



# Report and Recommendation of the President to the Board of Directors

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Project Number: 40198  
November 2007

Proposed Loan  
Socialist Republic of Viet Nam: Ho Chi Minh City–  
Long Thanh–Dau Giay Expressway Technical  
Assistance Project

## CURRENCY EQUIVALENTS

(as of 1 November 2007)

Currency Unit	–	dong (D)
D1.00	=	\$0.0001
\$1.00	=	D16,081

## ABBREVIATIONS

ADB	–	Asian Development Bank
ADF	–	Asian Development Fund
EA	–	executing agency
EIA	–	environmental impact assessment
EIRR	–	economic internal rate of return
EMP	–	environmental management plan
FIRR	–	financial internal rate of return
GDP	–	gross domestic product
GMS	–	Greater Mekong Subregion
HCMC	–	Ho Chi Minh City
HLD	–	Ho Chi Minh City–Long Thang–Dau Giay
IA	–	implementing agency
JBIC	–	Japan Bank for International Cooperation
JICA	–	Japan International Cooperation Agency
m <sup>2</sup>	–	square meter
MOF	–	Ministry of Finance
MOT	–	Ministry of Transport
NPV	–	net present value
O&M	–	operation and maintenance
pcu	–	passenger car unit
PPTA	–	project preparatory technical assistance
QL	–	national highway
SDR	–	special drawing rights
SEDP	–	Socio-Economic Development Plan
SOE	–	state-owned enterprise
TA	–	technical assistance
VEC	–	Vietnam Expressway Corporation
VOC	–	vehicle operating cost
WACC	–	weighted average cost of capital

## NOTE

In this report, "\$" refers to US dollars.

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## LOAN AND PROJECT SUMMARY

<b>Borrower</b>	Socialist Republic of Viet Nam
<b>Classification</b>	Targeting classification: General intervention Sector: Transport and communications Subsector: Roads and highways Themes: Sustainable economic growth, capacity development. Subthemes: Fostering physical infrastructure development, organizational development.
<b>Environment Assessment</b>	Category C. The Project will not cause any adverse environmental impacts. The ensuing investment project will be categorized at a later stage.
<b>Project Description</b>	The Ho Chi Minh City–Long Thanh–Dau Giay (HLD) Expressway Technical Assistance Project (the Project) will assist the Government of Viet Nam (the Government) to (i) complete documentation required for construction of the HLD Expressway, and (ii) undertake strengthening and capacity building at Vietnam Expressway Corporation (VEC). The project design and monitoring framework is in Appendix 1.
<b>Rationale</b>	<p>The Government's Socio-Economic Development Plan (SEDP) for 2006–2010 identified the need for a network of high capacity, high-speed expressways to complement the network of national, provincial, and city roads. Under the Government's Expressway Master Plan, developed with Asian Development Bank (ADB) funding under the technical assistance to the Socialist Republic of Viet Nam for the Expressway Network Development Plan project approved in 2005 (TA 4695-VIE) a short-term program of priority expressway projects was identified. This includes the HLD Expressway.</p> <p>Greater Ho Chi Minh City (HCMC) is the largest city in Viet Nam and the country's economic hub. However, the road network both within and around HCMC is becoming heavily congested, travel speeds are reducing, and transport costs are increasing. There is an urgent need to provide relief to the city roads connecting the center of HCMC and the port area with roads leading north from the city to central and northern Viet Nam. HCMC also lies at a critical junction on the transport network for the Greater Mekong Subregion (GMS), so improvements to the network around HCMC will remove a major bottleneck on the GMS network.</p> <p>In 2004, VEC was established as a state-owned enterprise (SOE) under the Ministry of Transport (MOT). VEC was established to invest in expressway construction, management, and operation and maintenance. To date, it has inadequate experience in project management, financial management, procurement, and safeguard issues. Institutional capacity building through the Project will enable VEC to manage this and similar projects in the future.</p>

<b>Impact and Outcome</b>	The impact of the Project will be a reduction in the cost and travel times for the movement of passengers and goods between HCMC and the provinces to the north and northeast and south of the city through the construction of the HLD Expressway. The outcomes of the Project will be completion of documentation required to commence construction of the HLD Expressway, and VEC strengthened as a commercially-oriented infrastructure provider with enhanced capacity.
<b>Project Investment Plan</b>	The investment cost of the Project is estimated at \$11.22 million, including taxes and duties of \$0.90 million.
<b>Financing Plan</b>	It is proposed that ADB provide a loan of \$10.0 million equivalent to the Socialist Republic of Viet Nam. The loan will be denominated in special drawing rights from ADB's Asian Development Fund (ADF) Special Funds resources, with a term of 32 years including a grace period of 8 years, an interest charge of 1% per annum during the grace period and 1.5% per annum thereafter. The Government will contribute about \$1.22 million equivalent.
<b>Allocation and Relending Terms</b>	The Borrower for the Project will be the Socialist Republic of Viet Nam. The Ministry of Finance (MOF) will be responsible for repayment of the loan and will make the proceeds of the loan available to VEC through onlending arrangements (Standard arrangements for onlending of Overseas Development Assistance funds by MOF will apply, under which MOF charges a fee of 0.2% on outstanding amounts).
<b>Period of Utilization</b>	30 June 2010
<b>Estimated Project Completion Date</b>	31 December 2009
<b>Executing Agency</b>	VEC
<b>Implementation Arrangements</b>	VEC will be responsible for the overall execution of the Project, with planning and implementation delegated to a project implementation unit headed by a project director. VEC will engage and direct the work of consultants, and be responsible for procurement.
<b>Procurement</b>	No major contracts will be procured under the Project. Procurement of small items of equipment, surveys, and other similar items will be included in the consulting services contract and will be procured using shopping procedures in accordance with ADB's <i>Procurement Guidelines</i> (2007, as amended from time to time).
<b>Consulting Services</b>	The Project will fund consulting services to be undertaken under a single contract. VEC will recruit an international consulting firm for the consulting services in accordance with ADB's <i>Guidelines on the Use of Consultants</i> (2007, as amended from time to time). Quality and cost-based selection procedures will apply, full proposals will be requested, and evaluation will be based on an 80:20 ratio of quality to cost. The consulting services will be implemented by an international consulting

firm in association with national consultants. About 821 person-months will be required, of which 153 will be from international experts and 668 from national experts. The consultants will have expertise in project management, expressway design, road safety, traffic control and toll collection systems, environmental and resettlement planning, social development, procurement assistance, organizational structures, business development plans, financial management, and public-private partnerships in the transport sector. The duration of the consulting services will be about 18 months.

**Project Benefits and Beneficiaries**

The principal direct benefits that will be generated by the construction of the HLD Expressway will be (i) an increase in the efficiency of the movement of goods and people in the area around HCMC, the provinces surrounding the city, and along the GMS southern and eastern economic corridors; (ii) a reduction in transport costs in the same area; and (iii) a reduction in the social and economic costs of traffic accidents. As transport costs are a key input to economic activities, the indirect benefits of the construction of the expressway will be an increase in economic growth and a contribution to the Government's overall poverty reduction program.

**Risks and Assumptions**

The main risk to the Project is delayed implementation caused by slow finalization of the single consulting services contract that will be implemented under the Project. This is being addressed through advance contracting action for the Project's consulting services. A further risk is VEC's limited capacity and experience of project management for major projects. This is being mitigated through the Project's component to address regulatory and institutional strengthening of VEC.



## I. THE PROPOSAL

1. I submit for your approval the following report and recommendation on a proposed loan to the Socialist Republic of Viet Nam for the Ho Chi Minh City–Long Thanh–Dau Giay (HLD) Expressway Technical Assistance Project (the Project).

## II. RATIONALE: SECTOR PERFORMANCE, PROBLEMS, AND OPPORTUNITIES

### A. Performance Indicators and Analysis

2. In 2006, the Vietnamese economy expanded by an estimated 8.0%, one of the fastest rates in the world. This performance came on top of an average annual growth rate of 7.5% over the period 2001–2005. For 2006, the industry and services sectors contributed more than 90% of total gross domestic product (GDP) growth, and industry expanded by a robust 10.4%, slightly below the previous year's rate.<sup>1</sup> One of the consequences of this sustained, rapid, growth has been an equally rapid increase in the use of motorized vehicles which is leading to increased congestion on the highway network. If industry is to continue as a major driver of growth in the Vietnamese economy, there is a need to maintain the development of the highway transport system so that goods and people can be moved efficiently. An overview of the road subsector is in Appendix 2.

3. Expressways are roads designed to allow a large number of vehicles to move freely between major centers, at speed, and with a high level of safety. Access is only provided at junctions that are widely spaced and are planned to high safety standards. Expressways are usually expensive to construct and operate, so it is not economical to maintain a dense network of expressways. Therefore, these roads must be supplemented by other types of high standard and secondary roads. In Viet Nam, traffic is growing rapidly, typically more than 10% a year, so congestion on many major roads is an increasing problem and an inappropriate traffic mix is contributing to severe road safety problems. The construction of expressways along key corridors would provide large capacity highways to reduce congestion, absorb traffic growth, and reduce the number of road safety incidents.

4. Greater Ho Chi Minh City (HCMC) is the largest city in Viet Nam and the country's economic hub, with a population forecast to grow by 2.1% per annum from the current 7.9 million<sup>2</sup> to 10.3 million by 2020. Growth in annual trade volumes, in terms of value, through HCMC's port exceeded 15% in 2006. With continued growth of the economy expected in the medium term, there is significant potential for household incomes to rise, enabling many more families to afford to purchase cars, and for a significant increase in the number of journeys undertaken. The road network both within and around HCMC is already becoming heavily congested, travel speeds are reducing, and transport costs are increasing. There is an urgent need to provide relief to the city roads connecting the center of HCMC and the port area, with (i) the suburbs to the north and northeast of the city and further out to the roads leading north from the city to central and northern Viet Nam, and (ii) the major subregional transport routes along the southern and eastern economic corridors that meet at HCMC and form part of the Greater Mekong Subregion (GMS) Transport Network under the GMS program.

5. The provinces of the Mekong Delta together comprise Viet Nam's largest rice growing area. Each year, the delta contributes 50% of Viet Nam's total rice output and about 90% of the

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<sup>1</sup> Asian Development Bank (ADB). 2007. *Asian Development Outlook 2007*. Manila.

<sup>2</sup> Estimate includes both permanent and transient population.

total rice export volume. By 2010, the delta area is projected to export an annual output of 4 million–5 million tons of rice. The output from the delta’s agroforestry and fisheries industries together accounts for 40% of the country’s total production. In total, the output from these provinces contributes about 18% to the national GDP. Being the country’s largest food production zone requires that the area is serviced by a comprehensive transport network. Government plans for the delta area include extensive improvements at all levels of the road and waterways networks. Given projections of annual increases of about 20% in the total annual export outputs from the delta area, and the increasing congestion on existing highways, there is an urgent need to improve road connections.

6. In 2004, Vietnam Expressway Corporation (VEC) was established as a state-owned enterprise (SOE) under the Ministry of Transport (MOT). VEC was established to invest in expressway construction, management, and operation and maintenance (O&M). Using Asian Development Bank (ADB) funds provided under the *Expressway Network Development Plan Project*<sup>3</sup> a study was undertaken to assist the Government of Viet Nam (the Government) to identify actions required to strengthen the organizational structure of VEC and to facilitate a change from an SOE to a commercially-oriented infrastructure provider. This study recommended changes to both the legal and regulatory framework for expressways and the organization structure of VEC. To date, VEC has inadequate experience in project management, financial management, procurement, and safeguard issues. Institutional capacity building through the Project will enable VEC to manage this and similar projects in the future.

## **B. Analysis of Key Problems and Opportunities**

### **1. The Government’s Strategy**

7. The Government is acutely aware of the impact of inadequate infrastructure on growth and poverty reduction, and is already beginning to see infrastructure bottlenecks affecting foreign investment. It also wishes to share development more equitably with parts of the country that are remote from the major urban areas—Hanoi, HCMC, Da Nang, and others. As part of the Government’s Socio-Economic Development Plan (SEDP) for 2006–2010,<sup>4</sup> the transport sector is expected to promote economic growth, poverty reduction, safety enhancement, environmental protection, and human resource development. For the road sector, the Government has noted the need for a network of high capacity, high-speed expressways to complement the network of national, provincial, and city roads. Under the Expressway Master Plan, developed with ADB assistance (footnote 3), a short-term program (2006–2015) of priority expressway projects was identified consisting of 21 projects covering 1,968 kilometers (km) with an estimated construction cost of \$11.556 billion.<sup>5</sup> A medium-term program (2016–2025) was also proposed that included another eight projects covering an additional 875 km with an estimated construction cost of \$5.238 billion.

### **2. Lessons**

8. Viet Nam Country Portfolio Review Missions have noted that there have been implementation delays in previous road projects, in particular during the project start-up phase. Project designs have required that project supervision consultants prepare detailed designs and bidding documents for civil works, meaning that the initial 1–3 years of the loan period are

<sup>3</sup> ADB. 2005. *Technical Assistance to the Socialist Republic of Viet Nam for the Expressway Network Development Plan*. Manila (TA 4695-VIE).

<sup>4</sup> Ministry of Planning and Investment. 2005. *The Five-Year Socio-Economic Development Plan 2006–2010*. Hanoi.

<sup>5</sup> In 2007 prices.

devoted to these essential but low-disbursement activities. The bulk of the loan remains undisbursed during this period, which causes the Government to incur substantial commitment and other financing costs, especially for ordinary capital resources loans. Delays in recruiting consultants or preparing detailed designs have led directly to delays in award of civil works, exacerbating the situation. This is addressed in the design of the Project by: (i) using advance action for the selection of consultants, and (ii) incorporating all safeguard-related planning and procurement-related activities (for the subsequent investment project) in the scope of the Project. By the time the investment project loan has been processed and become effective (or the Government has found other means to finance the highway's construction), land acquisition and resettlement plans will be ready for implementation, and all civil works and consulting services contracts will be ready for award.

### 3. ADB's Strategy

9. Viet Nam has a relatively inefficient and expensive transport system. As set out in ADB's country strategy and program for Viet Nam,<sup>6</sup> ADB's strategy will support the Government's investment program to improve transport infrastructure and reduce transport costs. The program of investment projects under the country strategy and program form three thrusts that are in line with the SEDP. The first thrust supports investment projects to reduce critical transport bottlenecks hampering economic growth in the main development centers. Projects will include investments in urban transport and priority expressway and railway facilities to facilitate the safe and efficient movement of goods and people around, through, and between national centers of major economic activity. The second thrust will support social equity aspects of Viet Nam's transport needs through support to the development of provincial and district roads. The third thrust complements the first two by bringing regional dimensions to the development of the transport network in terms of connectivity, including multimodal transport modes and competitiveness.

10. Under the Expressway Network Development Plan (footnote 3), ADB provided technical assistance (TA) that responded to the Government's request for assistance to plan the development of an expressway network. The TA funded a study that prepared an Expressway Master Plan for the long-term development of the country's expressway network, and identified priority expressway projects. The study identified the HLD Expressway as a high priority project and, based on a preliminary assessment, found the project to be economically, financially, and technically viable. A summary of the preliminary economic and financial analysis<sup>7</sup> for the HLD Expressway is in Appendix 3. The HLD Expressway was included in the 2004 Urban Transport Master Plan and Feasibility Study in Ho Chi Minh Metropolitan Area (often referred to as the HOUTRANS study), prepared with assistance from the Japan International Cooperation Agency (JICA).

11. In May 2006, the consultants engaged under the Expressway Network Development Plan TA were instructed to undertake a full feasibility study to confirm that the HLD Expressway is technically, economically, and financially viable, and that the impacts of the HLD Expressway are socially and environmentally acceptable. Under this feasibility study, the TA consultants will prepare a project that is suitable for funding by ADB and meets the requirements of the Government. The outputs from the feasibility study will include (i) a review of preliminary engineering designs for the proposed expressway to confirm compliance with technical

<sup>6</sup> ADB. 2006. *Country Strategy and Program, Viet Nam, 2007–2010*. Manila.

<sup>7</sup> These analyses are indicative only. Assumptions of costs, traffic volumes, and toll levels will be reviewed and confirmed under an ongoing ADB-funded project preparatory TA (PPTA) under *Expressway Network Development Plan Project* (footnote 3).

standards and good practice; (ii) a detailed economic and financial assessment of the project to confirm economic and financial viability of the expressway in terms of the requirements of ADB and the Government; (iii) an assessment of the social impacts of the expressway together with a full resettlement plan, a gender strategy, a program for HIV/AIDS awareness, and, if required, an ethnic minority development plan; (iv) an environmental impact assessment (EIA), including an environmental management plan (EMP) covering construction and operation phases of the expressway; (v) assessments of VEC's capacity to implement the project in terms of managerial, financial, technical, social (including resettlement and ethnic minorities), and environmental skills and resources; and (vi) identifying contract packages and an implementation schedule to meet the requirements to implement construction of the expressway in an efficient, economical manner. The feasibility study services commenced in June 2007, the draft final report is to be submitted in December 2007, and the services are expected to be completed by the end of January 2008.

12. Processing of an investment loan to fund construction of the HLD Expressway is expected to commence in January 2008.<sup>8</sup> However, before construction work can begin, detailed engineering designs, resettlement plans, and environmental documentation must be prepared and civil works contractors procured. The Project will fund consulting services to undertake these pre-construction activities. The services under the Project are to be based on (i) preliminary designs and feasibility studies prepared by VEC, and (ii) the outputs of the feasibility study. The civil works to be designed and procured under the Project will be constructed using funds from the investment loan.

#### 4. External Assistance

13. Since external support to Viet Nam's road sector commenced in 1993, many projects have supported the road subsector in Viet Nam (Appendix 4). Initially, these projects focused on rehabilitating National Highway 1 (QL1), the highway running along the east coast of Viet Nam that acts as the central spine for the road network. These QL1 projects were complemented by improvements under ADB-funded projects<sup>9</sup> to highways connecting QL1 to the Viet Nam sections of GMS economic corridors. As work on improving QL1 is drawing to a close, projects are increasingly focusing on other parts of the road network. ADB's Provincial Roads Improvement Sector Project<sup>10</sup> is upgrading provincial roads in 17 provinces in the northern uplands and Red River Delta regions while the Central Region Transport Networks Improvement Sector Project<sup>11</sup> is addressing the removal of transport constraints on economic and social development in the rural areas of 19 provinces in central Viet Nam. The upgrading of rural roads in 18 provinces was addressed under ADB's Rural Infrastructure Sector Project,<sup>12</sup> and rural roads are being improved in 40 provinces across the country with funding from the

<sup>8</sup> The Government has proposed that the cost of construction of the HLD Expressway be funded from loans from ADB and the Japan Bank for International Cooperation (JBIC).

<sup>9</sup> ADB. 1998. *Report and Recommendation of the President to the Board of Directors on Proposed Loans to the Kingdom of Cambodia and to the Socialist Republic of Viet Nam for the Greater Mekong Subregion: Phnom Penh to Ho Chi Minh City Highway Project*. Manila (Loan 1660-VIE); and ADB. 1999. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan and Technical Assistance Grant to the Lao People's Democratic Republic and a Proposed Loan to the Socialist Republic of Viet Nam for the Greater Mekong Subregion: East-West Corridor Project*. Manila (Loan 1728-VIE).

<sup>10</sup> ADB. 2001. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Provincial Roads Improvement Sector Project*. Manila (Loan 1888-VIE).

<sup>11</sup> ADB. 2005. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Central Region Transport Networks Improvement Sector Project*. Manila (Loan 2195-VIE).

<sup>12</sup> ADB. 1997. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Rural Infrastructure Sector Project*. Manila (Loan 1564-VIE).

World Bank and the United Kingdom's Department for International Development under the Rural Transport I, II, and III projects.<sup>13</sup> ADB has provided a TA loan<sup>14</sup> for the preparation of the Noi Bai–Lao Cai Highway Project and is currently processing an investment loan that will fund construction of this expressway connecting Hanoi to the border with the People's Republic of China at Lao Cai.

### III. THE PROPOSED PROJECT

#### A. Impact and Outcome

14. The impact of the Project will be a reduction in the cost and travel times for the movement of passengers and goods between HCMC and the provinces to the north and northeast and south of the city through the construction of the HLD Expressway. The benefit to users of the expressway will be a reduction in transport costs for the movement of passengers and goods (i) between HCMC and the provinces to the north and northeast of the city, and (ii) along transport links on the GMS southern and eastern economic corridors. The outcomes of the Project will be completion of documentation required to commence construction of the HLD Expressway, and Vietnam Expressway Corporation (VEC) strengthened as a commercially-oriented infrastructure provider with enhanced capacity.

15. The proposed HLD Expressway will connect to the HCMC inner city road network in District 2. Moving away from the city center, it will intersect with HCMC's 2<sup>nd</sup> and 3<sup>rd</sup> ring roads and with QL51 at Long Thanh. From Long Thanh, the proposed alignment passes by the proposed site of the new HCMC International Airport and ends at Dau Giay, a total distance of about 57 km. At Dau Giay, it will connect with QL1, the main north–south highway linking HCMC with Hanoi. The proposed alignment will (i) relieve congestion on the existing QL 1 through Bien Hoa for traffic entering HCMC from the north, (ii) connect the city center to new suburbs being developed to the west of HCMC, and (iii) provide high-speed access from the new airport to the city center. The expressway will be a high-speed, high capacity, limited access, toll road built to international expressway design standards. It is to be constructed in two stages: stage 1 will be a four-lane divided expressway that will be widened to six to eight lanes under stage 2, as traffic volume justifies the additional investment.

#### B. Outputs

16. Outputs from the Project will include completion of (i) pre-construction activities for the proposed HLD Expressway, and (ii) a program to strengthen VEC.

##### 1. HLD Expressway Design and Procurement Component

17. This component will address pre-construction activities for the proposed HLD Expressway. Outputs will be: (i) detailed engineering designs for the Project; (ii) updated resettlement plans and EIAs to take account of detailed engineering designs; (iii) bidding documents for procurement of civil works, goods, and consulting services required to construct

<sup>13</sup> World Bank. 1999. *Project Appraisal Documents on a Proposed Credit in the Amount of SDR74.7 Million (US\$103.9 Million Equivalent) to the Socialist Republic of Vietnam for a Rural Transport II Project*. Washington, DC.

<sup>14</sup> ADB. 2005. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Greater Mekong Subregion: Kunming-Haiphong Transport Corridor–Noi Bai-Lao Cai Highway Technical Assistance Project*. Manila (Loan 2222-VIE).

the expressway; (iv) civil works contracts procured by VEC; (v) documentation for a concession for the O&M of the finished expressway; and (vi) resettlement plan implemented by VEC.

## **2. Regulatory and Institutional Strengthening for Expressways**

18. This component will address capacity building and strengthening of VEC to facilitate the change from an SOE to an independent infrastructure provider.<sup>15</sup> Outputs will be (i) a revised organizational structure prepared for VEC; (ii) a review of legal and regulatory constraints to VEC operating as an efficient, financially secure, provider of expressway facilities; (iii) a training needs assessment completed and a training program implemented; (iv) training programs and strengthening of VEC's capacity to manage resettlement, social, and environmental impacts of expressways implemented; and (v) an asset management system identified and commissioned. The work under this component will also include strengthening of VEC's financial management capacity.

### **C. Special Features**

19. Improvements to the transport network along the north-south corridor connecting northern Viet Nam with southern Viet Nam in general—and major economic centers located around Hanoi and HCMC in particular—are critical to the economic development of Viet Nam and the countries of the GMS. Given the importance of this corridor to the national economy, agreements have been reached between the governments of Japan and Viet Nam for the development of expressways along this corridor to be one of three main foci of development assistance from the Government of Japan. However, given the size of investment needs on this corridor, ADB has been invited to provide financing for construction of the HLD Expressway on a parallel cofinancing basis with JBIC. Given the limited capacity of VEC to undertake its responsibilities to construct, manage, and operate and maintain an expressway network, there is a need for long-term support to build capacity within VEC. ADB has been involved with VEC from an early stage and has developed a strong relationship with its senior management. The involvement of ADB in the HLD Expressway will allow ADB the opportunity to continue support to strengthening and capacity building programs.

### **D. Project Investment Plan**

20. The project investment cost is estimated at \$11.22 million, including taxes of \$0.90 million. It is summarized in Table 1 and detailed cost estimates are in Appendix 5.

### **E. Financing Plan**

21. It is proposed that ADB will provide a loan to the Socialist Republic of Viet Nam of \$10.0 million equivalent. The loan will be denominated in special drawing rights from ADB's Asian Development Fund (ADF) Special Funds resources, with a term of 32 years including a grace period of 8 years, an interest charge of 1% per annum during the grace period and 1.5% per annum thereafter. The Borrower for the Project will be the Socialist Republic of Viet Nam. The Ministry of Finance (MOF) will be responsible for repayment of the loan and will make the proceeds of the loan available to VEC through onlending arrangements<sup>16</sup> under a subsidiary agreement between MOF, on behalf of the Government, and VEC (Subsidiary Loan

<sup>15</sup> Under Vietnamese law, all SOEs have to convert to limited liability companies by July 2010.

<sup>16</sup> Standard arrangements for onlending of overseas development assistance funds by MOF will apply under which MOF charges an annual fee of 0.2% on outstanding amounts.

Agreement). The Government will contribute about \$1.22 million equivalent, which will cover project management costs, a portion of contingencies, and all taxes and duties. The Project's financing plan is summarized in Table 2 and details are in Appendix 5. The Government has been informed that approval of this Project does not commit ADB to finance any ensuing project.

**Table 1: Project Investment Plan**  
(\$ million)

<b>Item</b>	<b>Amounts</b>
<b>A. Consulting Services</b>	
1. Consultants	9.00
2. Taxes	0.90
<b>Subtotal (A)</b>	<b>9.90</b>
<b>B. Project Administration</b>	<b>0.23</b>
<b>C. Contingencies<sup>a</sup></b>	<b>0.99</b>
<b>D. Financing Charges During Implementation</b>	<b>0.10</b>
<b>Total (A+B+C+D)</b>	<b>11.22</b>

<sup>a</sup> Includes physical contingency only, computed at 10% of the basic cost for the consulting services.

Source: Asian Development Bank estimates.

**Table 2: Financing Plan**  
(\$ million)

<b>Source</b>	<b>Total</b>	<b>%</b>
Asian Development Bank	10.00	89
Government of Viet Nam	1.22	11
<b>Total</b>	<b>11.22</b>	<b>100</b>

Source: Asian Development Bank estimates.

## **F. Implementation Arrangements**

### **1. Project Management**

22. The Executing Agency (EA) will be VEC, with responsibility for planning and implementation delegated to a project implementation unit headed by a project director. VEC will engage and direct the work of all consultants. A copy of a chart showing the proposed project organization and implementation arrangements is in Appendix 6.

### **2. Implementation Period**

23. The expressway preparation services consultant will be recruited to start work by mid 2008 and complete the services by 31 December 2009. For the HLD Expressway, the intention is that ADB will start processing the investment loan in early 2008 when the draft final report for the expressway feasibility study, being prepared under the Expressway Network Development Plan (footnote 3), becomes available, subject to the report demonstrating viability. Detailed designs and bid documents for the first civil works contract will be completed by end of 2008

enabling procurement of civil works for these first contracts to be completed by the mid 2009. Procurement of all civil works contracts is expected to be completed by end of 2009. The consultants will assist VEC and the districts in the expressway area to implement the resettlement plan such that by the end of 2009 all construction contracts may be awarded. Construction will require 4 years, to begin in mid-2009 and be completed by mid-2013. An outline implementation schedule is in Appendix 7.

### **3. Procurement**

24. The Project will not require civil works procurement. Equipment will be procured for the Project but the items required will be small and few in number—mainly computers, design software and equipment, testing and survey equipment, and similar items. Procurement of this equipment will be included in the consulting services contract and will be procured using shopping procedures in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time).

### **4. Consulting Services**

25. The single consulting services contract will be implemented by an international consulting firm in association with national consultants. About 821 person-months input will be required of which 153 will be from international experts and 668 from national experts. The consultants will have expertise in project management; design of expressway alignments, pavements, bridges, culverts, toll collection and traffic control information systems, and road safety systems; transport economics; financial analysis and assessment; EIA; preparation of resettlement plans; assessment of impacts on ethnic minorities; assessment of gender and other social issues; social development; procurement assistance; organizational structures; business development plans; financial management; and public-private partnerships in the transport sector. Outline terms of reference are in Appendix 8. The consulting services will include amounts for surveys, aerial photography, equipment, and other inputs essential for effective and timely project implementation. The duration of the consulting services will be about 18 months.

26. The activities to be funded under the Project will be undertaken through consulting services under a single contract. VEC will recruit an international consulting firm for the consulting services using quality and cost-based selection procedures, in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). Full technical proposals will be used. To calculate the firms' total scores, the technical proposals will be given a weight of 80% and the financial proposals will be given a weight of 20%. A procurement plan including this contract package is in Appendix 9.

### **5. Anticorruption Policy**

27. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to and discussed with the Government, MOT, and VEC. Consistent with its commitment to good governance, accountability, and transparency, ADB reserves the right to investigate, directly or through its agents, any alleged corrupt, fraudulent, collusive, or coercive practices relating to the Project. To support these efforts, relevant provisions of ADB's *Anticorruption Policy* are included in the loan regulations and the bidding documents for the Project. In particular, all contracts financed by ADB in connection with the Project shall include provisions specifying the right of ADB to audit and examine the records and accounts of the EA and all contractors, suppliers, consultants, and other service providers as they relate to the Project.

## **6. Disbursement Arrangements**

28. Disbursements for the single contract for consulting services will be through direct payment procedures defined in ADB's *Loan Disbursement Handbook* (2007, as amended from time to time).

## **7. Accounting, Auditing, and Reporting**

29. VEC will maintain separate records and accounts adequate to identify goods and services financed from the proceeds of the ADB loan, financing resources received, expenditures incurred for the Project, an audit of resettlement expenditures, and use of local funds. Within 6 months of the close of the fiscal year, VEC will submit audited annual project accounts to ADB, which provide a detailed description of the source of funds and expenditures made. Annual project accounts will be audited by an auditor acceptable to ADB, and the auditor's terms of reference will be approved by ADB before commencement of work. The audit results will be submitted to ADB on an annual basis.

30. Regular progress reports on the Project will be prepared by the project consultants, reviewed by VEC, and submitted to ADB every quarter. Progress reports will include a description of the physical progress, status of implementation of resettlement plans, procurement and contractual status, and highlights of any implementation issues. The progress reports should also contain a summary of project accounts, including details of the latest project expenditures and contract amounts. These reports will include an evaluation of progress in implementing the Project. Updated resettlement plans and EIA reports for the HLD Expressway will be submitted as separate reports and will take account of detailed designs. Within 3 months of completion of the Project, VEC will furnish to ADB a project completion report covering details of the project implementation, costs, and an evaluation of the Project's success in meeting performance targets.

## **8. Project Performance Monitoring and Evaluation**

31. Under the feasibility studies for both expressways, project performance management systems will be prepared in accordance with ADB's *Project Performance Management System*<sup>17</sup> and integrated with existing management information systems. During the proposed investment loans for construction of each expressway, sample surveys will be conducted to establish baseline data for subsequent performance monitoring; and will establish pre-project social and economic living conditions for the direct project beneficiaries. The baseline and impact surveys will include appropriate control areas and will assess all interventions under the Project, including resettlement and other safeguard interventions that affect the livelihood of project beneficiaries. In addition, a set of indicators reflecting transport costs, tariffs, and mobility will be developed to assess the effects of the improved transport infrastructure. District indicators will include economic activity, and health and education indicators. The impacts of development on the poor resulting from the expressway will receive particular attention.

## **9. Project Review**

32. In addition to regular reviews by ADB, a midterm review of project implementation will be carried out. Representatives of ADB and the Government will take part in the review. The review will allow for any necessary midcourse corrections.

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<sup>17</sup> ADB. 2006. *Operations Manual*. Section J1/BP: Project Performance Management System. Manila (24 January).

#### IV. PROJECT BENEFITS, IMPACTS, ASSUMPTIONS, AND RISKS

33. Improved transport infrastructure is critical for sustained rapid economic growth and poverty reduction, and can also contribute to regionally balanced and equitable economic growth by stimulating production of goods and increasing trade flows. The principal direct benefits that will be generated by the construction of the HLD Expressway will be (i) an increase in the efficiency of the movement of goods and people in the area around HCMC, the provinces surrounding the city, and along the GMS southern and eastern economic corridors; (ii) a reduction in transport costs in the same area; and (iii) a reduction in the social and economic costs of traffic accidents. As transport costs are a key input to economic activities, the indirect benefits of the construction of these expressways will be an increase in economic growth and a contribution to the Government of Viet Nam's overall poverty reduction program.

34. For the purposes of ADB's environment, involuntary resettlement, and indigenous peoples policies, the Project has been categorized C, i.e., no impacts will arise from activities under the Project. The ensuing investment project has been categorized A for environment and involuntary resettlement, and B for indigenous peoples. Under the Expressway Network Development Plan TA (footnote 3), ADB is funding a feasibility study for the HLD Expressway that will prepare a full EIA and full resettlement plans, together with appropriate special actions for ethnic minorities to meet the requirements of ADB's policies. Services under the Project include assistance in updating the resettlement plan to reflect detailed designs, and implementing the resettlement plan for the HLD Expressway. However, funds for all compensation and allowances will be included in the investment loan for the HLD Expressway, together with assurances on this use of these funds. The reason for proposing these arrangements is to allow the implementation of the resettlement plan to commence as early as possible and thereby expedite commencement of civil works contracts.

35. Construction of the HLD Expressway will require significant involuntary resettlement, including relocation of houses and loss of agricultural and homestead land. Relocation of households will be minimized by the careful threading of the expressway alignment through urban areas and by minimizing the construction corridors. Sufficient qualified resettlement specialists will be engaged to ensure adequate and timely planning and implementation of resettlement plans. Adverse impacts will be mitigated through resettlement planning and implementation in accordance with ADB's *Involuntary Resettlement Policy* (1995) and the Government's decrees on resettlement and compensation. The objective is to improve or at least restore the current living standards, income earning capacity, and production levels of affected people. Special assistance programs will be designed and included in the implementation planning to help the poorest and most vulnerable people improve their socioeconomic status.

36. The impact of the HLD Expressway will differ during the construction and operation phases. Activities associated with each of these phases will bring social and economic changes that could result in both positive and negative impacts. During construction of the expressway and once the expressway is completed, there is potential risk of increased HIV/AIDS and trafficking of women and children. Appropriate prevention and mitigation planning will be incorporated in the project design to address issues related to HIV/AIDS and human trafficking.

37. Initial investigations suggest that ethnic minorities may live within the HLD Expressway project area. Impacts on ethnic minorities are expected to be limited to those arising from

resettlement and land acquisition, which can be addressed through resettlement plans. A summary poverty reduction and social strategy is in Appendix 10.

38. The main risk to the Project is delayed implementation because of slow finalization of the single consulting services contract that will be implemented under the Project. This is being addressed through advance contracting action for the Project's consulting services. A further risk is VEC's limited capacity and experience of project management for major projects. This risk is being mitigated through the Project's component to address regulatory and institutional strengthening of VEC. Under this component, a revised organizational structure will be prepared for VEC to address the future needs of VEC as an efficient provider of infrastructure services. This new structure will include a unit to manage environmental and social impacts arising from expressway construction and operation. The component includes a training needs assessment, a training program, and assistance in recruitment of additional estimates.

## V. ASSURANCES AND CONDITIONS

### A. Specific Assurances

39. In addition to the standard assurances, the Government and MOT have given the following assurances, which are incorporated in the legal documents:

- (i) **Resettlement.** For the HLD Expressway, MOT will cause VEC to prepare an update to the resettlement plan in accordance with the requirements of ADB's *Involuntary Resettlement Policy* (1995), and submit the updated resettlement plan to ADB for approval. This updated resettlement plan will take into account final detailed engineering designs and will be disclosed to affect people prior to being submitted to ADB.
- (ii) **Indigenous Peoples and Ethnic Minorities.** For the HLD Expressway, MOT will cause VEC to undertake surveys to ensure that impacts on ethnic minorities are identified. If impacts are identified and ADB's *Policy on Indigenous Peoples* (1998) is invoked, then appropriate mitigation measures are prepared in accordance with the above policy.
- (iii) **Social Issues.** For the HLD Expressway, MOT will ensure that all works contract documents to be prepared under the Project will incorporate provisions and budget to the effect that contractors (a) comply with all applicable labor laws and related international treaty obligations and do not employ child labor, as defined under Vietnamese law; (b) provide safe working conditions for male and female workers; (c) implement the provisions set forth in the project-specific gender Strategy; and (d) carry out HIV/AIDS and human trafficking prevention and awareness campaigns in the campsites and corridors of influence.
- (iv) **Environmental.** For the HLD Expressway, MOT will cause VEC to prepare an EIA that takes into account the detailed engineering design. This EIA will include an EMP with adequate public consultation, in accordance with the requirements of ADB's *Public Communications Policy* (2005) and *Environment Policy* (2002), and submit them to ADB for approval. MOT will ensure that the civil works contract documents include specific measures as indicated in the EIA and in accordance with ADB's *Environment Policy* to mitigate negative environmental impacts caused by the construction and to give due consideration to prevention of damage to the natural environment in the design, construction, operation, and maintenance of the highway facilities. The Government shall ensure that specific provisions are included in civil works and consulting services contracts for the

implementation of the EMP and its monitoring, together with budget allowances for these provisions.

- (v) **Expressway Subsector.** MOT will ensure that, (a) revised regulations for VEC operations will be submitted to MOT for consideration by 30 November 2009; and (b) as part of the revised organizational structure, VEC will establish and suitable staff an Environmental and Social Unit by 30 June 2009.
- (vi) **Implementation Arrangements.** Prior to the commencement of consulting services, VEC will have completed the establishment of the project implementation unit headed by an experienced director and suitably staffed.

#### **B. Conditions for Loan Effectiveness**

40. A condition for loan effectiveness will be that a Subsidiary Loan Agreement will have been duly executed on behalf of VEC and will have become fully effective.

### **VI. RECOMMENDATION**

41. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and recommend that the Board approve the loan in various currencies equivalent to Special Drawing Rights 6,435,000 to the Socialist Republic of Viet Nam for the Ho Chi Minh City–Long Thanh–Dau Giay Expressway Technical Assistance Project from ADB's Special Funds resources with an interest charge at the rate of 1.0% per annum during the grace period and 1.5% per annum thereafter; a term of 32 years, including a grace period of 8 years; and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan and Project Agreements presented to the Board.

Haruhiko Kuroda  
President

7 November 2007

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p><b>Impact</b></p> <p>A reduction in the cost and travel times for the movement of passengers and goods between Ho Chi Minh City (HCMC) and the provinces to the north and northeast and south of the city through the construction of the Ho Chi Minh City–Long Thanh–Dau Giay (HLD) Expressway</p>	<p>Construction of HLD Expressway completed by the end of 2013</p> <p>Reduction in passenger and freight vehicle operating costs by an average of 30%, in real terms, within 1 year of project completion</p>	<p>Construction progress reports and project completion report</p> <p>Traffic and transport user surveys</p>	<p><b>Assumption</b></p> <ul style="list-style-type: none"> <li>Funds for construction of the Expressway are secured</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>Development plans for HCMC area are not implemented</li> <li>Construction of the expressways is delayed</li> </ul>
<p><b>Outcome</b></p> <p>Completion of documentation required to commence construction of the HLD Expressway, and Vietnam Expressway Corporation (VEC) strengthened as a commercially-oriented infrastructure provider with enhanced capacity</p>	<p>Award of civil works contracts for HLD Expressway by end of 2009</p> <p>Planning for new VEC organizational structure, with increased staffing finalized by end of 2009</p> <p>Revised legal and regulatory framework for toll road operation to enable commercial toll road construction and operation prepared for consideration by end of 2009</p>	<p>Signed contracts</p> <p>VEC organizational structure submitted to Ministry of Transport (MOT)</p> <p>Progress reports</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>The priorities of the Government remain the same</li> <li>The Government does not seek other sources of funding</li> <li>Government continues to support development of VEC</li> </ul> <p><b>Risk</b></p> <ul style="list-style-type: none"> <li>Insufficient interest in construction contracts from qualified contractors</li> </ul>
<p><b>Outputs</b></p> <p>1.1 Detailed engineering designs completed</p> <p>1.2 Bidding documents prepared</p> <p>1.3 Updated resettlement plans completed</p> <p>1.4 Updated environmental impact assessment (EIA) completed</p> <p>1.5 Civil works contracts procured by VEC</p> <p>1.6 Operation and maintenance (O&amp;M) concession documents prepared</p> <p>1.7 Resettlement plan implemented by VEC</p> <p>2.1 Revised organizational structure for VEC prepared</p> <p>2.2 Identification of legal and regulatory constraints, and remedies, to VEC operating as an efficient, financially secure, provider of expressway facilities</p> <p>2.3 Training needs assessment complete and training program</p>	<p>Approved bidding documents for construction of expressway issued by the end of 2009</p> <p>Civil works contracts awarded by end of 2009</p> <p>Approved updated resettlement plan and EIA issued by July 2009</p> <p>Resettlement plan implemented sufficient for commencement of civil works by end of 2009</p> <p>Approved O&amp;M concession documents issued by end of 2009</p> <p>Revised organizational structure prepared for VEC and Environmental and Social Unit established by mid-2009</p> <p>Revised regulations for VEC operations submitted to MOT for consideration by end of 2009</p>	<p>Design Report</p> <p>Bid evaluation and contract award reports</p> <p>Project completion report</p> <p>Decision issued for establishment of Environmental and Social Unit, and staff hired</p>	<p><b>Assumptions</b></p> <ul style="list-style-type: none"> <li>No restrictions on availability and access to information and government personnel</li> <li>No restrictions on access to project sites</li> </ul> <p><b>Risks</b></p> <ul style="list-style-type: none"> <li>Delays in recruitment of consultants</li> <li>VEC's limited organizational and financial capacity</li> </ul>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
implemented 2.4 Training programs and strengthening of VEC's capacity to manage resettlement, social, and environmental impacts of expressways implemented 2.5 Asset management system identified and commissioned	Approved training plan implemented by end of 2009  Asset management system operational by end of 2009		
<b>Activities with Milestones<sup>a</sup></b>  <b>A. Principal Tasks</b> 1.1 Prepare detailed construction designs Month 9  1.2 Prepare bidding documents for construction Month 12  1.3 Update resettlement plans Month 12 1.4 Update EIA Month 12 1.5 Assist VEC in procurement of civil works contracts Month 18 1.6 Prepare O&M concession documents Month 18 1.7 Assist VEC in implementation of resettlement plan Month 18  2.1 Training needs assessment Month 4 2.2 Revised organizational structure for VEC Month 6 2.3 Asset management system identified Month 6 2.4 Training program implemented Month 12 2.5 Assist VEC to establish and suitably staff a Environmental and Social Unit Month 12 2.6 Asset management system commissioned Month 12  <b>B. Reports</b> 3.1 Inception report Month 1 3.2 Interim report At 6 month intervals 3.3 Training needs assessment Month 4 3.4 Legal and Regulatory, Organizational Reform, and Business Development Plans for VEC Month 6 3.5 Training program materials Month 6 3.6 Asset management system Month 6 3.7 Final updated resettlement plans Month 12 3.8 Draft final engineering designs and bid documents Month 12 3.9 Detailed design report Month 12 3.10 Final engineering designs and bid documents Month 14 3.11 Project completion report Month 18			<b>Inputs</b>  Consulting services: <ul style="list-style-type: none"> <li>• Asian Development Bank: \$10 million</li> <li>• Government: \$1.12 million</li> </ul>

<sup>a</sup> Milestones are defined in terms of number of months from the start of consulting services. Due date is the end of the month.

## SECTOR/SUBSECTOR ANALYSIS

### A. The Road Network

1. The total length of the Viet Nam road system is about 251,786 kilometers (km), of which only 32.0% has a sealed pavement. Of 17,295 km of national roads, about 84% have sealed pavements; of the 23,137 km of provincial roads, only 66% are sealed. The remainder of the network comprises district, commune, and village roads. National and provincial roads provide the key links in the road network but, in 2004, only 44.8% of the total length of national roads was reported as being in good condition. The existing national roadway system was mainly constructed with two lanes; only limited lengths near major urban areas were constructed with four lanes. Only 3.9% of the national road network has four lanes whereas 66% has two or three lanes. Table A2.1 shows the road system by administrative category.

**Table A2.1: The Viet Nam Roads System**

Road Classification			With Pavement						Without Pavement		
Type	Class <sup>a</sup>	KM	Sealed			Unsealed			Earth	Other	%
			Asphalt	Concrete	Macadam	%	Aggregate	%			
National	QL	17,295.0	7,650.2	344.3	6,447.0	84	2,853.5	16	0.0	0.0	0
Provincial	DT	23,137.5	3,474.0	700.7	11,030.2	66	4,816.4	21	3,072.5	43.7	13
District	DH	54,961.9	1,761.7	2,581.3	10,992.1	28	15,881.7	29	20,144.6	3,600.5	43
Urban	DDT	8,535.6	2,465.0	776.4	2,750.4	70	976.3	11	1,567.5	0.0	18
Commune	DX	141,442.1	1,615.9	18,442.3	9,226.0	21	34,896.6	25	77,261.3	0.0	55
Special	DCD	6,414.4	314.1	160.4	546.5	16	2,593.2	40	2,800.2	0.0	44
<b>Total</b>		<b>251,786.5</b>	<b>17,280.9</b>	<b>23,005.4</b>	<b>40,992.2</b>	<b>32</b>	<b>62,017.7</b>	<b>25</b>	<b>104,846.1</b>	<b>3,644.2</b>	<b>43</b>

km = kilometer.

<sup>a</sup> For example: National Road 1A is referred to as QL1A, Provincial Road 7 is referred to as DT7

Source: Viet Nam Road Administration, Ministry of Transport, 2006.

2. Bridges are still a weak link in the system—30% of the 4,100 bridges are restricted to relatively low loads and 20% are narrow. Many sites have no bridge, with more than 115 ferryboats and 1,500 fords.

3. The average speed of vehicles is 50 km per hour (km/h) for trucks and 60 km/h for buses and cars. The complex traffic conditions cause many problems such as poor safety, limited vehicle speeds, and low capacity. Motorbikes have grown at over 20% per year, and totaled over 11 million in 2003 (140 per 1,000 people). The number of four-wheel drive vehicles and articulated trucks grew slightly faster than gross domestic product (GDP), from 400,000 in 1997 to 600,000 in 2002 (7.5 vehicles per 1,000 population). Trucks comprise 30% of the fleet, but 80% of them are small to medium size and only 10% are modern articulated trucks.

### B. Road Administration

4. Administration of the highways in Viet Nam is determined based on the administrative category of the road. National roads are administered by the central level, provincial roads are managed by the provincial level, district roads are managed by the district level, urban roads are managed by cities and towns, and commune roads are managed by the commune level. At the national level, responsibility for the road network lies with the Viet Nam Road Administration under the Ministry of Transport (MOT). However, in 2004, Viet Nam Expressway Corporation (VEC) was established under MOT to develop expressways.

### C. Road Safety

4. Poor road safety is a serious and growing problem throughout Viet Nam—14,161 road deaths were reported in 2006, which is equivalent to a rate of about 7 deaths per annum per 10,000 vehicles. The number of reported deaths increased marginally from 2005. Fatality rates for Viet Nam are very high, even in comparison with many neighboring countries in southeast Asia, and new initiatives in road policy and management are urgently required. Most road deaths (60%) occurred on national highways, but the number of accidents and deaths on provincial roads is increasing. The major causes of traffic accidents are speeding, misuse of drugs, and breaking traffic regulations. Additional factors causing the poor road safety record are the mix of different vehicle types using individual roads, particularly that of high and low speed vehicles sharing the same facility, and poor road traffic management. The Government established an interministerial National Traffic Safety Program to address road safety initiatives, under which roles and budget were allocated to each ministry concerned. Under this program, campaigns are being undertaken to promote enforcement of traffic laws, a road traffic safety, and regulation on the sale and use of motorcycles. However, this program has only had limited effect to date.<sup>1</sup> Full access-controlled highways (essentially expressways) can address some aspects of the road safety problem as (i) they are targeted at high-speed long-distance traffic, so slower local traffic does not have access; and (ii) access is restricted to a limited number of junctions, with each junction designed to allow safe entry and exit of traffic.

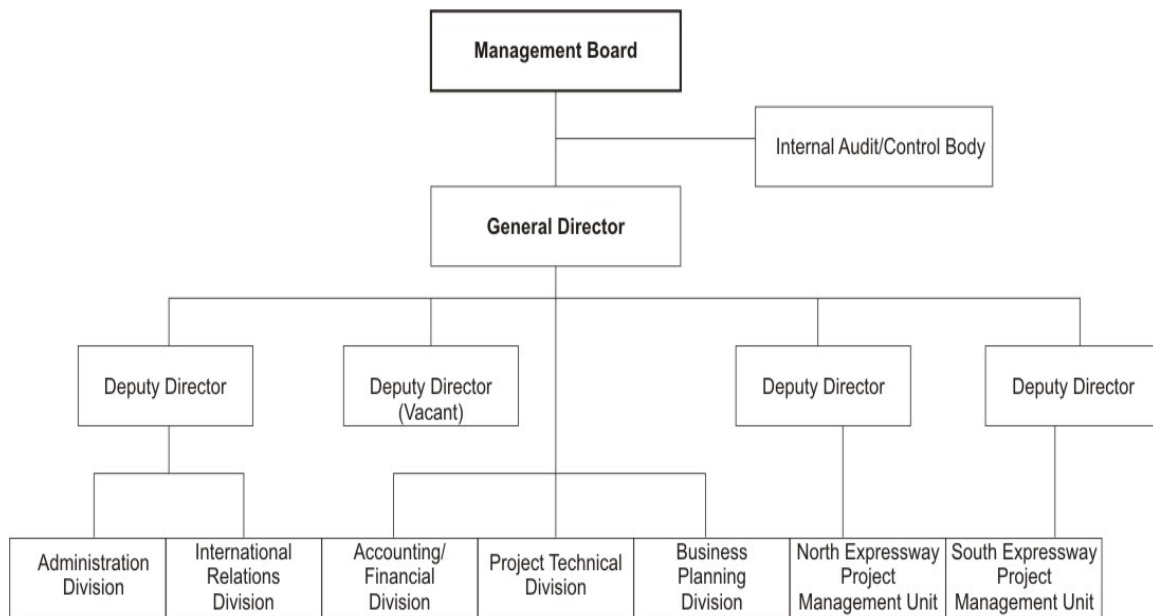
### D. Viet Nam Expressway Corporation

5. VEC was established in October 2004 under MOT as a fully state-owned enterprise (SOE) to develop expressways in Viet Nam. VEC's headquarters are located in Hanoi and a single branch office is located in Ho Chi Minh City. Management at VEC comprises a general director and four deputy directors. Operations are divided into five functional divisions and two project management units, and the current organizational structure of VEC is shown in Figure A2.

6. Article 4 of VEC's charter sets out the following areas in which VEC is to operate:
- (i) investment in expressway construction, management, maintenance, and organizing toll collection on national expressways;
  - (ii) investment in construction of other transport infrastructure by different modalities;
  - (iii) provision and operation of roadside facilities along expressways, such as rest houses, restaurants, filling stations, advertisement, and provision of construction materials;
  - (iv) transport engineering consultancy: studying national expressway network development, preparing pre-feasibility studies and feasibility studies, and designing and supervising transport infrastructure construction works; and
  - (v) development of roadside facilities adjacent to expressways.

7. VEC's charter capital is D1,000 billion (about \$62 million). The Ministry of Finance (MOF) has released D50 billion to VEC but the remaining capital has been provided in-kind by granting VEC toll collection rights for Cau Gie and Phu Dong toll plazas for 10 years, starting 1 January 2005. By 31 December 2005, VEC's total funds had reached D281.4 billion, of which D152.4 billion had been released by MOF—in addition to the D50 billion allocation provided on the establishment of VEC, and a further D79 billion from toll collection revenues.

<sup>1</sup> Japan Bank for International Cooperation. 2003. *Final Report of Social Republic of Vietnam Transport Sector Survey*. Tokyo.

**Figure A2: Current Organizational Structure of VEC**

8. As of August 2006, VEC employed 96 staff, most of whom (79%) have university or postgraduate degrees in transport-related subjects. VEC plans to train staff in the future through technical courses on financial management and engineering design, making use of courses at both domestic and overseas universities and colleges.

9. The immediate objective for VEC was to prepare an expressway master plan, and to complete preparations for the construction of new expressways. VEC also has to identify and employ a large number of technically qualified staff to implement its activities.

10. Under technical assistance (TA) for the Expressway Network Development Plan,<sup>2</sup> a review was undertaken of the: (i) government policies, laws, regulations, decrees, circulars, and charters relevant to VEC; (ii) current organizational structure of VEC, considering the role and responsibilities of each department and division of VEC, segregation of duty, staffing, etc.; and (iii) VEC's future organizational development plan. This study identified a number of issues that must be addressed, these issues are presented below.

### 1. Organizational Structure

11. VEC was established with an organizational structure intended for the start-up phase. As of January 2007, VEC was implementing two construction projects and had management systems in place for these. However, present tolling operations are limited to two toll plazas; it does not have any expressway operating and maintenance contracts in place; it is not providing any additional support activities to expressways, such as roadside facilities; and processes to enable public-private partnership have not been put in place. Further, VEC has limited capacity to manage the social and environmental impacts of the expressways. To administer the

<sup>2</sup> ADB. 2005. *Technical Assistance to the Socialist Republic of Viet Nam for the Expressway Network Development Plan*. Manila (TA 4695-VIE).

proposed expressway program, VEC needs to expand its capacity to enable it to manage a number of large, complex projects and to expand its capacity to take on new activities in terms of additional skills.

12. VEC was established as a fully owned SOE under MOT. However, the Law on State Enterprises, 2003, requires all SOEs to be converted into a company operating under the Law on Enterprises before 2010. Further, it is expected that VEC will operate as both a regulator and owner of the expressway network and as a supplier of various services. These demands require revision of the organizational structure, particularly to separate the roles of regulator and supplier within VEC. With funding from ADB, an Expressway Network Development Plan report<sup>3</sup> was prepared that recommends revisions to the organizational framework but these recommendations need to be refined for implementation.

## **2. Legal and Regulatory Framework**

13. The Expressway Network Development Plan TA undertook a review of legal and regulatory documents that apply to expressways. This study identified a number of issues that need to be addressed either through clarifications to existing laws or regulations or through new laws or regulations. Of particular concern is Circular 90, covering toll regimes for roads. As presently formulated, this circular is very restrictive in terms of ceilings on toll rates, which may have consequences on the financial viability of some expressways. The TA also made recommended how this circular could be revised to accommodate more flexible toll arrangements.

## **3. Training Needs**

14. Given that VEC is a new organization, many staff require training to fully engage in their roles and responsibilities. The Expressway Network Development Plan TA undertook an initial assessment of training needs, but the proposed program needs to be completed once work on the revised organizational structure has been completed.

## **4. Financial and Asset Management Systems**

15. VEC is currently operating using standard accounting software to record all financial transactions. However, a financial management system is needed to allow data to be accessed and analyzed to meet needs other than formal financial reporting. The Expressway Network Development Plan TA also identified a need for an asset management system.

## **E. The Expressway Master Plan**

16. Under The Expressway Network Development Plan TA, the Asian Development Bank (ADB) provided funding to assist the Government in preparing an Expressway Master Plan for a national expressway system. The purpose of this plan was to identify a logical national network of expressways and to prioritize the construction of each section of the proposed network based on economic and financial viability.

17. The existing national road system has been mainly constructed with two lanes, and a small part with four lanes. Traffic growth predictions vary across the country, but with short-term growth of 7–10% (to 2015), traffic volumes are set to grow significantly. Given that critical

<sup>3</sup> ADB. 2007. *Final Report for Expressway Network Development Plan*. Manila. (TA4695-VIE)

sections of the existing network are already congested, the capacity of the network needs to be expanded rapidly to accommodate the additional traffic. Design standards for expressways differ from normal roads, as they are targeted at allowing a large number of vehicles to move freely between major centers, at speed, and with a high level of safety. The proposed expressway network will provide high capacity highways that will connect key economic zones, large urban centers, industrial zones, and international borders. The Expressway Master Plan proposes that the main features of the network be two north–south expressway axes, and six east–west expressway axes, together with 14 expressway sections that provide access around major centers. The short-term program (2006–2015) includes 21 priority expressway projects covering 1,968 km, with an estimated construction cost of \$11.556 billion.<sup>4</sup> A medium-term program (2016–2025) was proposed that included another eight projects covering an additional 875 km, with an estimated construction cost of \$5.238 billion. The short-term program is set out in Table A2.2.

**Table A2.2 Short-Term Expressway Network, 2006–2015**

Section No.	Name	Length (km)	Location (region)	Lanes <sup>a</sup>	Investment Cost (\$ million)	Investment Cost (D billion)	
1	2A	Ninh Binh–Thanh Hoa	63	Central Region–Northern Coastal	4	359.7	5,755.2
2	2B	Thanh Hoa–Vinh	170	Central Region–Northern Coastal	4	970.7	15,531.2
3	5A	Dau Giay–Ninh Thuan	240	Central Region–Southern Coastal	4	1,677.6	26,841.6
4	5B	Ninh Thuan–Nha Trang	79	Central Region–Southern Coastal	4	552.2	8,835.2
5	6	Da Nang–Quang Ngai	140	Central Region–Southern Coastal	4	755.4	12,086.4
6	7A	Ho Chi Minh City–Long Thanh	25	South Eastern	6	371.6	5,955.1
7	7B	Long Thanh–Dau Giay	30	South Eastern	6	408.4	6,534.2
8	8	Trung Luong–Can Tho	95	Mekong Delta	4	544.1	8,705.6
9	14B	Noi Bai–Lam Thao	65	Northern	4	380.9	6,094.4
10	16	Hanoi–Thai Nguyen	61	Northern	4	374.1	5,985.6
11	18	Lam Thao–Lao Cai	220	Northern	4	938.4	15,014.4
12	21B	Hai Phong–Quang Ninh	40	Northern	4	200.4	3,206.4
13	22	Bien Hoa–Ba Ria	58	South Eastern	4	318.6	5,097.6
14	23A	Ho Chi Minh City–Thu Dau Mot	25	South Eastern		164.3	2,628.8
15	23B	Thu Dau Mot–Chon Thanh	45	South Eastern	4	295.7	4,731.2
16	25	Ben Luc–Nhon Trach–Long Thanh	57	South Eastern	4	385.6	6,169.6
17	33	Soc Trang–Chau Doc	160	Mekong Delta	4	883.2	14,131.2
18	34	Bac Lieu–Ha Tien	195	Mekong Delta	4	1,076.4	17,222.4
19	42	Can Tho–Rach Gia	72	Mekong Delta	4	472.5	7,560.0
20	43	Sai Dong–Hai Phong	78	Northern	4	505.3	8,084.8
21	44	Tien Nong–Ha Long	50	Northern	4	280.9	4,494.4

<sup>a</sup> Number of lanes given is for ultimate design. Staged construction will be appropriate for some expressways.

Source: Asian Development Bank. 2005. *Technical Assistance to the Socialist Republic of Viet Nam for the Expressway Network Development Plan*. Manila (TA 4695-VIE, Final Report).

<sup>4</sup> In 2007 prices.

## PREFEASIBILITY ECONOMIC AND FINANCIAL VIABILITY

### A. Background

1. Three priority highway projects have been selected to pilot test private sector involvement in toll road infrastructure development in Viet Nam under public-private partnership arrangements. The three priority projects selected are:

- (i) Ninh Binh–Thanh Hoa,
- (ii) Ho Chi Minh City–Long Thanh–Dau Giay, and
- (iii) Bien Hoa to Ba Ria (Vung Tau).

2. The three proposed projects have been subjected to simplified economic and financial analysis to ascertain their viability. The data and forecast underpinning the analysis were collated to develop a prioritized national Expressway Master Plan.<sup>1</sup> As a result, the data available are comprehensive in scope but less detailed than required to perform full economic and financial analysis at project level. The analysis should therefore be considered preliminary and its results indicative.

#### 1. Ninh Binh–Thanh Hoa

3. The proposed expressway between Ninh Binh and Thanh Hoa is to take the role of the existing highway no. 1 serving long-distance traffic between the north and south of Viet Nam. The proposed project is the next stage in developing the expressway between Hanoi and Ho Chi Minh City (HCMC). The section from Hanoi to Cau Gie is completed, and the section from Cau Gie to Ninh Binh is under construction.

4. The project will construct 63 kilometers (km) of four-lane dual carriageway expressway between 2009 and 2012. It includes (i) two large river crossings—of the Do Len River (bridge length about 500–800 meters [m]) and the Ma River (bridge length about 1,500 m); (ii) seven grade separated interchanges; (iii) and three toll plazas. On the basis of traffic counts made in the autumn of 2006 in Ninh Binh and Bim Son, if the expressway existed now, it is estimated that it would carry 9,783 passenger car units (pcu)/day,<sup>2</sup> rising to 13,167 pcu/day in 2010 and 27,426 pcu/day in 2025. The cost of construction is estimated at \$359.70 million (D6,395 billion).

#### 2. Ho Chi Minh City–Long Thanh–Dau Giay

5. The proposed project forms the southern end of the north–south expressway from Hanoi to HCMC, and connects to the planned urban expressway network around HCMC. It intersects with the proposed Bien Hoa–Ban Ria expressway (see paragraph 7 below) which will form part of a bypass around HCMC. The project will provide the primary road connection from HCMC to the planned new airport in Long Thanh.

<sup>1</sup> ADB. 2007. *Final Report for: Expressway Network Development Plan Project: The Expressway Development Plan, – Volume 3*. Manila. (TA4695-VIE)

<sup>2</sup> This is a normalized measure of traffic where different types of traffic (buses, trucks etc.) are converted into pcu by multiplying the number of vehicles by a factor reflecting the equivalent traffic load of one vehicle expressed in terms of passenger cars.

6. The project will construct 57 km of four-lane dual carriageway expressway between 2009 and 2012. It includes (i) a bridge across the Dong Nai River (about 1,721 m long); (ii) eight grade separated intersections; and (iii) three toll plazas. Based on updated origin-destination data from the VITRANSS study,<sup>3</sup> the technical assistance (TA) consultant estimates that, if the expressway existed today, traffic on the first 25 km from HCMC to Long Thanh would be 20,063 pcu/day, rising to 112,633 pcu/day in 2030. On the remaining 30 km, estimated traffic today would be 14,429 pcu/day, rising to 81,129 pcu/day in 2030. The cost of construction is estimated at \$780.0 million (D12,489 billion).

### 3. Bien Hoa–Ba Ria

7. The proposed project would take the role of the existing highway no. 51 between Bien Hoa and Ba Ria. The alignment starts from Bien Hoa, crosses the alignment of the proposed HCMC–Long Thanh–Dau Giay expressway near Long Thanh, and connects to the proposed Ben Luc–Nhon Trach–Long Thanh expressway. Vung Tau has a major seaport, an airport, and some tourist industry. The Nha Be river serves as an inland waterway along the same distance as the expressway, and further to the northwest.

8. The project would construct 58 km of four-lane dual carriageway expressway between 2011 and 2014. It includes (i) several bridges with a total length of 8,212 m; (ii) six grade separated interchanges; and (iii) 11 toll plazas. Based on VITRANSS data and the consultants' own traffic counts on national highway no. 51, estimated traffic volume if the expressway existed today would be 13,184 pcu/day, rising to 17,957 pcu/day in 2010 and 32,531 pcu/day in 2030. The cost of construction is estimated at \$318.58 million (D5,097 billion).

## B. Cost Benefit Analysis

9. The cost-benefit analysis estimates the incremental costs and benefits for each of the three projects by comparing with- and without-project scenarios. It considers the cost of constructing and maintaining the expressways, and all resettlement and land acquisition costs; and the benefits enjoyed by road users, encompassing reduced vehicle operating cost (VOC) and time savings.

10. The analysis was performed using Highway Design and Maintenance (version 4) and is based on costs and benefits estimated using economic (border) prices. For road works, the economic costs are estimated at 85% of financial cost. The maintenance costs used in the economic appraisals were \$1,250 per km for routine maintenance and \$1.36 per square meter (m<sup>2</sup>) per year for periodic maintenance. However, since periodic maintenance is only carried out every 7 years, the annual operation costs have been converted to \$9.72 per m<sup>2</sup> once every 7 years. Benefits have been estimated using economic VOC, and include time savings benefits for passengers and cargo. Benefits and maintenance costs are estimated over a 20-year benefit period after completion of construction.

11. The results of the analysis are expressed in terms of the proposed projects' economic internal rate of return (EIRR) and economic net present value (NPV). Pertinent assumptions are tested through sensitivity analysis. The distributional impact of the proposed projects has not been analyzed.

<sup>3</sup> Japan International Cooperation Agency. 2005. *Report on Follow-up to VITRANSS*. Hanoi.

## C. Results

12. The cost-benefit analysis in each case compares forecast costs and benefits for the toll expressway being constructed with forecast costs and benefits if the expressway were not constructed, the null alternative. The results of the analysis are as follows:

- (i) Ninh Binh–Thanh Hoa: the EIRR was calculated to be 27.4% and the NPV to be \$576.2 million. The discounted benefits are divided between savings in VOC of \$520.1 million and travel time savings for passengers and cargo of \$366.0 million.
- (ii) HCMC–Long Thanh–Dau Giay: the EIRR was calculated to be 29% and the NPV was \$476 million. The discounted benefits are divided between savings in VOC of \$511 million and travel time savings for passengers and cargo of \$295 million.
- (iii) Bien Hoa–Ba Ria: The EIRR was calculated to be 20.2% and the NPV was \$291.4 million. The discounted benefits are divided between savings in VOC of \$312.3 million and travel time savings for passengers and cargo of \$261.4 million.

## D. Sensitivity Analysis

13. The Project's sensitivity to risks and changes in assumptions (Table A3.1) was tested by modifying the following key variables that have particular impact on the outcome of the analysis: (i) 20% increase in construction costs, and (ii) 20% decrease in traffic. The combined impact was also tested. In all cases, the EIRR is well above the cutoff value of 12%. Switching values were not calculated and risk analysis was not performed. However, given the outcome of the sensitivity analysis, it appears unlikely that any of the projects would fall below the economic viability cutoff rate except under catastrophic circumstances.

**Table A3.1: Sensitivity Analysis  
(EIRR)**

Parameter	Change	Ninh Binh– Thanh Hoa	Ho Chi Minh City– Long Thanh	Long Thanh– Dau Giay	Bien Hoa– Ba Ria
Base case		27.4%	29.4%	21.8%	20.2%
Increase in investment cost	+20%	24.1%	25.3%	20.9%	18.1%
Reduction in traffic	–20%	25.6%	24.4%	21.2%	16.7%
Combined		22.5%	20.7%	20.3%	15.0%

EIRR = economic internal rate of return.

Source: Final report for Expressway Network Development Plan (footnote 1).

## E. Financial Analysis

14. Similar to the approach taken in the economic analysis, incremental revenue forecasts (in financial terms) are based on traffic forecasts with and without the proposed projects.

15. The projects are expected to be funded with 10% equity from the Government, and the assumed opportunity cost of such equity financing is 9%. The Asian Development Bank (ADB) will fund 30% at ordinary capital resources conditions with a variable interest rate of London interbank offered rate plus 0.5% per annum, amounting to 5.4% + 0.5% = 6.1%. Japan Bank for International Cooperation (JBIC) will fund 60% on conditions comparable to ADB's Asian

Development Fund (ADF) loans, taken for the purpose of this analysis to be 1.5% interest rate with a maturity of 30 years. The weighted average cost of capital (WACC) in real terms is 1.14%. The WACC calculation is shown in Table A3.2.

**Table A3.2: Weighted Average Cost of Capital**  
(%)

Item	Financing Components			Total
	ADB	JBIC	Government	
A. Weighting	30.00	60	10	100
B. Nominal cost	6.10	1.50	9.00	
C. Tax rate	25.00	25	0	
D. Tax-adjusted nominal rate [B x (1-C)]	4.58	1.13	9.00	
E. Inflation rate	2.00	2.00	5.00	
F. Real cost [(1+D) / (1+E) -1]	2.52	(0.86)	3.81	
G. Weighted component of WACC (F x A)	0.76	0.00	0.38	1.14

( ) = negative, ADB = Asian Development Bank, JBIC = Japan Bank for International Cooperation, WACC = weighted average cost of capital.

Source: ADB staff.

16. The financial analysis, performed on an incremental basis in real terms—taking into account the cost of investment, future toll revenues after taxes, and future maintenance expenditures—shows that the projects will be financially viable with financial internal rates of return (FIRRs) of 2.04–6.30%, which exceed the real WACC of 1.14%. The estimated NPV of the net cash flows, using the WACC as hurdle rate, is \$1.7 billion–\$4.4 billion. The individual FIRR and NPV results are shown in Table A3.3.

**Table A3.3: Financial Internal Rate of Return and Net Present Value**  
(\$ million)

Item	Ninh Binh– Thanh Hoa	Ho Chi Minh– Dau Giay	Bien Hoa–Ba Ria
NPV (1.14%)	1,777	2,118	4,433
FIRR	3.17%	2.04%	6.30%

FIRR = financial internal rate of return, NPV = net present value.

Source: ADB estimates.

## EXTERNAL ASSISTANCE TO THE ROAD SUBSECTOR

	Project	Implementation Schedule	Project Cost (\$ million)	External Funding Source
<b>A.</b>	<b>National Highway and Provincial Roads Network</b>			
Loan 1272	Road Improvement Project	Completed	141.0	ADB: \$120 million
Loan 1487	Second Road Improvement Project	Completed	237.0	ADB: \$120 million JBIC: \$64 million
Loan 1564	Rural Infrastructure Sector Project	Completed	150.0	ADB: \$105 million AFD: \$15 million
Loan 1653	Third Road Improvement Project	1999–2003	239.0	ADB: \$130 million JBIC: \$60 million
Loan 1660	GMS: Phnom Penh to Ho Chi Minh City Highway Project	Completed	144.8	ADB: \$100 million
Loan 1728	GMS: East–West Corridor Project	Completed	30.0	ADB: \$25 million
Loan 1888	Provincial Roads Improvement Project	2002–2008	100.0	ADB: \$70 million ADB (L): \$94.5 million
Loan 2195	Central Region Transport Networks Improvement Project	2005–2009	138.0	ADB (G): \$0.5 million NDF: \$11.0 million
	Highway Rehabilitation Project II and III	Completed	416.6	WB
	Road Safety Project	2005–2009	25.0	WB
	NH1 Bridge Rehabilitation Project	Completed	162.2	JBIC
	NH1 Bridge Rehabilitation Project (2)	1999–2007	211.0	JBIC
	NH1 Bridge Rehabilitation Project (3)	2003–2009	80.1	JBIC
	NH5 Improvement Project (1), (2), and (3)	Completed	326.3	JBIC
	NH10 Improvement Project (1)	1998–2007	161.3	JBIC
	NH18 (1)	Completed	107.8	JBIC
	Transport Infrastructure in Hanoi	1998–2006	113.7	JBIC
	Hai Van Tunnel Construction (1), (2), and (3)	1998–2008	372.4	JBIC
	NH18 Widening Projects (2)	2000–2007	232.0	JBIC
	Can Tho, Thanh Tri, Bai Chay, Binh Bridge Construction	2000–2008	882.0	JBIC
	NH10 Improvement Project (2)	2000–2007	116.3	JBIC
	Red River Bridge Construction (1), (2), and (3)	2002–2010	179.1	JBIC
	Saigon East–West Highway Project (1), (2), and (3)	2000–2008	919.9	JBIC
	NH1 Bypass Road Construction Project	2001–2007	76.3	JBIC
	Transport Sector Loan	2004–2010	86.7	JBIC
	My Thuan Bridge	Completed	79.3	AusAID
	<b>Subtotal (A)</b>		<b>5727.8</b>	
<b>B.</b>	<b>Rural Roads Network (District and Commune Roads)<sup>a</sup></b>			
	Rural Transport Project	Completed	60.9	WB
	Rural Transport II Project	2000–2007	145.3	WB/DFID
	Rural Transport III Project	2006–2011	173.0	WB/DFID
	Rural Access Project	1998–2000	1.3	DFID
	Rural Infrastructure Development <sup>b</sup>	Completed	133.0	JBIC
	<b>Subtotal (B)</b>		<b>513.5</b>	
	<b>Total</b>		<b>6,241.3</b>	

ADB = Asian Development Bank, AusAID = Australian Agency for International Development, AFD = Agence Française de Développement, DFID = Department for International Development, G = grant, GMS = Greater Mekong Subregion, JBIC = Japan Bank for International Cooperation, L = loan, NDF = Nordic Development Fund, NH = national highway, WB = World Bank.

<sup>a</sup> Excludes ADB-financed rehabilitation of rural roads as specific components of rural infrastructure projects.

<sup>b</sup> Amount of project cost is only for the road component.

Sources: Viet Nam Road Administration, Ministry of Transport, and ADB estimates.

## DETAILED COST ESTIMATES

**Table A5: Detailed Cost Estimates by Expenditure Category and Financier**

Item	Cost	ADB		Government	
		(\$'000)	% of Cost Category	(\$'000)	% of Cost Category
<b>A. Investment Costs<sup>a</sup></b>					
1. Consultants	9,000	9,000	100.0	0	0.0
2. Taxes and Duties	900	0	0.0	900	100.0
<b>Subtotal (A)</b>	<b>9,900</b>	<b>9,000</b>	<b>90.9</b>	<b>900</b>	<b>9.1</b>
<b>B. Recurrent Costs</b>					
1. Project Administration	230	0	0.0	230	100.0
<b>Subtotal (B)</b>	<b>230</b>	<b>0</b>	<b>0.0</b>	<b>230</b>	<b>100.0</b>
<b>Total Base Cost</b>	<b>10,130</b>	<b>9,000</b>	<b>88.9</b>	<b>1,130</b>	<b>11.1</b>
<b>C. Contingencies<sup>b</sup></b>	<b>990</b>	<b>900</b>	<b>91.0</b>	<b>90</b>	<b>9.0</b>
<b>D. Financing Charges During Implementation</b>	<b>100</b>	<b>100</b>	<b>100.0</b>	<b>0</b>	<b>0.0</b>
<b>Total Project Costs</b>	<b>11,220</b>	<b>10,000</b>	<b>89.2</b>	<b>1,220</b>	<b>10.8</b>
<b>% Total Project Costs</b>	<b>100</b>		<b>89</b>		<b>11</b>

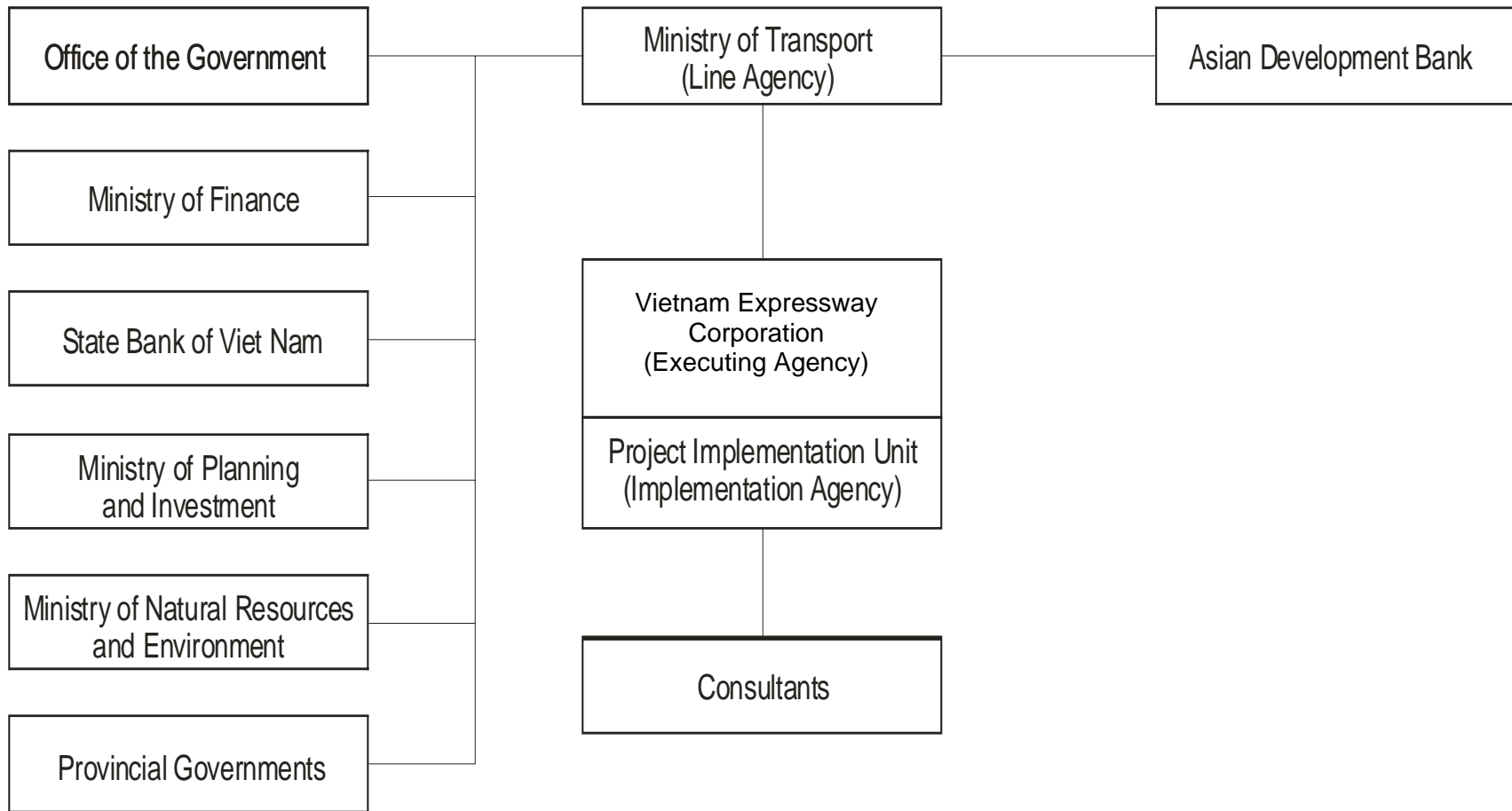
ADB = Asian Development Bank.

<sup>a</sup> In mid-2006 prices.

<sup>b</sup> Includes physical contingency only, computed at 10% of the base cost for the consulting services.

Source: ADB estimates

## PROJECT ORGANIZATION AND IMPLEMENTATION ARRANGEMENTS



Source: Asian Development Bank.



## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. Scope of the Services

1. The consulting services under the technical assistance (TA) loan for the Ho Chi Minh City–Long Thanh–Dau Giay (HLD) Expressway Technical Assistance Project (the Project) have been divided into two components:

- (i) **Expressway design and procurement component.** Complete documentation required for the construction of the HLD Expressway; and
- (ii) **Regulatory and institutional strengthening for expressways component.** Undertake strengthening and capacity building at the Vietnam Expressway Corporation (VEC).

2. The tasks to be completed under each component are set out below.

### B. Expressway Design and Procurement Component

3. Under this component, the objectives will be to (i) undertake detailed engineering designs for the Project; (ii) update resettlement plans and environmental impact assessments to take account of detailed engineering designs; (iii) prepare bidding documents for procurement of civil works, goods, and consulting services required to implement the Project; (iv) assist the Executing Agency (EA) and Implementing Agency (IA) for the Project in undertaking procurement of the civil works; (v) prepare documentation for use in offering a concession for the operation and maintenance (O&M) of the finished Project; (vi) undertake training and capacity building activities for the management of social, resettlement, and environmental impacts of expressway projects; and (vii) assist in the implementation of the resettlement plans prior to commencement of civil works.

4. Based on the preliminary design prepared under the Expressway Network Development Plan TA,<sup>1</sup> prepare detailed engineering designs and documentation required to commence construction of the HLD Expressway. The consultant is required to note that the Government of Viet Nam (the Government) has requested consideration of funding of the construction of the HLD Expressway under loans from the Asian Development Bank (ADB) and the Japan Bank for International Cooperation (JBIC). This is to be confirmed but, for the purposes of these terms of reference, it should be assumed that JBIC will fund construction of the expressway from the 2<sup>nd</sup> Ring Road to Long Thanh interchange, and ADB will fund from the Long Thanh interchange to Dau Giay. However, the scope of work for these services will include the entire expressway from the 2<sup>nd</sup> Ring Road to Dau Giay. The tasks to be undertaken are as follows.

- (i) Undertake detailed topographic, geotechnical, and traffic surveys sufficient to design detailed alignments and cross sections for the proposed expressway.
- (ii) Prepare detailed engineering designs and bills of quantities, and calculate detailed costs estimates for civil works, broken down into base cost and taxes and customs duties.
- (iii) Conduct a road safety audit on the engineering designs to ensure that safety hazards have been eliminated.

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<sup>1</sup> ADB. 2005. *Technical Assistance to the Socialist Republic of Viet Nam for the Expressway Network Development Plan*. Manila (TA 4695-VIE).

- (iv) Prepare concept and detailed engineering designs for traffic control and toll collection systems. These designs will be based on standards for expressway traffic control systems and data interchange that will be developed under the services for use on all expressways. The intent is that these systems will take into account the latest international standards. A key feature of the system will be the use of open architecture and a data exchange facility to facilitate expansion of the system and communications with other systems.
- (v) Undertake surveys to determine the extent of unexploded ordnance contamination and include appropriate measures to survey and clear the site prior to commencement of construction.
- (vi) Prepare documents for VEC's use in securing a concession for the O&M of the completed expressway, based on the work under the Expressway Network Development Plan TA (footnote 1) which assessed various public-private partnership models. When construction of the expressway is completed, it is proposed that O&M of the expressway facilities will be bid as a concession.
- (vii) Prepare an update to the environmental impact assessment (EIA) and an environmental management plan (EMP)—based on the EIA prepared under the Expressway Network Development Plan TA (footnote 1)—that take account of the results of the detailed design. This will be undertaken in accordance with (i) ADB's *Environment Policy* (2002), *Public Communications Policy* (2005), and *Environmental Assessment Guidelines*<sup>2</sup> (2003); (ii) the Environmental Protection Law, 2006, and its pursuant implementing ordinance, including Decree 80, 2006 and Circular 08, 2006; and (iii) Ministry of Transport sector standards, including Standard 22 TCN 242 98: Guidelines for Environmental Impact Assessment in the Feasibility Study and Design of Transport Construction.
- (viii) Prepare an updated resettlement plan, based on the full resettlement plan prepared under the Expressway Network Development Plan TA (footnote 1) and the detailed designs, and assist VEC in the implementation of this plan. The consultants will undertake these tasks in accordance with ADB's *Involuntary Resettlement Policy* (1995) guided by Operations Manual on Involuntary Resettlement (OM/F2, 2006); and other relevant policies and guidelines of ADB, i.e., *Policy on Gender and Development* (1998), *Policy on Indigenous Peoples* (1998), *Accountability Mechanism* (2003), and *Public Communications Policy* (2005).
- (ix) Identify vulnerable households, including ethnic minorities, based on the findings of the social surveys and analysis. Include appropriate mitigation measures to ensure that the needs of these groups are met. If the needs of ethnic minorities trigger ADB's *Policy on Indigenous Peoples*, the requirements of this policy must be met either through an ethnic minority development plan or ethnic minority special actions. If the needs refer to land acquisition or resettlement activities, special actions should be included in the resettlement plans.
- (x) The consultant will assist VEC and district resettlement committees in implementing and monitoring the resettlement plans. Funds for all compensation, entitlements, and programs required under the resettlement plans will be provided under the proposed ADB investment loan<sup>3</sup> for the HLD Expressway.
- (xi) Ensure that the bid documents include specific provision to minimize disruption/damage to the environment and local settlements caused by

<sup>2</sup> ADB. 2003. *Environmental Assessment Guidelines*. Manila

<sup>3</sup> Processing of this loan is contingent on feasibility studies demonstrating that the HLD Expressway is viable. These feasibility studies will be completed in December 2007.

construction, using the EIA, EMP, and the detailed design prepared during this work as a basis for these provisions. Bid documents will also include specific provisions for the engagement and payment of a subcontractor to undertake HIV/AIDS awareness programs for contractors' staff.

- (xii) Prepare all required bidding documents in accordance with the requirements of ADB's *Procurement Guidelines* (2007, as amended from time to time) for sections of the HLD Expressway to be funded with assistance from ADB. Prepare all required bidding documents in accordance with the *Handbook for Procurement under JBIC ODA Loans* (January 2005) for sections of the HLD Expressway to be funded with assistance from the Government of Japan.
- (xiii) Prepare bidding documents for civil works to construct the HLD Expressway. These documents will include, as necessary, prequalification documents, prequalification evaluation documents, and bidding documents for the civil works, including the road traffic information and toll collection systems. Bidding documents will include bill of quantity items for environmental mitigation measures, and HIV/AIDS awareness and prevention programs for contractors' workers. The bidding documents will also include provisions regarding any aspects of the gender strategy that should be included, and, if appropriate, employment opportunities for ethnic minority groups in the construction phase.
- (xiv) Prepare procurement plans, setting out details of proposed contract packages, procurement methods, and proposed schedule for procurement. Each plan is to cover a period of no less than 18 months and to be updated on a regular basis.
- (xv) Assist the EA and IA in (a) evaluating prequalification of potential bidders in line with the prequalification evaluation document approved by ADB, and prepare a prequalification evaluation report; (b) evaluating bids and preparing a bid evaluation report; and (c) answering inquiries from bidders during the prequalification and bidding exercise. Responsibility for the content of evaluation reports and responses to inquiries will remain with the EA.

### C. Regulatory and Institutional Strengthening for Expressways

5. Under this component, the objective will be to strengthen VEC and facilitate the transition from a state-owned enterprise to an independent infrastructure provider. This component of the services will (i) review work undertaken under the Expressway Network Development Plan TA (footnote 1) regarding VEC's strategy and institutional structure; (ii) prepare legal and regulatory frameworks, policies, and institutional and administrative arrangements required to support VEC's activities and responsibilities as an autonomous authority that will develop and operate the expressway network; (iii) identify performance targets, mandate, goals and objectives, corporate policy and plan, organization structures, responsibilities, decision and management arrangements, reporting and financial systems, operational mechanisms and structures, human resources and training needed to ensure accountability for management and operations of VEC; and (iv) prepare and implement a detailed, time-bound, phased, pragmatic implementation plan with the resource requirements, implementation responsibilities, and an implementation program to position VEC as a technically and financially viable operator of an efficient expressway network. Tasks under this component will include the following.

- (i) **Initial review.** The consultants will undertake an initial review to establish a comprehensive understanding of the environment within which VEC operates, including transport sector planning, current organizational arrangements and plans, management proposals and issues, human resources, and budget

constraints. This review will include all records, documents, and proposals relevant to the services—particularly work undertaken under the Expressway Network Development Plan TA.

- (ii) **Expressway planning.** The consultants will assist VEC to identify its role in transport policy planning and its relationship with the other road authority in the regulatory and policy areas of the road sector.
- (iii) **User charges.** The consultants will assist VEC to review and make appropriate recommendations on laws, decisions, and regulations that address user charges and revenues, revenue collection mechanism, and road maintenance funding. Prepare a time-bound action plan for implementing the recommended changes, and assist with the approval and implementation of the recommendations.
- (iv) **Legal and regulatory frameworks.** The consultants will assist VEC to prepare draft legal and regulatory frameworks, including all related legal texts and submissions, required to establish VEC's authority over the expressway network.
- (v) **Organizational structures.** The consultants will assist VEC to review and clarify its future organizational structure. Prepare plans to create this structure and assist VEC to implement these plans. In preparing and implementing the planned organization reform, the consultants will assist VEC in (a) preparations for future conversion into a shareholding company; (b) planning and implementing a new internal management structure with responsibilities to reflect commercial operations; (c) strengthening its organization by creating and staffing units for tolling, legal, and environment and social impact management as soon as possible; (d) preparing a training needs assessment, implementing a training plan, and recruiting additional staff to meet the needs of VEC.
- (vi) **Business development plans.** The consultants will assist VEC to prepare proposals for business development plans for the short, medium, and long term.
- (vii) **Private sector involvement.** The consultants will assess the feasibility of private sector involvement in all aspects of expressway O&M, with reference to improvements in quality of services or reductions in cost; recommend appropriate means and structures to secure private sector involvement in such activities. Review market conditions for provision of service in potential areas that may be offered under a concession.
- (viii) **Financial and asset management.** The consultants will (a) review the financial management and accounting needs of VEC; (b) develop an appropriate proposal for an effective financial management system and chart of accounts; (c) prepare relevant financial targets for VEC; and (d) identify financial management information, performance indicators, systems, and procedures. Assist VEC in installing and commissioning a financial information management system and in establishing modern toll and asset management systems.

#### D. Reporting Requirements

6. The consultants will prepare the documents and reports listed in Table A8, and submit them to VEC, JBIC, and ADB.

**Table A8: Reporting Requirements**

Report	No. of Copies			Schedule
	ADB	JBIC	VEC	
Inception Report	3	3	5	End of month 1
Progress Reports	3	3	5	Monthly
Interim Reports	3	3	5	At 6 month intervals
Training needs assessment	3	3	5	End of month 4
Training program materials	3	3	5	End of month 6
Asset management system	3	3	5	End of month 6
Legal and Regulatory, Organizational Reform, and Business Development Plans for VEC	3	3	5	End of month 6
Final Updated Resettlement Plans	3	3	5	End of month 12
Draft Final Engineering Designs and Bid Documents	3	3	3	End of month 12
Detailed Design Report	3	3	3	End of month 12
Final Engineering Designs and Bid Documents	3	3	3	2 weeks from VEC comments
Final Updated EIA and EMP Reports	3	3	5	End of month 12
Project Completion Report	3	3	5	End of services

ADB = Asian Development Bank, EIA = environmental impact assessment, EMP = environmental management plan, JBIC = Japan Bank for International Cooperation, No. = number, VEC = Vietnam Expressway Corporation.  
Source: ADB estimates.

## PROCUREMENT PLAN

### Project Information

Country	Socialist Republic of Viet Nam
Name of Borrower	Socialist Republic of Viet Nam
Project Name	Ho Chi Minh City–Long Thanh–Dau Giay Expressway Technical Assistance Project
Loan or technical assistance Reference	Loan number to be determined
Date of Effectiveness	To be determined
Amount \$	10 million
Of which Committed \$	Loan not yet approved
Executing Agency	Ministry of Transport/Vietnam Expressway Corporation
Approval Date of Original Procurement Plan	2 November 2007
Approval of Most Recent Procurement Plan	
Publication for Local Advertisements <sup>a</sup>	To be determined
Period Covered by this Plan	September 2007–March 2009

<sup>a</sup> General procurement notice, invitations to prequalify and to bid, calls for expressions of interest.

### Procurement Thresholds, Goods and Related Services, Works, and Supply and Install

Procurement Method	Value (\$)
Shopping	100,000

### Procurement Thresholds, Consultants Services

Procurement Method	Value (\$)
Quality-and Cost-Based Selection (QCBS) <sup>a</sup>	Above 200,000

<sup>a</sup> Default for procurement above \$200,000.

### List of Contract Packages in Excess of \$100,000, Goods, Works and Consulting Services

Ref	Contract Description	Estimated Cost (\$ million)	Procurement Method	Expected Date of Advertisement <sup>a</sup>	Prior Review Y/N	Comments
CS1	Expressway Preparation Consulting Services	10.89	Quality and cost-based selection (full proposals, 80% technical weighting)	September 2007	Y	

<sup>a</sup> The invitation for bids, request for expressions of interest, or invitation to prequalify, as the case may be.

## SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

### A. Linkages to the Country Poverty Analysis

<b>Is the sector identified as a national priority in country poverty analysis?</b>	<input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No	<b>Is the sector identified as a national priority in country poverty partnership agreement?</b>	<input checked="" type="checkbox"/> Yes  <input type="checkbox"/> No
<p><b>Contribution of the sector or subsector to reduce poverty in the Socialist Republic of Viet Nam:</b></p> <p>Viet Nam's record in poverty reduction has been impressive in the last decade. The proportion of the population below the poverty line has declined from around 59% in 1993 to 25% in 2005. The proposed target for the Five-Year Socio-Economic Development Plan (2006–2010) is to reduce poor households to 15–16% by 2010. While significant in terms of magnitude, progress in poverty reduction remains fragile, with a significant number of “near poor” clustered just above the poverty line. Sustained development requires modernization and improvement of physical infrastructure and associated services.</p> <p>Expressways are intended to serve long distance traffic. They do not necessarily benefit local communities directly, but address poverty in areas around the expressway indirectly by facilitating continued economic growth. The proposed Ho Chi Minh City–Long Thanh–Dau Giay (HLD) Expressway is located in Ho Chi Minh City and Dong Nai Province, one of the least poor provinces with a poverty rate of 10.33%<sup>1</sup>. Given the generally low rates of poverty in the project area, the proposed Project will have very limited impact on poverty reduction in the project locations. However, improved transport infrastructure is critical for sustained rapid economic growth and overall poverty reduction, and can contribute to regionally balanced and equitable economic growth by stimulating agriculture production, increasing access to employment opportunities, and facilitating better access to social services. Remoteness and disconnection have often been identified as factors for poor people's inability to benefit from economic growth. Improved road connectivity under the proposed Project might contribute to poor people's ability to benefit from economic growth in the long run.</p>			

### B. Poverty Analysis

**Targeting Classification:** General intervention

<p><b>What type of poverty analysis is needed?</b></p> <p>Following the Asian Development Bank's Enhanced Poverty Reduction Strategy (December 2004), projects classified as general intervention no longer require project level poverty assessments. However, for the HLD Expressway, the ongoing project preparatory technical assistance<sup>2</sup> (PPTA) includes a poverty impact analysis that will examine the extent to which there is any opportunity for pro-poor design. As part of the project preparation for the HLD Expressway, social assessments will be prepared for project provinces and districts, and areas affected by resettlement. Since HIV/AIDS and human trafficking represent significant risks, assessment on HIV/AIDS and human trafficking will be conducted to prepare preventive measures for implementation during the construction phase of the expressway.</p> <p>The social assessment data will include: (i) a demographic, social (education, occupation, etc.), and economic profile of the population of the project provinces and districts (urban, semi-urban and rural) disaggregated by ethnicity and gender; (ii) available social services and access to other services; (iii) access to markets and movement of goods to other provinces; (iv) the potential impact of the proposed expressways on the social environment of urban, semi-urban, and rural areas; (v) potential employment opportunities in the project area; (vi) reduction of transport costs associated with transportation on the provincial road networks; (v) potential change in agriculture production, and manufacturing of goods in semi-urban areas and rural areas and its potential impact on women; (vi) potential change in land and property value; (vii) commercial development in the provinces and its impact on local resident, especially middle-income, low-income, and poor people.</p> <p>Since the HLD Expressway runs through some densely populated areas and is near several industrial zones, the social assessment will also focus on environmental issues and possible negative impacts arising from construction-related air pollution—caused by rock crushing, cutting and filling works, asphalt processing, disposal of waste, and noise—on the living conditions of people in the project area. The expressway alignment runs through mixed areas of urban settlements, farmland, and rubber plantations. This could result in the fragmentation of farmland, settlements,</p>
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<sup>1</sup> Ministry of Labor and Invalids. 2002. *Viet Nam Household Living Standard Survey*. Hanoi.

<sup>2</sup> ADB. 2005. *Expressway Network Development Plan*. Manila (TA 4695-VIE)

and rubber plantations. The social impact of the fragmentation of farmland, urban settlements, rubber plantations, and other facilities on people's daily life and livelihood will be examined. Consultation will be held with affected communities regarding the location of community infrastructure such as underpasses, bridges, access road, etc. Based on the social assessment, strategies will be developed to address the social impact in the designs of the expressway

Social analysis will include the potential negative impact of resettlement on affected people, and risks of the spread of HIV/AIDS. Assessment of HIV/AIDS will include: (i) the current HIV/AIDS prevalence in the project area; (ii) the type and level of vulnerability to HIV/AIDS of the population along the proposed expressway (disaggregated by gender, ethnicity, age, type of occupation, mobility, etc.); (iii) review of provincial plans and activities on HIV/AIDS and human trafficking; (iv) review of existing programs of donors and nongovernment organizations; (v) recommendations for activities related to provincial plans and relevant linkages with other donors' programs for preventing and mitigating the impacts; and (vi) assessment of the capacity building training needs of relevant agencies for anti-HIV/AIDS activities and the prevention of human trafficking program.

The social analysis will be prepared from both primary and secondary data. Primary data will be collected from selected project areas through sample survey and focus group discussions. Secondary data will include existing data such as census, national socioeconomic surveys, and available HIV/AIDS and human trafficking related data.

### C. Participation Process

**Is there a stakeholder analysis?**  Yes  No

Under the Expressway Network Development Plan (footnote 2), workshops were held with government agencies to prepare the Expressway Master Plan. For the social impact analysis (Box B), land acquisition, and resettlement issues, individual and group consultations will be undertaken with affected people at the urban settlements, semi-urban, and rubber plantation areas. The stakeholder analysis will also include consultation with relevant agencies working on human trafficking and HIV/AIDS prevention programs.

**Is there a participation strategy?**  Yes  No

Based on the stakeholder analysis, a participatory strategy will be incorporated in the location and design of underpasses and footbridges for local communities and for the planning and implementation of resettlement activities.

### D. Gender Development

#### Strategy to maximize impacts on women:

The social analysis will include surveys to determine the situation of women in the project areas, including their work in the formal and informal sector (work on rubber plantations and agriculture, etc.). The social impact assessment will include information on: (i) the extent to which land acquisition and relocation will affect women's social condition, economic activities, access to farmland, rubber plantation, etc; (ii) women's access to social services and other facilities; and (iii) potential risk of HIV/AIDS and human trafficking. The socioeconomic data and HIV/AIDS and human trafficking data will be disaggregated by gender and ethnic groups. A project-specific gender strategy will be prepared and gender-related strategies will be incorporated in the project activities, including resettlement plans.

The gender strategy will include specific activities to ensure that project benefits will accrue to women. The strategy will ensure that: (i) women do not become more vulnerable because of relocation; (ii) women are involved in the consultation process for preparation of losses of inventory, and the grievance process on resettlement and compensation issues; (iii) women retain access to land or land title during resettlement; (iv) women are consulted in identifying locations of community infrastructure (such as underpasses, bridges, access road, etc.); (v) potential social problems arising from the projects will be addressed; and (vi) women participate fully in programs related to HIV/AIDS prevention and human trafficking. A relevant capacity building training program will be developed for men and women officials of the Executing Agency; leaders of the communes; and provincial, district, and commune level Women's Unions, to ensure effective implementation of the resettlement plan and HIV/AIDS awareness and prevention of human trafficking, and monitoring of project activities. Community level monitoring and consultation for land acquisition, compensation price, and relocation and implementation of the resettlement plan will include mechanisms for community involvement and participation, as outlined in the government decrees on regulation for participatory investment supervision, and grassroots democracy.

**Has an output been prepared?**  Yes  No

**E. Social Safeguards and Other Social Risks**

Item	Significant/ Not Significant/ None	Strategy to Address Issues	Plan Required
<b>Resettlement</b>	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	The Project will not trigger the <i>Involuntary Resettlement Policy</i> (1995). However, a full resettlement plan will be prepared for the construction phase of the HLD Expressway.	<input type="checkbox"/> Full <input type="checkbox"/> Short <input checked="" type="checkbox"/> None
<b>Affordability</b>	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	The HLD Expressway will promote economic growth along the north–south economic corridor and in the Mekong Delta area. Affordability will increase through improved economic opportunities.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Labor</b>	<input type="checkbox"/> Significant <input type="checkbox"/> Not significant <input checked="" type="checkbox"/> None	Construction documentation will require that in the construction campsites, labor standards will be maintained and basic facilities (water and sanitation) will be provided for the workers. No trafficked person or child labor will be used for construction and maintenance.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Indigenous Peoples</b>	<input type="checkbox"/> Significant <input checked="" type="checkbox"/> Not significant <input type="checkbox"/> None	The HLD Expressway will run through mainly urban and semi-urban areas. A preliminary assessment of the project areas indicates that ethnic groups might be present in the urban and semi-urban areas. Surveys will be undertaken to determine the presence of ethnic minorities within the project areas and, if confirmed, their socioeconomic condition. If found necessary, either an ethnic minority development plan or special actions will be prepared to meet the requirements of the Asian Development Bank's <i>Policy on Indigenous Peoples</i> (1998).	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  Based on the social assessment, an appropriate plan or activities will be included in the Project
<b>Other Risks and/or Vulnerabilities</b>	<input checked="" type="checkbox"/> Significant <input type="checkbox"/> Not significant <input type="checkbox"/> None	The HLD expressway could become a new pathway for diseases. Mobile groups (such as drivers and guides of tour buses, truck drivers, and workers) are particularly vulnerable to sexually transmitted infections and HIV/AIDS. During the construction and post-construction phases, risks of HIV/AIDS and human trafficking can increase around the construction camps and in the project areas. A HIV/AIDS awareness and human trafficking program will be included in the project design. During and after construction of the highway, a road safety education campaign will be required for local people to avoid traffic accidents.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  A HIV/AIDS and prevention of human trafficking program will be included in the project designs