For Discussion on 17 December 2004

#### Legislative Council Panel on Transport

# Highways Department's Directorate Staffing Proposals

#### PURPOSE

This paper briefs Members on our proposal to create one permanent post of Chief Engineer (CE) (D1), and to retain four supernumerary posts, viz., one Government Engineer (GE) (D2) and three CEs (D1), for the time frames mentioned below, in the Highways Department (HyD) with effect from 12 March 2005. We plan to submit our proposal to the Establishment Subcommittee (ESC) of the Finance Committee (FC) for consideration at its meeting on 19 January 2005.

#### PROPOSAL

2. Three supernumerary posts in the Major Works Project Management Office (MWPMO), viz., the Deputy Project Manager/Major Works (1) (DPM/MW(1)) (GE) (D2), Chief Engineer/Major Works 1-1 (CE/MW1-1) (CE) (D1) and Chief Engineer/Major Works 3-1 (CE/MW3-1) (CE) (D1); and two supernumerary posts in the Railway Development Office (RDO), viz., the Chief Engineer/Railway (2) (CE/R(2)) (CE) (D1) and Chief Engineer/Technical Services (CE/TS) (CE) (D1), in the HyD will lapse on 12 March 2005. The HyD would require the continued support of these directorate posts for managing major highway projects, and for planning and implementing new railway projects to support the economic development and population growth in Hong Kong and our growing links with the Mainland. In this regard, we propose to –

- (a) create one permanent CE (D1) post in the RDO,
- (b) retain one supernumerary CE (D1) post in RDO for a period of 27 months up to 11 June 2007, and

(c) retain the three supernumerary posts of one GE (D2) and two CE (D1) in the MWPMO for a period of 18 months up to 11 September 2006

in the HyD with effect from 12 March 2005.

#### JUSTIFICATION

3. On 12 March 1999, FC approved vide EC (98-99)26 and EC (98-99)27 the creation of the five supernumerary posts listed in paragraph 2 above in the HyD for a period of six years. In putting forward the above submissions to the ESC/FC, we undertook to review the continued need of the above posts before the end of the six-year period. We have reviewed critically the current and foreseeable workload, the directorate structure and manpower resources of the department and concluded that we have a continued need for the five supernumerary directorate posts, of which one CE (D1) should be made permanent and the remaining four posts (1 GE (D2) and 3 CE (D1)) should be retained for the respective extended periods mentioned in paragraphs 2(b) and (c) above.

#### Major Works Project Management Office

4. The workload of the MWPMO would be at its peak up to the end of 2006 when the major projects, namely the Hong Kong-Shenzhen Western Corridor (HK-SWC), the Deep Bay Link (DBL), the Widening of the Yuen Long Highway (YLH), Route 8 (previously known as Route 9) between Tsing Yi and Sha Tin, and the improvements to Castle Peak Road all reach their critical stage of construction. The Office is tasked to manage an annual expenditure on highway infrastructure projects of around \$7.0 billion in 2004-05, \$6.0 billion in 2005-06 and \$6.0 billion in 2006-07. The complexity of the projects and the level of responsibilities associated with their successful and timely completion and commissioning require the intensive management by the directorate professionals.

5. The existing and proposed organisation chart is at Enclosure 1. At present, the MWPMO is headed by the Project Manager/Major Works (Principal Government Engineer) (PGE) (D3). The projects are being implemented through three major works project teams, each headed by a Deputy Project Manager/Major Works (DPM/MW) (GE) (D2). Each of the three DPM/MWs is supported by two or three CEs (D1), designated as Chief Engineer/Major Works. The workload of the project teams in the MWPMO is detailed below. 6. <u>Team One (MW1)</u> is responsible for implementing Route 8 between Tsing Yi and Sha Tin. This includes the Stonecutters Bridge which will be the world's longest span cable stayed bridge, three tunnels totalling 6.5 kilometres (km) in length and 9.5 km in length of high-level viaducts involving over 8 000 units of pre-cast concrete viaduct segments of which some are to be put up over areas with heavy traffic. A sophisticated traffic control and surveillance system has to be implemented in a timely manner in conjunction with the civil contracts to ensure the staged, orderly commissioning of the Route 8 project between Cheung Sha Wan and Sha Tin by mid-2007, and between Tsing Yi and Cheung Sha Wan by mid-2008.

7. Apart from Route 8, MW1 is also responsible for the Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha, the construction of which has just commenced for completion in early 2007; the detailed planning for the Reconstruction and Improvement of Tuen Mun Road; and the planning for the Route 4 (previously known as Route 7) section between Kennedy Town and Aberdeen. DPM/MW(1) also oversees the Project Technical Support Unit. The projects under MW1 have a total cost of over \$19 billion. Because of their scales and complexities, the continued intensive input to the projects at the directorate level is essential to ensuring their successful implementation.

8. <u>Team Two (MW2)</u> is responsible for managing the implementation of the Castle Peak Road improvement project which will be completed in phases between late-2005 and mid-2007, and the highly complex project of the Reconstruction of the Causeway Bay Flyover and the Widening of Victoria Park Road, both due for completion in mid-2007.

9. MW2 is also responsible for planning and designing the Central-Wanchai Bypass and Island Eastern Corridor Link, Improvements to the Island Eastern Corridor Section between North Point and Causeway Bay, the Widening of the Tolo/Fanling Highway between Island House and Fanling; and the planning for the Central Kowloon Route and Gascoigne Road Flyover Widening. DPM/MW(2) also oversees the Programme, Planning and Control Unit. The projects under MW2 have a total cost of over \$24 billion, and have to be implemented in environmentally and socially sensitive areas. Their successful delivery would require extensive directorate level supervision.

10. <u>Team Three (MW3)</u> is responsible for implementing the HK-SWC and DBL among other projects. These cross-boundary road projects are being implemented under an exceptionally fast-track programme that demands the proactive involvement of directorate officers. The Government is fully committed to the timely delivery of these projects. Directorate officers also need to liaise closely with the Mainland authorities to ensure a good programme match with the Mainland side. They also need to liaise closely with various local community groups, and to arrange the necessary briefings and site visits to address public concerns. In due course, MW3 would have to prepare for the commissioning of the projects.

11. MW3 is also responsible for the Widening of the YLH, the New Boundary Bridge at Lok Ma Chau, and retrofitting of noise barriers on Fanling Highway near Choi Yuen Estate and Fanling Centre. DPM/MW(3) also oversees the Contract Advisory Unit and the Electrical and Mechanical Engineering Co-ordination Unit. The projects under MW3 have a total cost of about \$10 billion and are all strategically important.

12. A plan showing the location of the major highways projects is Encl.2 The magnitude, complexity and tight construction at Enclosure 2. programmes of each of the projects mentioned above create considerable inherent risks in project management, including project cost overruns and late completion. Only senior directorate professionals would have the necessary experience, status and authority to deal pro-actively, at the highest levels of the contractors' and consultants' organisations, with the many and varied issues that are bound to arise and which, if not managed well, might impact negatively on the costs and the timely delivery of the The directorate officers would be required to interface projects. pro-actively with all the contracting parties in respect of programme, cost and resource management to ensure that the projects will be completed on time, within budget and to a conforming standard of quality. In particular, the Government is now actively promoting partnering<sup>1</sup> with its contractors on all major projects. This new partnering approach requires regular meetings among all project stakeholders at the highest levels to deal with

<sup>&</sup>lt;sup>1</sup> In the past, for major projects under construction, the Government's main role was to oversee the consultants in the administration of the works contracts. Nowadays, the complexity and extensive interfaces amongst individual contracts demand more active involvement of the Government in contract matters in order to best protect the Government's interests. To this end, the Government (including HyD since 2003) has adopted a partnering approach on all major contracts. Partnering is a collaborative process between the Government and the contractors under a non-binding partnering charter signed between the parties. It focuses on early identification and cooperative solving of problems throughout the contract period.

project matters and to resolve potential problems at the early stage. This increases considerably the level of responsibility and accountability on the directorate staff since they have to be involved more intimately in every aspect of the projects. In sum, the directorate staff are required to manage the projects actively on a daily basis through attending progress meetings, participating in problem solving workshops, drawing up strategies to deal with delays and cost overruns, reviewing and approving contractors' alternative designs, and ensuring that the projects progress as smoothly as possible.

13. supernumerary Three posts, viz., the Government Engineer/Major Works (3) (GE) (D2), Chief Engineer/Major Works 2-3 (CE) (D1) and Chief Engineer/Major Works 3-3 (CE) (D1), were created in 1999 for a period of six years to strengthen the directorate support in the MWPMO in planning and implementing a number of strategic highway projects including the Route 8 project, the Widening of the YLH, Tsing Yi North Coastal Road, the Widening of Tolo/Fanling Highway, Improvement to Fan Kam Road, Kam Tin Bypass, etc. Over the years, while some projects have been completed (e.g. Tsing Yi North Coastal Road and Kam Tin Bypass), some new projects, in particular the strategic cross-boundary road projects, e.g. the Hong Kong-Shenzhen Western Corridor, have been added for fast-track implementation. In addition, the implementation programmes of a number of projects have been reviewed and adjusted in the light of changing planning parameters and circumstances, e.g. Route 10. As a result, projects and workload, including the four supporting units, have been redistributed amongst the Office to utilise the resources more The opportunity has also been taken to re-title the effectively. Government Engineer/Major Works post to DPM/MW to better reflect his role as project manager together with the re-designation of the other CE posts.

14. The above three supernumerary posts, re-designated as DPM/MW(1), CE/MW1-1 and CE/MW3-1 respectively, will lapse on 12 March 2005. Having considered the workload in the MWPMO which would remain high until the substantial completion of some of the mega projects in end-2006; the increasing involvement of directorate officers in project management with the adoption of the partnering approach since 2003; and the increasing level of public participation throughout the whole period of project implementation as well as increasing public expectation of active monitoring of government projects which involve huge sums of public funds, we consider that it is essential for us to maintain the current level of directorate support for a period of 18 months with effect from 12 March 2005. The job descriptions of DPM/MW(1), CE/MW1-1 and

#### Encls. 3-5 CE/MW3-1 are at **Enclosures 3 to 5**.

15. A number of on-going major contracts would still be in full swing in 2007-2008, including the eight major contracts forming the Route 8 project, the Tung Chung Road improvement project and one contract under the Castle Peak Road improvement project. However, with the anticipated commissioning of the HK-SWC, DBL, YLH and most of the Castle Peak Road projects after the second quarter of 2006, the workload in respect of these projects would diminish gradually, with the major part of the remaining work being the finalisation of accounts within 12 months after completion of works. In the light of the above, we consider that the three supernumerary posts of DPM/MW(1), CE/WM1-1 and CE/MW3-1 would no longer be required after 12 September 2006. We would redistribute the outstanding matters of the projects handled by the three posts to the permanent staff in the MWPMO.

#### **Railway Development Office**

16. The existing and proposed organisation chart of the RDO is at Encl. 6 **Enclosure 6**. The RDO, headed by the Principal Government Engineer/Railway Development (PGE) (D3), is responsible for planning and implementing the committed new railways, and planning for future railway development in Hong Kong. It consists of two groups, namely, the Railway Development Group (1) (RDG1) and Railway Development Group (2) (RDG2).

17. <u>RDG1</u> is responsible for handling the outstanding issues of the West Rail (WR), overseeing the implementation of the Disneyland Resort Line, co-ordinating the improvement works to existing railways stations and planning for and examining the Kowloon Southern Link (KSL), Sha Tin to Central Link (SCL), North Hong Kong Island Line (NIL), West Hong Kong Island Line (WIL), South Hong Kong Island Line and Port Rail Line (PRL) projects.

18. <u>RDG2</u> is responsible for overseeing the implementation of the Ma On Shan to Tai Wai Rail Link (MOS Rail), Tsim Sha Tsui Extension (TST Extension) and the Sheung Shui to Lok Ma Chau Spur Line (Spur Line) projects, and planning for the Tseung Kwan O South Station, the Regional Express Line (REL) and the Northern Link (NOL) projects. It also undertakes transport model analysis to provide the essential patronage and revenue forecasts for future railway planning. A plan showing the location of the railway projects is at **Enclosure 7**.

Encl. 7

19. The two supernumerary posts in the RDO, viz., CE/R(2) and CE/TS, were created in 1999 for a period of six years for planning and implementing new railway projects and for the planning of future railway development to support the continued population growth and economic development within Hong Kong and our growing links with the Mainland. Over the years, the duties and responsibilities of the two posts have remained more or less the same. CE/R(2) heads the Railway Division 2 and is responsible for overseeing the planning and implementation of the Spur Line project. CE/TS heads the Technical Services Division and is responsible for establishing a computerised railway planning tool and the necessary database for the continuous planning and updating of the territory's rail developments. He has also been charged with handling all district administration matters on railway development for the whole of Hong Kong, including provision of advice on strategic and regional transport planning studies. The above two supernumerary posts will lapse on 12 March 2005. We consider it necessary to retain the CE/R(2) post for 27 months and make permanent the CE/TS post as explained below.

#### Chief Engineer/Railway (2)

20. In order to address the environmental concerns, the original viaduct option for the Spur Line project was changed to a tunnel option in 2002. Due to this major change in scope, construction could only commence in late-2002, which was about two years behind the original programme. Coupled with the fact that construction of tunnel would take about one more year than that of a viaduct, the target completion of the Spur Line has been revised from 2004 to mid-2007 due to these changes.

21. In the light of the revised programme for the Spur Line, the supernumerary CE/R(2) post is required to continue to oversee the implementation of the Spur Line project and the associated Essential Public Infrastructure Works<sup>2</sup> worth over \$600 million. In particular, the project includes a pedestrian bridge that straddles across the boundary over Shenzhen River joining the Lok Ma Chau and Huanggang Terminals. We have entrusted the construction of the pedestrian bridge to the Shenzhen authority. As the construction of the cross-boundary pedestrian bridge needs to synchronise with that of the terminal construction, CE/R(2) has to

<sup>&</sup>lt;sup>2</sup> The Essential Public Infrastructure Works (EPIW) are works, which are not railway works, but are necessary to enable a railway project to be opened for operation, such as access roads to railway stations, pedestrian subways/footbridges and public transport interchanges. Government is responsible for funding these items that are by nature public works. The associated EPIW for Spur Line include construction of the Hong Kong portion of the pedestrian bridge across Shenzhen River connecting the Lok Ma Chau Terminus with Huanggang, cross-boundary facilities at the Lok Ma Chau Terminus and widening of the access road to the Lok Ma Chau Terminus.

liaise closely with the Shenzhen side on its implementation and to agree on the design, construction and commissioning aspects. CE/R(2) is also responsible for implementing a \$93-million public transport interchange at the Lok Ma Chau Terminus (to be entrusted to KCRC) to tie in with the commissioning of the Spur Line. In the light of the responsibility and duties, we propose to retain the supernumerary post of CE/R(2) for 27 months up to 11 June 2007 to ensure the satisfactory completion of the Spur Line. We consider the extended period sufficient to enable CE/R(2) to see through the implementation of the Spur Line. We will not seek further extension of the post. We will review regularly the need of the post before the end of the 27-month period and will delete the post once it is no longer required.

#### Chief Engineer/Technical Services

22. CE/TS heads the Technical Services Division that maintains a comprehensive database of transport statistics and collates key planning and land use information. The information provides essential input to the operation of Railway Transport Model (the RDS Model) that forecasts rail patronage and revenue for different rail network configurations at different future years under different socio-economic assumptions. The model results provide essential information to enable us to formulate rail expansion plans, and update the Railway Development Strategy and, in a wider context, the transport policy.

23. The RDS Model is a highly complicated one that requires regular updating and recalibration to take into account changes in planning and social-economic parameters, including passengers' behaviour and route choices as well as the community's aspirations. Furthermore, analysis and interpretation of model results together with the subsequent financial and economic evaluations on railway projects are a highly complex task that demand professional input at the directorate level.

24. We saw the long-term need for the CE/TS post when we put forward the submission to the ESC/FC in March 1999. In our submission vide EC(98-99)26, we proposed to create the post on a supernumerary basis for a period of six years in the first instance and would explore other options including redeployment following the completion of the new railway projects. Since then, we have published our policy statement "Hong Kong Moving Ahead" in October 1999 which stated clearly our policy objective of better use of railways as the back-bone of our passenger transport system. To achieve this policy objective, it is imperative to update regularly our railway development plans. Experience in the past six years reaffirmed our view in 1999 that there is a genuine need for the CE/TS post in the long run. Taking into account also the number of railway projects under planning and coupled with the fact that there is no capacity for other directorate officers to take up the tasks (paragraph 26 below), we therefore propose to make permanent the existing supernumerary post with effect from 12 March 2005.

Encl. 8-9 25. The job descriptions for the CE/R(2) and CE/TS posts are at **Enclosures 8 and 9**.

26. When we made the submission for the establishment of the Hong Kong-Zhuhai-Macao Bridge Hong Kong Project Management Office vide EC(2004-05)4, which was endorsed by FC on 14 May 2004, we had completed a comprehensive review of the organisation and manpower deployment of the department. Our conclusion, which still stands, is that –

- (a) the directorate staff in the MWPMO are fully occupied in taking forward the major highway projects as described in paragraphs 4 15 above;
- (b) the existing directorate staff in RDO are fully engaged in the committed and new railway projects as described in paragraphs 17 18 above (we have taken into account the supernumerary Chief Engineer/West Rail (CE) (D1) post in the RDO which was created for the WR and lapsed on 1 May 2004 after the commissioning of the WR project); and
- (c) the Headquarters and the Regional Offices of the HyD have been restructured in early 2004 to cope with the additional workload upon implementation of the Land (Miscellaneous Provisions) (Amendment) Ordinance and they have no capacity to take on more work (the details are set out in EC(2003-04)17 that was endorsed by FC on 27 February 2004).

In sum, the manpower in the department is already fully committed and there is no spare capacity for them to take up the work of the five directorate posts in the specific periods under the current proposal. There is a need for the permanent post of CE/TS and the extension of the four supernumerary posts for the respective periods as stated in paragraph 2(b) and (c) above. We have reviewed critically the need for the extended periods for the supernumerary posts and consider the need for the extension final. We will delete the posts when they expire. We will also review the need for the supernumerary posts during the extension periods and delete them should they become unnecessary in the interim.

#### FINANCIAL IMPLICATIONS

27. The proposed creation of one permanent CE (D1) post and retention of four supernumerary posts of one GE (D2) and three CEs (D1) will bring about an additional notional annual mid-point salary cost of \$5,937,600 and in full annual average staff cost of \$8,903,000. The additional resources required will be met by internal redeployment of resources within the Environment, Transport and Works Bureau.

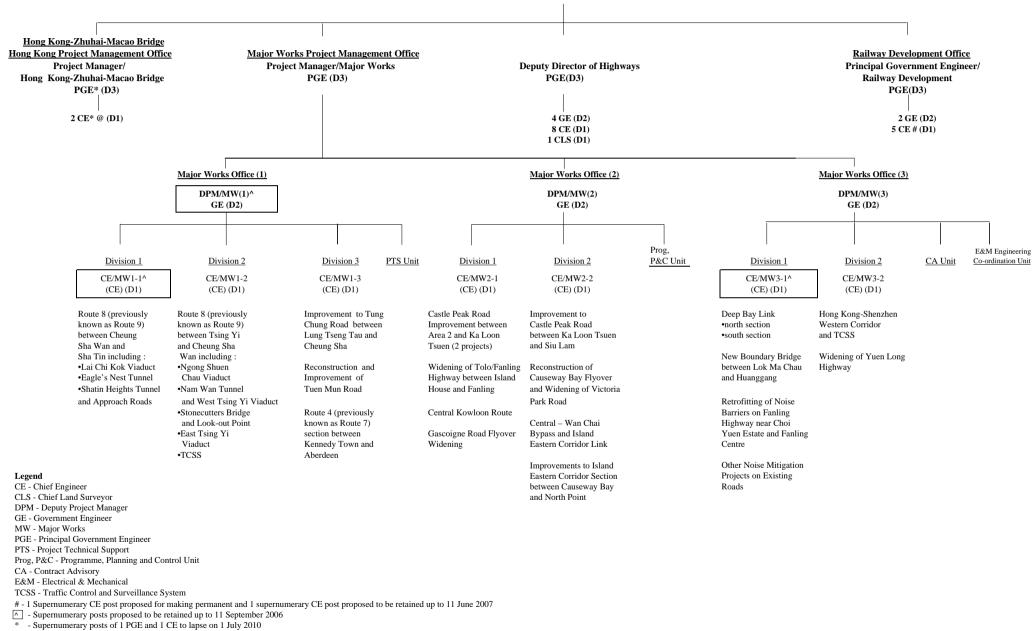
### **ADVICE SOUGHT**

28. Members are invited to give their views on the proposal in this paper and support our staffing proposal.

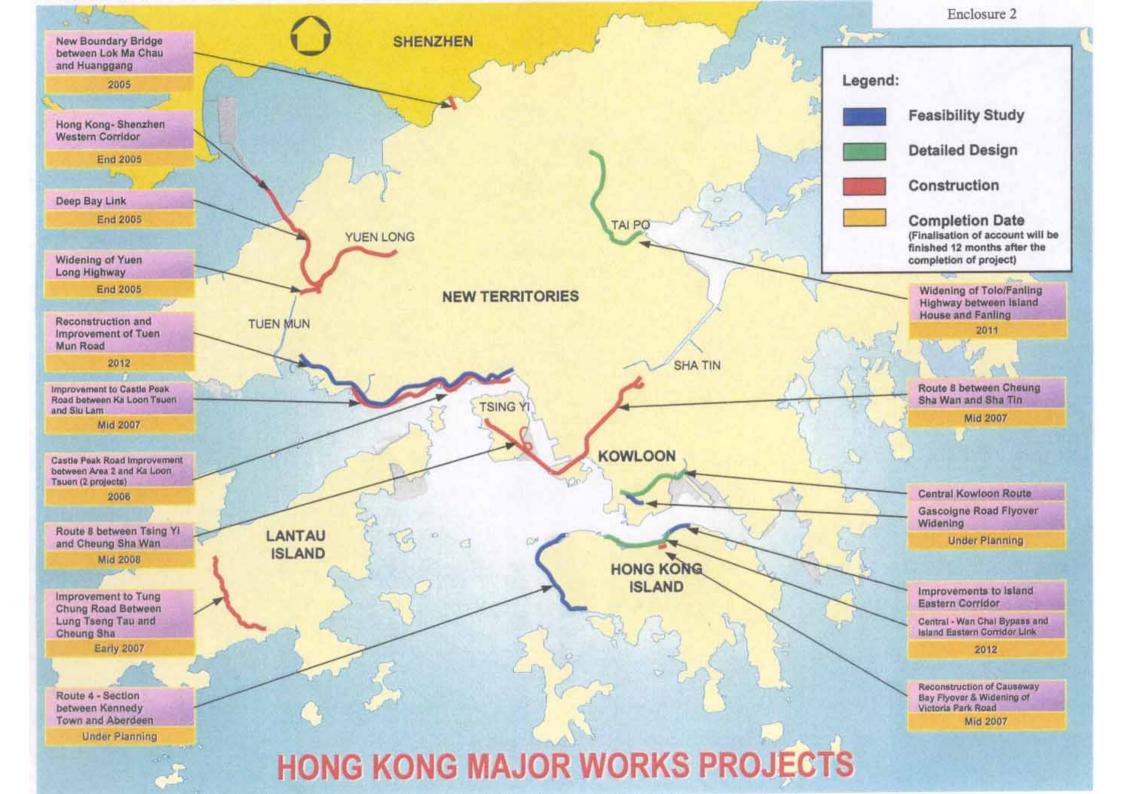
**Environment, Transport and Works Bureau December 2004** 

#### Existing and Proposed Organisation Chart of Major Works Project Management Office

Director of Highways (D6)



@ - 1 CE post redeployed from MWPMO to HZMB Hong Kong Project Management Office on a time-limited basis up to 30 June 2010



#### Job Description for Deputy Project Manager/Major Works (1) (DPM/MW(1))

**Rank** : Government Engineer (D2)

**Responsible to** : Project Manager/Major Works

#### **Overall Role and Objectives :**

DPM/MW(1) manages the day-to-day operations of the Divisions under his control. He provides professional, administrative and policy guidance, support and leadership to his subordinates who are responsible for planning and implementing strategic highway projects relating to Route 8 (previously known as Route 9) between Tsing Yi and Sha Tin, Improvement to Tung Chung Road between Lung Tseng Tau and Cheung Sha, Reconstruction and Improvement of Tuen Mun Road and Route 4 (previously known as Route 7) section between Kennedy Town and Aberdeen.

- 1. Executing strategies, policies and procedures to control project scope, cost and programme of major highway projects;
- 2. managing, monitoring and co-ordinating the work of his Divisions and Units in implementing major highway projects with the best utilisation of resources;
- 3. setting Divisional programmes and cost targets and monitoring performance against the set targets to ensure projects are completed on time and within budget;
- 4. handling contractual disputes, and dealing with contractual issues from the Client's perspective;
- 5. liaising with policy bureaux and other government departments on issues relating to the planning, design and implementation of projects;

- 6. chairing assessment panels for consultants selection, negotiating and processing consultants agreements and presenting recommendations to the Consultants Selection Board, and supervising the management of consultants engaged in the major highway projects; and
- 7. preparing tender documents, chairing panels for the prequalification of tenderers and the assessment of tender proposals, and attending meetings of the Central Tender Board.

#### **Enclosure 4**

#### Job Description for Chief Engineer/Major Works 1-1 (CE/MW1-1)

Rank:Chief Engineer (D1)Responsible to:Deputy Project Manager/Major Works (1)

#### **Overall Role and Objectives :**

CE/MW1-1 heads a Division and is responsible for the implementation of the highway projects under Route 8 between Cheung Sha Wan and Sha Tin including Lai Chi Kok Viaduct, Eagle's Nest Tunnel as well as Shatin Heights Tunnel and approach roads.

- 1. Assisting in the execution of strategies and procedures as formulated by his seniors in respect of major highway projects;
- 2. leading and directing his subordinates in the planning, design and implementation of major highway projects;
- 3. consulting and co-ordinating with the policy bureau and other departments in preparing briefings, information papers and situation reports;
- 4. attending meetings of the District Councils and other meetings as and when required;
- 5. procuring and administering consultancies;
- 6. managing the performance of contractors engaged in construction contracts, overseeing construction progress and ensuring they are completed on time, within budget and in compliance with the approved schedules, government procedures and standards;
- 7. handing over completed works to maintenance authorities and ensuring as-constructed records are accurate and complete; and
- 8. resolving claims and disputes raised by contractors.

#### **Enclosure 5**

#### Job Description for Chief Engineer/Major Works 3-1 (CE/MW3-1)

**Rank** : Chief Engineer (D1)

**Responsible to** : Deputy Project Manager/Major Works (3)

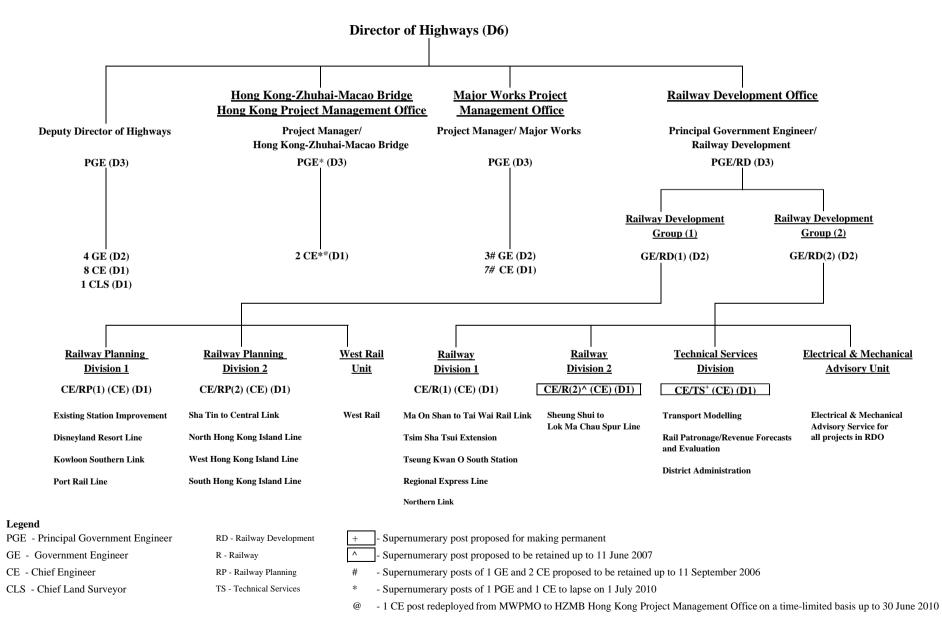
#### **Overall Role and Objectives :**

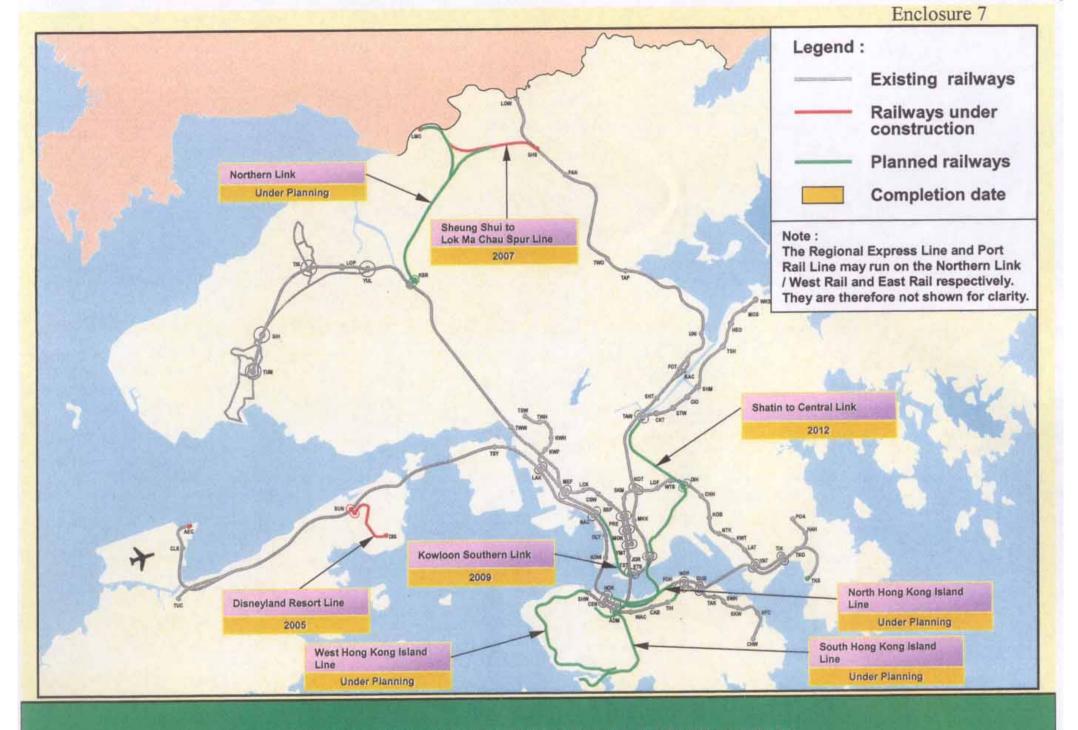
CE/MW3-1 heads a Division and is responsible for the implementation of a number of highway projects including Deep Bay Link, New Boundary Bridge between Lok Ma Chau and Huanggang, retrofitting of noise barriers on Fanling Highway near Choi Yuen Estate and Fanling Centre and other noise mitigation projects on existing roads.

- 1. Assisting in the execution of strategies and procedures as formulated by his seniors in respect of major highway projects;
- 2. leading and directing his subordinates in the planning, design and implementation of major highway projects;
- 3. consulting and co-ordinating with the policy bureau and other departments in preparing briefings, information papers and situation reports;
- 4. attending meetings of the District Councils and other meetings as and when required;
- 5. procuring and administering consultancies;
- 6. managing the performance of contractors engaged in construction contracts, overseeing construction progress and ensuring they are completed on time, within budget and in compliance with the approved schedules, government procedures and standards;
- 7. handing over completed works to maintenance authorities and ensuring as-constructed records are accurate and complete; and
- 8. resolving claims and disputes raised by contractors.

#### **Enclosure 6**

#### **Existing and Proposed Organisation Chart of Railway Development Office**





## HONG KONG RAILWAY NETWORK

#### Job Description for Chief Engineer/Railway (2) (CE/R(2))

**Rank** : Chief Engineer (D1)

**Responsible to** : Government Engineer/Railway Development (2)

#### **Overall Role and Objectives :**

CE/R(2) heads the Railway Division (2) of the Railway Development Office and is responsible for overseeing the implementation of the Sheung Shui to Lok Ma Chau Spur Line (the Spur Line) project and the associated Essential Public Infrastructure Works (EPIW).

- 1. Vetting the technical proposals of the Kowloon-Canton Railway Corporation (KCRC) for the Spur Line, and assisting in negotiation with the Corporation;
- 2. liaising with KCRC to ensure the adoption of appropriate strategy, procedures and programme in consultancies and contract management for the Spur Line;
- 3. providing technical input to the financial and legal aspects of the Spur Line;
- 4. monitoring the programme and progress of the Spur Line;
- 5. co-ordinating with other government departments and parties, including the Shenzhen Authorities, to ensure the smooth progress of the Spur Line and the Huanggang-Lok Ma Chau Passenger Bridge;
- 6. resolving interfacing matters arising from the Spur Line with other development projects;
- 7. administering the Public Works Programme items on the EPIW for the Spur Line and the Public Transport Interchange at Lok Ma Chau Terminus (entrusted to KCRC);

- 8. monitoring the expenditure and progress of the EPIW and the Public Transport Interchange at Lok Ma Chau Terminus; and
- 9. serving on the following committees for the Spur Line
  - (a) Site Liaison Group (Chairman); and
  - (b) Huanggang-Lok Ma Chau Passenger Bridge Joint Working Group (Member).

#### Job Description for Chief Engineer/Technical Services (CE/TS)

**Rank** : Chief Engineer (D1)

**Responsible to** : Government Engineer/Railway Development (2)

#### **Overall Role and Objectives :**

CE/TS heads the Technical Services Division of the Railway Development Office and is responsible for the upkeeping and operation of the Railway Transport Model (the RDS Model) and the necessary database for the continuous planning and updating of the territory's rail network development.

- 1. Co-ordinating the compilation of statistical data on railway riderships covering line flows, station to station passenger movements and interchange flows;
- 2. analyzing and compiling land use, demographic and socio-economic data in the format of the computerised transport model for use in various transportation studies on railway development;
- 3. updating the databank for railway planning, maintain and refine the model parameters of a four-stage (trip generation, distribution, model split and assignment) computerised transport model and validating its performance to produce a reliable, effective and responsive planning tool for rail-based transport;
- 4. recalibrating the computerised transport model to the latest survey results on travel characteristics;
- 5. reviewing and updating computer applications for railway development;
- 6. ensuring compatibility on planning assumptions and data input with other strategic transport studies;

- 7. producing and analysing forecasts on railway demands for different network, socio-economic assumptions and land use development scenarios;
- 8. carrying out financial and economic evaluation of new railway proposals;
- 9. handling railway district administration matters; and
- 10. serving on the following committees
  - (a) Working Group on the Hong Kong 2030 Planning Vision and Strategy (Member); and
  - (b) other steering/working groups on transport studies.