Report No. 54 of the Director of Audit — Chapter 3

CONSTRUCTION OF PEDESTRIAN CROSSING FACILITIES

Summary

1. Most pedestrian crossing facilities are provided at-grade (at the same level as the road). Footbridges and subways are grade-separated crossings (constructed at a level higher or lower than that of the road) which maximise pedestrian safety when crossing the road and minimise disruption to vehicular traffic. The Transport Department (TD) has the overall responsibility for the planning and provision of pedestrian crossing facilities, and has laid down detailed guidelines in the Transport Planning and Design Manual (TPDM) for the planning of pedestrian crossing facilities. The Highways Department (HyD) and the Civil Engineering and Development Department (CEDD) implement capital works projects for constructing footbridges and subways. As at December 2009, the HyD was maintaining 717 footbridges and 435 subways. In 2003, the Census and Statistics Department conducted a survey and found that about 70% of the respondents preferred at-grade crossings to footbridges and subways. The Audit Commission (Audit) has recently conducted a review to examine the planning process for the provision of footbridges and subways by selecting a number of footbridges and subways for examination.

Improvement measures on utilisation of footbridges and subways

2. In Chapter 11 of the Director of Audit's Report No. 49 of October 2007, Audit reported observations on the provision of footbridges and subways, and identified a number of footbridges and subways with low utilisation due to the presence of nearby at-grade crossings or connection to undeveloped sites. Audit made a number of recommendations for improvement which were accepted by the Administration for implementation.

3. ***Need to implement improvement works and follow-up actions.*** In the 2007 audit review, Audit recommended that the TD should conduct a review to identify footbridges and subways with low utilisation and ascertain the underlying reasons, and regularly monitor their utilisation. The TD agreed to conduct the review in stages and commenced the first stage of the review in December 2007. In January 2010, the TD compiled a final report (2010 Review Report) with proposed improvement works and follow-up actions. *Audit has recommended that the Commissioner for Transport should take early action to implement the improvement works and follow-up actions.*

4. ***Need to draw up a programme for reviewing utilisation of footbridges and subways.*** In the 2010 Review Report, the TD examined 22 footbridges and 17 subways with low utilisation, and identified the presence of nearby at-grade crossings as one of the major reasons leading to low utilisation. Audit noted that the TD had not compiled any action plans for conducting the review of the remaining footbridges and subways on a systematic basis. Audit examination also found seven footbridges and two subways (not covered by the TD's review) with low utilisation. In each case, there was an at-grade crossing in the vicinity of the footbridge or subway. *Audit has recommended that the Commissioner for Transport should: (a) draw up a programme with a timetable to examine the utilisation of all footbridges and subways on a systematic basis, and to identify improvement measures for those with low utilisation; and (b) examine the underlying reasons for the existence of a footbridge/subway and an at-grade crossing in close proximity.*

A footbridge alongside Hung Hom Bypass

5. Alongside Hung Hom Bypass, there is a 600-metre elevated pedestrian walkway, Footbridge J, connecting the promenade of Tsim Sha Tsui East and Hung Hom Bay reclamation area. It was completed in 1999 at a cost of $30 million under two capital works projects, namely, an HyD project for constructing Hung Hom Bypass (Project A), and a CEDD project for providing engineering infrastructure on Hung Hom Bay reclamation area (Project B).

6. ***Need to provide sufficient and accurate information in funding submissions.*** In July 1995, the HyD sought funding from the Public Works Subcommittee (PWSC) of the Finance Committee (FC) for Project A. The PWSC paper did not specifically mention the construction of Footbridge J, despite the fact that 70% of the construction cost was charged to Project A. In March 1996, the CEDD sought funding from the PWSC for Project B. In the PWSC paper, it was mentioned that Footbridge J would link up the Hung Hom Bay reclamation area with the railway freight-yard extension. This description was not entirely applicable to Footbridge J because its side span for connection to the railway freight-yard extension had been deleted in the revised design. Audit considers that the HyD and the CEDD had not provided sufficient detailed information about the justifications for constructing Footbridge J in the PWSC papers. *Audit has recommended that, in planning infrastructure and roadworks projects in future, the Director of Highways and the Director of Civil Engineering and Development should, in consultation with the Commissioner for Transport, provide sufficient and accurate information to the PWSC/FC for the provision of footbridges or subways under the projects.*

7. ***Need to monitor the utilisation and explore alternative uses of Footbridge J.*** Audit's site visits and TD's surveys conducted in late 2009 found that the utilisation of Footbridge J was low. The few users using Footbridge J were mostly joggers and strollers. Audit also notes that the usefulness of Footbridge J as a pedestrian walkway may further diminish due to the planned development of a continuous waterfront promenade at ground level connecting Tsim Sha Tsui East and Hung Hom Bay reclamation area. *Audit has recommended that the Commissioner for Transport should: (a) monitor the utilisation of Footbridge J with a view to identifying ways to promote its uses; and (b) in consultation with other relevant government departments, explore alternative uses of Footbridge J, taking into account the planned development of the nearby areas.*

A closed subway in Sham Shui Po

8. In Sham Shui Po, underneath the West Kowloon Corridor, there is a 150-metre long subway, Subway W, connecting Kiu Kiang Street to an undeveloped site pending public housing development. Since its completion in 1988 at a cost of $1.96 million, Subway W has not been open for public use. There were repeated reports of illegal occupation by street sleepers and dumping at Subway W.

9. Up to February 2010, Subway W had been closed for over 20 years. Audit could not find records showing the justifications for constructing Subway W. *Audit has recommended that: (a) the Director of Highways and the Commissioner for Transport should examine the justifications for constructing Subway W, and its closure after completion, with a view to drawing lessons for better planning of grade-separated crossing facilities in future; and (b) the Commissioner for Transport should, in consultation with other relevant government departments, review the future use of Subway W, including the prospect of opening it for public use.*

Two footbridges in Tung Chung West

10. In the western part of the Tung Chung New Town, there are two pedestrian/cycle bridges, Footbridges K and L. Footbridge K is located at the junction of Yu Tung Road and Chung Yan Road. Footbridge L is located near the western end of Yu Tung Road. The two footbridges were completed in 2000 by the CEDD at the cost of $110 million, as part of the capital works project for Phase IIB development of Tung Chung New Town.

11. ***Need for better planning of pedestrian crossing facilities.*** According to the TPDM, the volume and speed of the traffic should be considered when providing a grade-separated crossing facility. Footbridges K and L are situated on roads currently with light traffic and a low speed limit of 50 kilometres per hour. Local residents considered that the two footbridges were not convenient and had repeatedly requested the TD to provide at-grade crossings near the footbridges. Some residents risked jaywalking across Chung Yan Road instead of using Footbridge K. In January 2010, an at-grade crossing was installed at Chung Yan Road. *Audit has recommended that the Director of Civil Engineering and Development should, in consultation with the Commissioner for Transport, critically examine the justifications for each case of providing a grade-separated crossing, taking into account all relevant factors mentioned in the TPDM, including the projected volume and speed of traffic, and local residents' views and their preferred type of crossing facility.*

12. ***Need to provide justifications for grade-separated crossing facilities.*** In June 1996, the Administration sought funding approval from the PWSC/FC for Phase IIB development of Tung Chung New Town including the construction of Footbridges K and L. In the PWSC paper, the reason provided for the construction of the two footbridges was to avoid future interfacing and environmental problems. No detailed information was given about the justifications for providing the two footbridges instead of at-grade crossings. *Audit has recommended that, in planning the provision of grade-separated crossing facilities as part of an infrastructure development project in future, the Director of Civil Engineering and Development should provide sufficient detailed information in the funding application to justify the need for, and timing of provision of, the grade-separated crossing facilities.*

Footbridges built under Castle Peak Road improvement project

13. In March 2001, the FC approved funding for the improvement works of a section of Castle Peak Road (CPR) in Tsuen Wan between Area 2 and Ka Loon Tsuen (CPR section). The scope of works included the construction of 11 footbridges, Footbridges M to W, which were completed between 2005 and 2006 at a total cost of $88.9 million.

14. ***Need to document justifications for providing grade-separated crossing facilities in PWSC/FC papers.*** The TPDM stipulates that the justifications for each case of providing a grade-separated crossing facility should be considered on its own merits, taking into account a number of factors in the area concerned. Audit notes that the CPR section is classified as a rural road and pedestrian crossing facilities can be either at-grade or

grade-separated. In the design document of the CPR Project, grade-separated crossing facilities were recommended on both town planning and traffic management/road safety grounds. In the event, the HyD provided one at-grade crossing and 11 footbridges. The funding papers submitted to the PWSC/FC had mentioned that 11 footbridges would be constructed along the CPR section but did not fully document the justifications for providing footbridges on a case-by-case basis.

15. ***Need to consider adopting at-grade crossings at locations with low traffic and pedestrian flows.*** In late 2009, the TD conducted a survey and found that the vehicular and pedestrian flows at the locations of Footbridges M to W were not high. In particular, at the locations of seven footbridges, the peak-hour vehicular flows were lower than 20% of the design flow capacity. Moreover, at the locations of seven footbridges, the peak-hour pedestrian flows were lower than 60 pedestrians per hour. Audit considers that, at those locations where both the traffic and pedestrian flows are low, providing at-grade crossings might have been a viable alternative compared with the provision of grade-separated crossings.

16. ***Need to take into account pedestrian crossing facilities in the vicinity.*** According to the TPDM, the availability and location of alternative crossings should be considered when providing a grade-separated crossing facility. Footbridge M provides a pedestrian link across Hoi On Road to a seafront promenade. To the east of Footbridge M, there are also one at-grade crossing and two footbridges (all completed before Footbridge M) providing links to the promenade. Audit considers that it might be a viable alternative to provide an at-grade crossing at the location of Footbridge M if a crossing was considered necessary.

17. ***Need to critically examine justifications for providing two footbridges in close proximity.*** Footbridges O and P, at a distance of 212 metres apart, are located near Ting Kau Village. According to the TPDM, the desired pedestrian path and the connectivity of the facility with nearby developments and walkway systems should be considered when providing a grade-separated crossing facility. In 1998, the HyD intended to build a subway at the location of Footbridge P as the only crossing facility near Ting Kau Village. However, residents of Ting Kau Village considered that the proposed subway was not convenient as it was not located at the main pedestrian path, and requested a crossing facility at the location of Footbridge O. They also expressed concern over crime and security in a subway. Finally, the HyD provided Footbridge O at the residents' request and replaced the proposed subway by Footbridge P, resulting in the provision of two footbridges in close proximity.

18. In Tsing Lung Tau, there is another pair of footbridges, Footbridges U and V, in close proximity (315 metres apart). Audit's site visit and TD's survey (see para. 15) found that the vehicular and pedestrian flows at the locations were not high and there were more jaywalkers than footbridge users. Audit also found that there was a road junction near Footbridge V allowing vehicles right-turning from the westbound lane without control by traffic light signals. In Audit's view, the provision of a signal-controlled at-grade crossing at the location of Footbridge V might be an alternative option to both serve pedestrians and control the right-turning vehicular movements.

19. *In the light of the audit observations mentioned in paragraphs 14 to 18, Audit has recommended that, in planning roadworks projects in future, the Director of Highways should, in consultation with the Commissioner for Transport, set out clearly in the PWSC/FC papers the justifications for providing a grade-separated crossing facility, taking into account: (a) vehicular and pedestrian flows; (b) other pedestrian crossing facilities in the vicinity; (c) the desired pedestrian path of the potential users and the connectivity of the facility with nearby developments and walkway systems; and (d) whether two grade-separated crossing facilities are provided in close proximity*.

20. ***Need to monitor road safety and jaywalking near footbridges.*** The TD's survey (see para. 15) found that, of the 568 pedestrians crossing the road at the 11 footbridge locations during peak hours, 196 (35%) crossed the road by jaywalking. At Footbridges S, U and V, the numbers of jaywalkers exceeded the numbers of footbridge users. *Audit has recommended that the Commissioner for Transport should monitor road safety at the locations of the 11 footbridges along the CPR section, and identify measures to deter jaywalking*.

Response from the Administration

21. The Administration agrees with the audit recommendations.

April 2010