measures (para. 4.23).**

## **Response from the Government**

- 18. The Government agrees with the audit recommendations.



## PART 1: INTRODUCTION

1.1 This PART describes the background to the audit and outlines the audit objectives and scope.

### Background

1.2 In December 1987, the then Transport Branch (Note 1) promulgated in a circular entitled “Provision of covers or ramps and escalators to grade separated pedestrian facilities” that ramps (see Photograph 1) should be provided for all footbridges and elevated walkways (see Photograph 2), unless the then Secretary for Transport approved exempting the provision of such ramps under special circumstances, such as the lack of space.

**Photograph 1**

**A ramp of a footbridge in Wong Tai Sin**



*Source: Photograph taken by Audit Commission in December 2015*

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**Note 1:** *The then Transport Branch (before July 1997) and the then Transport Bureau (from July 1997 to June 2002) were responsible for the policy portfolio of transport matters. In July 2002, the then Environment, Transport and Works Bureau was set up to take over the policy portfolio. In July 2007, the Transport and Housing Bureau was formed to take over the transport policy portfolio.*

### Photograph 2

#### An elevated walkway in Wong Tai Sin



*Source: Photograph taken by Audit Commission in February 2016*

1.3 Under the Disability Discrimination Ordinance (Cap. 487) enacted in 1995 and effective from 1996, it is unlawful for a person to discriminate against another person with a disability (PWD) by refusing to allow that other person access to, or the use of, any premises or facilities that the public is entitled, except where any alteration to the premises to provide such access or provision of such facilities would impose unjustifiable hardship on the provider of such access or facilities.

1.4 According to the Highways Department (HyD), footbridges, elevated walkways and subways (hereinafter referred to as grade-separated walkways — GS walkways) are facilities governed under the Disability Discrimination Ordinance, and most of the GS walkways constructed after 1996 have thus been installed with barrier-free access facilities such as ramps or passenger lifts (see Photograph 3).

### Photograph 3

**A passenger lift for a footbridge in Wan Chai**



*Source: Photograph taken by Audit Commission in February 2016*

### *Lift retrofitting works from 2001 to 2010*

1.5 In September 2000, the then Transport Bureau (see Note 1 to para. 1.2) stipulated in a circular entitled “Provision of covers, ramps, and escalators to grade separated pedestrian facilities” that access for the disabled had to be provided for all GS walkways either by the provision of ramps or lifts. In December 2001, in response to an enquiry of a Member of the Legislative Council (LegCo) on the provision of facilities for the disabled at footbridges, the then Transport Bureau informed LegCo that:

- (a) in view of the large scope of works and resource constraints, the Government would retrofit ramps or lifts for existing public footbridges according to an order of priorities (hereinafter referred to as the **2001 Retrofitting Initiative**); and
- (b) some footbridges could not be retrofitted with such facilities due to site constraints (e.g. not enough space for installing ramps), and some footbridges did not have a need for such facilities (e.g. there were nearby at-grade crossings).

1.6 In March 2009, in response to an enquiry of a LegCo Member, the Transport and Housing Bureau (THB) informed LegCo that the Transport Department (TD) received suggestions from the public from time to time on the provision of lifts at existing footbridges in different districts, and the suggestions on retrofitting lifts at some footbridges could not be accepted because ramps had already been provided at these footbridges to provide barrier-free access facilities for PWDs.

1.7 As of December 2010, of the 1,540 GS walkways under its purview, the HyD had taken actions from 2001 to 2010 on investigation and retrofitting works for 94 GS walkways. In April 2011, the Labour and Welfare Bureau (LWB) informed the LegCo Panel on Welfare Services that:



- (a) the Equal Opportunities Commission's Formal Investigation Report on Accessibility in Publicly Accessible Premises published in June 2010 had made recommendations on the improvement of accessibility, connectivity and interface with the surrounding environment, and user-friendly management practices for publicly accessible premises;
- (b) a total of 295 GS walkways in the territory were not provided with lifts, ramps or alternative at-grade crossings (hereinafter referred to as barrier-free access facilities); and
- (c) the HyD would accelerate retrofitting of barrier-free access facilities at GS walkways where technically feasible. In order to shorten the time of project delivery, retrofitting works for all remaining feasible walkways would be taken forward in phases, with majority of works scheduled for completion by around 2016-17 and works for the remaining walkways (e.g. those involving public objections or technical complexities) by around 2017-18.

1.8 In 2011, the HyD commenced a programme for carrying out investigation and retrofitting works for the remaining 201 (295 less 94) walkways (hereinafter referred to as the **2011 Retrofitting Programme** (Note 2), which formed part of 2001 Retrofitting Initiative). For the 94 walkways having investigation and retrofitting works carried out before the 2011 Retrofitting Programme, the works were funded by two project votes (6143TB and 6153TB) and a general block vote 6100TX (for financing HyD works, studies and investigations). As of December 2015, the total approved funding and actual expenditure of investigation and retrofitting works of these 94 walkways were \$437.6 million and \$345.2 million respectively. For the 201 walkways under the 2011 Retrofitting Programme, investigation and retrofitting works were funded under a project vote 6167TB (Provision of barrier-free access facilities) and a block vote 6101TX (Universal Accessibility Programme). As of December 2015, the total approved funding and actual expenditure of investigation and retrofitting works of the 201 walkways were \$4,032.7 million and \$1,147.7 million respectively. Details of the retrofitting works carried out from 2001 to 2010 and under the 2011 Retrofitting Programme are shown in Table 1.

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**Note 2:** *In papers submitted to LegCo from 2012 to 2015, the HyD used the term "Original Programme" to refer to the 2011 Retrofitting Programme.*

**Table 1**

**Work progress of 2001 Retrofitting Initiative  
(December 2015)**

Particulars	Number of walkways having investigation and retrofitting works		
	From 2001 to 2010	Included under 2011 Retrofitting Programme	Total
Total	94	201	295
<u>Less:</u> Retrofitting works found not feasible	49	24	73
Retrofitting works found not necessary (e.g. nearby at-grade crossing available)	3	16	19
Retrofitting works undertaken or to be undertaken under other projects	5	11	16
Retrofitting works to be carried out under 2012 Expanded Programme (see para. 1.10)	3	Nil	3
	60	51	111
Requiring retrofitting works	34	150	184
Works completed as of December 2015	34	26	60
Works in progress	Nil	124	124

Source: Audit Commission analysis of HyD records

1.9 According to the 2001 Retrofitting Initiative, retrofitting works will not be carried out for GS walkways that are technically infeasible to be retrofitted with barrier-free access facilities, or a nearby at-grade crossing has been provided within 100 metres of the walkways. In this connection, in June 2011, the HyD informed LegCo Panel on Transport that, in deciding whether to retrofit barrier-free access facilities for a pedestrian crossing, the major consideration was the availability of such facilities and not its utilisation rate nor its location.

### ***2012 Expanded Programme***

1.10 In a press release on 21 August 2012, the Government promulgated a new policy on “universal accessibility” (see para. 1.11), stating that:

- (a) the Government would from that time onwards treat lifts and ramps equally when considering installing barrier-free access facilities at GS walkways. This would be a change from the prevailing practice of giving priority to installing ramps at GS walkways; and
- (b) as long as site conditions permitted, the Government would consider installing lifts at walkways where there was already a standard ramp installed (hereinafter referred to as the **2012 Expanded Programme**).

According to the THB, the universal accessibility policy aimed at bringing further convenience to the elderly, PWDs and the general public in using GS walkways.

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1.11 In January 2013, the Finance Committee (FC) of LegCo approved the creation of a new block vote 6101TX (Universal Accessibility Programme) under the Capital Works Reserve Fund to finance lift retrofitting works under the 2011 Retrofitting Programme and the 2012 Expanded Programme (see Table 2 in para. 1.13). Under the 6101TX block vote arrangement, retrofitting works costing \$75 million or below for a walkway may be approved by an appropriate directorate officer (Note 3) without the need to seek the FC's separate approval. In this regard, the Government would seek the FC's funding approval for the block vote on an annual basis.

1.12 Between August and October 2012, the Government invited members of the public to submit proposals for GS walkways for lift retrofitting works. In response, public proposals for 253 walkways were submitted to the Government. In November 2012, the THB informed the LegCo Panel on Transport of the arrangement of inviting each of the 18 District Councils (DCs) to select three priority GS walkways among the public proposals received. In the first half of 2013, the HyD and the Civil Engineering and Development Department (CEDD) invited each of the 18 DCs to nominate three GS walkways in its district for priority implementation of lift retrofitting works. As of December 2015, the 18 DCs together had nominated 53 walkways (Sham Shui Po DC only nominated two walkways — see para. 3.7(d)) for lift retrofitting works (hereinafter referred to as the First Phase of the 2012 Expanded Programme).

### *Sources of funding*

1.13 The sources of funding for the 2001 Retrofitting Initiative and the 2012 Expanded Programme are summarised in Table 2.

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**Note 3:** *For Subhead 6101TX, the approving officers for different sums are as follows:*

- (a) Permanent Secretary for Transport and Housing (Transport): up to \$75 million;*
- (b) Deputy Secretary for Transport and Housing (Transport): up to \$55 million;*
- (c) Director of Highways / Director of Civil Engineering and Development: up to \$50 million;*
- (d) Deputy Director (or officer at D3 level) of the HyD and the Civil Engineering and Development Department: up to \$30 million; and*
- (e) Directorate officers of the HyD and the Civil Engineering and Development Department: up to \$12 million.*

**Table 2**  
**2001 Retrofitting Initiative and 2012 Expanded Programme**  
**(December 2015)**

2001 Retrofitting Initiative				First Phase of 2012 Expanded Programme (covering 53 walkways)	
Investigation and retrofitting works from 2001 to 2010 (covering 94 walkways)		2011 Retrofitting Programme (covering 201 walkways)			
Funding source	Total approved funding (Actual expenditure) (\$ million)	Funding source	Total approved funding (Actual expenditure) (\$ million)	Funding source	Total approved funding (Actual expenditure) (\$ million)
Project vote 6143TB	67.0 (63.7)	Project vote 6167TB	292.1 (192.6)	Block vote 6101TX	1,692.2 (143.5)
Project vote 6153TB	71.4 (55.4)	Block vote 6101TX	3,740.6 (955.1)		(Note 2)
Block vote 6100TX	299.2 (226.1) (Note 1)		(Note 2)		
Total	437.6 (345.2)	Total	4,032.7 (1,147.7)	Total	1,692.2 (143.5)

Legend: Project vote 6143TB: Improvement to pedestrian subway system at Kwai Fuk Road roundabout

Project vote 6153TB: Enhancement of footbridges in Tsim Sha Tsui East

Project vote 6167TB: Provision of barrier-free access facilities at public footbridges, elevated walkways and subways — design works and phase 1 construction works

Block vote 6100TX: Highway works, studies and investigations for items in Category D of the Public Works Programme

Block vote 6101TX: Universal Accessibility Programme

Source: Audit Commission analysis of HyD records

Note 1: These amounts only represented the approved funding and actual expenditure of lift/ramp retrofitting works, but excluded those for other HyD works items under block vote 6100TX.

Note 2: Block vote 6101TX covers works under both 2011 Retrofitting Programme and 2012 Expanded Programme.

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### *Estimated costs*

1.14 According to the HyD:

- (a) the cost of retrofitting one lift each at both ends of a walkway was about \$40 million (or \$20 million for each lift). The cost included construction cost, design, investigation and supervision fees;
- (b) the estimated annual operation and maintenance cost of each lift was about \$310,000;
- (c) as of December 2015, the approved funding of the retrofitting works under the 2001 Retrofitting Initiative and the 2012 Expanded Programme totalled \$6.16 billion (\$437.6 million + \$4,032.7 million + \$1,692.2 million), and the total actual expenditure was \$1.64 billion (\$345.2 million + \$1,147.7 million + \$143.5 million) (see Table 2 in para. 1.13); and
- (d) the total estimated cost of the works from 2012-13 to 2021-22 would be about \$8.6 billion.

### *Responsible government bureau and departments*

1.15 The THB is responsible for policy matters on the provision of barrier-free access facilities for GS walkways. The Major Works Office (1), the Bridges and Structures Division and the Works Division of the HyD are responsible for implementing the 2001 Retrofitting Initiative. Moreover, the Urban and New Territories Regional Offices of the HyD are responsible for maintaining public walkways. Appendix A shows an extract of the organisation chart of the HyD. The Universal Accessibility Projects Unit of the CEDD is responsible for implementing the First Phase of the 2012 Expanded Programme.

### **Audit review**

1.16 In December 2015, the Audit Commission (Audit) commenced a review to examine retrofitting of barrier-free access facilities for GS walkways through implementation of the 2001 Retrofitting Initiative and the 2012 Expanded Programme. The review focuses on the following areas:

- (a) implementation of 2001 Retrofitting Initiative (PART 2);
- (b) implementation of 2012 Expanded Programme (PART 3); and
- (c) management information system and way forward (PART 4).

Audit has found room for improvements in the above areas, and has made a number of recommendations to address the issues.

### **Acknowledgement**

1.17 Audit would like to acknowledge with gratitude the full cooperation of the staff of the THB, the HyD and the CEDD during the course of the audit review.

## **PART 2: IMPLEMENTATION OF 2001 RETROFITTING INITIATIVE**

2.1 This PART examines the HyD's actions in implementing the 2001 Retrofitting Initiative, focusing on:

- (a) walkways considered feasible for retrofitting works (see paras. 2.3 to 2.16); and
- (b) walkways considered infeasible for retrofitting works (see paras. 2.17 to 2.31).

2.2 From 2001 to 2010, the HyD had taken actions on investigation and retrofitting works for 94 GS walkways and had completed lift retrofitting works for 22 of them. LegCo was informed in April 2011 that 295 GS walkways had not been provided with barrier-free access facilities (see para. 1.7(b)). However, Audit examination revealed that in fact 328 walkways had not been provided with related facilities (see para. 4.11). Table 3 shows the status of implementing the 2001 Retrofitting Initiative as of April 2011 and December 2015.



## Implementation of 2001 Retrofitting Initiative

**Table 3**

### **GS walkways under 2001 Retrofitting Initiative (April 2011 and December 2015)**

Retrofitting works	Walkways			
	HyD statistics reported to LegCo in April 2011		HyD statistics as of December 2015	
	(No.)	(%)	(No.)	(%)
Found feasible for implementation under 2001 Retrofitting Initiative	67	23%	184	56%
Found infeasible	56	19%	92	28%
Found not necessary (Note 1)	Not mentioned	Not mentioned	23	7%
Carried out or to be carried out under other works project or private development projects outside 2001 Retrofitting Initiative	Not mentioned	Not mentioned	26	8%
To be carried out under 2012 Expanded Programme (see para. 2.19)	Not mentioned	Not mentioned	3	1%
With planning and investigation in progress	172	58%	Nil	Nil
Total	295 (Note 2)	100%	328 (Note 2)	100%

*Source: Audit analysis of LWB and HyD records*

*Note 1: As of December 2015, the HyD's investigation found that, mainly due to availability of nearby alternative barrier-free access facilities (e.g. within about 100 metres of a GS walkway), retrofitting works for 23 (7%) of the 328 walkways were not necessary.*

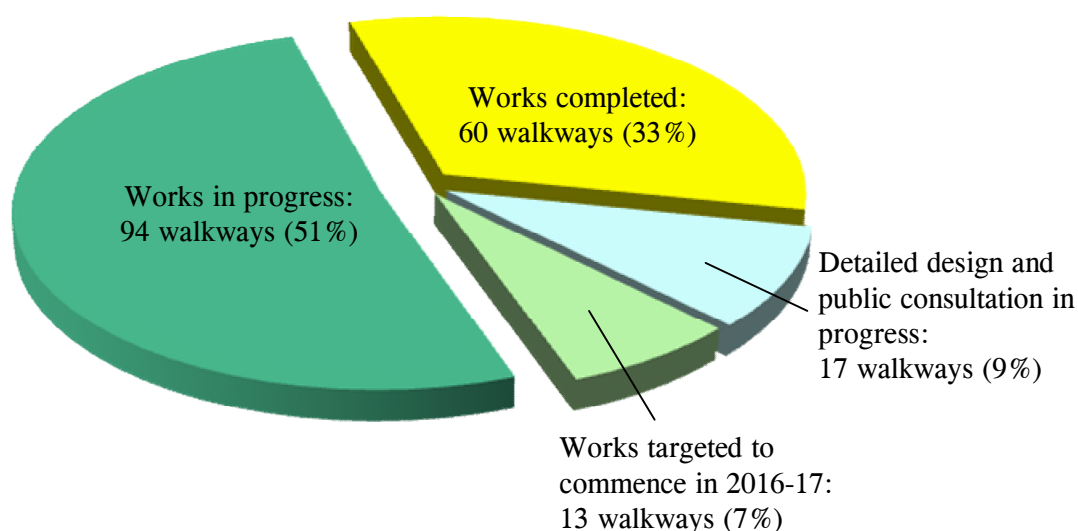
*Note 2: Retrofitting works for 22 of the 295 walkways had been completed by April 2011 and 60 of the 328 walkways had been completed by December 2015. Based on HyD records, the 295 walkways as of April 2011 were understated by 33 walkways, comprising 19 walkways under "Found infeasible", 4 walkways under "Found not necessary" and 10 walkways under "carried out or to be carried out under other projects or private development projects outside 2001 Retrofitting Initiative".*

### Walkways considered feasible for retrofitting works

2.3 As of December 2015, 184 GS walkways (see Table 3 in para. 2.2) under the 2001 Retrofitting Initiative that had been found to be feasible for retrofitting works were in various stages of works. Figure 1 shows the progress of implementing retrofitting works for these 184 walkways.

**Figure 1**

**Progress of retrofitting works for 184 walkways  
(December 2015)**



*Source: HyD records*

2.4 For the 60 GS walkways with retrofitting works completed as of December 2015, works for:

- (a) 34 GS walkways were completed from 2001 to 2010 and were not covered under the 2011 Retrofitting Programme; and
- (b) 26 GS walkways were completed under the 2011 Retrofitting Programme.

## Implementation of 2001 Retrofitting Initiative

2.5 From December 2011 to December 2013, under the 2011 Retrofitting Programme, the HyD awarded five works contracts (Contracts A to E) through open tendering for carrying out retrofitting works for 50 walkways, including the 26 GS walkways with works completed as mentioned in paragraph 2.4(b). Details are shown in Table 4.

**Table 4**

**Contracts A to E for retrofitting works  
(December 2015)**

<b>Contract</b>	<b>Walkway to be retrofitted  (No.)</b>	<b>Contract sum  (\$ million)</b>	<b>Walkway with works completed  (No.)</b>	<b>Contract commencement date</b>	<b>Scheduled completion date  (Note 1)</b>
A	4	44.5	4	December 2011	December 2014
B	6	86.8	6	October 2012	October 2015
C	14	372.4	10	March 2013	September 2017
D	10 (Note 2)	162.4	5	March 2013	March 2016
E	16	329.6	1	December 2013	December 2017
<b>Total</b>	<b>50</b>	<b>995.7</b>	<b>26</b>		

*Source: HyD records*

*Note 1: As of December 2015, the accounts of Contracts A to E had not been finalised.*

*Note 2: Contract D comprised retrofitting works for 11 GS walkways of which one footbridge located in Wong Tai Sin was funded under block vote 7016CX, which was under the control of the Home Affairs Department. The works for this footbridge were not covered under the 2011 Retrofitting Programme. The \$162.4 million contract sum was for retrofitting the 11 walkways.*

### *Slow progress in implementing the 2011 Retrofitting Programme*

2.6 In the 2011-12 Budget published in February 2011, the Government stated that the bulk of the retrofitting works for barrier-free access facilities for GS walkways would be completed by 2016-17. The THB also informed the LegCo Panel on Transport in June 2011 that the majority of the retrofitting works for barrier-free access facilities for GS walkways under the 2011 Retrofitting Programme were scheduled for completion by 2016-17 and the remaining by 2017-18.

2.7 Notwithstanding the Government's commitment in 2011 to complete the majority of the retrofitting works under the 2011 Retrofitting Programme by 2016-17 and the remaining by 2017-18, of the 184 walkways found to be feasible for retrofitting works, as of December 2015, retrofitting works for 94 (51%) walkways were in progress, 17 (9%) were under detailed design and public consultation and 13 (7%) had not commenced (see Figure 1 in para. 2.3). Audit considers it questionable whether the target set in 2011 for completing the related retrofitting works by 2017-18 would be met.

2.8 According to the HyD:

- (a) the progress of the 2011 Retrofitting Programme was affected by factors including longer time required for handling different public opinions, the need to coordinate with other works or development projects and to resolve design and construction problems, such as the need to divert utility cables;
- (b) in November 2015, the THB informed the LegCo Panel on Transport that the lift retrofitting works for 104 walkways (Note 4) were in progress and they were targeted for completion progressively from 2015 to 2018, and the works for 30 walkways were targeted for completion progressively from 2018 onwards; and

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**Note 4:** *In November and December 2015, works for 10 walkways were completed. Therefore, as of December 2015, works for 94 walkways were in progress (see Figure 1 in para. 2.3).*

- (c) according to the 2016 Policy Address, 80% of the retrofitting works items would be completed within three years.

2.9 In Audit's view, the HyD needs to expedite actions to complete the retrofitting works for the outstanding 124 (94 + 17 + 13) GS walkways (see para. 2.7) under the 2011 Retrofitting Programme.

### ***Significant time and cost overrun in implementing retrofitting works items***

2.10 Based on the information provided by the HyD and that kept in the Public Works Programme Information System (Note 5) maintained by the Development Bureau, Audit noted that 5 (Subways A and B and Footbridges A to C) of the 34 works items completed from 2001 to 2010 (see para. 2.4(a)) had significant cost-overrun and works slippages, as follows:

- (a) ***Subways A and B carried out under a project.*** The lift retrofitting works were carried out under a project (with an original approved project estimate (APE) of \$57.7 million) to address the increased pedestrian flow and to enhance pedestrian safety on a road. Four lifts were to be installed under the project. Audit noted that the project involved cost overrun of \$9.3 million (16% of the APE). In December 2009, the Financial Services and the Treasury Bureau approved an increase in the APE from \$57.7 million to \$67 million, partly due to additional works for utility diversions;
- (b) ***Footbridges A and B carried out under a project.*** The project (with an APE of \$71.4 million) included the renovation of Footbridges A and B and the replacement of footbridge ramps by lifts to provide more space for greening and to facilitate pedestrian movement. The actual works completion date was 1,088 days later than the scheduled completion date. The contractor had submitted claims for additional costs; and

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**Note 5:** *Works departments are required to input specified information of works projects funded under a project vote of the Capital Works Reserve Fund into the System.*

## Implementation of 2001 Retrofitting Initiative

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- (c) *Footbridge C funded under block vote 6100TX.* The actual works completion date was 730 days later than the scheduled completion date (see Case 1).

### Case 1

#### **Works delay due to interfacing problems with other works projects in same location (Footbridge C)**

1. In December 2009, the THB approved \$17.66 million for carrying out works to retrofit two lifts (Lifts A and B) for a footbridge (Footbridge C) funded under block vote 6100TX. In May 2010, the HyD awarded a contract to a contractor in the sum of \$15.2 million for carrying out the retrofitting works. Works commenced in May 2010 and were scheduled (under the contract) for completion in November 2011. As it transpired, retrofitting works for Lift A were completed and it was open for public use in March 2012. However, works for Lift B were only completed and it was open for use in November 2013, 20 months later than the opening date of Lift A. In August 2013, the THB approved increasing the APE of the works item from \$17.66 million by \$6.72 million (38%) to \$24.38 million for meeting the prolongation cost and the increase in price fluctuations.

2. The retrofitting works under the contract, which were scheduled for completion within 540 days, had been delayed by 730 days. According to the HyD's paper submitted in May 2013 to the THB for seeking approval for increasing the APE of the works item:

- (a) the lift retrofitting works were delayed by works of an interfacing water-pipe replacement project managed by the Water Supplies Department (WSD). Both the footbridge and water pipe projects required temporary occupation of a two-lane carriageway with one lane to be open to traffic at any time;
- (b) before commencement of the lift retrofitting works, the HyD had coordinated with the WSD which had originally scheduled the water pipe project to be completed by December 2010. The HyD planned to carry out the lift retrofitting works after the WSD completing the water pipe works; and
- (c) the WSD only completed the works in October 2012, with a delay of 22 months.

3. Comments of the HyD and the WSD on this case are summarised at Appendix B.

### Case 1 (Cont'd)

#### *Audit comments*

4. Audit considers it unsatisfactory that Lift B was only commissioned 20 months after commissioning of Lift A, rendering Footbridge C not a truly barrier-free access facility during the 20-month period. The HyD needs to draw lessons from this works item and, in carrying out a similar works item in future, take measures to minimise works interfacing problems with another works project at the same location.

*Source: HyD and WSD records*

2.11 In March 2016, the HyD informed Audit that:

- (a) for Subways A and B, the increase in project cost was due to the higher-than-expected tender prices, higher-than-expected contract price fluctuations due to substantial inflation in construction material prices from 2008 to 2009, and additional works for drainage and water mains diversions; and
- (b) for Footbridges A and B, the project delay was mainly due to the contractor's delay in supplying materials in conformity with the contract specifications.

2.12 Of the 26 GS walkways having retrofitting works completed as of December 2015 (see para. 2.4(b)), works for 16 walkways were funded under block vote 6101TX, and their APEs ranged from \$11.61 million to \$47.3 million. For the remaining 10 walkways, works were funded under project vote 6167TB and they did not have individual APEs. Of the 26 GS walkways, as of December 2015, the actual works completion dates of 20 walkways (77%) were later than the contract completion dates, with slippages ranging from 14 to 422 days (on average 156 days) due to utility diversion problems found after awarding works contracts in some cases. In this connection, the contract time for completing retrofitting works for the 26 GS walkways ranged from 365 to 1,095 days, depending on the works location and complexity. Audit selected the following two completed works items for review:

## **Implementation of 2001 Retrofitting Initiative**

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- (a) a completed works item involving the longest works slippage (Footbridge D and Subway C — see Case 2); and
- (b) a completed works item involving the largest cost overrun (Subway D — see Case 3).

### **Case 2**

#### **Delays of two works items due to utility diversion problem (Footbridge D and Subway C)**

1. Retrofitting works for a footbridge (Footbridge D) funded under project vote 6167TB involved the construction of two lifts which were scheduled (under the contract) for completion within 730 days. However, there was a slippage of 422 days in completing the retrofitting works. During the preliminary design and feasibility study, HyD consultant noted that the proposed locations of the two lifts would be in conflict with some underground utilities, including gas mains, power cables and tele-communication cables, and diversions were necessary in order to vacate space for the foundation works for the lift installation. After commencement of Footbridge D works, five utility companies submitted utility diversion plans with timeframes ranging from four to five years. Subsequently, the works contractor proposed to use a common trench to accommodate the underground utilities. The proposal was subsequently agreed by the utilities companies. This works item was substantially completed in December 2015 and took 1,152 days (or 3.2 years) to finish. According to the works contractor, consultation with the utility companies and final agreement of a solution for utility diversions had caused delays to the works.

2. Separately, retrofitting works for a subway (Subway C) funded under block vote 6101TX involved the construction of a lift which was scheduled for completion within 641 days, but there was a slippage of 367 days in completing the works. In order to construct the lift, an existing staircase would need to be demolished and reconstructed. After commencement of works, the works contractor found that signal cables located underneath the staircase would affect the demolition works. Subsequent to the diversion of the signal cables, the works contractor found that the construction of a proposed pillar box was obstructed by the diverted cables. As a result, HyD consultant revised the location of the pillar box to avoid conflict with the underground cables. This works item was substantially completed in December 2015 and took 1,008 days (or 2.8 years) to finish. As of December 2015, the contractor had submitted claims for the works item. According to the works contractor, the diversion of the underground signal cables had caused a delay to the works.



### Case 2 (Cont'd)

3. In March 2016, the HyD informed Audit that, in implementing the 2011 Retrofitting Programme:

- (a) according to the established procedures and good practices, HyD consultants would consult the utility companies concerned on the locations of their utilities and the programme required for utility diversions. Such information would be incorporated into the contract documents and the contract period would take into account such information. Given the utility density in Hong Kong, it was not uncommon that the actual number, extent and locations of utilities on sites could be different from those shown in the records of utilities companies, resulting in unexpected obstruction to the works and the need for diversion solutions; and
- (b) a contractor under the related works contract could be granted extensions of time (but not additional payments) for delays arising from unforeseen utility works. However, if there was a change in design of the proposed works arising from a conflict between existing utilities and the works design, the contractor might be entitled to claim for both extensions of time and additional payments.

#### *Audit comments*

4. In Audit's view, for works requiring utility diversions (as identified in feasibility studies) in implementing a works project in future, the HyD needs to endeavour to find solutions before letting related works contracts.

*Source: HyD records*

### Case 3

#### Works delay due to contract variations after contract award (Subway D)

1. Retrofitting works for Subway D funded under block vote 6101TX involved the construction of a lift (the other end of Subway D was connected to other subways having been provided with lifts and ramps). The APE of retrofitting works for Subway D was \$47.3 million and the works were scheduled (under the contract) to complete within 608 days. However, the works took 844 days (or 2.3 years) to complete.

2. As specified in the works contract, an air-conditioning system should be installed for the lift car. Subsequent to the works contractor submitting to the HyD the lift installation drawings for approval, the HyD informed the contractor that he should adopt a mechanical ventilation scheme for the lift instead of an air-conditioning system as specified in the contract. However, one year later, after conducting a cost-benefit analysis on the contractor's cost estimates, the HyD informed the contractor that he should revert back to adopting an air-conditioning system instead of a mechanical ventilation system. According to the contractor, the change in the ventilation system had caused a delay to the works. As of December 2015, the contractor had submitted claims for the works item.

3. In March 2016, the HyD informed Audit that:

- (a) the HyD instructed the contractor of Subway D to change the original design of air conditioning to mechanical ventilation for the purpose of energy saving which would also result in cost saving;
- (b) the HyD later cancelled the variation order after having detailed discussions with the contractor, because the variation would not be cost-effective given the cost and possible time implications; and
- (c) the HyD considered it as an isolated case. Some other similar projects were successful in changing the air conditioning system to mechanical ventilation system.

#### *Audit comments*

4. In Audit's view, in implementing a works project in future, the HyD needs to take measures to avoid unnecessary contract variations after contract award.

*Source: HyD records*

2.13 Furthermore, Audit also selected one (Footbridge E) of the 94 works-in-progress items for examination (see Case 4).

### Case 4

#### **Excessive footbridge settlement due to concurrent carrying out of two works projects in close proximity (Footbridge E)**

1. After commencing lift retrofitting works for Footbridge E funded under block vote 6101TX, the HyD consultant noted that there were cracks on the bridge structure and damage to the expansion joints, and the works contractor suspended works immediately. The HyD survey check found that there was excessive settlement of Footbridge E. Based on the HyD consultant's investigation report, the likely cause of the excessive settlement of Footbridge E was the cumulative effect of vibration caused by the works at Footbridge E and works by a utility company nearby.

2. The contractor later resumed works after taking remedial measures including carrying out grouting works. According to the HyD, the ground settlement had been stable with no further adverse development. As of December 2015, the contractor had submitted claims for the works item.

#### ***Audit comments***

3. In Audit's view, in implementing works for a footbridge in future where another works project is being carried out in close proximity, the HyD needs to take measures to prevent excessive footbridge settlement due to the cumulative effect of vibration caused by works of the two projects.

*Source: HyD records*

2.14 As of December 2015, retrofitting works for 124 walkways were in progress or had not commenced (see Figure 1 in para. 2.3). Audit examination of Cases 1 to 4 revealed that there were lessons to be learnt from the lift retrofitting works. In Audit's view, the HyD needs to conduct reviews of other completed works items involving significant cost overrun or works slippages with a view to drawing lessons for improvement.

### Audit recommendations

2.15      **Audit has *recommended* that the Director of Highways should:**

- (a)      **expedite actions to complete the outstanding retrofitting works under the 2011 Retrofitting Programme;**
- (b)      **take measures to avoid carrying out a works project concurrently with another works project at the same location in future;**
- (c)      **for works requiring utility diversions in implementing a works project in future, endeavour to find solutions before letting related works contracts;**
- (d)      **in implementing a works project in future, take measures to avoid unnecessary contract variations after contract award;**
- (e)      **in implementing works for a footbridge in future where another works project is being carried out in close proximity, take measures to prevent excessive footbridge settlement due to the cumulative effect of vibration caused by works of the two projects; and**
- (f)      **conduct reviews of completed GS walkway retrofitting works items involving significant cost overrun or works slippages with a view to drawing lessons for improvement.**

### **Response from the Government**

2.16 The Director of Highways agrees with the audit recommendations. He has said that the HyD will:

- (a) expedite actions to complete the outstanding retrofitting works under the 2011 Retrofitting Programme so as to meet the latest commitment made in the 2016 Policy Address;
- (b) after balancing the related considerations, take measures to avoid carrying out a works project concurrently with another works project at the same location in future;
- (c) endeavour to arrange for utility diversions before contract commencement, and to allow for sufficient time for diversion of underground utilities in future contract programmes; and
- (d) issue letters to HyD consultants involved in retrofitting works to remind them of the need to implement the audit recommendations in paragraph 2.15(a) to (e).

### Walkways considered infeasible for retrofitting works

2.17 As shown in Table 3 in paragraph 2.2, as of December 2015, 92 GS walkways were considered to be infeasible for carrying out retrofitting works. Based on HyD records, Audit analysis of HyD justifications for not carrying out retrofitting works for these 92 walkways are shown in Table 5.

**Table 5**

**HyD justifications for not carrying out retrofitting works for 92 walkways  
(December 2015)**

Justification	Walkway	
	(No.)	(Percentage)
(a) Walkways situated on or alongside sloping terrains where barrier-free access facilities could not be provided unless large-scale site formation works were carried out	53	58%
(b) Insufficient space for retrofitting a lift or a standard ramp	27	29%
(c) Retrofitting works likely affecting existing underground utilities and insufficient space for diverting affected facilities	6	7%
(d) Retrofitting works likely affecting existing underground railway facilities	3	3%
(e) Retrofitting works likely affecting structural integrity of existing structures	3	3%
Total	92	100%

*Source: Audit analysis of HyD records*

### ***No documented feasibility study reports on some GS walkways considered infeasible for retrofitting works***

2.18 As shown in Table 5 in paragraph 2.17, 92 walkways were found to be infeasible for carrying out lift/ramp retrofitting works. Audit noted that feasibility study reports were only prepared for 36 walkways (39%) by HyD consultants. Regarding the remaining 56 (61%) walkways, the feasibility studies were carried out by HyD in-house staff. According to the HyD, of the 56 walkways, location plans, site photographs and justifications for not carrying out retrofitting works for 37 walkways were recorded in the HyD's document archives but the related records for the other 19 walkways could not be located. In Audit's view, the HyD needs to properly document the findings of the technical feasibility study for every walkway which has been examined for retrofitting works.

### ***Some retrofitting works originally found to be infeasible by the HyD but later found to be feasible by the CEDD***

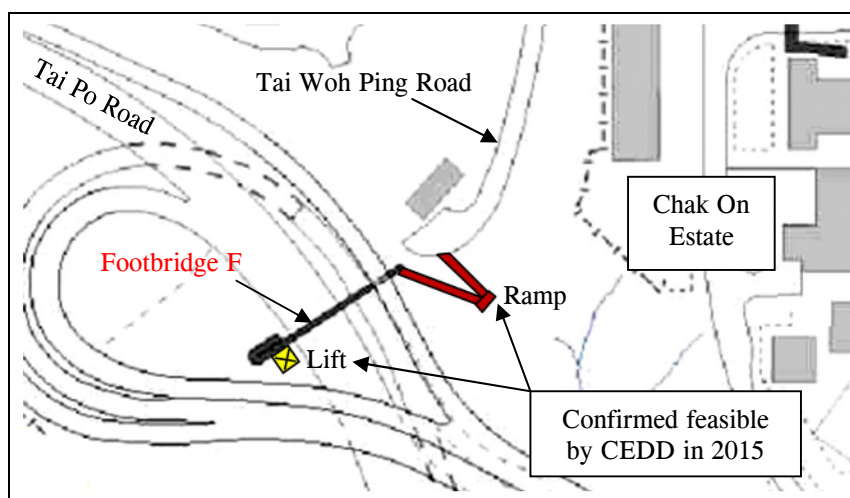
2.19 Audit examination revealed that, notwithstanding that HyD technical feasibility studies under the 2001 Retrofitting Initiative had found that it was infeasible to carry out retrofitting works for a footbridge in Sham Shui Po (Footbridge F — see Case 5), a footbridge in Wan Chai (Footbridge G — see Case 6) and a subway in Wan Chai (Subway E — see Case 7), the CEDD later found in its feasibility studies conducted between February 2014 and April 2015 under the 2012 Expanded Programme that it was technically feasible to carry out the works for these three walkways by adopting alternative solutions.

### Case 5

#### Footbridge F in Sham Shui Po

1. Footbridge F is located in Sham Shui Po District across Tai Po Road near Tai Woh Ping Road (see Figure 2). According to the HyD, Footbridge F is the main pedestrian route to the nearby Chak On Estate.

**Figure 2**



2. In April 2011, a feasibility study carried out by HyD in-house staff found that, unless large-scale site formation works were carried out, barrier-free access facilities could not be provided for Footbridge F because it was situated alongside a sloping terrain. In June 2011, the THB informed LegCo Panel on Transport that it was infeasible to retrofit lifts or standard ramps for Footbridge F because of insufficient space.
3. In July 2014, in response to an enquiry from two Sham Shui Po DC Members, the HyD stated that it was infeasible to carry out lift retrofitting works for Footbridge F due to limited space. In October 2014, the Sham Shui Po DC nominated Footbridge F as one of the priority items of that district under the 2012 Expanded Programme, and requested the CEDD to conduct a feasibility study on the retrofitting works. In April 2015, the CEDD informed the Sham Shui Po DC that it was feasible to retrofit a lift and a ramp for Footbridge F (see Figure 2). In late 2015, CEDD consultant completed the detailed design work for Footbridge F and estimated that the works would cost \$51.1 million.



### Case 5 (Cont'd)

4. In March 2016, the HyD informed Audit that:
- (a) the existing Tai Woh Ping Road connecting Footbridge F to Chak On Estate was too steep to be provided with a barrier-free environment. Large-scale site formation works would have to be carried out to make the road barrier-free, but there was insufficient space for such works. In the event, the retrofitting works for Footbridge F were considered infeasible in 2011;
  - (b) while constructing the proposed lift and ramp for Footbridge F were confirmed to be feasible by the CEDD under the 2012 Expanded Programme which could benefit the elderly and the needy persons, pedestrians would still need to access Chak On Estate via the existing Tai Woh Ping Road; and
  - (c) in view of the large quantity of lift retrofitting works, the HyD had been implementing the works gradually using the available resources.

#### *Audit comments*

5. Footbridge F, which was not provided with lifts, ramps or alternative crossings, fell within the 2001 Retrofitting Initiative. However, retrofitting works for the footbridge were only taken forward after nomination by the Sham Shui Po DC under the 2012 Expanded Programme.

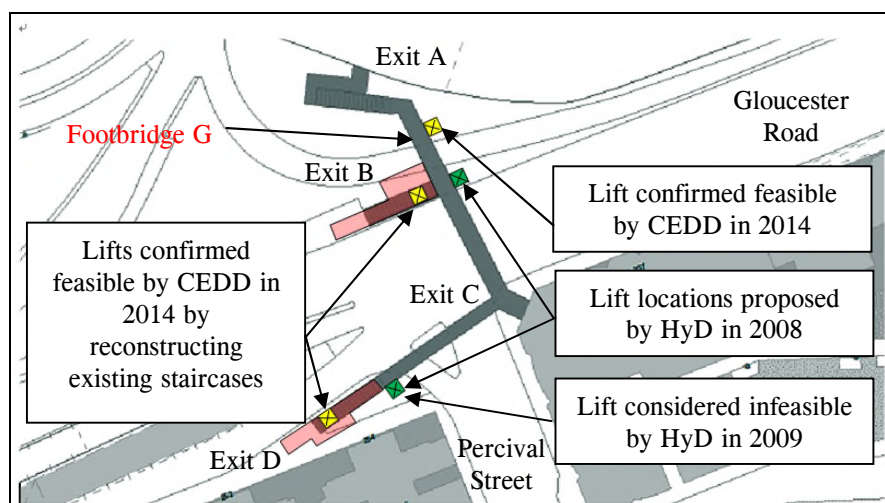
*Source: HyD and CEDD records*

### Case 6

#### Footbridge G in Wan Chai

1. Footbridge G is located in Wan Chai District across Gloucester Road and Percival Street having four exits (see Figure 3).

Figure 3



2. In February 2008, the HyD engaged a consultant (Consultant A) to investigate the feasibility of retrofitting barrier-free access facilities for 50 GS walkways, including Footbridge G and Subway E (see Case 7), at a lump-sum fee of \$5.6 million. The HyD requested Consultant A to study the feasibility of retrofitting lifts at Exits B and D of Footbridge G (see Figure 3).
3. In June 2009, the HyD informed the Wan Chai DC that, while it was feasible to retrofit a lift at Exit B, lift retrofitting works at Exit D were infeasible because the proposed lift location would conflict with two underground sewers and there was insufficient space to divert the sewers elsewhere. At the same meeting, the DC Members enquired whether the HyD had considered demolishing the existing staircase at Exit D and reconstructing a lift and a staircase at the same location. In reply, HyD representative said that this option was infeasible because it would extend the staircase length at Exit D, which would seriously narrow the adjacent footpath.

### Case 6 (Cont'd)

4. In June 2011, the THB informed LegCo Panel on Transport that it was infeasible to retrofit barrier-free access facilities for Footbridge G because the works would affect existing underground utilities and there was insufficient space for diverting them.

5. In February 2013, the Wan Chai DC nominated Footbridge G as one of the priority items of that district under the 2012 Expanded Programme.

6. In February 2014, the CEDD informed the Wan Chai DC that it was feasible to retrofit a lift at Exit A, and two other lifts could be respectively retrofitted at Exits B and D by demolishing and reconstructing the existing staircases at the locations (see Figure 3). The CEDD considered that the underground sewers and the footpath narrowing issue (as indicated by the HyD in 2009 — see para. 3 above) would not affect the lift retrofitting works at Exit D, because it could reconstruct the existing staircase to provide space for a lift.

7. In November 2015, a CEDD contractor commenced retrofitting works (under Contract H — see Table 10 in para. 4.16) for 10 walkways, including the works at Exit D of Footbridge G. The APE for the works at Exit D of Footbridge G was \$31.6 million. According to the CEDD, the works at Exits A and B would be carried out in or after 2021 following the completion of a nearby railway project.

#### *Audit comments*

8. The HyD, in consultation with the CEDD, needs to investigate why the HyD's feasibility study in 2009 found it infeasible to retrofit a lift at Exit D.

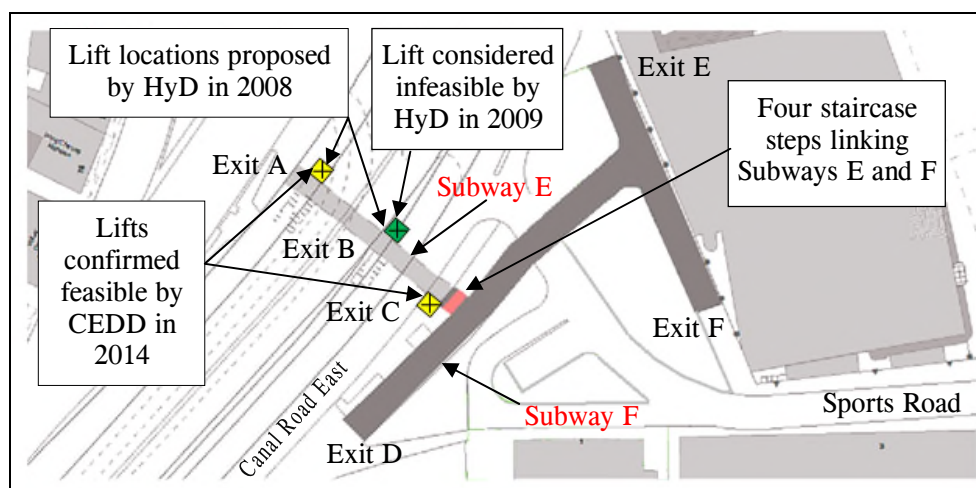
*Source: HyD and CEDD records*

### Case 7

#### Subway E in Wan Chai

1. Subway E is located in the Wan Chai District across Canal Road East near Sports Road having staircases at Exits A and B, and the subway is connected to another subway (Subway F) at Exit C by four staircase steps (see Figure 4).

**Figure 4**



2. In February 2008, the HyD engaged Consultant A (see para. 2 in Case 6) to study the feasibility of retrofitting lifts at Exits A and B. In June 2009, the HyD informed the Wan Chai DC that, while it was feasible to retrofit a lift at Exit A, retrofitting a lift at Exit B was infeasible due to insufficient headroom to accommodate the lift shaft.
3. In February 2011, the HyD informed the Wan Chai DC that the four staircase steps at Subway F were not suitable for use by wheelchair users, and proposed to modify part of the four staircase steps to a ramp.
4. In June 2011, the THB informed LegCo Panel on Transport that it was infeasible to retrofit lifts or standard ramps for Subway E because of insufficient space.
5. In February 2013, the Wan Chai DC nominated Subway E as one of the priority items of that district under the 2012 Expanded Programme. In February 2014, the CEDD informed the Wan Chai DC that it was feasible to retrofit a lift at Exit A and another lift at Exit C of Subway E (see Figure 4). In April 2015, a CEDD contractor commenced retrofitting works (under Contract G — see Table 10 in para. 4.16) for 8 walkways, including Subway E. The APE for the works at Subway E was \$47 million.

### Case 7 (Cont'd)

6. In February 2016, Audit site visit found that works had not been carried out to convert part of the four staircase steps at Subway F into a ramp.

7. In March 2016, the HyD informed Audit that:

- (a) since a lift could not be installed at Exit B, retrofitting works for Subway E were considered as infeasible in 2009 due to physical constraints in providing lifts for both Exits A and B;
- (b) while the retrofitting works for Subway E had been confirmed to be feasible by the CEDD by providing a lift at Exit A and installing an additional lift at Exit C, it was still not feasible to install a lift at Exit B;
- (c) since the proposed lift at Exit C of Subway E would serve as a barrier-free access facility (so that needy persons would not have to negotiate the four staircase steps at Subway F to use the subways), modification works of the four steps into a ramp were considered no longer necessary; and
- (d) in view of the large quantity of lift retrofitting works, the HyD had been implementing the works gradually using the available resources.

#### *Audit comments*

8. Subway E, which was not provided with lifts, ramps or alternative crossings, fell within the 2001 Retrofitting Initiative. However, retrofitting works for the subway were only approved after nomination by the Wan Chai DC under the 2012 Expanded Programme.

9. The HyD needs to inform the Wan Chai DC of its decision of not carrying out modification works for the four staircase steps at Subway F (see para. 7(c) above).

*Source: HyD and CEDD records*

## Implementation of 2001 Retrofitting Initiative

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2.20 In Audit's view, the HyD needs to take measures to ensure that lift retrofitting works are implemented for GS walkways not having been provided with barrier-free access facilities (if technically feasible) under the 2001 Retrofitting Initiative. The HyD also needs to re-examine the justifications for not carrying out retrofitting works for the 92 walkways previously found to be infeasible for such works (see Table 5 in para. 2.17).

### *LegCo and DCs not fully informed of reasons for not carrying out retrofitting works for some walkways*

2.21 Of the 92 GS walkways considered infeasible for retrofitting barrier-free access facilities, Audit examination revealed that, up to February 2016, the HyD had only informed the related DCs of the reasons for not carrying out retrofitting works for 21 (23% of 92) walkways. When informing the DCs of the reasons, the HyD generally provided a discussion paper (explaining the feasibility of retrofitting works at each exit of a walkway, together with a location map and a site photograph) for DCs' information and deliberation.

2.22 In June 2011, the THB submitted a paper to LegCo Panel on Transport providing reasons for not carrying out retrofitting works for 52 walkways. However, as of February 2016, LegCo had not been informed of reasons for not carrying out retrofitting works for another 43 walkways (Note 6) subsequently found by the HyD. In Audit's view, for enhancing transparency and public accountability, after re-examining the justifications for not carrying out retrofitting works for 92 walkways (see para. 2.20), the HyD needs to inform LegCo and the related DCs of the examination findings.

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**Note 6:** *Three walkways previously considered to be infeasible for retrofitting works were subsequently having the works confirmed to be feasible under the 2012 Expanded Programme (see para. 2.19). Therefore, 95 (92 + 3) walkways were considered infeasible for retrofitting works from 2001 to 2013 (see para. 2.25) and reasons for 43 (95 less 52) walkways found to be infeasible for the works had not been provided to LegCo.*

### *Lack of guidelines on determining the feasibility of carrying out retrofitting works for walkways*

2.23 Under the Disability Discrimination Ordinance effective from 1996, it is unlawful for a person to discriminate against another PWD by refusing to allow that other person access to, or the use of, any premises or facilities that the public is entitled, except where any alteration to the premises to provide such access or provision of such facilities would impose unjustifiable hardship on the providers of such facilities (see para. 1.3). In this connection, Audit noted that, in 2004, in response to a complaint about discrimination in respect of the lack of access for PWDs at a footbridge in the Yau Tsim Mong District, the HyD accelerated action to carry out works to retrofit two lifts for that footbridge.

2.24 According to the HyD:

- (a) physical constraints can be construed as unjustifiable hardship for lift retrofitting works under the Disability Discrimination Ordinance; and
- (b) taking into account the physical constraints, the HyD has reviewed the feasibility of carrying out lift retrofitting works for all GS walkways including those completed before the enactment of the Disability Discrimination Ordinance.

2.25 From 2001 to 2013, HyD feasibility studies found that 95 walkways were not feasible for carrying out lift/ramp retrofitting works under the 2001 Retrofitting Initiative mainly for reasons of site constraints or existence of underground utilities. Between February 2014 and April 2015, CEDD feasibility studies carried out under the 2012 Expanded Programme found that three of the 95 walkways were feasible for carrying out retrofitting works (see Cases 5 to 7 in para. 2.19).

2.26 In Audit's view, in order to ensure that all public GS walkways not having been installed with barrier-free access facilities are eligible for exemption from retrofitting works for the facilities under the Disability Discrimination Ordinance, the HyD needs to issue guidelines on determining whether a public GS walkway is feasible for carrying out lift/ramp retrofitting works.

### *Lack of directional signs on nearby barrier-free access facilities*

2.27 According to the Transport Planning and Design Manual issued by the TD, although the general practice is to avoid the over-use of traffic signs (as the signs together with any support posts can themselves cause obstruction), a more liberal attitude should be adopted wherever possible to provide useful information for PWDs to help them identify routes suitable for their use (see examples in Photographs 4 and 5).

#### **Photographs 4 and 5**

##### **Directional signs on nearby barrier-free access facilities**



*Source: Photographs taken by Audit in February 2016*

2.28 In March 2009, in response to a LegCo Member's enquiry, the THB informed LegCo that, to facilitate PWDs who were unable to use footbridges not being provided with barrier-free access facilities, the Government would consider installing signs near the footbridges providing information on nearby at-grade crossing facilities having regard to the actual situation.

2.29 In this connection, Audit site visits from December 2015 to March 2016 to 15 GS walkways (see Appendix C) not being provided with barrier-free access facilities found that no directional sign was erected near all the 15 walkways to advise needy persons of nearby barrier-free access facilities (see an example in Case 8).



## Case 8

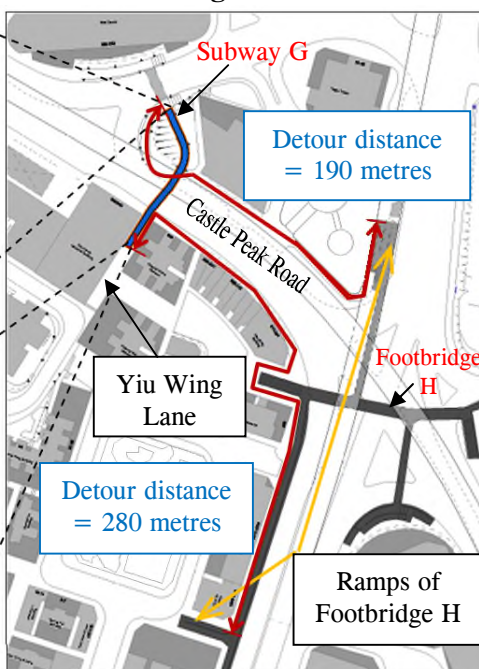
### Subway G in Kwai Tsing

1. Subway G is located in Kwai Tsing District across Castle Peak Road near Yiu Wing Lane (see Figure 5).

**Photographs 6 and 7**



**Figure 5**



2. In August 2011, the HyD informed the Traffic and Transport Committee of the Kwai Tsing DC that it was infeasible to retrofit barrier-free access facilities for Subway G mainly because of insufficient space. In response, a Committee member suggested that the HyD should erect directional signs to guide needy persons to make use of the barrier-free access facilities of a nearby footbridge (Footbridge H in Figure 5) for road-crossing.
3. In February 2016, Audit site visit found that no directional sign was erected near Subway G to advise needy persons of the nearby ramps at Footbridge H for crossing Castle Peak Road.

#### ***Audit comments***

4. The HyD, in consultation with the TD, needs to erect directional signs (providing information on nearby barrier-free access facilities) near walkways not being provided with such facilities.

*Source: HyD records and photographs taken by Audit in February 2016*

### Audit recommendations

- 2.30      **Audit has *recommended* that the Director of Highways should:**
- (a)      **take measures to ensure that findings of technical feasibility studies for walkway retrofitting works are properly documented;**
  - (b)      **take measures to implement retrofitting works under the 2001 Retrofitting Initiative (if technically feasible to do so) for all GS walkways not being provided with barrier-free access facilities;**
  - (c)      **in consultation with the Director of Civil Engineering and Development, investigate why the HyD's feasibility study in 2009 found it infeasible to retrofit a lift at Exit D of Footbridge G;**
  - (d)      **inform the Wan Chai DC of the decision of not carrying out modification works for the four staircase steps at Subway F;**
  - (e)      **re-examine the justifications for not carrying out retrofitting works for walkways found under the 2001 Retrofitting Initiative to be infeasible for such works, and inform LegCo and the related DCs of the examination findings;**
  - (f)      **issue guidelines on determining whether a public GS walkway is feasible for carrying out lift/ramp retrofitting works; and**
  - (g)      **in consultation with the Commissioner for Transport, erect directional signs providing information on nearby barrier-free access facilities near GS walkways not being provided with such facilities.**

## **Response from the Government**

2.31 The Director of Highways agrees with the audit recommendations. He has said that the HyD will:

- (a) issue guidelines on documentation of investigation findings of retrofitting works;
- (b) conduct a review of all GS walkways not being provided with barrier-free access facilities and will take measures to implement retrofitting works if justifiable to do so;
- (c) for paragraph 2.30(d), inform the Wan Chai DC during the next round of consultation for the forthcoming lift retrofitting works; and
- (d) for paragraph 2.30(g), liaise with the TD to take appropriate actions.

## **PART 3: IMPLEMENTATION OF 2012 EXPANDED PROGRAMME**

3.1 This PART examines actions taken by the HyD and the CEDD in implementing the 2012 Expanded Programme.

### **Public proposals on retrofitting lifts for GS walkways**

3.2 According to the THB, since 2001, the Government has taken actions to retrofit ramps and lifts for public GS walkways not having been installed with standard barrier-free access facilities. Under the 2012 Expanded Programme, as long as site conditions permit, retrofitting of lifts for a GS walkway would be considered even when a standard ramp has already been installed. The objective is to bring further convenience to the elderly, PWDs and the general public in using public GS walkways.

3.3 According to the THB:

- (a) the Government's transport policy is to factor in "walkability" as complementary to the overall mobility system through careful planning and provision of adequate pedestrian facilities. The installation of lifts for walkways would allow those in need, including elderly persons and PWDs, to move around the community with greater ease;
- (b) this initiative also supports the Government's commitment to provide an age-friendly environment, which is pertinent to the promotion of active ageing to unleash and harness the social capital of senior citizens; and
- (c) the 2012 Expanded Programme adopts a "bottom-up" model whereby each DC was invited to select public GS walkways for priority implementation. DCs should be in the best position to nominate up to three walkways by prioritising the implementation of the retrofitting works within the district according to the actual local requirements of the districts.

3.4 Between August and October 2012, the Government invited members of the public to submit proposals for GS walkways for lift retrofitting works. In November 2012, the THB informed the LegCo Panel on Transport that each of the 18 DCs would be invited to select three walkways from the public proposals received for priority implementation of lift retrofitting works. In January 2013, the THB informed the LegCo Public Works Subcommittee that the Government had received public proposals on retrofitting lifts for 253 walkways. In the first half of 2013, the HyD and the CEDD invited each of the 18 DCs to nominate three walkways in its district from 219 walkways (see Table 6) proposed by the public (hereinafter referred to as List of Public Proposed Walkways — PPW List) for priority implementation of lift retrofitting works.

## Implementation of 2012 Expanded Programme

**Table 6**  
**Public proposed walkways for lift retrofitting works**  
**(2013)**

District	Public proposed walkways				
	As of January 2013	Subsequently received before consulting DCs	Involving two structures (Note 1)	Not provided to DCs (Note 2)	Included in PPW List
	(a)  (No.)	(b)  (No.)	(c)  (No.)	(d)  (No.)	(e) = (a) + (b) – (c) – (d) (No.)
Tuen Mun	32	2		4	30
Sha Tin	23				23
Tsuen Wan	21		1	2	18
North	20	2	4		18
Yuen Long	19		1		18
Eastern	18		2	2	14
Kwai Tsing	17	1		2	16
Central and Western	16			4	12
Kwun Tong	14			2	12
Wan Chai	13			6	7
Kowloon City	12			3	9
Wong Tai Sin	11			1	10
Southern	10			2	8
Tai Po	8				8
Yau Tsim Mong	8			2	6
Sham Shui Po	6	1		2	5
Sai Kung	4				4
Islands	1				1
Total	253	6	8	32	219

Source: Audit analysis of HyD records

Note 1: For example, a footbridge consisting of two bridge spans may be considered as two footbridges which are assigned with two structure numbers by the HyD. However, during DC consultation under the 2012 Expanded Programme, this footbridge with two spans was considered as one walkway.

Note 2: The HyD did not provide DCs with information of 32 walkways proposed by the public for DC nomination (see para. 3.15).

***Low peak-hour pedestrian flow of some nominated walkways***

3.5 In the PPW List provided to DCs comprising 219 walkways, the HyD indicated that three walkways had been closed or already installed with lifts, 28 walkways had already been included under the 2011 Retrofitting Programme and nine walkways had been found technically infeasible for retrofitting works. Details are shown in Table 7.

**Table 7**  
**Public proposed walkways for DC nomination**  
**(2013)**

District	Public proposed walkways				
	Included in PPW List	Already closed or installed with lifts	Included under 2011 Retrofitting Programme	Found technically infeasible	For DC nomination
	(a)  (No.)	(b)  (No.)	(c)  (No.)	(d)  (No.)	(e) = (a) – (b) – (c) – (d) (No.)
Tuen Mun	30		2		28
Sha Tin	23	1	1		21
Tsuen Wan	18		5		13
North	18		5		13
Yuen Long	18	1			17
Eastern	14		2		12
Kwai Tsing	16		1		15
Central and Western	12		1	7	4
Kwun Tong	12		2	2	8
Wan Chai	7		2		5
Kowloon City	9				9
Wong Tai Sin	10		2		8
Southern	8		3		5
Tai Po	8		1		7
Yau Tsim Mong	6		1		5
Sham Shui Po	5	1			4
Sai Kung	4				4
Islands	1				1
Total	219	3	28	9	179

Source: Audit analysis of HyD records

## **Implementation of 2012 Expanded Programme**

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3.6 To facilitate DCs' nomination of walkways for lift retrofitting works, the HyD provided them with pertinent information of each of the 179 public proposed walkways, including:

- (a) pedestrian-flow information;
- (b) a map showing locations of proposed lifts; and
- (c) the number of public proposals received.

3.7 As of December 2015, the 18 DCs together had nominated 53 walkways for lift retrofitting works. Details are as follows:

- (a) for Eastern DC, it originally nominated three walkways from the PPW List, but one was later found by the CEDD as infeasible for lift retrofitting works. The DC nominated another walkway from the List which was not recommended by the CEDD for lift retrofitting works because the works were complicated and the estimated cost would exceed \$75 million. The DC agreed with the CEDD's view and subsequently nominated another walkway from the List (totalled three walkways);
- (b) for Wan Chai DC, it nominated two walkways from the List and one walkway outside the List (totalled three walkways);
- (c) for Islands DC, it nominated the only one walkway from the List and two outside the List (totalled three walkways);



- (d) for Sham Shui Po DC, it originally nominated three walkways from the List, but two were later found by the CEDD as infeasible or not recommended by the CEDD (due to site constraints and objections received) for lift retrofitting works. It subsequently nominated two walkways outside the List, but the CEDD later did not recommend carrying out retrofitting works for one of the walkways and the DC agreed not to proceed with the related retrofitting works (Note 7 — totalled two walkways); and
- (e) the remaining 14 DCs each nominated three walkways from the PPW List for lift retrofitting works (totalled 42 walkways).

3.8 Accordingly, of the 53 (3 + 3 + 3 + 2 + 42) walkways nominated by the 18 DCs, 49 were nominated from the PPW List and four outside the List.

3.9 To assist DCs in nominating walkways in their districts for lift retrofitting works, the HyD and the CEDD provided them with the pedestrian-flow information. Of the 179 walkways included in the PPW List, four were later found by the CEDD as infeasible or not recommended by the CEDD for retrofitting works (see para. 3.7(a) and (d)). Table 8 summarises the pedestrian-flow statistics of the 175 (179 less 4) walkways and those of 49 walkways (see para. 3.8) nominated by the 18 DCs for retrofitting works.

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**Note 7:** *After consulting and obtaining agreement of the Sham Shui Po DC, the CEDD did not proceed with implementing the DC's proposal of retrofitting a lift for a GS walkway due to the availability of a nearby at-grade crossing, the provision of another nearby at-grade crossing in the near future, and the estimated low utilisation of the proposed lift based on views of and survey results provided by a nearby university.*

**Table 8**

**Pedestrian-flow statistics of walkways included in PPW List**

<b>Peak-hour pedestrian flow in 2013 (No.)</b>	<b>Public proposed walkways</b>	
	<b>For DC nomination (No.)</b>	<b>Nominated by DCs (No.)</b>
6,001 to 9,988	5	5
5,001 to 6,000	3	2
4,001 to 5,000	3	2
3,001 to 4,000	3	1
2,001 to 3,000	8	3
1,001 to 2,000	27	14
801 to 1,000	16	6
601 to 800	10	2
401 to 600	14	3
201 to 400	34	9
0 to 200	52	2 (Note)
<b>Total</b>	<b>175</b>	<b>49</b>

*Source: Audit analysis of HyD and CEDD records*

*Note: The peak-hour pedestrian-flow statistics of the two walkways nominated by DCs were 69 (Elevated Walkway A in Southern District) and 112 (Footbridge I in Sai Kung District) respectively.*

3.10 Under the 2012 Expanded Programme, each DC was invited to nominate three walkways in its district for lift retrofitting works. However, while the 18 DCs were each invited to nominate three walkways from the PPW List, the number of walkways included in individual PPW List for nomination by DCs varied from 1 to 28. For example, as shown in Table 7 in paragraph 3.5, whereas the PPW List provided to Tuen Mun and Sha Tin DCs respectively contained 28 and 21 walkways, the List provided to Central and Western, Sham Shui Po and Sai Kung DCs each contained 4 walkways, and to Islands DC only 1 walkway. As a result, of the latter four DCs, Sham Shui Po and Islands DCs together nominated three walkways outside the List for lift retrofitting works. Details of the walkways nominated by the latter four DCs are shown in Table 9. Audit noted that there were wide variations in the pedestrian flow among the walkways. As shown in Table 8 in paragraph 3.9, the peak-hour pedestrian flow of some walkways nominated was relatively low. For example, Elevated Walkway A in Southern District and Footbridge I in Sai Kung District had peak-hour pedestrian flow of 69 and 112 respectively (See Note to Table 8). On the other hand, some walkways having relatively high pedestrian flow and included in the PPW List were not nominated, such as those with peak-hour pedestrian flow of about 2,000 to 5,000 (see Table 9).

## Implementation of 2012 Expanded Programme

**Table 9**  
**Pedestrian flow of walkways nominated and**  
**not nominated for retrofitting works**  
**(December 2015)**

District	Walkway	Included / not included in PPW List	Peak-hour pedestrian flow in 2013 (No.)
(a) Walkways nominated by four DCs			
Central and Western	Footbridge J	Included	1,234
	Footbridge K	Included	298
	Footbridge L	Included	280
Sham Shui Po	Footbridge M	Included	696
	Footbridge F (see Case 5 in para. 2.19)	Not included	73 (Note 1)
Sai Kung	Footbridge N	Included	287
	Footbridge O	Included	257
	Footbridge I	Included	112
Islands	Footbridge P	Included	381
	Footbridge Q	Not included	(Note 2)
	Subway H	Not included	(Note 2)
(b) Walkways not nominated by seven DCs			
Yau Tsim Mong	Footbridge R	Included	5,076
Kwun Tong	Footbridge S	Included	4,959
North	Footbridge T	Included	3,613
Sha Tin	Subway I	Included	3,557
	Footbridge U	Included	2,080
Yuen Long	Footbridge V	Included	2,980
Wan Chai	Footbridge W	Included	2,891
	Footbridge X	Included	2,059
Wong Tai Sin	Footbridge Y	Included	2,054

*Source: Audit analysis of HyD and CEDD records*

*Note 1: The pedestrian-flow information of Footbridge F was separately provided to Sham Shui Po DC upon the DC's request when it was invited to nominate walkways to replace those found to be infeasible or not recommended by the CEDD for lift retrofitting works (see para. 3.7(d)).*

*Note 2: These walkways were outside the PPW List, and no pedestrian-flow information was available when Islands DC made the nomination.*

3.11 According to a paper submitted to the Public Works Subcommittee of LegCo in December 2012 seeking approval to create the new Capital Works Reserve Fund block vote 6101TX, the Government would ensure that cost-effectiveness consideration would be met when approving individual works item under the block vote. The Director of Highways is the Controlling Officer of block vote 6101TX, and the Director of Civil Engineering and Development has been delegated the authority to approve works items under the block vote. According to Financial Circular No. 1/2004 on Responsibility of Controlling Officers, Controlling Officers are ultimately responsible and accountable for the proper use of funds under their control, and they should also satisfy themselves that an appropriate system of cost control or monitoring is in place, having regard to economy, efficiency and effectiveness in the delivery of public service and use of the public funds.

3.12 According to the THB and the HyD:

- (a) it is the Government's deliberate policy decision that the provision of lifts should no longer be justified on expected usage under the 2012 Expanded Programme. The policy intent is to retrofit lifts for all GS walkways where technically feasible, and expected usage may be a factor taken into account by the DCs in selecting the priority items;
- (b) the nominations by the DCs were made with due consideration of an array of factors, including the pedestrian-flow information. The ultimate decision would rest with the DCs to select up to three walkways that they consider to be the most beneficial ones to the districts. The HyD would ensure that the retrofitting works for the walkways selected by the DCs would be implemented in a cost-effective manner (e.g. by using mechanical ventilation instead of air-conditioning for a lift to save energy);
- (c) allocating the same three-walkway quota to each district is generally acceptable to the DCs and the public, obviating the need for prolonged discussion over the criteria for allocating walkways among the districts which would lead to delays in the works implementation. This approach is considered to be conducive to consensus building at the DC level, engaging DCs constructively in matters of significant local community concern, and the maintenance of a harmonious relationship between the Government and DCs; and

## **Implementation of 2012 Expanded Programme**

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- (d) the HyD has been acting in accordance with the policy on “universal accessibility” promulgated in 2012, and cost-effectiveness is only one of the considerations in taking forward a public works project. Controlling Officers will ensure the cost-effectiveness to the extent of the actual planning, design and construction of the concerned works, after nominations of the GS walkways by the DCs, and this approach of nominations is in accordance with the 2016 Policy Address.

3.13 The Government has a plan to retrofit lifts for all GS walkways where technically feasible (see para. 3.12(a)). However, Audit notes that there is an open timeframe for implementing this plan.

### ***Some useful information not provided to DCs for facilitating informed decision***

3.14 Audit noted that when the public were invited to make proposals for retrofitting lifts for walkways in 2012 (see para. 3.4), they were requested to indicate on a standard form one or more of the following justifications for their proposals:

- (a) no ramp provided;
- (b) high pedestrian flow;
- (c) high usage by the elderly, PWDs and wheelchair users;
- (d) elderly home nearby;
- (e) no road crossing facilities for wheelchair users nearby; and
- (f) other reasons (to be specified).

3.15 As shown in Table 6 in paragraph 3.4, the HyD did not provide DCs with information of 32 walkways proposed by the public for DC nomination. In February and March 2016, the HyD informed Audit that:

- (a) the reasons for not including information of the 32 walkways in the PPW List to the DCs were:
  - (i) retrofitting works for 17 walkways had been included under other projects (e.g. retrofitting works included under other HyD's infrastructure projects);
  - (ii) 7 walkways were found to be technically infeasible for lift retrofitting works;
  - (iii) 5 walkways had already been installed with lifts;
  - (iv) 2 walkways had already been included under the 2011 Retrofitting Programme; and
  - (v) 1 walkway had already been demolished; and
- (b) there was room for improvement in adopting a unified approach in preparing the PPW List for DC nomination. The HyD would prepare appropriate guidelines for adopting a unified approach.

3.16 Audit noted that, as shown in Table 7 in paragraph 3.5, the HyD provided information of 219 walkways in the PPW List to DCs, including those “already closed or installed with lifts”, “included under 2011 Retrofitting Programme”, and “found technically infeasible”. In Audit's view, information of the 32 walkways was likely omitted from the PPW List, and the HyD needs to take measures to prevent omissions in including information of pertinent walkways proposed by the public in the PPW List for DC nomination. In this connection, Audit noted that Sham Shui Po DC had nominated Footbridge F (see Case 5 in para. 2.19) for priority lift retrofitting works, which was one of the 32 walkways having been omitted from the PPW List.

## **Implementation of 2012 Expanded Programme**

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3.17 According to the THB and the HyD, they appreciated the importance of letting DCs make informed choices in implementing the 2012 Expanded Programme, and therefore the HyD provided DCs with pertinent information of each of the public proposed walkways, including pedestrian-flow information. Audit noted that, for the 179 walkways on the PPW List, the HyD provided DCs with pertinent information, including pedestrian-flow information, a map showing locations of proposed lifts and number of public proposals received (see para. 3.6). The HyD also provided additional information to three (Tuen Mun, Kwai Tsing and Kwun Tong) DCs, including:

- (a) ramps at suggested locations;
- (b) nearby facilities for the elderly and PWDs;
- (c) alternative at-grade crossings within 100 metres; and
- (d) availability of other lift facilities nearby.

3.18 For the four walkways nominated by DCs but not being included in the PPW List (see para. 3.8), the HyD and the CEDD only provided pedestrian-flow information of one walkway to Sham Shui Po DC (see Note 1 to Table 9 in para. 3.10), but did not provide such information of the two walkways to Islands DC (see Note 2 to Table 9 in para. 3.10) and of one walkway to Wan Chai DC (see para. 3.7(b)).

3.19 In Audit's view, in order to facilitate DCs in nominating walkways for retrofitting works, the HyD and the CEDD need to provide them with the pedestrian-flow information and information mentioned in paragraph 3.17. In addition, Audit considers that the following information is also useful for DCs in nominating walkways for retrofitting works:

- (a) estimated cost of proposed lift retrofitting works;
- (b) relevant information that would affect the pedestrian flow; and
- (c) site constraints and land resumption requirements.



3.20 To facilitate DCs in making informed decisions in nominating GS walkways for lift retrofitting, Audit considers that the HyD and the CEDD need to provide useful information to DCs in future.

***Some relevant information not timely provided to a DC  
for considering retrofitting works for a walkway***

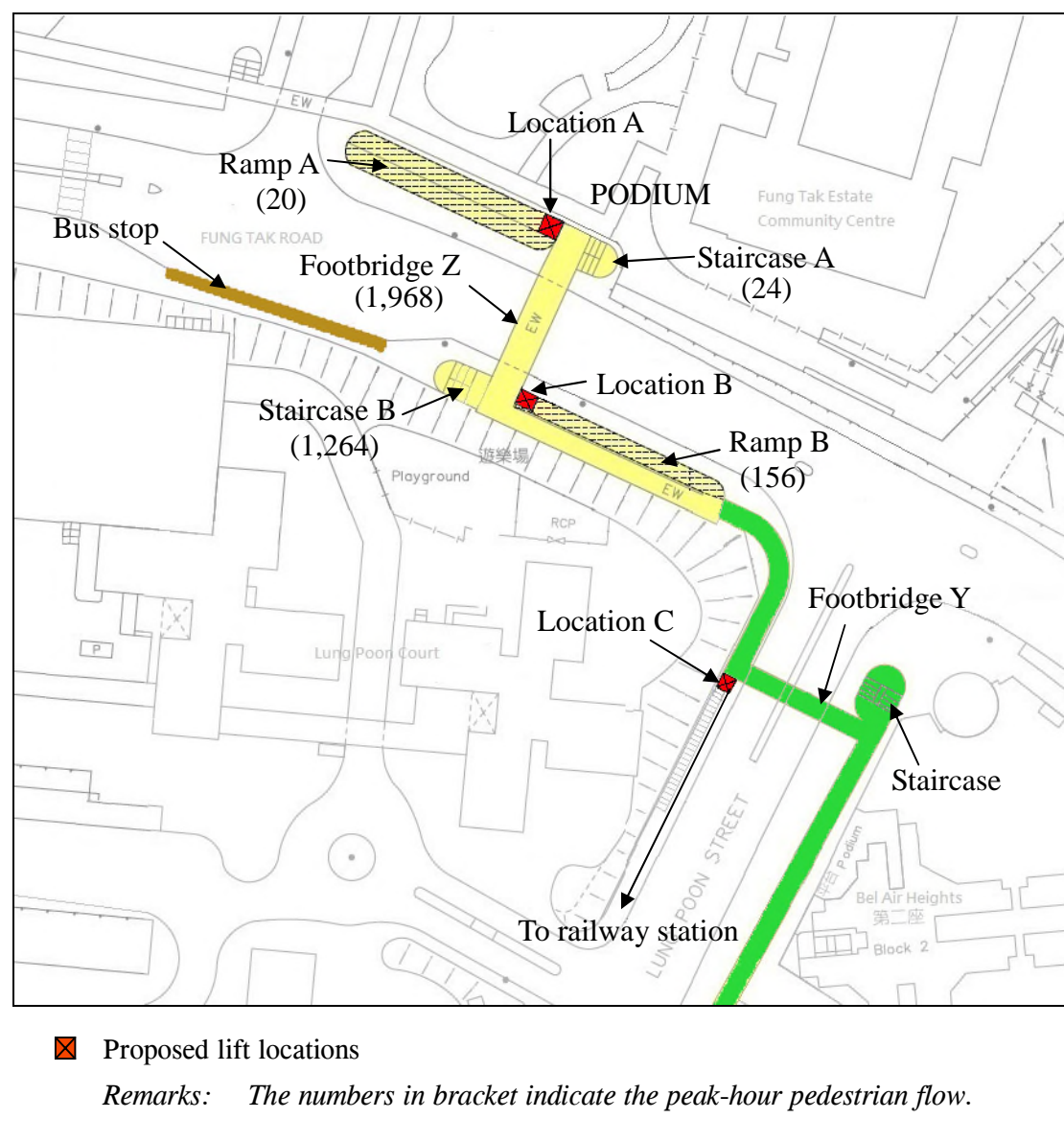
3.21 Under the 2012 Expanded Programme, pedestrian-flow information was provided to DCs for nominating walkways for priority implementation of retrofitting works (see para. 3.6). However, Audit noted that the CEDD provided significant pedestrian-flow statistics to Wong Tai Sin DC relating to a footbridge (Footbridge Z) only after the DC's nomination of Footbridge Z for retrofitting works (see Case 9).

### Case 9

#### Footbridge Z in Wong Tai Sin

1. In March 2013, the Wong Tai Sin DC nominated Footbridge Z being situated across Fung Tak Road and Lung Poon Street as one of the three walkways in the district for priority retrofitting works under the 2012 Expanded Programme. As reflected by public proposals, two lifts might be respectively retrofitted at Locations A and B, each of which had been installed with a ramp and a staircase (see Figure 6).

**Figure 6**



**Case 9 (Cont'd)**

2. The proposed scope of works included demolishing the ramps at Locations A and B and retrofitting a lift at each location. The Wong Tai Sin DC made reference to the peak-hour pedestrian flow of both Footbridges Z and Y in nominating Locations A and B for retrofitting lifts. At that time, a lift at Location C was being constructed by a railway company as part of its pedestrian connectivity enhancement project.

3. In August and September 2013, CEDD consultant (Consultant B) conducted surveys on the peak-hour pedestrian flow of staircases and ramps of Footbridge Z. The results are as follows:

Location	Peak-hour pedestrian flow
Footbridge Z	1,968
Staircase A	24
Ramp A	20
Staircase B	1,264
Ramp B	156

4. In January 2014, the CEDD informed the DC of preliminary design and the result of the feasibility study, including the additional pedestrian-flow information. As of January 2016, the CEDD was preparing for tendering for lift retrofitting works at Locations A and B.

5. In March 2016, the HyD informed Audit that:

- (a) as the main span served the primary function of the walkway to cross the road, the pedestrian flow at the main span should normally be adequate to reflect the level of usage of the walkway, including the entrances and exits, for consideration by the DCs; and
- (b) in this case, the pedestrian-flow information for individual ramps and staircases was specially provided upon the pertinent DC's request, as pedestrians could bypass the ramp and access the adjacent public housing estate directly through an exit connecting to the footbridge deck. Nevertheless, the HyD would consider providing the DCs with additional pedestrian-flow information if the situation so warranted.

### Case 9 (Cont'd)

#### *Audit comments*

6. Audit noted that, according to Consultant B's survey result, the peak-hour pedestrian flow of Staircase A and Ramp A was 24 and 20 respectively. Audit considers that the pedestrian-flow information of Staircase A and Ramp A was significant information for considering the nomination of Location A for lift retrofitting works. However, the CEDD only provided the DC with this information in January 2014, 10 months after the DC had made the nomination in March 2013. In Audit's view, in implementing lift retrofitting works in future, the HyD and the CEDD need to provide the DCs with pedestrian-flow information of existing ramps and staircases of the walkways involved before their nomination of walkways for retrofitting works.

*Source: HyD and CEDD records*

### **Audit recommendation**

3.22 Audit has *recommended* that, in implementing works items under the 2012 Expanded Programme, the Director of Highways and the Director of Civil Engineering and Development should provide DCs with useful information (such as that mentioned in paragraphs 3.17 and 3.19) for making informed decisions in nominating GS walkways for implementation of lift retrofitting works.

### **Response from the Government**

3.23 The Director of Highways agrees with the audit recommendation. He has said that the HyD will provide DCs with additional information as appropriate.

3.24 The Director of Civil Engineering and Development also agrees with the audit recommendation.

3.25 The Secretary for Transport and Housing has said that, when inviting the 18 DCs to further nominate not more than three existing walkways in each district under the Second Phase of the 2012 Expanded Programme (see para. 4.18(b)), the HyD will provide relevant information (including current and rough predicted pedestrian flow of the walkways, rough order of cost of the proposed lift retrofitting works, facilities for the elderly or PWDs nearby, and site constraints of the proposed lift retrofitting works) to facilitate DCs to make informed choices.

## **PART 4: MANAGEMENT INFORMATION SYSTEM AND WAY FORWARD**

4.1 This PART examines the management information systems for supporting implementation of the 2001 Retrofitting Initiative and the 2012 Expanded Programme, outlines the major audit observations and examines the way forward.

### **Integrated Structures Information System**

4.2 The HyD established an Integrated Structures Information System (ISI System) in 2002 for maintaining information of ramps, lifts, staircases and other furniture of walkways under its maintenance.

#### ***ISI System not capable of generating important information***

4.3 In April 2011, the LWB informed LegCo that 295 GS walkways were not installed with lifts, ramps or alternative at-grade crossings (see para. 1.7(b)). In June 2011, the THB informed LegCo that, as of December 2010, of the 1,540 GS walkways under the HyD's purview, about 1,270 walkways had already been installed with lifts or up-to-standard ramps, or alternative at-grade crossings were available in the vicinity. In other words, about 270 (1,540 less 1,270 — Note 8) walkways were yet to be provided with barrier-free access facilities. According to HyD records, GS walkways constructed after April 2011 had been installed with barrier-free access facilities.

4.4 In December 2015, Audit requested the HyD to provide an up-to-date list of the 1,540 GS walkways showing the following information for each walkway:

- (a) its location;
- (b) availability of ramps or lifts; and

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**Note 8:** *Of the 295 walkways, 22 walkways had been retrofitted with lifts from 2001 to 2010. Therefore, 273 walkways had not been provided with ramps or lifts in April 2011.*

- (c) year of commissioning.

4.5 In March 2016, the HyD provided Audit with a list comprising 1,561 GS walkways as of 24 September 2012 with information of their locations, availability of ramps or lifts and year of commissioning. According to the HyD:

- (a) the information as of 24 September 2012 was compiled in September 2012 through a one-off exercise by manually searching information from the ISI System. The ISI System was designed for structural asset management to facilitate highway structure maintenance, and was not for generating management reports on barrier-free access facilities. It would involve substantial modification to enhance the System before it could generate information on barrier-free access facilities of individual GS walkways; and
- (b) of these 1,561 walkways, 1,259 (81%) were provided with ramps or lifts and 302 (19%) were not provided with these facilities (Note 9).

4.6 Audit considers it unsatisfactory that the ISI System could not generate management reports on the locations and availability of ramps or lifts of GS walkways under the HyD's purview. The HyD needs to make enhancements to the ISI System for the purpose.

### ***Need to maintain records of monitoring progress of retrofitting works items***

4.7 According to the Project Administration Handbook for Civil Engineering Works, all works projects should be completed on time and within budget. The HyD and the CEDD engaged consultants to help monitor implementation of works items under the 2001 Retrofitting Initiative and the 2012 Expanded Programme. The consultants submitted monthly reports outlining the works progress and problems encountered in implementing the retrofitting works items.

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**Note 9:** *Audit noted that the 295 walkways referred to in April 2011 (see para. 4.3) and 302 walkways in September 2012 were both understated (see para. 4.11).*

## **Management information system and way forward**

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4.8 In March 2016, the HyD informed Audit that:

- (a) the HyD's Universal Accessibility Project Team had prepared periodic reports on works progress and expenditures of individual works items of the retrofitting works; and
- (b) the Chief Engineer of the Project Team held monthly meetings with the consultants and contractors to monitor the works progress and expenditure. The monthly construction and planning meetings, chaired by the Project Manager of the HyD Major Works Project Management Office, also monitored and reviewed the works progress and expenditure summaries of the 2001 Retrofitting Initiative and the 2012 Expanded Programme.

4.9 However, the HyD did not have documents (such as minutes of meeting) showing the discussion and monitoring of the works progress and expenditures of the retrofitting works items at the construction and planning meetings. Audit considers that the HyD needs to maintain such records.

### ***Some GS walkways constructed after effective date of Disability Discrimination Ordinance not being provided with barrier-free access facilities***

4.10 Twenty years have lapsed since the effective date of the Disability Discrimination Ordinance in 1996. According to the HyD, walkways constructed after the effective date of the Ordinance should be provided with barrier-free access facilities, and of the 1,561 GS walkways as of 24 September 2012, 302 walkways were not provided with barrier-free access facilities (see para. 4.5(b)). However, Audit examination of the information provided by the HyD revealed that, of these 302 walkways, construction of 11 (4%) had commenced from 1999 to 2005, and the construction time of the other 29 (10%) walkways (which were open for public use from 1997 to 2003) was not available. These 40 (11 + 29) walkways were included in the 328 walkways for considering retrofitting works (see Table 3 in para. 2.2). In Audit's view, the HyD needs to conduct a review of these 40 walkways to ascertain whether barrier-free access facilities should have been provided at the time of walkway construction, and take necessary remedial measures.



### ***Needs to inform LegCo of the correct number of walkways requiring retrofitting works***

4.11 Furthermore, the LWB informed LegCo in April 2011 that 295 GS walkways had not been provided with lifts, ramps or alternative at-grade crossings (see para. 1.7(b)). However, Audit examination revealed that in fact 328 walkways had not been provided with related facilities as of April 2011 (i.e. an understatement of 33 walkways — see para. 2.2). Audit noted that the understatement of the number of walkways without barrier-free access facilities as of April 2011 was partly due to the omissions of some elevated walkways in the compilation of information. In Audit's view, the HyD needs to make improvement in its record keeping as well as providing correct information to LegCo in future.

### **Audit recommendations**

4.12 **Audit has *recommended* that the Director of Highways should:**

- (a) **make enhancements to the ISI System for generating management reports on important information of GS walkways under the HyD's purview;**
- (b) **maintain records (such as minutes of meeting) showing the monitoring of the works progress and expenditures of the retrofitting works items at the construction and planning meetings;**
- (c) **conduct a review of GS walkways constructed after the effective date of the Disability Discrimination Ordinance in 1996 which were not provided with barrier-free access facilities to ascertain whether such facilities should have been provided at the time of walkway construction, and take necessary remedial measures; and**
- (d) **ascertain the reasons for the omission of 33 walkways in reporting to LegCo in April 2011 the number of walkways not having been provided with barrier-free access facilities, and endeavour to provide correct information to LegCo in future.**

### Response from the Government

4.13 The Director of Highways agrees with the audit recommendations. He has said that, regarding paragraph 4.12(a), the HyD will explore the feasibility on making enhancements to the ISI System for generating management reports related to barrier-free access facilities.

4.14 The Secretary for Labour and Welfare has said that, regarding paragraph 4.12(d), the LWB will follow up the matter with the HyD.

### Major audit observations

#### *2001 Retrofitting Initiative*

4.15 Since 2001, the HyD has taken actions to carry out retrofitting works for GS walkways not yet provided with barrier-free access facilities. Audit noted that the progress in implementing the 2011 Retrofitting Programme had been behind schedule. However, 20 years have lapsed since the effective date of the Disability Discrimination Ordinance in 1996, and notwithstanding that the THB informed LegCo in June 2011 that the majority of the retrofitting works under the 2011 Retrofitting Programme were scheduled for completion by 2016-17 and the remaining by 2017-18, works for 13 walkways would only commence in 2016-17 and the time of works commencement for 17 walkways had not been determined as of December 2015. Audit also noted that 11 GS walkways constructed after the effective date of the Disability Discrimination Ordinance had not been provided with barrier-free access facilities. Furthermore, as of December 2015, of the total approved funding of \$4.03 billion for the lift/ramp retrofitting works under the 2011 Retrofitting Programme, only \$1.15 billion (29%) had been spent (see Table 2 in para. 1.13). Audit examination of implementation of some works items revealed areas for improvement, such as handling of utility diversions and design changes after contract award.

### 2012 Expanded Programme

4.16 As of December 2015, of the 53 GS walkways included in the First Phase of 2012 Expanded Programme, the CEDD had awarded four contracts (Contracts F to I) for 44 walkways (see Table 10).

**Table 10**

**Contracts F to I under First Phase of 2012 Expanded Programme  
(December 2015)**

<b>Contract</b>	<b>Number of GS walkways involved</b>	<b>Contract sum (\$ million)</b>	<b>Contract commencement date</b>	<b>Scheduled completion date</b>
F	13	290.0	April 2015	October 2018
G	8	272.0	April 2015	April 2019
H	10	254.1	November 2015	November 2019
I	13	320.1	November 2015	May 2019
<b>Total</b>	<b>44</b>	<b>1,136.2</b>		

*Source: CEDD records*

4.17 Under the 2012 Expanded Programme, based on a DC's nomination, a GS walkway having been installed with ramps might also be considered for lift retrofitting works. Audit examination revealed that, while the 18 DCs were each invited to nominate three walkways from the PPW List, the number of walkways included in individual PPW List for nomination by DCs varied from 1 to 28. Audit also noted that the peak-hour pedestrian flow of some nominated walkways was relatively low.

### Way Forward

4.18 In the Policy Address of January 2016, the Government said that:

- (a) it would press ahead with the remainder of about 180 projects (Note 10) in all 18 districts, including the three priority projects identified by each DC. It was expected that about 80% of the projects would be completed in phases within three years; and
- (b) from the fourth quarter of 2016, the Government would again invite the DCs to further nominate not more than three existing GS walkways in each district for lift retrofitting works under the Second Phase of the 2012 Expanded Programme. The walkways eligible for consideration by the DCs would no longer be confined to GS walkways maintained by the HyD, provided that certain criteria were met (Note 11).

4.19 In Audit's view, the THB, the HyD and the CEDD need to take into account the observations contained in this Audit Report in implementing lift retrofitting works for GS walkways in future.

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**Note 10:** *These comprised 124 GS walkways (184 less 60 — see para. 2.4) under the 2001 Retrofitting Initiative and 53 GS walkways (see para. 3.7) under the 2012 Expanded Programme.*

**Note 11:** *According to a paper submitted to the LegCo Panel on Transport in January 2016, the criteria include:*

- (a) *walkways being spanned across public roads maintained by the HyD, open for public access at all times and not privately owned; and*
- (b) *the parties responsible for the management and maintenance of these walkways have no objection to such retrofitting proposals, and are willing to cooperate with the Government on the works implementation. The HyD will take up the maintenance of the lifts installed.*

### ***Significant increase in average unit cost of lift retrofitting works***

4.20 From 2001 to 2010, lift retrofitting works for 34 GS walkways had been completed (no walkway being retrofitted with ramps). Of these 34 walkways, 18 have been each retrofitted with two lifts and the remaining 16 have been each retrofitted with one lift (because one of the two ends are linked to barrier-free access facilities). The related works contracts were awarded from February 2002 to June 2011 and the contract cost of these 52 ( $18 \times 2 + 16$ ) lifts totalled \$347.8 million, or on average \$6.7 million for retrofitting one lift. On the other hand, retrofitting works for the 44 walkways under Contracts F to I (see Table 10 in para. 4.16) awarded in 2015 costing \$1,136.2 million involved retrofitting a total of 76 lifts, or on average \$15.0 million for retrofitting one lift.

4.21 Given the significant increase in the average unit construction cost of lift retrofitting works from \$6.7 million (from 2002 to 2011) to \$15.0 million in 2015 (a 124% increase), the HyD needs to conduct a review to ascertain whether the implementation of a large quantity of lift retrofitting works within a few years has created pressure on the related trade and driven up the cost of works, and take necessary improvement measures.

### **Audit recommendations**

4.22 **Audit has *recommended* that the Secretary for Transport and Housing, the Director of Highways and the Director of Civil Engineering and Development should take into account observations contained in this Audit Report in implementing lift retrofitting works for GS walkways in future.**

4.23 **Audit has also *recommended* that the Director of Highways should conduct a review to ascertain whether the implementation of a large quantity of lift retrofitting works within a few years has created pressure on the related trade and driven up the cost of works, and take necessary improvement measures.**

### Response from the Government

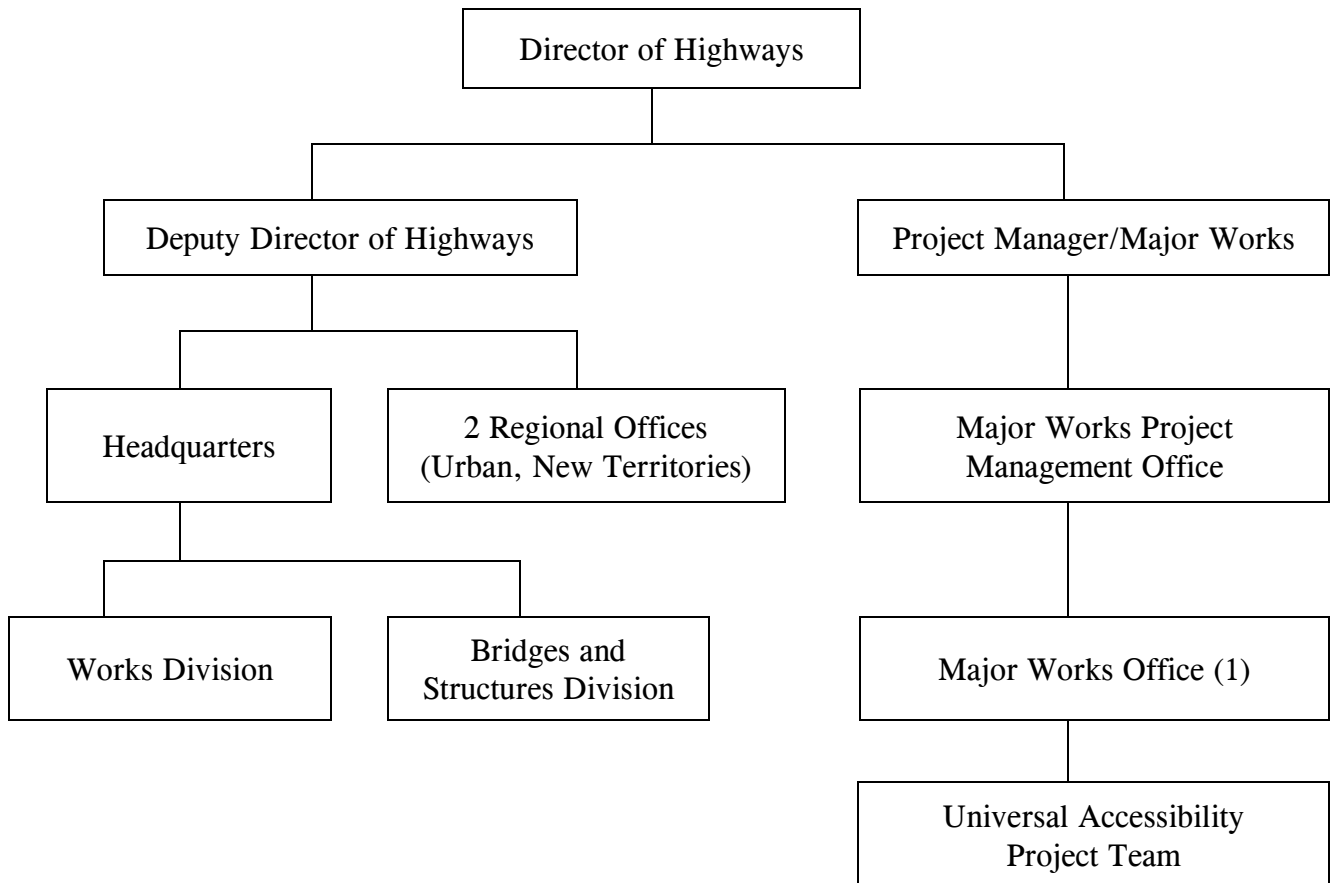
4.24 The Secretary for Transport and Housing agrees with the audit recommendation in paragraph 4.22.

4.25 The Director of Highways agrees with the audit recommendations in paragraphs 4.22 and 4.23. He has said that:

- (a) the rise in the construction prices of the lift retrofitting works is attributed to a number of factors, such as:
  - (i) construction cost has risen in recent years; and
  - (ii) the lift retrofitting works are relatively small in scale, and should be able to attract more medium-sized contractors to submit tenders. This keen level of competition is reflected by the fact that 13 contractors won tenders for 15 works contracts awarded from December 2011 to November 2015 for lift retrofitting works; and
- (b) the HyD will continue to closely monitor the market situation and conduct related tender exercises at appropriate time.

4.26 The Director of Civil Engineering and Development also agrees with the audit recommendation in paragraph 4.22.

**Highways Department:  
Organisation chart (extract)  
(29 February 2016)**



*Source: HyD records*

## **Comments of the HyD and the WSD on Case 1 (March 2016)**

### **HyD comments**

- (a) When planning the implementation of a works project, there were various considerations in managing interfacing issues with other projects or developments. From an overall consideration of implementing the Public Works Programme, it might often not be advisable to complete one project before commencing another project in the vicinity, since this would unduly prolong the delivery of the projects and was not in the public interest. Furthermore, depending on the site conditions and nature of the projects, there were cases in which working concurrently with another project could enhance integration, minimise disruption to the public and increase cost-effectiveness. The HyD project office would carefully make arrangements for individual projects to ensure the smooth implementation of the projects.
- (b) During the design and planning stages in 2008 for the lift retrofitting works for Footbridge C, the HyD was aware of the WSD's water-pipe replacement project being implemented in the vicinity. Though the WSD's works front was outside the proposed works site, the HyD noted that the WSD's works might affect the temporary traffic lane closure under the HyD's works contract. The works involved applications for the traffic lane closure and excavation permits for road works. In this connection, since October 2008, the HyD had liaised with the WSD to explore the feasibility of carrying out the necessary water-pipe diversion works under the WSD's water-pipe replacement project, and to ascertain the WSD's project completion date before conducting tendering of the lift retrofitting project. In July 2009, the WSD informed the HyD that the water-pipe replacement works would be completed in around December 2010, and the WSD would provide a better estimate on the works completion date upon completion of further site investigation. The HyD planned the contract commencement date based on the information provided by the WSD and included certain flexibility to cater for possible delay in the WSD works. There was also strong public expectation and pressure for early commencement of the lift retrofitting works. Late commencement of HyD works contract might not be favourable as other utility undertakers also had plans for laying cables at the same location.



- (c) Since at least one of the traffic lanes should always be open for public use, the road works under the HyD works contract could not proceed until the WSD had completed its works. With the delay in the completion of the WSD works contract, the HyD's lift retrofitting works project unavoidably encountered a consequential delay. Nevertheless, having noted the WSD's works difficulty due to adverse ground conditions and stringent traffic requirements (i.e. traffic lanes could not be closed during normal working hours on weekdays), the HyD had instructed the works contractor to implement mitigation measures to create more work fronts at the concerned road section to mitigate the works delay, and to request the utility undertakers to change the diversion routes to shorten the working period on the road.
- (d) As of March 2016, the HyD had granted an extension of time of 671 days to the works contractor due to the above delay and was assessing the contractor's claim for prolongation cost.

**WSD comments**

- (e) In May 2009, the WSD water-pipe works commenced and the works were carried out in a common trench excavated by a contractor of a utility company for laying its utilities. The trench excavation was fraught with uncertainties, and was the most time-consuming and critical activity in the whole project. Neither the utility company nor the WSD could provide a works completion date with certainty. The common trench works would not affect the HyD's lift retrofitting works.
- (f) The HyD's lift retrofitting works were affected by an underground fresh water pipe, which had to be diverted away from the foundation area of Lift B. In July 2010, the HyD started liaison with the WSD site staff with a view to making provision in the WSD water-pipe project to enable the diversion of the underground water pipe affecting the HyD's lift retrofitting works. This involved a variation to the construction sequence and therefore longer construction time taken for the WSD's water-pipe works (e.g. additional site investigation and re-opening of the completed section of the water pipe).

- (g) The diversion of the underground fresh water pipe affecting the HyD's lift retrofitting works was completed in September 2012. The long construction period of the WSD's water-pipe works was primarily due to longer construction time taken for works in the common trench, adverse ground condition, restricted working hours due to stringent traffic requirements, and obstruction by existing underground utilities.
- (h) There were also other utilities required to be diverted before the commencement of the HyD's retrofitting works for Lift B. Such utilities included gas pipes, power cables, stormwater and sewer drains, and optical fibre cables. Some of the diversion works were carried out at the same time with the WSD's water-pipe works. The delay of the HyD's lift retrofitting works was mainly caused by the interfacing issues arising from the diversion of existing utilities under the foundation area of Lift B. The WSD had made the best endeavour to tackle the site constraints and coordinate the interfacing issues with the HyD for the lift retrofitting works.

*Source: HyD and WSD records*

**15 grade-separated walkways without directional signs  
on nearby barrier-free access facilities**

Item	District	Walkway location
1	Central and Western	Elevated walkway across Cotton Tree Drive over Queensway
2		Footbridge across Queensway from Garden Road to Murray Road
3	Eastern	Footbridge across Shau Kei Wan Road near Taikoo Shing Road
4		Footbridge along Electric Road near Fuk Yuen Street
5	Kowloon City	Footbridge across Waterloo Road near Durham Road
6	Kwai Tsing	Footbridge across Castle Peak Road near Ping Fu Path
7		Subway across Castle Peak Road near Yiu Wing Lane
8	Kwun Tong	Footbridge across Kwun Tong Road near Junction of Ngau Tau Kok Road
9		Subway across Kwun Tong Road near How Ming Lane
10	Tsuen Wan	Subway across Texaco Road at Tak Tai Path
11		
12	Wan Chai	Footbridge across Gloucester Road and Wan Shing Street near Canal Road
13		
14	Yau Tsim Mong	Subway across Nathan Road near Saigon Street
15		Subway across Nathan Road near Soy Street

*Source: Audit site visits from December 2015 to March 2016*

**Acronyms and abbreviations**

APE	Approved project estimate
Audit	Audit Commission
CEDD	Civil Engineering and Development Department
DC	District Council
FC	Finance Committee
GS walkway	Grade-separated walkway
HyD	Highways Department
ISI System	Integrated Structures Information System
LegCo	Legislative Council
LWB	Labour and Welfare Bureau
PPW List	List of Public Proposed Walkways
PWD	Person with a disability
TD	Transport Department
THB	Transport and Housing Bureau
WSD	Water Supplies Department