LegCo Panel on Transport

Comparison of views presented by Route 3 (CPS) Company Limited and the Administration on planning and transport-related information for Route 3 (Country Park Section)

Government's undertakings highlighted by Route 3 (CPS) Company Limited (the Route 3 Company)	**Comments made by the Route 3 Company**	**Response of the Administration**
• Government aims at "ensuring the private sector a reasonable but not excessive return" (paragraph 6.3 of the Invitation for Expressions of Interest in Developing the Country Park Section of Route 3 - Project Outline, March 1993 (the "Project Outline")) (**Annex A**). • "Government's policy is to optimise private sector participation in the construction and operation of road infrastructure which is capable of providing a reasonable but not excessive return on investment". (paragraph 1.2.1	• The Route 3 Company has been incurring a net loss since the opening of Route 3. As such, no other highway in competition with Route 3 should be built until Route 3 reaches a sufficient capacity.	• There is no provision in both the Project Agreement with the Route 3 Company and the Tai Lam Tunnel and Yuen Long Approach Road Ordinance regarding a guaranteed rate of return for the Route 3 project. • Schedule 2 of the Project Brief (**Annex C**) states that "The rationale for the toll adjustment mechanism is to maintain a low and stable toll regime while allowing a degree of certainty for the Franchisee over future toll increases. The mechanism does not guarantee the Franchisee a level of

Government's undertakings highlighted by Route 3 (CPS) Company Limited (the Route 3 Company)	**Comments made by the Route 3 Company**	**Response of the Administration**
of the Route 3 - Country Park Section: Project Brief (the "Project Brief")) (**Annex B**).		revenue or a level of return. It is rather a mechanism by which the Franchisee has the option to implement toll increases which would, if other assumptions are met, achieve a level of revenue/return within specified parameters".
• Route Y would only be built until the initial capacity of Route 3 be filled (paragraph 6.8.3 of the Final Report of the Updating of Second Comprehensive Transport Study (CTS-2 update), which forms part of the Project Brief) (**Annex D**).	• The capacity of Route 3 is 140,000 vehicles per day and the present daily traffic is only 44,000 vehicles. • According to the company's traffic consultant, Route 3 will not reach saturation until 2016 and Route 10 will not be needed before then.	• Route 10 is a strategic highway project first identified in the CTS-2 Update published in 1993 as Route "Y" which serves as a new north-south road link in addition to Route 3 (**Annex E**). • Potential tenderers for Route 3 were aware of the Government's plans regarding land use and transport developments in the territory. The Project Brief for Route 3 has made reference to CTS-2 Update which states that Route Y currently only at a conceptual stage, is intended to cater for the anticipated heavy north-south movements in the New Territories and to relieve

Government's undertakings highlighted by Route 3 (CPS) Company Limited (the Route 3 Company)	**Comments made by the Route 3 Company**	**Response of the Administration**
		screenlines RR and TT (see page 7 of Annex E for the locations of the screenlines) towards the end of the period 2007-2011(**Annex F**).
• Function of Route 10 should be reviewed if development plans change to exclude port development on Lantau Island (paragraph 11.3.19 of the Third Comprehensive Transport Study (CTS-3) - Technical Report) (**Annex G**).	• In view of the uncertainty associated with the provision of additional container terminal facilities on Lantau Island, there is a need to review the implementation programme for Route 10.	• The need and alignment for Route 10 was confirmed in CTS-3 completed in 1999. The latest traffic forecasts also indicate a need for the southern section by 2007/2008 and the northern section in 2010/2011 taking into account all relevant updated factors including the opening of West Rail and the latest development of port-related infrastructure. The plan to advance northern section of Route 10 to 2007 is mainly in response to local demand as well as changing economic circumstances. • Planning of transport infrastructure has a long lead time and it would be irresponsible for Government to make a start on Route 10 only when Route 3 is saturated. Without

Government's undertakings highlighted by Route 3 (CPS) Company Limited (the Route 3 Company)	Comments made by the Route 3 Company	Response of the Administration
		Route 10, the peak volume to capacity ratios for Tuen Mun Road and Route 3 will be 1.31 and 1.15 by 2011.
• Traffic forecasts prepared by Government are inaccurate	• Paragraph 8 of the Project Outline states that "It is estimated that approximately 80% of traffic using Tai Lam Tunnel will be goods vehicles". (**Annex H**) The actual is only 28% in 2001. This further demonstrates the need to avoid making expensive decisions on the basis of traffic forecasts until it becomes clear that the forecast conditions are likely to be realized.	• The average traffic volume forecast on Route 3 during the tender stage was 40,158 for 2001 under the low range scenario which is very close compared to the existing flow of over 43,000. (**Annex H**) • The current set of traffic data for future planning is derived from CTS-3. CTS-3 examined an envelope of growth scenarios including Low, Medium and High in assessing the future transport needs. A range of possible infrastructure requirements was produced corresponding to the different growth scenarios. • With the introduction of an annual Strategic Highway Project Reviews, the Administration is able to take on board the

Government's undertakings highlighted by Route 3 (CPS) Company Limited (the Route 3 Company)	Comments made by the Route 3 Company	Response of the Administration
		latest changes in circumstances and projections of growth in various aspects, and hence, it has a more current forecast of the future traffic demands and the related new infrastructure requirements.

Legislative Council Secretariat
29 January 2002

INVITATION FOR EXPRESSIONS OF INTEREST IN DEVELOPING THE COUNTRY PARK SECTION OF ROUTE 3 ("THE PROJECT")

Project Outline

5.3 Although the road is on the periphery of the Kam Tin River flood plain, its effect on the surrounding drainage system and the future river training works will be assessed via a Drainage Impact Assessment as part of the Stage 2 Preliminary Design.

5.4 Minimal visual intrusion is anticipated along the flood plain, but replanting is required at the Ma On Kong cut/fill slope area. Although the impact of the Yuen Long Approach on air quality and noise levels is considered to be surmountable, the extent of the impact and the mitigation measures required will be identified as part of the full environmental impact assessment to be carried out for the entire Project during the Stage 2 Preliminary Design.

5.5 The road alignment is kept close to the hillside in Kam Tin valley to reduce encroachment on, or severance of, existing communities. It avoids graveyards over most of its length by running on the flood plains and not cutting across spurs and ridges.

6 Toll Facilities

6.1 Provision in the design has been made for toll plazas within the Yuen Long Approach for traffic using the Tai Lam Tunnel and within the North West Tsing Yi interchange for traffic travelling north and south on Route 3 between Cheung Ching Tunnel and the Ting Kau Bridge. No separate provision has been identified to collect tolls from traffic between Ting Kau Bridge and the Lantau Fixed Crossing. One option is for tolls to be collected by the Lantau Fixed Crossing operator with the Country Park Section Operator being reimbursed with a proportion of the Lantau Fixed Crossing toll to reflect the volume of traffic using the Ting Kau Bridge. Proposals are invited.

6.2 As part of the Lantau Fixed Crossing works Government will construct the North West Tsing Yi Interchange toll plaza administration and associated buildings and carry out site formation for approximately two thirds of the North West Tsing Yi Interchange. The Country Park Section Franchisee will be required to complete the remaining one third of the site formation for the North West Tsing Yi Interchange and construct, operate and maintain the toll plaza.

6.3 The Government wishes to achieve a low and stable toll regime throughout the Franchise Period whilst at the same time ensuring the private sector a reasonable but not excessive return. The Government will consider proposals based on a toll adjustment formula that may be linked to certain predetermined conditions.

7 Traffic Control and Surveillance

7.1 The Traffic Control and Surveillance System for the Ting Kau Bridge including the Ting Kau Interchange is anticipated to be integrated into the system for the Control area covering the Lantau Fixed Crossing and the Tsing Yi and

1.1.4 A plan showing the alignment of Route 3 - Country Park Section is at Annex 1.

1.1.5 The Hong Kong Government will construct the Ting Kau Bridge under its Public Works Programme. It is envisaged that tenders for the bridge will be invited in early 1994, with a view to commencing construction in September 1994 for completion in mid 1997.

1.2 PURPOSE OF THE BRIEF

1.2.1 In accordance with Government's policy to optimise private sector participation in the construction and operation of road infrastructure which is capable of providing 2 reasonable but not excessive return on investment. Government invites Tenders from the private sector for the Franchise, which will comprise the Execution of the Works and the operation and maintenance of Route 3 - Country Park Section (Tai Lam Tunnel and Yuen Long Approach Road). Tenders should be submitted on the basis of the Brief.

1.2.2 The purpose of the Brief is threefold:-

(i) to explain Government's general requirements in respect of the Project and the Franchise and to provide certain information which may be relevant to the Project and the Franchise;

(ii) to provide guidance in the preparation of Tenders and explain the criteria and procedure based on which Tenders will be assessed; and

(iii) to set out in detail Government's design and construction requirements in respect of the Project and Government's operation, maintenance and other requirements in connection with the Franchise.

1.3 THE FRANCHISE

Government envisages granting a franchise to design, construct, commission, maintain and operate Route 3 - Country Park Section (Tai Lam Tunnel and Yuen Long Approach Road). The Franchise will include the right to collect tolls from vehicles using Route 3 - Country Park Section (Tai Lam Tunnel and Yuen Long Approach Road) over the Operating Period.

1.4 PROJECT SCOPE

1.4.1 The scope of the Project includes Route 3 - Country Park Section (Tai Lam Tunnel and Yuen Long Approach Road) which the Franchisee shall design, construct, operate and maintain. Also included in the scope of the Project will be:-

SCHEDULE 2

FRAMEWORK FOR A TOLL ADJUSTMENT MECHANISM

The purpose of this Schedule is to outline a framework for a toll adjustment mechanism.

The rationale for the toll adjustment mechanism is to maintain a low and stable toll regime while allowing a degree of certainty for the Franchisee over future toll increases.

The mechanism does not guarantee the Franchisee a level of revenue or a level of return. It is rather a mechanism by which the Franchisee has the option to implement toll increases which would, if other assumptions are met, achieve a level of revenue/return within specified parameters.

Basic Principles

(1) Upon award of the Franchise, Government and the Franchisee agree upon a maximum and minimum level of Estimated Net Revenue figures for each year (respectively **"the Maximum Estimated Net Revenue"** and **"the Minimum Estimated Net Revenue"**), and a defined number of Anticipated Toll Increases (**"ATIs"**) during the Operating Period which fall on a number of specified dates (the "Specified Dates").

(2) Estimated Net Revenue figures are calculated as estimated revenue less estimated interest and estimated operating costs.

(3) The Estimated Net Revenue figures are calculated on the basis that a number of ATIs are required at periodic intervals during the Operating Period.

(4) Government and the Franchisee also agree on the amount of each ATI on the Specified Dates in money of the day terms.

Overview of how the Mechanism works

At the end of each operating year, the Franchisee submits to Government an audited statement of its Actual Net Revenue for that year. Actual Net Revenue is defined as actual revenue less actual interest and actual operating costs.

Final Report of the Updating of Second Comprehensive Transport Study

Updating of Second Comprehensive Transport Study July 1993

Period 3 - Strengthening (2007-2011)

The initial capacity of Route 3 will be filled. Relief will be needed because of anticipated further development in the New Territories and in cross-border traffic. This will be provided by the addition of Route 3 (CRA4), the extension to the south of Hong Kong Island by Route 7, and a further connection with Lantau by Green Island Link. A new north-south highway, Route Y, is needed to strengthen the main demand corridor.

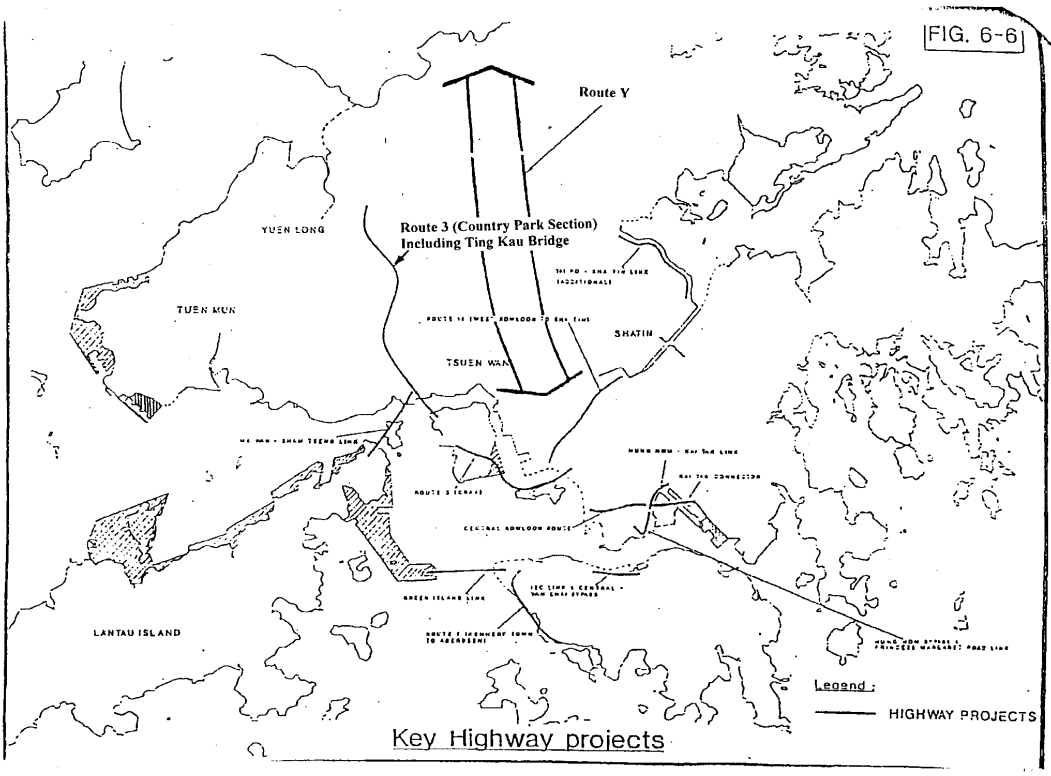
The programme for these three periods is summarised in greater detail in the following sections, and illustrated in Figure 6.6.

Period 1 - 1998 to 2001

6.8.4 This period follows on from the opening of Hong Kong's new airport at Chek Lap Kok and the concurrent transport infrastructure programme, notably Route 3 from Hong Kong Island to Tsing Yi, the Lantau Fixed Crossing, the North Lantau Expressway, and the Airport Railway. The construction of these projects will have pre-empted many of the original CTS-2 recommendations, which are therefore subject to re-examination in this Study. In fact, it was found that many of those recommendations are still valid, despite the westward movement of the Territory's development.

6.8.5 The conclusions of this Update are presented in Table 6.11, and it can be seen that the major part of the funds for the period are recommended for the Country Park Section of Route 3, including the Ting Kau Bridge. This project is vital to provide the strategic link required between Hong Kong, its port and airport, and China. The economic single year rate of return (SYRR) is excellent and the highway frees many road sections that

FIG. 6-6



Key Highway projects

Updating of the Second Comprehensive Transport Study -
Executive Summary

5.3 Method of Evaluation

5.3.1 22 candidate highway projects were evaluated. These projects could be divided into three main categories :-

(a) Additions to the strategic road system,
(b) Access roads to major development areas, and
(c) Improvements to existing highways.

5.3.2 The candidate highway projects were evaluated from the viewpoint of traffic operations and economic performance. Screenline traffic volumes were used to indicate how well each project performed in providing relief to the congestion on roads across screenlines. The degree of use of each project was also taken into account. By comparing the economic benefits of the project to the community with the project cost, an overall picture of the relative values of the candidate projects could be seen. A single year rate of return thus obtained formed a measure by which projects could be ranked in order to establish priority.

5.4 Recommended Highway Projects

5.4.1 The recommended highway development strategy is as follows :-

(a) 1998-2001
- Route 3 (Country Park) and Ting Kau Bridge
- Hung Hom Bypass and Princess Margaret Road Link
- Route 16 between Shatin and West Kowloon

(b) 2002-2006
- Ma Wan - Sham Tseng Link
- Central and Wanchai Bypass plus Island Eastern Corridor Link between Wanchai and Causeway Bay

- Central Kowloon Route plus Kai Tak Connector between Kai Tak and Kwun Tong
- Hung Hom - Kai Tak Link (North-South Highway)
- Tai Po - Sha Tin Link (Additional)

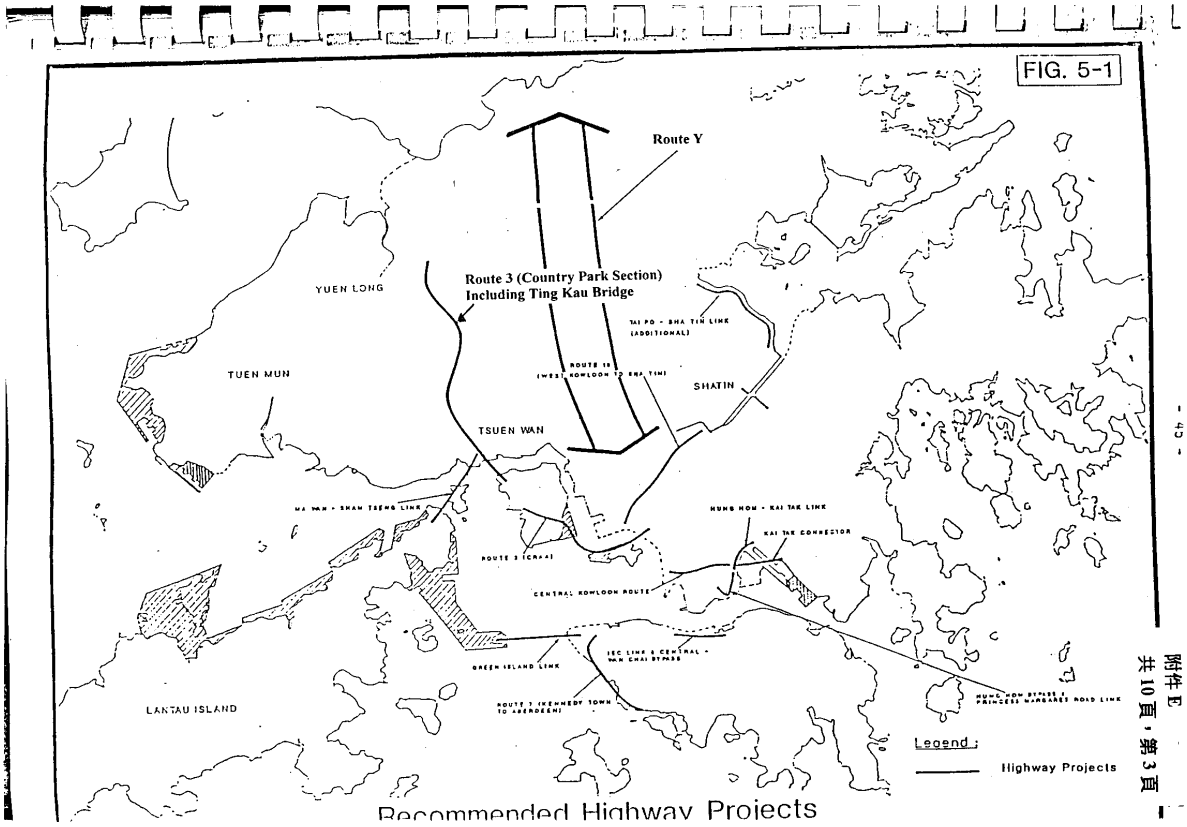
(c) 2007-2011

- Green Island Link
- Route 3 (CRA4) (Stone Cutters - Tsing Yi Section)
- Route 7 from Kennedy Town to Aberdeen
- Route Y (North-South Route in the New Territories)

These projects shown in Figure 5.1 are recommended to be in place within the respective periods mentioned above.

5.4.2 The capital costs of the recommended projects, their road cross-sections, as well as their economic single year rate of return and the traffic conditions at the concerned screenlines for each of three years of evaluation i.e. 2001, 2006 and 2011 are given in Tables 5.1, 5.2 and 5.3 respectively. The locations of the screenlines are also shown in Figure 5.2. The outcome of the evaluation of these projects are further summarized in the following paragraphs.

5.4.3 Route 3 (Country Park) and Ting Kau Bridge - this section of Route 3 fulfils two main functions : to complete an outer bypass for Tsuen Wan, and to give good access to the Northwest New Territories and through to China. It would provide relief to the Tuen Mun Road/Castle Peak Road and Tolo Highway/Tai Po Road corridors across screenline RR. Although it would not bring the Lion Rock section of the Kowloon External screenline below its capacity during peak hours in 2001, it would help to reduce the level of congestion.



Recommended Highway Projects

Table 5.1 2001 EVALUATION

Highway Projects	Cross Section	Financial Cost (91$) ($billion)	Economic SYRR (%)	Traffic conditions at Screenlines (V/C Ratio)
Route 3 CPS	D3	10.3	39	RR 1.3 to 0.9, Kln Ext (Lion Rock) 1.3 to 1.2
Hung Hom Bypass & Princess Margaret Road Link	D2	0.9	98	CC(Waterloo) 1.2 to 1.1, Access to Tsim Sha Tsui
Route 16	D2	2.7	47	Kln Ext (Lion Rock) 1.2 to 0.9
Total Cost		13.9		
Budget		13.0		

For locations of screenlines please see Fig 5.2

Table 5.2 2006 EVALUATION

Highway Projects	Cross Section	Financial Cost (91$) ($billion)	Economic SYRR (%)	Traffic conditions at Screenlines (V/C Ratio)
Ma Wan Link	D2	7.0	54	Lantau Ext 1.4 to 0.8
Central & Wanchai Bypass + IEC Link	D3 D3	6.5	24	GG 1.3 to 0.8
Central Kln Route + Kai Tak Connector	D2 D3	7.4	21	AA(Boundary) 1.1 to 0.9
Hung Hom - Kai Tak Link (North South Highway)	D3	2.4	39	CC(To Kwa Wan) 1.2 to 1.0, KK 1.1 to 0.8
Tai Po - Shatin Link (Additional)	D2	1.9	29	RR(Shatin) 1.2 to 0.9
Total Cost		25.2		
Budget		20.2		

For locations of screenlines please see Fig 5.2

Table 5.3 2011 EVALUATION

Highway Projects	Cross Section	Financial Cost (91$) ($billion)	Economic SYRR (%)	Traffic conditions at Screenlines (V/C Ratio)
Green Island Link	D2	8.3	93	Lantau Ext 1.2 to 0.8
Route 3 (CRA4)	D2	8.4	36	Route 3 (CRA1) 1.4 to 0.7 Kln Ext(Lion Rock) 1.1 to 1.0
Route 7	D3	2.6	18	HK Ext (II Valley) 1.2 to 0.9
Route Y (NT N/S Route)	not fixed	[6.0]		RR 1.2 to < 1.0 TT 1.2 to < 1.0
Total Cost		25.3		
Budget		25.5		

For locations of screenlines please see Fig 5.2

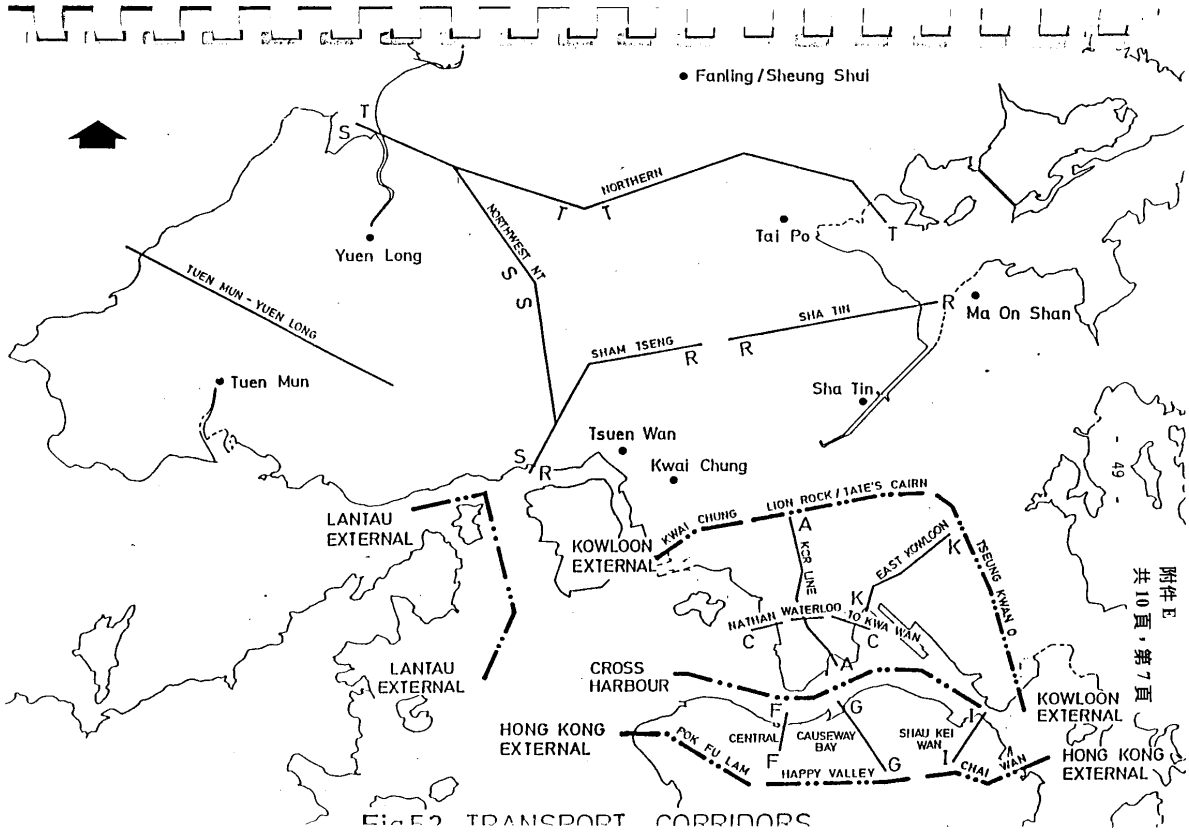


Fig.E2 TRANSPORT CORRIDORS

5.4.4 Hung Hom Bypass/Princess Margaret Road Link - these elevated road links would allow traffic generated in Tsim Sha Tsui to reach the strategic road system without passing through the bottlenecks of Chatham Road and the Cross Harbour Tunnel approaches. It would also have a beneficial effect on the Waterloo Road section of screenline CC.

5.4.5 Route 16 - this tunnel is planned to connect Route 3 at Lai Chi Kok with Sha Tin. It would bring the Lion Rock section of the Kowloon External screenline within capacity in 2001. Without Route 16 by 2001, this screenline section would experience congestion during peak hours even if Route 3 (Country Park) is in place.

5.4.6 Ma Wan - Sham Tseng Link - this bridge is planned to connect both Route 3 and Route 2 at Sham Tseng to the North Lantau Expressway and thus to the new airport at Chek Lap Kok and the Lantau Port Peninsula. Insofar as relieving the Lantau External screenline in 2006 is concerned, both the Green Island Link (GIL) and the Ma Wan Link (MWL) perform equally well. However, the MWL could be more viable financially because of its lower capital cost. In addition, the provision of the GIL in 2006 was found to have a small affect in relieving the Cross Harbour screenline. There would also be uncertainty about the completion of Green Island Reclamation and Lantau Port Peninsula between 2004 and 2006, which would result in delay to the provision by the GIL by 2006. In contrast, both end connections for the MWL are expected to be in place before 2001. In view of the above, the MWL has been selected as the second crossing to Lantau.

5.4.7 Central and Wanchai Bypass plus Island Eastern Corridor Link - these highways together form a connection between the Island

Eastern Corridor (IEC) and elevated Connaught Road. This route will allow east-west traffic on Hong Kong Island to avoid the current congestion spots at the western end of the IEC and around the entrance to the Cross Harbour Tunnel. Without the Central and Wanchai Reclamation, currently not expected to be in place by 2001, this route cannot be constructed effectively. The effect of completing this project in the period 2002-2006 would be to reduce significantly the congestion on screenline GG at Causeway Bay.

5.4.8 Central Kowloon Route plus Kai Tak Connector - these highways together provide an east-west link from Route 3 on the West Kowloon Reclamation via the Hung Hom-Kai Tak Link and the airport site to Kwun Tong. This route is required for the implementation of the Metroplan strategy in Kowloon. In particular, the Kai Tak Connector must be built at an early stage of the re-development of the Kai Tak airport site. In addition to meeting development needs, the Central Kowloon Route would eliminate congestion on the central part of screenline AA between Boundary Street and Waterloo Road.

5.4.9 Hung Hom - Kai Tak Link - this extends the Hung Hom Bypass to Route 6, thereby allowing traffic from South Kowloon to reach the strategic road systems in East Kowloon and the North-east New Territories. It would serve as the primary access route for the re-development of the Kai Tak airport site, and provide relief to screenline CC at To Kwa Wan and screenline KK between San Po Kong and Ngau Chi Wan.

5.4.10 Tai Po - Sha Tin Link (Additional) - this could be either an improvement to the existing route or a new route between Tai Po and Sha Tin. The project is expected to be required by 2006 to alleviate the congestion on Tolo Highway. Such a capacity increase would allow full use to be made of the Lion Rock Tunnel, Tate's Cairn Tunnel and the proposed Route 16.

5.4.11 Green Island Link - this immersed tube tunnel runs from Route 7 on the proposed Green Island Reclamation to join the spine road on the proposed Lantau Port Peninsula. With the continuing growth in port and airport related traffic, the Green Island Link would be needed by 2011 to provide the third crossing to Lantau.

5.4.12 Route 3 (CRA4) - this road is planned for the period of 2007-2011 to provide relief to the CRA1 alignment of Route 3 between Sham Shui Po and Tsing Yi, particularly the section along Kwai Chung Road near Lai Chi Kok. CRA4 would link the urban area only to the Lantau Fixed Crossing and not to the Ting Kau Bridge and would therefore carry mostly airport related traffic.

5.4.13 Route 7 (Kennedy Town - Aberdeen) - this route will provide an alternative to the Aberdeen Tunnel for access to the south side of Hong Kong Island, and will connect with the Green Island Link. Because of the slow pace of development on Southern District, relief to the Hong Kong External screenline at Happy Valley by the provision of Route 7 would only be necessary after 2006. With Route 7 in place, further development in the Pokfulam area could be permitted.

5.4.14 Route Y - this route, currently only at a conceptual stage, is intended to cater for the anticipated heavy north-south movements in the New Territories and to relieve screenlines RR and TT towards the end of the period of 2007-2011.

7.10 LANTAU PORT PENINSULA DEVELOPMENT

7.10.1 The Lantau Port Peninsula is to be developed to provide Hong Kong with substantial additional port expansion. The most recent forecasts indicate a 2011 need for 5,440 m of quay for container terminals.

7.10.2 Initially, the Lantau Fixed Crossing will provide the only route for traffic to move between the port and the mainland. The shared use of this link with, in particular, Chek Lap Kok airport-generated traffic, constitutes a potential constraint which is expected to be removed through the construction of additional fixed links serving road and/or rail traffic. The Sham Tseng Link, when completed, will provide an alternative route for the Lantau Port Peninsula Development traffic to the North West New Territories.

7.11 WHITE PAPER ON TRANSPORT POLICY

Government's transport policies are stated in the White Paper on Transport Policy in Hong Kong published in January 1990, a copy of which is shown at **Annex 16.** Details of Government's plans on the provision and improvement of the transport infrastructure to meet the long term travel demand in Hong Kong are given in the White Paper. In particular, Tenderers should note that it is Government's declared objective to provide high capacity strategic links to support the new airport and port facilities.

7.12 COMPREHENSIVE TRANSPORT STUDY II UPDATE

This study was carried out to review the recommendations of the Second Comprehensive Transport Study and all major post Second Comprehensive Transport Study studies on the new transport infrastructure proposals, taking into account the port and airport developments and other developments proposed by various strategic planning studies. This update study produced a new transport infrastructure development programme up to 2011. It also assessed the suitable level of restraint required on the private vehicle fleet and goods vehicle trips, apart from investigating the tolling strategy for road crossings and tunnels. A copy of the Study Update is shown at **Annex 17.**

7.13 TIMING OF STRATEGIC TRANSPORT LINKS

7.13.1 In accordance with the results of the Comprehensive Transport Study II Update and Railway Development Study, the programmes for commencement/completion of major improvements to strategic transport links are appended below for information only. For obvious reasons, the programmes are only indicative and the Government does not guarantee any of the timings in any manner.

could function satisfactorily without this project in 2006. Additionally. CTS-3 assumed that the Lingdingyang Bridge would not be open in 2006 eliminating the need for the project to meet development (cross boundary) objectives. The low volumes (and related poor economic performance) forecast for the Tuen Mun Port Expressway and Southern Bypass also suggested that it be deferred for further consideration in the 2011 tests.

Table 11.5
2006 Project Combined Evaluation

Project	Economic	Financial	Environment	Public Acceptance	Development	Total Score
Widen Yuen Long Highway to Dual 3-Lane	60	0	7	8	5	80
Trunk Road T2	60	0	10	3	5	79
Central Kowloon Route	40	0	10	8	6	64
Route 10 Package & Deep Bay Link	20	0	9	5	10	44
Route 7	20	0	7	5	8	40
Western Coast Road & Cross Bay Link	20	0	7	3	7	37
Tuen Mun Southern Bypass & Port Expressway	0	0	5	7	9	21
Sha Tin Northern Bypass	0	0	7	8	4	19

11.3.18 Widening of Yuen Long Highway will add much needed capacity between Tuen Mun and Yuen Long. The Central Kowloon Route, Trunk Road T2, Western Coast Road and Cross Bay Link provide a needed east-west high capacity link across the Kowloon Peninsula CTS-3 demand estimates suggest that a dual 3-lane cross section may be sufficient, but tight, for the Western Coast Road through the 2016 design period (as opposed to the dual 3/4-lane configuration presently being considered). However, a dual 3/4-lane would allow for future growth.

11.3.19 The Route 10 Package and Deep Bay Link provide high capacity links to new boundary crossings and improve access to planned Port Facilities on Lantau Island. If development plans change to exclude port development on Lantau Island then the function for Route 10 should be reviewed. Route 7 will eliminate the severe congestion that exists in the Pokfulam Road corridor.

11.3.20 The Sha Tin Northern Bypass is recommended to provide a diversion route around Sha Tin (for through traffic) and as a logical extension of Route 9. Demand estimates suggest that without this project severe levels of congestion on parallel (to the proposed Sha Tin Northern Bypass) routes may occur within Sha Tin. It should be noted that the Eastern Highway is not recommended for implementation until 2011 (and therefore is not included in the 2006 networks). When the Eastern Highway is included in the transport system it also provides relief to existing roads through Sha Tin. Should the Eastern Highway be implemented earlier than 2011 then the need for the Sha Tin Northern Bypass would be reduced.

Kwai Chung Sections of Route 3. The implementation and operation of th traffic control and surveillance for the Ting Kau Bridge will be entrusted t the Lantau Fixed Crossing Operator and the Country Park Section franchise will be required to pay for a proportion of the installation and operatin costs.

7.2 The traffic control and surveillance system for the Tai Lam Tunnel and Yue Long Approach will be separated from the Lantau Fixed Crossing's system, an will be controlled by the administration building at the toll plaza at Yue Long Approach. The Franchisee shall have the full responsibility fo constructing and operating this traffic control and surveillance system.

8 Traffic Forecasts

8.1 Using the transport forecasting model developed in the Second Comprehensiv Transport Study, the daily traffic flows through the Tai Lam Tunnel ar estimated as follows :-

Tai Lam Tunnel
Average Traffic Volume (veh/day)

Year	High Range Total	Low Range Total
1999	49,277	32,837
2001	57,551	40,158
2006	81,550	63,490
2011	98,325	92,945
2021	144,026	128,597

It is estimated that approximately 80% of traffic using Tai Lam Tunnel wil be goods vehicles.

The above estimates are based on the Government's own assumptions includin those concerning land use, airport and port development, cross border traffi forecasts, economic growth forecasts, future transport infrastructur development, tolling of tunnels/road crossings and traffic restraint measures Any variation to the input assumptions would affect the above traffi forecasts.

The Government gives no guarantee and makes no representation as to futur traffic volumes using the Project.

9 Development Conditions

9.1 The Government envisages granting a franchise to finance, design, construc and operate the Project on a Build-Operate-Transfer basis for a period o approximately 30 years, at which time the ownership of the Project will b