



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

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Project Number: 40198-02  
September 2008

## Proposed Loan

Socialist Republic of Viet Nam: Ho Chi Minh City–  
Long Thanh–Dau Giay Expressway Construction  
Project

## CURRENCY EQUIVALENTS

(as of 27 August 2008)

Currency Unit	–	dong (D)
D1.00	=	\$0.0001
\$1.00	=	D16,625

## ABBREVIATIONS

ADB	–	Asian Development Bank
DCC	–	district compensation committee
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 Thanh–Dau Giay
JBIC	–	Japan Bank for International Cooperation
km	–	kilometer
LIBOR	–	London interbank offered rate
m <sup>2</sup>	–	square meter
MOT	–	Ministry of Transport
O&M	–	operation and maintenance
PPP	–	public–private partnership
PSC	–	project supervision consultant
QL	–	national highway
SEPMU	–	Southern Expressway Project Management Unit
SGIA	–	second generation imprest account
SFEZ	–	Southern Focal Economic Zone
TA	–	technical assistance
VEC	–	Vietnam Expressway Corporation
VOC	–	vehicle operating cost
WACC	–	weighted average cost of capital

## NOTES

- (i) The fiscal year (FY) of the Government and its agencies ends on 31 December. FY before a calendar year denotes the year in which the fiscal year ends, e.g., FY2008 ends on 31 December 2008.
- (ii) 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, private sector development, inclusive social development Subthemes: Fostering physical infrastructure development, public–private partnerships, other vulnerable groups
<b>Environment Assessment</b>	Category A. An environmental impact assessment was undertaken; the summary was circulated to the Asian Development Bank (ADB) Board of Directors and placed on the ADB website on 19 May 2008.
<b>Project Description</b>	The Ho Chi Minh City–Long Thanh–Dau Giay Expressway (HLD expressway) Project comprises construction of approximately 51 kilometers of four-lane, tolled expressway. The expressway will commence at the junction of the Second Ring Road in District 9, Ho Chi Minh City (HCMC), and end at a junction with National Highway 1 at Dau Giay, Dong Nai Province. It will provide a direct connection from the center of HCMC to economic growth areas in provinces to the north of HCMC along National Highway 1, which connects HCMC to Hanoi. The expressway will be a toll road, with access initially restricted to three locations: the intersection with the Second Ring Road, the intersection with National Highway 51 at the southern end of Long Thanh town, and at Dau Giay. The Project includes construction of a major new 1,700-meter bridge over the Dong Nai River at Long Thanh, and two rest and service areas.
<b>Rationale</b>	<p>The Government's Socio-Economic Development Plan for 2006–2010 identifies 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 technical assistance for the Expressway Network Development Plan Project approved in 2005, a short-term program of priority expressway projects was identified. This program includes the HLD expressway.</p> <p>Greater 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 decreasing, and transport costs increasing. Relief to city roads connecting the center of HCMC and the port area with roads leading north from the city to central and northern Viet Nam is urgently needed. HCMC also lies at a critical junction on the transport network for the Greater Mekong Subregion.</p>

**Impact and Outcome** The project impact will be business-led, pro-poor, and sustainable economic growth in HCMC and neighboring provinces. The project outcome will be ability of transport users in HCMC and Dong Nai Province to travel from District 9 in HCMC to Dau Giay with lower transport costs on the HLD expressway.

**Project Investment Plan** The investment cost of the Project is estimated at \$932.4 million equivalent, including taxes and duties of \$6.6 million.

**Financing Plan**

Source	Total (\$ million)	Percent
Asian Development Bank	410.2	44.0
Japan Bank for International Cooperation <sup>a</sup>	517.6	55.5
Vietnam Expressway Corporation	4.6	0.5
<b>Total</b>	<b>932.4</b>	<b>100.0</b>

<sup>a</sup> The amount indicated for the Japan Bank for International Cooperation is indicative pending the completion of detailed designs and final cost estimates

A loan of \$410,200,000 from the ordinary capital resources of ADB will be provided under ADB's London interbank offered rate (LIBOR)-based lending facility. The loan will have a 25-year term, including a grace period of 5 years, an interest rate determined in accordance with ADB's LIBOR-based lending facility plus a spread of 0.20%, a commitment charge of 0.15% per annum, and such other terms and conditions set forth in the draft loan and project agreements.

The ADB loan will finance 44% of the total project cost and will fund (i) civil works for construction of the Long Thanh–Dau Giay section of the HLD expressway, (ii) land acquisition and resettlement compensation and allowances for all of the Project, (iii) consulting services, and (iv) project administration costs of Vietnam Expressway Corporation (VEC). ADB's financing will cover all local taxes on the ADB-financed civil works section.

The Government also requested a loan of ¥50.972 billion (about \$444.5 million equivalent) from the Government of Japan through the Japan Bank for International Cooperation (JBIC). The loan will have a 30-year term, including a grace period of 10 years and an interest rate of 1.2% for the construction loan and 0.01% for consulting services. JBIC will finance civil works for the HCMC–Long Thanh section of the HLD expressway, an electronic toll collection and traffic information and monitoring system for the entire Project, and consulting services.

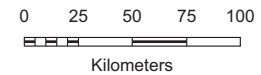
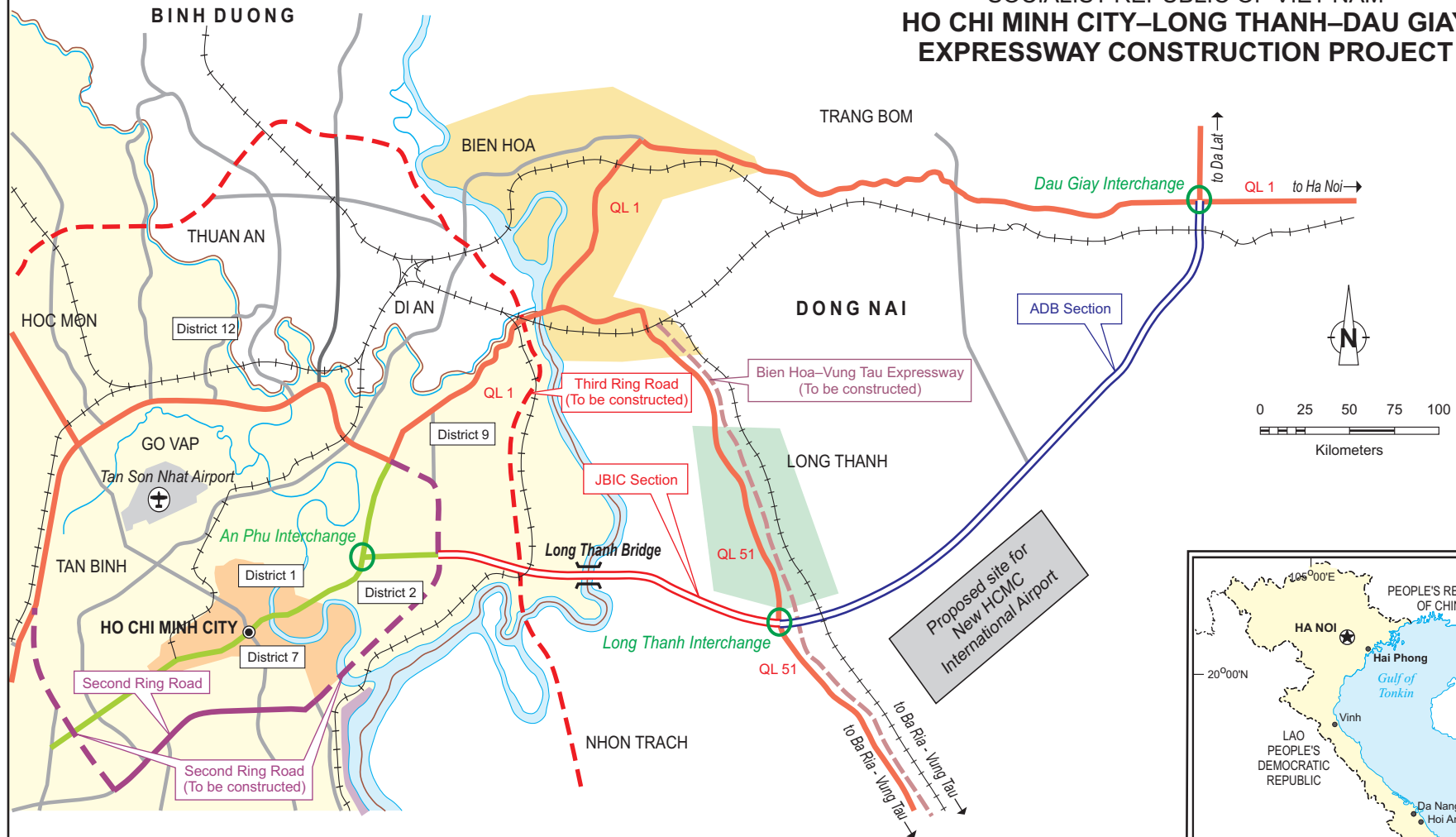
VEC will finance the remaining cost of about \$4.6 million equivalent.

The discrepancy between the JBIC loan amount and the estimated costs for the JBIC-financed project components presented in this document has arisen as a result of the initial JBIC loan amount being fixed in October 2007, whereas the estimated costs are based on an updated cost estimate completed in February 2008. A determination of the total amount of funding to be provided by JBIC will be drawn up once detailed designs and final cost estimates are complete (expected by the end of March 2009); this amount will be consistent with the final cost estimates for the components to be funded by JBIC.

<b>Allocation and Relending Terms</b>	The Government of Viet Nam will be the Borrower for the ADB and JBIC loans. The Government will onlend the entire loan proceeds to VEC, as the Executing Agency. For the ADB loan, the onlending will be on terms acceptable to ADB, and at ADB's interest rate applicable to the loans, plus an onlending fee pursuant to the Borrower's regulations.
<b>Period of Utilization</b>	31 December 2014
<b>Estimated Project Completion Date</b>	30 June 2014
<b>Executing Agency</b>	VEC
<b>Implementation Arrangements</b>	VEC will have overall responsibility for project implementation and formal correspondence with the line ministries, provincial authorities, and ADB. VEC will engage and direct the work of consultants, and will procure and direct all contractors. VEC will delegate responsibility for day-to-day project implementation to the Southern Expressway Project Management Unit. The peoples committees of HCMC and Dong Nai Province have established district compensation committees and commune resettlement task forces for all districts through which the HLD expressway will pass. The district compensation committees will be responsible for preparing and implementing the resettlement plans. VEC will have overall responsibility for implementation of the environmental management plan during design and construction.
<b>Procurement</b>	All procurement to be financed under the ADB loan will be carried out in accordance with ADB's <i>Procurement Guidelines</i> (2007 as amended from time to time). Civil works to be funded from the ADB loan will be procured through (i) international competitive bidding procedures for two contracts to construct the ADB-funded section of the HLD expressway, and (ii) national competitive bidding procedures for four contracts to prepare resettlement sites. JBIC will fund the remaining four civil works contracts; procurement will follow JBIC procedures. VEC will fund a contract for clearance of unexploded ordnance for the entire expressway; procurement will follow Government procedures.

<b>Consulting Services</b>	<p>The consulting service activities to be funded under the Project will be undertaken through four contracts, with three funded from the ADB loan and one from the JBIC loan. Using ADB loan proceeds, VEC will recruit international consulting firms for the project supervision and third party quality assurance consulting services using quality- and cost-based selection procedures. For the project audit consulting services, VEC will recruit a national consulting firm using consultants' qualifications selection procedures. All recruitments for ADB-funded contracts will be in accordance with ADB's <i>Guidelines on the Use of Consultants</i> (2007, as amended from time to time).</p>
<b>Project Benefits and Beneficiaries</b>	<p>The principal direct benefits generated by the construction of the HLD expressway include (i) increased efficiency of the movement of goods and people in the area around HCMC, the provinces surrounding the city, and along the Greater Mekong Subregion southern and eastern economic corridors; (ii) reduced transport costs in the same area; and (iii) reduced social and economic costs of traffic accidents. As transport costs are a key input to economic activities, the indirect benefits of the expressway construction will be an increase in economic growth and a contribution to the Government's overall poverty reduction program.</p>
<b>Risks and Assumptions</b>	<p>The main risk to the Project is delayed implementation because of slow finalization of detailed designs and procurement of civil works contracts. This is being addressed through the project preparation work undertaken under the ADB-funded Ho Chi Minh City–Long Thanh–Dau Giay Expressway Technical Assistance Project. This work includes all activities required to facilitate commencement of construction. The technical assistance is addressing the risk associated with VEC's limited capacity and experience with management of major projects. It includes a component to address regulatory and institutional strengthening of VEC. Under this component, a revised organization structure will be prepared for VEC to address the corporation's future needs.</p> <p>The construction of the HLD expressway is not anticipated to cause any major environmental impacts. Impacts during construction will be mitigated through implementation of an environmental management plan covering both construction and operation phases. Impacts during operation are expected to be limited to air and noise pollution due to vehicular emissions, and potential water pollution due to accidents.</p> <p>The Project will cause significant impacts because of land acquisition and resettlement activities. Risks that may arise from these activities have been mitigated through a full resettlement plan and measures to address vulnerable groups, including a gender strategy. Impacts on ethnic minorities will be minor as only 11 households from ethnic minorities were identified. These 11 households were found to be well integrated into mainstream society; they will not be affected differently than the main ethnic groups.</p>

# SOCIALIST REPUBLIC OF VIET NAM HO CHI MINH CITY–LONG THANH–DAU GIAY EXPRESSWAY CONSTRUCTION PROJECT



- |  |   |   |
|--|---|---|
| Bien Hoa Urban Area                        | Interchange                                     | QL 51 National Highway 51                     |
| Long Thanh Urban Area                      | Ho Chi Minh City–Long Thanh–Dau Giay Expressway | River   |
| Ho Chi Minh City Central Business District | East–West Highway (Under Construction)          | City/District Boundary                        |
| Ho Chi Minh City Administrative Area       | National Highway                                | International Boundary                        |
| Ho Chi Minh City Port Area                 | City/Provincial Road                            | Boundaries are not necessarily authoritative. |
| National Capital                           | Railway   |   |
| Provincial Capital                         | JBIC Japan Bank for International Cooperation   |   |
| City/Town                                  | QL 1 National Highway 1                         |   |



## 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 Construction Project. The design and monitoring framework is in Appendix 1.

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

### A. Performance Indicators and Analysis

2. In 2007, the Vietnamese economy expanded by an estimated 8.5%,<sup>1</sup> one of the fastest rates in the world. This performance came on top of an average annual growth rate of 8.1% during 2004–2006. In 2007 GDP growth was mainly driven by rapid growth in industry, which expanded by 10.6% and contributed 4.3% to GDP growth; and services, which expanded by 8.7% and accounted for 3.5% of GDP growth. 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, development of the highway transport system needs to continue so that goods and people can be moved efficiently.

3. Investments in large infrastructure have played a major role in attracting the private investment and employment that has underpinned Viet Nam's remarkable success in reducing poverty. While the results of recent investments in transport infrastructure are impressive, investment demands are still considerable and past growth has spawned several complex issues. These challenges are identified in several studies and recognized in the Government's Socio-Economic Development Plan for 2006–2010;<sup>2</sup> they generally fall into three categories: transport management, transport financing, and urbanization. An overview of the road subsector is in Appendix 2.

4. **Transport Management.** Viet Nam has relatively inefficient transport infrastructure and high transport costs. Capacity is constrained; less than 5% of national highways have four-lanes, and quality is poor. Less than 50% of national highways are considered to be in good condition and more than 30% of bridges have weight restrictions, many waterway crossings have no bridges. Rail transport is inhibited by low speeds and limited capacity; inland waterways have limited cargo-handling facilities. Thus, improving transport infrastructure is crucial to developing a competitive economy. To be competitive, infrastructure must be brought up to modern standards. Viet Nam needs to enact and enforce laws, regulations, and policies that encourage transportation to and through Viet Nam in conformity with international practices.

5. **Transport Financing.** Economic growth generates increased demand for infrastructure. Funds from the state budget are not adequate, even when supplemented with external assistance. The World Bank<sup>3</sup> estimates planned annual expenditure of about \$2.3 billion for the period up to 2020, compared to total actual expenditures of about \$4.0 billion during 2001–2005 of which 42% was funded by official development assistance. While both domestic and foreign private funds are potentially available, but they are rarely accessed due to regulatory weaknesses. Given that concessionary official development assistance is limited and

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<sup>1</sup> Asian Development Bank estimate.

<sup>2</sup> Ministry of Planning and Investment. 2005. *The Five-Year Socio-Economic Development Plan 2006–2010*. Hanoi.

<sup>3</sup> World Bank. 2005. *Transport Strategy: Transition, Reform, and Sustainable Management*. Washington, DC.

the demand is great, the Government will need to borrow long-term commercial funds for large infrastructure.

6. **Urbanization.** With economic development, Viet Nam is becoming an increasingly urban society; demands for urban services are increasing rapidly. Economic opportunities in urban areas attract migrants. In 2003, 25% of the country's population was urban; this is expected to reach 45% by 2020. Urban centers now account for about 70% of total economic output, and most foreign direct investment is directed toward cities. The combination of rapidly growing population and economic growth rates higher than the national average is driving a rapid increase in demand for transport services in urban areas. Meeting these demands for urban transport will require large investments in new roads and public transport, such as mass rail transport and high-speed, high-capacity expressways.

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

7. Traffic volume is increasing rapidly, typically more than 10% a year. 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.

8. Greater Ho Chi Minh City (HCMC) is the largest city in Viet Nam and the country's economic hub. Its population is forecast to grow by 2.1% per annum from 7.9 million<sup>4</sup> in 2008 to 10.3 million by 2020. Growth in annual trade volume, in terms of value, through HCMC's port exceeded 15% in 2006. The road network both within and around HCMC is already heavily congested, travel speeds are reducing, and transport costs are increasing. Relief is urgently needed by providing 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.

### **1. The Government's Strategy**

9. 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 wishes to share development more equitably with parts of the country that are remote from major urban areas—Hanoi, HCMC, Da Nang, and others. As part of the Government's Socio-Economic Development Plan for 2006–2010 (footnote 2), the transport sector is expected to promote economic growth, poverty reduction, safety enhancement, environmental protection, and human resource development. For roads, 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 Asian Development Bank (ADB) assistance,<sup>5</sup> a short-term program (2006–2015) of priority expressway projects was developed consisting of 21 projects covering 1,968 kilometers (km) with an estimated construction cost of \$11.556 billion.<sup>6</sup> A medium-term program (2016–2025)

<sup>4</sup> Estimate includes permanent and transient population.

<sup>5</sup> ADB. 2005. *Technical Assistance to the Socialist Republic of Viet Nam for the Expressway Network Development Plan*. Manila (TA 4695-VIE).

<sup>6</sup> In 2007 prices.

was also proposed that included another 8 projects covering an additional 875 km with an estimated construction cost of \$5.238 billion.

10. In 2004, Vietnam Expressway Corporation (VEC) was established, as a state-owned enterprise under the Ministry of Transport, to invest in expressway construction, management, and operation and maintenance (O&M). In establishing VEC, the intent was to allow VEC to independently raise funds without recourse to sovereign guarantees. However, VEC cannot issue debt instruments until it obtains a credit rating, which at this time is not practical as VEC has virtually no assets and very limited cash flow. Initial projects will need government support until VEC establishes a credible financial record that demonstrates capacity to fund the large capital needs required for construction of sections of the expressway network. Establishing this financial capacity will take some time as the first expressway to begin operation will likely be the Cau Gie–Ninh Binh Expressway in 2011. To date, VEC has limited experience in project management, financial management, procurement, and safeguard issues. The ADB-funded Ho Chi Minh City–Long Thanh–Dau Giay Technical Assistance Project<sup>7</sup> (HLD TA) will implement a strengthening and capacity-building component for VEC that includes tasks to reorganize VEC and put in place financial information and asset management systems. This work is to strengthen the organization structure of VEC, facilitate a change from a state-owned enterprise to a commercially oriented infrastructure provider, and position VEC as a viable partner to work with the private sector.

11. The legal and regulatory environment for private sector investment in the transport sector needs to be improved. Although the country has a generic public–private partnership (PPP) law, it does not meet the specific requirements of road subsector PPPs. Further, existing road subsector laws do not provide a comprehensive framework for PPPs. Initiating and attracting private investor interest to road PPPs depends on a comprehensive policy. Such a policy is absent in Viet Nam. Under the World Bank-funded Road Network Improvement Project<sup>8</sup> a study on PPP in the road subsector is in progress. This study's objective is to assist the Ministry of Transport to formulate a strategy for development of roads with PPP, and the preparation of a policy framework for private sector participation in toll roads.

## 2. Lessons

12. ADB country portfolio review missions have noted implementation delays in previous road projects, in particular during project start-up. Delays in recruiting consultants or preparing detailed designs have led directly to delays in award of civil works. This is addressed in the design of the Project by (i) using advance action for selecting consultants, and (ii) incorporating all safeguard-related and procurement-related activities in the scope of the HLD TA (footnote 7). Recruitment of consultants under the HLD TA was completed in August 2008. These consultants have commenced work on (i) preparing detailed engineering designs, (ii) developing procurement documentation, (iii) updating safeguards documentation, and (iv) implementing resettlement plans. The intent is that by the time of approval of loans for the Project, updating of land acquisition and resettlement plans will be in progress, and procurement of civil works and consulting services contracts will be well advanced.

<sup>7</sup> ADB. 2007. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Ho Chi Minh City–Long Thanh–Dau Giay Expressway Technical Assistance Project*. Manila (Loan 2374-VIE).

<sup>8</sup> World Bank. 2003. *Project Appraisal Document on a Proposed Credit to the Socialist Republic of Vietnam for the Road Network Improvement Project*. Washington, DC.

### 3. ADB Strategy

13. As set out in ADB's country strategy and program for Viet Nam,<sup>9</sup> ADB 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 Socio-Economic Development Plan. 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 and competitiveness.

14. Under the Expressway Network Development Plan (footnote 5), ADB provided technical assistance (TA) in response 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. An initial assessment was made of each section of the proposed expressway network and an overall ranking was prepared based on estimates of net present value. Based on this ranking, the HLD expressway was evaluated a very high priority. Given that HCMC is the economic engine of Viet Nam, and the need to ensure that the country's economic growth continues, addressing the infrastructure restraints of HCMC was given the highest priority. The HLD expressway is included in the 2004 Urban Transport Master Plan and Feasibility Study in the Ho Chi Minh Metropolitan Area (often referred to as the HOUTRANS study), prepared with assistance from the Japan International Cooperation Agency. The ADB-funded HLD TA (footnote 7) will complete all detailed project preparation documentation sufficient to allow construction work on the HLD expressway to commence. The HLD TA includes a strengthening and capacity building component for VEC (para. 10). Work under the HLD TA commenced in September 2008.

### 4. External Assistance

15. External support to roads in Viet Nam commenced in 1993 (Appendix 3). Initially, projects focused on rehabilitating National Highway 1 (QL1), which runs along the country's east coast and acts as the central spine for the road network. These QL1 projects were complemented by improvements under ADB-funded projects 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 and commencing the construction of an expressway network. ADB has provided a TA loan<sup>10</sup> and an investment loan<sup>11</sup> for the GMS Noi Bai–Lao Cai Highway Project that will fund construction of this expressway connecting Hanoi to the border with the People's Republic of China at Lao Cai.

<sup>9</sup> ADB. 2006. *Country Strategy and Program (2007–2010): Viet Nam*. Manila.

<sup>10</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).

<sup>11</sup> ADB. 2007. *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 Project*. Manila (Loans 2391/2392-VIE).

### III. THE PROPOSED PROJECT

#### A. Impact and Outcome

16. The impact of the Project will be business-led, pro-poor, and sustainable economic growth in HCMC and neighboring provinces. The outcome of the Project will be that transport users in HCMC and Dong Nai Province can travel from HCMC District 9 to Dau Giay with lower transport costs on the HLD expressway. At present, all traffic leaving HCMC to the northeast has to pass over the Dong Nai Bridge and then pass through a dense area of industrial estates centered on Ben Hoa. Further, the route provides the only connection from the HCMC port area, immediately to the south of the city center, to all destinations to the north of HCMC. As economic growth centers develop around HCMC, a high-capacity, high-speed transport link is needed to divert heavy port traffic away from the city center and provide direct access to the north. The HLD expressway provides that link. 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 HLD expressway is a key link in an interconnected network of expressways and ring roads around HCMC that is planned for development within the next 10 years.<sup>12</sup> The impact of this network will be to alleviate transport constraints on development in the HCMC area.

17. Economic activity in HCMC and the surrounding provinces is a major driver of the Vietnamese economy, and is focused on the industry and service sectors, which are driven by export markets. Industrial developments in the HCMC area include electronics, industrial processing, construction equipment, building materials, and agroproducts. Currently, the city has 15 industrial parks and export-processing zones. The value of the city's industrial activities in 2007 is estimated at \$6.4 billion, equivalent to 30% of the whole country. The value of goods passing through HCMC ports in 2007 is estimated at \$36 billion, or 40% of the national total, of which export revenue reached \$18.3 billion accounting for 40% of the country's total export revenue.<sup>13</sup> With growth in the HCMC area exceeding that of the nation as a whole, the demands being placed on transport infrastructure to support economic activities are rising rapidly and major investments are required to expand capacity.

18. The Project comprises the construction of about 51 km of four-lane expressway. The expressway will commence in District 9 of HCMC at the junction with the Second Ring Road and the East–West Highway, a new highway that crosses through the center of HCMC. The HLD expressway will end at the junction at Dau Giay with QL 1, the main north–south highway linking HCMC with Hanoi. The alignment passes by the proposed site of the new HCMC international airport and will relieve congestion on the existing QL 1, through Bien Hoa, for traffic entering HCMC from the north. Construction work will include about 21 bridges, of which 20 are small or medium in scale. The Project will include construction of a new bridge over the Dong Nai River at Long Thanh; the bridge will have a total length of about 1,700 meters and a width of 19.75 meters. The expressway will be a toll road, with access initially restricted to three locations: the intersection with the Second Ring Road, the intersection with QL51 at the southern end of Long Thanh town, and at Dau Giay. Additional intersections may be provided as the road network develops in HCMC and Dong Nai Province, particularly with the proposed third ring road and an expressway from Bien Hoa to Vung Tau. Toll plazas will be constructed at

<sup>12</sup> Planned expressways include Ben Luc–Long Thanh, Ben Hoa–Vung Tau, and Dau Giay–Nha Trang. Planned ring roads include the second and third ring roads.

<sup>13</sup> Source: <http://www.hochiminhcity.gov.vn/eng>.

the three interchanges; at the interchange with QL51 the toll booths will be located on the approach ramps, not on the expressway itself. In addition two rest and service areas are planned.

## **B. Outputs**

19. The core output from the Project will be that the HLD expressway is operating, connecting HCMC District 9 with Dau Giay. To ensure that the Project's social and environmental impacts are acceptable, the Project will implement full resettlement plans, an environmental management plan (EMP) prepared based on an environmental impact assessment (EIA), and an HIV awareness and prevention of human trafficking program. Project documentation incorporates a gender strategy, and the Project will implement a road safety awareness campaign and road safety audits. A project performance management system will be put in place to monitor compliance with project requirements and to measure project indicators. The project design includes O&M of the completed expressway under an O&M concession.

## **C. Special Features**

20. **Cofinancing.** The Project will be cofinanced by ADB and Japan Bank for International Cooperation (JBIC). Cofinancing will be on a parallel basis with each civil works and consulting services contract funded by a single financier. However, ADB funding will be applied to all land acquisition and resettlement activities for the entire Project, and JBIC will fund an electronic toll collection and traffic information and monitoring system for the entire Project. An agreement between ADB, JBIC, and VEC confirms that the requirements of ADB's environment, indigenous peoples, and involuntary resettlement policies will apply to the entire Project.

21. **Environmental Assessment.** Based on the requirements of ADB's *Environment Policy* (2002), the Project is categorized environment category A. The Government prepared an EIA for the Project and submitted it to the Ministry of Natural Resources and Environment in July 2007; it approved the EIA in October 2007. Under the ADB-funded TA for the Expressway Network Development Plan (footnote 5), the Government's EIA was updated and additional sections added to fulfill the requirements of ADB's *Environment Policy*. A summary EIA for the Project was prepared and circulated to the ADB Board of Directors and made publicly available through the ADB website on 19 May 2009. The project area does not include any sensitive areas such as national parks, protected areas, or special use forests within or near the proposed alignment. Endangered, threatened, or rare species of flora and fauna have not been found in the project area. The construction of the HLD expressway is not anticipated to cause any major change to the current ecology.

22. **Resettlement Plan.** The involuntary resettlement category for the Project is category A. A full resettlement plan was prepared in accordance with ADB's *Involuntary Resettlement Policy* (1995). A summary of the resettlement plan is in Appendix 4, and the full resettlement plan is provided in Supplementary Appendix A. Based on the results of a census and inventory of losses carried out during project preparation, the project-affected persons (i.e., households, organizations, companies) were identified. A total of 975 households will be affected in District 9 of HCMC (167 households) and in four districts of Dong Nai Province (808 households). Of these, 31 households in HCMC and 392 households in Dong Nai Province will lose more than 10% of their productive assets; 309 households will have to relocate to new plots of residential land as their land will be either totally acquired or the remaining land will no longer be viable; and 246 households will lose some land but they will retain sufficient residential land to retain or

relocate structures on the remaining land. The Project will acquire land currently being used by three rubber plantation companies, commune-owned culverts, 15 irrigation canals, church land with a prayer house, and three foundations for transmission towers. In terms of land acquisition, 307 hectares will be acquired of which 62 hectares are in HCMC and 245 hectares in Dong Nai Province.

23. **Land Acquisition and Retroactive Financing.** The Government requested that ADB loan funds be used to finance land acquisition and resettlement activities. As required by ADB's *Operation Manuals*,<sup>14</sup> due diligence assessments focused on the (i) expected productive nature of the acquisition; (ii) suitability of land market conditions; (iii) adequacy of administrative arrangements; (iv) definition of the risk profile of the transaction; and (v) soundness of the monitoring and evaluation arrangements. From the results of these assessments, ADB concluded that all requirements had been met, a copy of the due diligence report is in Supplementary Appendix B. The Government also requested that retroactive financing be approved for land acquisition and resettlement activities. Approval of this request will allow the updating and implementation of the resettlement plan to proceed in parallel with processing of the Project to expedite award of construction contracts and shorten project implementation. Consulting services resources to assist in updating and implementing the resettlement plan are available under the HLD TA (footnote 7). However, implementation cannot commence without access to the Project's land acquisition and resettlement funds.

24. **Public-Private Partnership.** As an initial step to the involvement of the private sector in the expressway subsector, an O&M concession will be put in place using competitive bidding procedures. The intent is that the O&M concession will take effect within 2 years of completion of construction of the HLD expressway and use documentation being prepared under the HLD TA (footnote 7).

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

25. The project investment cost is estimated at \$932.4 million equivalent, including taxes and duties of \$6.6 million. The total cost includes physical and price contingencies, and interest and other charges during implementation. The project investment plan is shown in Table 1, detailed cost estimates are in Appendix 5.

#### **E. Financing Plan**

26. The Government has requested a loan of \$410,200,000 from ADB's ordinary capital resources to help finance the Project. The loan will have a 25-year term, including a grace period of 5 years, an interest rate determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility plus a spread of 0.20%, a commitment charge of 0.15% per annum, and such other terms and conditions set forth in the draft loan and project agreements. The Government has provided ADB with (i) the reasons for its decision to borrow under ADB's LIBOR-based lending facility on the basis of these terms and conditions, and (ii) an undertaking that these choices were its own independent decision and not made in reliance on any communication or advice from ADB. The ADB loan will finance 44% of the total project cost: (i) civil works for construction of the Long Thanh–Dau Giay section of the HLD expressway, (ii) land acquisition and resettlement compensation and allowances for all of the Project, (iii) consulting services, and (iv) VEC's project administration costs. ADB financing will cover all

<sup>14</sup> ADB. 2005. *Operations Manual*. Section A1/BP: Cost Sharing and Eligibility of Expenditures for ADB Financing. Manila.

local taxes on the ADB-financed expenditures. Use of ADB loan proceeds for funding taxes and duties is acceptable as (i) taxes and duties in Viet Nam are considered reasonable, and no taxes and duties are specifically targeted at ADB projects; (ii) taxes and duties amount to less than 1% of the project investment plan; (iii) the taxes and duties to be funded by ADB apply only to ADB-financed expenditures; and (iv) the financing of the taxes and duties is material and relevant to project success, are legitimate expenses, and use of ADB loan funds provides the lowest cost of funds to VEC. The project financing plan is in Table 2, details of the financing plan are in Appendix 5. Assistance in preparing the Project was provided under the ADB-funded TA for the Expressway Network Development Plan (footnote 5), under which \$800,000 was allocated from ADB's TA Special Fund to prepare the HLD expressway.

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

Item	Amount <sup>a</sup>
<b>A. Base Cost<sup>b</sup></b>	
1. Civil Works	451.1
2. Land Acquisition Cost	115.1
3. Compensation and Resettlement	20.8
4. Unexploded Ordnance Clearance	0.5
5. Consulting Services	19.2
6. Project Administration Costs	10.2
<b>Subtotal (A)</b>	<b>616.9</b>
<b>B. Contingencies</b>	
1. Physical <sup>c</sup>	53.7
2. Price <sup>d</sup>	145.9
<b>Subtotal (B)</b>	<b>199.5</b>
<b>C. Financing Charge during Implementation<sup>e</sup></b>	<b>116.0</b>
<b>Total (A+B+C)</b>	<b>932.4</b>

<sup>a</sup> Includes taxes and duties of \$6.6 million.

<sup>b</sup> In 2008 prices (1<sup>st</sup> quarter 2008)

<sup>c</sup> Physical contingencies computed at 10% for civil works of ADB-financed section and 15% for land acquisition cost.

<sup>d</sup> Price contingencies computed at 0.8% on foreign exchange costs, local currency costs are computed at 18.3% in 2008, 10.2% in 2009, 6.5% in 2010, 4.0% in 2011, and 5.0% in 2012 onward and include provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

<sup>e</sup> Includes interest and commitment charges. Interest during the grace period is computed at the 5-year forward London interbank offered rate plus a spread of 0.2%. Commitment charge is calculated at 0.15% on the undisbursed balance.

Source: Asian Development Bank estimates

27. VEC can recoup local taxes and duties relating to value-added tax from the Government. When funds so recouped are against payments made for ADB-funded contracts, they will be placed in a special project account established by VEC. Funds from this account will only be applied to eligible payments for civil works for the construction of the Long Thanh–Dau Giay section of the HLD expressway.



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

<b>Source</b>	<b>Total</b>	<b>%</b>
Asian Development Bank	410.2	44.0
Japan Bank for International Cooperation <sup>a</sup>	517.6	55.5
Vietnam Expressway Corporation	4.6	0.5
<b>Total</b>	<b>932.4</b>	<b>100.0</b>

<sup>a</sup> The amount indicated for the Japan Bank for International Cooperation is indicative pending the completion of detailed designs and cost estimates.  
Source: Asian Development Bank estimates.

28. Project administration costs will be funded from the ADB loan. Eligible expenses incurred by VEC for project administration, and by the city, provincial, and district resettlement committees in implementing the resettlement plan will include (i) salaries for full-time VEC staff engaged in administration of the Project; (ii) leases, utilities, office equipment (both hard furnishings and computer equipment), and communication charges for offices established for the Project by VEC; (iii) per diem, travel, and other field allowances; and (iv) lease, maintenance, and operating costs for vehicles acquired by VEC for project use only.

29. The Government also requested a loan of ¥50.972 billion (about \$444.5 million<sup>15</sup> equivalent) from the Government of Japan through JBIC. The loan will have a 30-year term, including a grace period of 10 years and an interest rate of 1.2% for the construction loan and 0.01% for consulting services. JBIC will finance civil works for the HCMC–Long Thanh section, an electronic toll collection and traffic information and monitoring system for the entire Project, and consulting services. Counterpart funds from VEC will cover taxes on the JBIC-financed project components. As of October 2007, the agreed amount of funding from JBIC to the Project is ¥50.972 billion, this amount will be provided using a time-slice modality with the first loan for ¥16.643 billion signed in March 2008. Loan documents for the remaining funds will be drawn up once detailed designs and final cost estimates are complete. At that time,<sup>16</sup> the total amount of funding to be provided by JBIC, and the value of the second time-slice loan, will be determined to be consistent with the final cost estimates for JBIC-funded components. The discrepancy between the agreed JBIC loan amount and the estimated costs for the JBIC-financed project components presented in this document is a result of the initial JBIC loan amount being fixed in October 2007, whereas the estimated costs are based on a February 2008 update. The Government has provided ADB with an assurance that any shortfall in the JBIC financing will be covered from the Government's own funds.

30. VEC will finance the remaining cost, about \$4.6 million equivalent. The loans from ADB and JBIC will be lent to the Government of Viet Nam. The Government will onlend the proceeds of the ADB loan to VEC through a subsidiary loan agreement on terms and conditions acceptable to ADB.

<sup>15</sup> Based on a yen/\$ exchange rate of Y114.66/\$1 on 30 October 2007, at the time of signing of the memorandum of understanding between JBIC and the Government of Viet Nam.

<sup>16</sup> The detailed designs and final cost estimates are being prepared under the HLD TA (footnote 7) and are expected to be complete by the end of March 2009.

## **F. Implementation Arrangements**

### **1. Project Management**

31. VEC will be the Executing Agency for the Project. VEC will have overall responsibility for project implementation and formal correspondence with the line ministries, provincial authorities, and ADB. VEC will engage and direct the work of consultants, and procure and direct all contractors. It will delegate responsibility for day-to-day project implementation to the Southern Expressway Project Management Unit (SEPMU). SEPMU is based in HCMC and will establish field offices in district 9 of HCMC and Long Thanh district, Dong Nai Province. SEPMU has a land acquisition and resettlement unit, headed by the SEPMU deputy-director, and has assigned four staff on a full-time basis to represent VEC on the district compensation committees (DCCs). In addition, one accountant will be responsible for administering and monitoring loan funds for land acquisition and resettlement. Vietnamese regulations require that land acquisition and resettlement plans are implemented by the relevant provincial authorities. The peoples committees of HCMC and Dong Nai Province have established DCCs for all districts through which the HLD expressway will pass. The DCCs will be the implementing agencies for the land acquisition and resettlement plans, and be responsible for payment of all compensation and allowances. VEC will ensure that an updated resettlement plan is prepared prior to any award of civil works contracts. VEC will have overall responsibility for implementation of the EMP during design and construction. EMP requirements will be incorporated into the construction documents; monitoring and enforcement will be ensured by the ADB- and JBIC-funded construction supervision consultants. VEC will implement the EMP requirements during expressway operation, with the provincial departments of natural resources and the environment providing the monitoring. Project organization arrangements are shown in Appendix 6.

### **2. Implementation Period**

32. The Project will be implemented from December 2008 to June 2014. This assumes that construction work on the first package will commence by the June 2009 and that the last package will be sufficiently complete for the HLD expressway to be opened for operation by the June 2013. An additional year is allowed to complete all construction work and finalize payments. The implementation schedule for the Project is in Appendix 7.

### **3. Procurement**

33. All procurement to be financed under the ADB loan will be carried out in accordance with ADB's *Procurement Guidelines* (2007, as amended from time to time). Civil works to be funded from the ADB loan will be procured through (i) international competitive bidding procedures for two contracts to construct the ADB-funded section of the HLD expressway, and (ii) national competitive bidding procedures for four contracts to prepare resettlement sites. The first international competitive bidding contract will cover construction of 13.9 km of the HLD expressway from the end of the JBIC section at Long Thanh to a point 37.8 km from the start of the expressway. The second international competitive bidding contract will cover the construction of 17.2 km of expressway from kilometer 37.8 to the eastern end of the HLD expressway at Dau Giay. Advance contracting procedures will be applied to procurement of civil works contracts. The remaining four civil works contracts will be funded by JBIC and procured using JBIC procedures. JBIC will also fund an equipment contract for an electronic toll collection and traffic information and monitoring system for the entire HLD expressway. This contract will be procured using JBIC procedures. VEC will fund a contract for clearance of unexploded

ordnance for the entire expressway. This contract will be procured using Government procedures. Contract packages are presented in the procurement plan in Appendix 8.

#### **4. Consulting Services**

34. The consulting service activities to be funded under the Project will be undertaken through four contracts, with three funded from the ADB loan and one from the JBIC loan. Using ADB loan proceeds, VEC will recruit international consulting firms for the project supervision and third party quality assurance 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 required. For the project audit consulting services, VEC will recruit a national consulting firm using consultants' qualifications selection procedures, in accordance with ADB's *Guidelines on the Use of Consultants*. Use of consultants' qualifications selection procedures and a shortlist comprising only national firms is justified as (i) the cost of services is estimated at \$180,000, (ii) the number of qualified national firms is sufficient to draw up a shortlist, (iii) national firms have successfully undertaken these services under previous ADB-funded projects, and (iv) the preparation and evaluation of competitive proposals is not necessary given the nature of the services. In the evaluation of proposals for all services, except those under consultants' qualifications selection procedures, to calculate the firms' total scores the technical proposals will be given a weight of 80% and the financial proposals a weight of 20%. About 1,800 person-months (200 person-months of international and 1,600 person-months of national consulting services) will be required. For the project supervision services, the consultants should have expertise in project management, highway engineering, structural engineering, geology, material and quality control, international procurement, toll collection systems, expressway O&M management and works, road safety improvement, project performance monitoring and evaluation, project financial assessment, corporate financing, toll setting, EIA and environmental management, land acquisition and resettlement, livelihood development and income restoration programs, ethnic minority development strategies, gender strategies, HIV and sexually transmitted infections, human trafficking, and staff training. For the third party quality assurance services, the consultants should have expertise in providing quality assurance services for major highway projects, including construction of major bridges. Outline terms of reference for consulting services are in Appendix 9. VEC has engaged an external monitoring agency under the HLD TA (footnote 7) to monitor the updating and implementation of the resettlement plans. Retroactive financing will not be required for consulting services.

#### **5. Anticorruption Policy**

35. ADB's *Anticorruption Policy* (1998, as amended to date) was explained to and discussed with the Government 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 Executing Agency and all contractors, suppliers, consultants, and other service providers as they relate to the Project.

36. To ensure transparency and good governance, VEC will publicly disclose on its website information on how loan proceeds are being used. For each procurement contract, VEC will disclose (i) the list of participating bidders, (ii) name of the winning bidder, (iii) basic details on

bidding procedures adopted, (iv) amount of the contract awarded, (v) list of goods and/or services purchased, and (vi) intended and actual utilization of loan proceeds under each contract. VEC will disclose details of resettlement reports on its website. The website will be updated within 2 weeks of each contract being awarded. VEC will submit internal and external resettlement monitoring reports to ADB every quarter, and place them within 2 weeks of submission. Moreover, the Government will ensure that all VEC's project staff are fully aware of and comply with Government and ADB procedures, including for implementation, procurement, use of consultants, disbursement, reporting, monitoring, and prevention of fraud and corruption.

## 6. Disbursement Arrangements

37. Loan disbursement will be in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time) and detailed arrangements agreed between the Government and ADB. A diagram showing the funds flow arrangements is in Appendix 10. Loan proceeds will be disbursed directly to the contractors and consultants, based on an approved contract using direct payment procedures. An imprest account will be established at a commercial bank acceptable to the Government and ADB, and be operated under ADB's imprest account procedures as shown in ADB's *Loan Disbursement Handbook*. VEC will administer the imprest account. The initial deposit to the imprest account will be based on ADB's share of estimated expenditures to be funded from the imprest account for the first 6 months or \$40.7 million, whichever is lower. Use of the imprest account will be limited to VEC providing funds for (i) payments for project administration costs, (ii) payments for consulting services, and (iii) replenishment of second generation imprest accounts (SGIAs).

38. Five SGIAs will be established in the project districts<sup>17</sup> for payment of expenses arising from implementation of the Project's resettlement plan. Use of the SGIAs will be in accordance with procedures in ADB's *Loan Disbursement Handbook*. The initial deposit to an SGIA will be based on ADB's share of estimated expenditures to be funded from the imprest account for the first 6 months of project implementation or \$5 million, whichever is lower. Use of the SGIAs will be limited to VEC providing funds for payments (i) to affected persons for land and other assets acquired to facilitate construction of the HLD expressway; (ii) to affected persons for resettlement compensation and allowances as set out in the approved updated resettlement plan; (iii) for relocation site development and income restoration programs; and (iv) for incremental expenses incurred by the city, provincial, and district compensation committees necessary for implementing the approved updated resettlement plan. Liquidation of any amount paid from any SGIA for land or other assets will require submission of (i) a valid validation certificate issued by an external valuer acceptable to both the Government and ADB; (ii) the results of the detailed measurement survey for the affected person receiving the payment, signed as agreed by the affected person, setting out the assets to be acquired; (iii) that receipt of payment is acknowledged by the affected person, and (iv) certification by the external monitoring agency that the affected person has received the full payment. VEC will administer the SGIAs and be responsible for ensuring they are operated in accordance with ADB's requirements, authorize all withdrawals from the SGIAs, and ensure that all SGIAs are audited as part of the regular annual audits of project accounts. The statement of expenditure procedure will be used to reimburse eligible expenditures and liquidate advances to imprest and SGIA accounts to facilitate project implementation. The ceiling for each payment under the statement of expenditure procedure is \$100,000.

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<sup>17</sup> District 9 in HCMC, and Cam My, Long Thanh, Nhon Trach, and Thong Nhat districts of Dong Nai Province.

39. Retroactive financing up to a limit of \$80 million will be applied to (i) acquisition of land and compensation of nonland assets; (ii) resettlement allowances; (iii) incremental expenses for the city, provincial, and district resettlement committees incurred during implementation of the project resettlement plan; (iv) civil works to prepare resettlement sites for the Project; and (v) implementation of appropriate income restoration programs. Use of retroactive financing for these activities is considered reasonable as this will allow the timely commencement of construction activities. The \$80 million represents less than 20% of the ADB loan and is thus within the limit set out in ADB's *Operations Manual*.<sup>18</sup> Retroactive financing will be applied only to expenditures incurred no earlier than 12 months before the loan signing date and under arrangements acceptable to ADB. Reimbursement procedures, in accordance with ADB's *Loan Disbursement Handbook*, will be applied to payments for eligible expenses under retroactive financing.

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

40. VEC will maintain separate records and accounts adequate to identify goods and services financed from the proceeds of the project 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 each 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 annual audit will include a separate audit opinion on the imprest account, SGIAs, and statement of expenditures procedure operations.

41. Regular progress reports on the Project will be prepared by the construction supervision consultants, reviewed by VEC, and submitted by VEC to ADB. Progress reports will include a description of the physical progress, status of implementation of updated resettlement plans, status of work subject to provisions of the EMP, procurement and contractual status, and highlights of any implementation issues. The progress reports will contain a summary of project accounts, including details of the latest project expenditures and contract amounts. They will include an evaluation of progress in implementing the Project. Within 6 months of physical completion of the Project, VEC will provide ADB with a project completion report covering details of project implementation, costs, and an evaluation of the Project's success in meeting performance targets.

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

42. VEC will establish systematic project performance monitoring and analysis throughout the life of the Project and integrate it with the existing management information system. Initially, the monitoring system will develop and conduct sample surveys to establish baseline data for subsequent performance monitoring, and will establish preproject social and economic living conditions for the direct project beneficiaries. These baseline surveys will be carried out within 1 year of the commencement of services of the supervision consultant and will ensure that sufficient data is gathered to monitor the indicators set out in the design and monitoring framework for the Project. A second survey will be carried out at project completion and a third after a period of not less than 5 years after project completion. The baseline and impact surveys will include appropriate control areas and assess all interventions under the Project, including resettlement and other safeguard interventions that affect the livelihood of project beneficiaries.

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<sup>18</sup> ADB. 2006. *Operations Manual*. Section H4/BP: Retroactive Financing. Manila

In addition, a set of indicators reflecting transport costs, tariffs, and mobility will be developed to assess the effects of improved access. District indicators will include agricultural productivity, economic activity, and status of health and education.

## 9. Project Review

43. ADB, together with Government representatives, will undertake regular reviews of the Project at about 6-month intervals. At critical periods during implementation of the resettlement plans and EMPs, ADB's resettlement and environment specialists will join the reviews. In addition to these regular reviews a comprehensive midterm review of project implementation will be carried out. This midterm review will allow for any necessary midcourse corrections. About 1 year after project completion, a project completion review will document project achievements.

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

44. **Economic Viability.** Improved transport infrastructure is critical for sustained rapid economic growth and poverty reduction, and can contribute to regionally balanced and equitable economic growth by stimulating production of goods and increasing trade flows. The Project is the most cost-effective and least-cost option to accommodate traffic growth in HCMC for vehicles traveling from the city center to the northeast. The principal direct benefits generated by construction of the HLD expressway will be (i) increased 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) reduced transport costs in the same area; and (iii) reduced social and economic costs of traffic accidents. As transport costs are a key input to economic activities, the indirect benefits of the expressway construction include increased economic growth and support for the Government's overall poverty reduction program. Traffic volume on existing roads in the project area has been increasing at about 7% per annum for passengers for the last 7 years and about 12% for freight. In certain sections, the capacity is saturated. Approximately 30%–40% of the traffic on existing roads is forecast to be diverted to the project expressway. The forecast daily traffic volume on the HCMC–Long Thanh section, for example, is expected to grow from 17,200 vehicles in 2013 to 30,400 vehicles in 2020, a 8.5% average annual growth rate. It will then grow more slowly at 6.7% per annum to reach an average of 42,000 vehicles in 2025 (Appendix 11).

45. The Project's economic internal rate of return was estimated by comparing the major road networks of eastern HCMC with and without the Project. Without the Project, traffic will use the existing road network, which will be congested and expensive to maintain because of rapidly increasing traffic. With the Project, congestion on existing roads will be reduced, and traffic on both the project expressway and existing roads will benefit from faster travel. The project economic costs include (i) capital costs and resettlement costs, excluding tax and price contingency; and (ii) the expressway's O&M cost. The project economic benefits are reduced vehicle operating cost and reduced passenger travel times, which will benefit traffic on the expressway and traffic on existing roads. The Project yields an economic internal rate of return of 15.6%, indicating that it is economically viable. Sensitivity analysis confirms the robustness of the Project's economic viability. The capital cost would have to be 45.1% higher than projected, or project benefit 31.9% lower than projected, for the economic internal rate of return to fall below the cutoff rate of 12%. The economic analysis of the Project was extended to analyze the distribution of project net benefits by determining the project effects for various beneficiaries, including road users, laborers, and the Government (Appendix 11 and Supplementary Appendix C). One of the risks that would prevent realization of the full economic benefits of the expressway is the use of the expressway by overloaded trucks. To address this risk the project

design includes truck weigh-station facilities. Inflation in Viet Nam accelerated markedly in late 2007 and early 2008 due to a combination of internal and external factors. The Project is unlikely to fuel inflation as the bulk of expenditures will be incurred from 2010 onward when inflation is expected to slow to single digits. In the medium to long term, the Project will help contain inflation because it will reduce infrastructure bottlenecks and increase aggregate supply.

46. **Financial Viability.** The Project's financial viability was assessed by (i) determining the financial internal rate of return (FIRR), and (ii) analyzing the Project's financial statements. The financial viability in terms of the FIRR was assessed by comparing the Project's FIRR to the weighted average cost of capital in accordance with ADB's *Guidelines for the Financial Management and Analysis of Projects (2005)*. The financial analysis examined the aggregated costs and benefits from toll revenues of the highway, and is based on toll rates of D900 per passenger car unit per km. The FIRR of the Project was calculated for 2008 to 2033 using constant 2007 prices. The projected financial statements for the Project were prepared in current terms using the same period as the FIRR analysis. From this analysis, the Project's FIRR is estimated at 4.0% after tax, this exceeds the weighted average cost of capital, which is calculated as 1.1%, indicating that the Project is financially viable. Sensitivity tests show that the FIRR exceeds the weighted average cost of capital even under a range of adverse scenarios. The projected financial statements demonstrate that the Project will have enough retained cash to cover O&M costs and annual debt service. The FIRR calculation and the projected financial statements are shown in Appendix 12 and Supplementary Appendix D. The proposed toll rate of D900 per passenger car unit per km is considered reasonable<sup>19</sup> and affordable, given that HCMC is one of the most developed areas of Viet Nam. A review of the proposed toll rate will be undertaken 6 months prior to the opening of the expressway. The review will confirm toll rates at opening that are consistent with the financial viability of the Project and meet the required financial ratios. It will take into account the review of toll regulations to be undertaken under the HLD TA (footnote 7).

47. **Financial Sustainability of VEC.** VEC is currently processing or implementing three projects: (i) the Cau Gie–Ninh Binh Expressway Project (50 km, under construction); (ii) the Noi Bai–Lao Cai Expressway Project (244 km); and (iii) the proposed Project. The total capital expenditures for these three projects will exceed \$2.5 billion, with revenues to VEC projected to commence in 2011 when operation of the Cau Gie–Ninh Binh Expressway starts. The analysis of financial projections for VEC is based on these activities. This analysis assumes that VEC will charge D900 per passenger car unit per km for the Project and that this will be adjusted to account for inflation. The results show that VEC will have net operating losses until 2016 because toll revenue will not be sufficient to cover depreciation costs and interest in the initial operation stage. However, VEC can maintain positive accumulated cash flow throughout the operating period to cover debt service. A net operating profit will be generated from 2017, or 7 years from the commencement of operations, on the assumption of a gradual increase in traffic volume. The estimated debt to equity ratio will be 95:5 in 2013, and improve to 77:23 in 2022 as a result of increased retained earnings. Despite its large-scale investments, VEC will be financially viable in the medium and long term without additional subsidies during expressway operation. VEC needs to establish a financial information system to ensure that investments target financially sustainable expressway projects, through which VEC may monitor cost recovery, plan traffic forecasts and toll rates, make projected financial statements, and develop a debt management strategy. A system to meet this need is to be designed and commissioned under the HLD TA (footnote 7). Financial and institutional analyses of VEC are provided in Appendix 13 and financial projections of the Project and VEC are in Supplementary Appendix D.

<sup>19</sup> The toll rate adopted for the Noi Bai–Lao Cai Expressway (footnote 14) was D800 per passenger car unit per km.

48. **Environmental Impacts.** The project area does not include any sensitive areas such as national parks, protected areas, or special use forests within or near the proposed alignment. Endangered, threatened, or rare species of flora and fauna have not been found. The construction of the HLD expressway is not anticipated to cause any major change to the present ecological situation. Predicted environmental impacts during construction include air pollution, mainly due to dust emission; noise and vibration; water pollution due to fuel spills and improper waste disposal; soil erosion and siltation of water courses due to earthworks and extraction of borrow materials; and temporary obstructions of river flow. Impacts during operation are expected to be limited to air and noise pollution due to vehicular emissions, and potential water pollution due to accidents involving transportation of chemicals and other hazardous materials. Land use within the project area is dominated by tree plantations (mainly rubber) and paddy fields; significant impacts to flora and fauna are not anticipated.

49. The mitigation measures identified in the EIA for the construction phase include (i) treatment of sewage at construction camps and discharge from work sites, and mixing and crushing plants; (ii) dust suppression measures; (iii) maintenance of construction equipment and vehicles; (iv) restoration of borrow areas; (v) restriction of high noise activities to daylight hours; (vi) installation of temporary noise walls or boards at sensitive sites; (vii) coordination with local authorities on collection and disposal of waste and surplus soil; (viii) provision of concrete pavement and oil separator in fuel storage sites; (ix) locating crushing and mixing plants away from sensitive sites; and (x) implementation of slope stabilization measures. The civil works contractors will undertake these mitigation measures, while VEC, with the assistance of the supervision consultant will monitor the contractor's environmental performance. During operation, air pollution can be minimized by ensuring a steady flow of traffic and avoiding congestion. VEC will cooperate with the local authorities to ensure enforcement of road regulations. Two rows of trees will be planted on each side of the expressway to help minimize noise and the spread of dust. Where the HLD expressway passes through residential areas in Long Thanh, sound-insulating walls will be constructed to reduce noise. VEC will prepare an emergency action plan for use during expressway operation to address accidents involving chemicals and other hazardous materials.

50. During detailed design of the expressway, being undertaken under the ADB-funded HLD TA (footnote 7), the design consultants will update the EMP and incorporate in the project design relevant mitigation measures identified in the EMP. VEC will ensure that (i) bidding documents for the civil works include contract clauses requiring the contractor to implement the EMP, (ii) contractors prepare a site-specific EMP based on the actual situation on-site and the EMP prepared for the Project, and (iii) the EMP is properly implemented during different project phases. Provided the mitigation measures defined in the EMP are implemented appropriately before and during construction, and throughout the expressway operation, the Project will not result in significant environmental impacts.

51. **Social Impacts.** The HLD expressway will be constructed within HCMC and Dong Nai Province, one of the least poor provinces in the country with a poverty rate of 10.33% (Viet Nam Household Living Standard Survey 2002). Given the low rate of poverty in the project area, and that the expressway is intended to serve long distance traffic, the Project will have limited direct impact on poverty reduction in communities living along the expressway. Even though expressways generally do not directly address local poverty, they do address it indirectly by facilitating continued economic growth. 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 and increasing access to employment opportunities.

52. The Project's social impacts relate to (i) displacing local residents because of land acquisition; (ii) losing productive land; (iii) dividing local communities and disrupting the local road network; (iv) increasing traffic risks for people living and working along the highway due to the large volume of traffic and higher vehicle speeds along the highway; and (v) increasing risks of exposure to HIV and trafficking of women and children during construction and postconstruction phases due to the large volume of transit traffic along the highway. Unless compensation, income restoration measures, and livelihood activities relating to involuntary resettlement are delivered on time; these can pose significant risk to the livelihoods of project-affected households. The Project is formulated to minimize potential risks. A full resettlement plan was prepared that includes compensation and allowances for households that will be impacted by land acquisition and resettlement activities, and an income restoration plan for people who have been significantly affected. Land acquisition for expressway construction can divide existing communities and disrupt existing local transport networks, which could have an impact on the livelihood of local communities. During the detail project design, consultation with local residents will be undertaken to ensure that underpasses and overpasses are provided. These will maintain the functions of existing local roads and irrigation systems during construction and operation, and minimize disruption to local peoples' livelihood systems and social networks.

53. **Land Acquisition and Resettlement.** The involuntary resettlement category for the Project is category A. VEC, together with the local officials of HCMC and Dong Nai Province, prepared a full resettlement plan based on the socioeconomic and inventory of losses surveys. A summary of the resettlement plan is in Appendix 4, and the full resettlement plan is in Supplementary Appendix A. Consultations, public meetings, and village discussions with affected households and local officials were carried out during the resettlement planning process. These activities will continue during updating and implementation. DCCs have been established in HCMC and Dong Nai Province. The DCCs, together with VEC, will update the approved resettlement plan based on detailed design of the highway; and implement land acquisition, resettlement, livelihood restoration, and income-restoration activities. The estimated resettlement cost is \$186.05 million, of which about \$157.58 million will be required for land acquisition and \$28.47 million for resettlement allowances and compensation. VEC will be responsible for internal monitoring of resettlement activities, and contract an external monitoring agency for independent monitoring and evaluation. The internal and external monitoring reports will be uploaded to VEC's website, submitted to ADB every quarter, and uploaded to ADB's website until the resettlement and income restoration programs are complete. The project supervision consultants will provide formal and on-the-job training to VEC and the DCCs.

54. **HIV and Human Trafficking.** In 2003, HCMC residents accounted for 25% of all HIV infections in the country. The city has the fastest growing epidemic in the country with HIV prevalence among adults aged 15–29 estimated to be about 1.2%, making this one of the worst epidemics in Viet Nam. The number of infected females relative to males is increasing each year, indicating increasing heterosexual transmission.<sup>20</sup> The influx of construction workers in the Project during construction and increased volume of transit traffic in the postconstruction period will increase the risk of HIV and human trafficking. With improved transportation and infrastructure, existing risks and vulnerabilities for HIV transmission, drug use, and trafficking

<sup>20</sup> Ministry of Health, General Department of Preventative Medicine and HIV/AIDS Control. 2005. *HIV/AIDS Estimates and Projections 2005–2010*. Hanoi, Viet Nam.

along the highway will significantly increase if targeted risk mitigation initiatives are not implemented. Reports from nongovernment organizations and aid organizations indicate that the rate of human trafficking from the south to HCMC is high. To mitigate these risks, an HIV awareness and prevention of human trafficking program is included in the Project to minimize exposure of the local population to these issues (a summary of the program is in Supplementary Appendix E). The program includes capacity building of VEC, awareness campaigns in construction camps and communities in the project districts, development of peer educators, community monitoring, and distribution of medical equipment to relevant health facilities. Also included are community awareness programs on human trafficking, safe migration, and community monitoring. It will be managed by the construction supervision consultant; a summary of the terms of reference is in Appendix 9.

55. **Ethnic Minorities.** The overwhelming majority of the population within the project area is from the main ethnic group, the Kinh. Of the 800 households affected by resettlement, only 11 belong to an ethnic minority. These 11 households are disbursed across the project districts; are living within Kinh communities; and are well-integrated within mainstream Vietnamese society in terms of language, clothing, housing, and daily livelihood activities. A specific action for these 11 households is included in the resettlement plan.

56. **Gender.** The resettlement impact on poor women and households headed by women could be significant. Poor women and women who head households in the project area are at more risk economically (loss of productive assets due to land acquisition) and socially (risks posed by HIV, road safety, and possible human trafficking) than males. To address loss of livelihood of poor women and households headed by women, the resettlement plan includes a livelihood program targeted at women in the project districts. A project-specific gender strategy was prepared and is described in the summary of poverty reduction and social strategy (Appendix 14). The gender strategy includes capacity-building training and consultation workshops with those affected to increase their understanding of resettlement issues (compensation, entitlements, and grievance procedures) and to develop skills for appropriate livelihood activities.

57. **Road Safety.** The expressway is expected to provide road users with a safe environment compared to normal roads. However, for this benefit to be realized, users must make behavioral changes to adapt to the high speed, limited access environment of an expressway. To address these and other road safety issues, a road safety awareness campaign and road safety audits are included in the tasks for the construction supervision consultant.

58. **Project Implementation.** The main risk to the Project is delayed implementation because of slow finalization of detailed designs and procurement of civil works contracts. This is being addressed through the project preparation work undertaken under the HLD TA (footnote 7). This work includes all activities required to advance the commencement of construction. A further risk is VEC's limited capacity and experience with project management for major projects. This risk is being mitigated through the HLD TA component to address regulatory and institutional strengthening of VEC. Under this component, a revised organization structure will be prepared for VEC to address 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.

## V. ASSURANCES AND CONDITIONS

### A. Specific Assurances

59. In addition to the standard assurances, the Government, Ministry of Transport, and VEC have given the following assurances, which are incorporated in the legal documents:

- (i) **JBIC cofinancing.** In the event where funds from loan agreements between JBIC and the Government are insufficient at any time to finance the items to be funded by JBIC, the Government undertakes to fund the shortfall from its own resources under arrangements satisfactory to ADB.
- (ii) **Financial matters.** The Government will ensure that VEC will achieve (a) a debt service coverage ratio of at least 1.2 times, and (b) a debt to equity ratio of not greater than 90:10 beginning from fiscal year 2020. The Government will ensure that, no later than 1 June 2012 or the date of opening of the ADB section of the HLD expressway from Long Thanh to Dau Giay (whichever falls earlier), VEC has established toll rates sufficient to satisfy VEC's minimum debt service coverage ratio and debt to equity ratios.
- (iii) **Resettlement.** The Government will ensure that (a) VEC recruits an external monitoring agency before commencement of any land acquisition activities; and (b) land acquisition and relocation activities do not commence until an updated resettlement plan has been prepared for that section and the updated resettlement plan has been reviewed and approved by ADB. Resettlement plans will be prepared in compliance with ADB's *Involuntary Resettlement Policy* and the Government's laws, regulations, and procedures; and be applied to all resettlement activities under the Project, regardless of the source of funding.
- (iv) VEC will ensure that all payments for land will require (a) a valid validation certificate issued by an external valuer acceptable to both the Government and ADB; (b) the results of the detailed measurement survey for the affected person receiving the payment, signed as agreed by affected person, setting out the assets to be acquired; (c) that receipt of payment is acknowledged by the affected person, and (d) certification by the external monitoring agency that the affected person has received the full payment.
- (v) VEC will ensure that civil works contractors are not issued a notice of possession for a geographic area until (a) compensation payment and relocation to new sites has been satisfactorily completed for that area, (b) agreed rehabilitation assistance is in place, and (c) the area is free of all encumbrances.
- (vi) **Indigenous peoples and ethnic minorities.** The Government will ensure that, to the extent any ethnic minorities are likely to be significantly affected by the Project, the measures set forth in the ethnic minority specific sections in the resettlement plans, and as agreed between the Government and ADB, are carried out in accordance with such actions, applicable laws and regulations of the Government, and ADB's *Policy on Indigenous Peoples* (1998).
- (vii) **Gender.** VEC will implement the provisions set forth in the project-specific gender strategy, the updated resettlement plan, and the HIV awareness and prevention of human trafficking program.
- (viii) **Other social issues.** VEC will ensure that all civil works contracts incorporate provisions that contractors comply with all applicable labor laws and related international treaties and carry out the HIV awareness and prevention of human trafficking program in the campsites and corridors of influence.

- (ix) **Governance.** The Government will ensure that a project-specific web page will be established and information will be publicly disclosed on this web page on how loan proceeds are being used, including for each contract (a) the list of participating bidders, (b) name of the winning bidder, (c) basic details on bidding procedures adopted, (d) amount of the contract awarded, (d) list of goods and/or services purchased, and (e) intended and actual utilization of loan proceeds under each contract. The web page will be updated after each award of contract.
- (x) **Operation and maintenance.** By completion of the works, VEC shall submit to ADB documentation for an O&M concession for the entire Expressway including a time-bound implementation schedule.
- (xi) **Environmental.** VEC will ensure (a) that specific provisions are included for implementation of the EMP and its monitoring in civil works contracts, and in consulting services contracts; and (b) the environmental mitigation measures in the EIA prepared under the ADB-funded TA (footnote 5) will be adequately implemented by the contractors. VEC will ensure that the provisions of the EIA and EMP, and any updates, are fully implemented for all activities under the Project, regardless of the source of funds for a particular activity.
- (xii) **Award of civil works contracts.** VEC will not award any works contracts financed under the loan until (a) an updated resettlement plan for the section of road covered by the proposed works contract has been approved by VEC and submitted to ADB for approval; and (b) an EMP for the section of road covered by the proposed works contract has been approved by VEC and submitted to ADB for approval.

## **B. Condition for Loan Effectiveness**

60. Loan effectiveness is dependent on the execution of a subsidiary loan agreement between the Government and VEC for the onlending of the ADB loan funds, the agreement must be fully effective and binding upon the Government and VEC.

## **VI. RECOMMENDATION**

61. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Asian Development Bank (ADB) and, acting in the absence of the President, under the provisions of Article 35.1 of the Articles of Agreement of ADB, I recommend that the Board approve the loan of \$410,200,000 to the Socialist Republic of Viet Nam for the Ho Chi Minh City–Long Thanh–Dau Giay Expressway Construction Project from ADB's ordinary capital resources, with interest to be determined in accordance with ADB's London interbank offered rate (LIBOR)-based lending facility; a term of 25 years, including a grace period of 5 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.

C. Lawrence Greenwood, Jr.  
Vice-President

5 September 2008

## DESIGN AND MONITORING FRAMEWORK

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<b>Impact</b> Business-led, pro-poor, and sustainable economic growth in HCMC and neighboring provinces	<ul style="list-style-type: none"> <li>• Average per capita income in HCMC and Dong Nai Province increases by 8% per year from project completion</li> <li>• Value of exports from HCMC port increased by at least 10% per annum from project completion</li> </ul>	<ul style="list-style-type: none"> <li>• Annual HCMC and Dong Nai Province statistical reports on manufactured goods</li> <li>• HCMC port customs reports</li> <li>• Road traffic surveys by VEC</li> <li>• Periodic reporting by HCMC's Department of Transport and Urban Public Works and Ministry of Transport</li> </ul>	<b>Assumptions</b> <ul style="list-style-type: none"> <li>• Complementary Investments are made in the linked road system including sections of high-capacity, limited-access highways</li> <li>• Viet Nam remains internationally competitive, and continues to attract foreign direct investment</li> </ul> <b>Risk</b> <ul style="list-style-type: none"> <li>• Viet Nam abandons pro-growth policies</li> </ul>
<b>Outcome</b> Transport users in HCMC and Dong Nai Province can travel from HCMC District 9 to Dau Giay with lower transport costs on the HLD expressway	<ul style="list-style-type: none"> <li>• Road user costs for a car are reduced from D4,200/km without the Project to D2,400/km with the Project in 2013</li> <li>• Travel time from HCMC district 9 to Dau Giay reduced from 100 minutes to 40 minutes on completion of the expressway</li> <li>• In 2013, traffic volume from HCMC District 9 to Long Thanh reaches 33,000 passenger car units per day in 2013 and from Long Thanh to Dau Giay 23,000 per day</li> </ul>	<ul style="list-style-type: none"> <li>• VEC measurements of vehicle operating costs</li> <li>• Toll data for HLD expressway</li> <li>• Annual VEC management reports</li> <li>• Annual financial statements of VEC</li> <li>• Traffic surveys by VEC</li> <li>• VEC interviews with HCMC freight forwarders</li> </ul>	<b>Assumptions</b> <ul style="list-style-type: none"> <li>• Assumed economic growth rates materialize</li> <li>• Planned connections from the HLD expressway to the HCMC road network are completed</li> </ul> <b>Risk</b> <ul style="list-style-type: none"> <li>• Toll revenue is lower than expected due to low traffic demand</li> </ul>
<b>Outputs</b> 1. HLD expressway is operating, connecting HCMC District 9 with Dau Giay (about 51 km) as a four-lane, high-speed, limited-access, tolled highway.	<ul style="list-style-type: none"> <li>• Road capacity of 80,000 passenger car units per day is provided on the full length of the expressway in 2013</li> <li>• About 62 hectares (ha) of land in HCMC and 245 ha in Dong Nai acquired at replacement cost by the end of 2009</li> <li>• The environmental</li> </ul>	<ul style="list-style-type: none"> <li>• Contract completion certificates</li> <li>• Contract handover surveys</li> <li>• Project accounts</li> <li>• Resettlement monitoring reports by the external monitoring agency</li> <li>• Environmental monitoring reports by</li> </ul>	<b>Assumptions</b> <ul style="list-style-type: none"> <li>• Measures to address inflation are effective and reduce inflation to single figures by mid 2010</li> </ul> <b>Risks</b> <ul style="list-style-type: none"> <li>• Inadequate priority or funding given to the environmental management plan</li> </ul>

Design Summary	Performance Targets/Indicators	Data Sources/Reporting Mechanisms	Assumptions and Risks
<p>management plan is implemented and adverse environmental impacts are minimized by mitigation measures</p> <ul style="list-style-type: none"> <li>The HIV awareness and prevention of human trafficking program is implemented in the five project districts and community monitoring in place by the end of 2013</li> <li>Women representatives are included in the five district compensation committees by the end of 2009; capacity building training on resettlement and livelihood are conducted for women and households headed by women in five districts by the end of 2009</li> </ul> <p>2. O&amp;M concession procurement complete and concession operating</p> <p>3. Project management system operating</p>	<p>management plan is implemented and adverse environmental impacts are minimized by mitigation measures</p> <ul style="list-style-type: none"> <li>The HIV awareness and prevention of human trafficking program is implemented in the five project districts and community monitoring in place by the end of 2013</li> <li>Women representatives are included in the five district compensation committees by the end of 2009; capacity building training on resettlement and livelihood are conducted for women and households headed by women in five districts by the end of 2009</li> </ul> <ul style="list-style-type: none"> <li>Concession for O&amp;M effective and operating within 2 years of completion of the expressway</li> <li>Project performance management system reports generated</li> </ul>	<p>VEC</p> <ul style="list-style-type: none"> <li>Monitoring by the HCMC and Dong Nai Province departments of health</li> <li>Resettlement monitoring reports by the external monitoring agency</li> <li>Signed O&amp;M concession</li> <li>Reports submitted to VEC and ADB</li> </ul>	<p>and the HIV program</p> <ul style="list-style-type: none"> <li>Resettlement activities by HCMC and Dong Nai Province are not implemented on time and do not effectively address livelihood restoration for poor women and households headed by women.</li> </ul>

Activities with Milestones	Inputs
<p>1.1 Unexploded ordnance clearance Target: begin at start of 2009 and complete by end of 2009</p> <p>1.2 Civil works for roads, bridges, and toll and traffic control systems Target: begin at mid 2009 and complete by mid-2013</p> <p>1.3 Implement resettlement plans Target: begin at end of 2008 and complete by end of 2009</p> <p>1.4 Implement environmental management plan Target: begin at mid 2009 and complete by mid-2013</p> <p>1.5 Implement HIV awareness and prevention of human trafficking program Target: begin at start of 2009 and complete by mid-2013</p> <p>1.6 Implement road safety awareness campaigns and road safety audits Target: begin at start of 2009 and complete by mid-2013</p> <p>1.7 Implement project gender strategy Target: begin at start of 2009 and complete by mid-2013</p> <p>1.8 HLD expressway commissioned and open to traffic Target: mid-2013</p>	<p>ADB: \$410.2 million</p> <ul style="list-style-type: none"> <li>Consulting services: \$10.6 million</li> <li>Land acquisition and resettlement: \$186.1 million</li> <li>Civil works: \$133.5 million</li> <li>Taxes and duties: \$2.6 million</li> </ul> <p>JBIC: \$517.6 million</p> <ul style="list-style-type: none"> <li>Consulting</li> </ul>

Activities with Milestones	Inputs
2.1 O&M concession documentation completed Target: end of 2012 2.2 Procurement of O&M concession Target: begin at start of 2014 and complete by end of 2014 2.3 O&M concession awarded Target: end of 2014 3.1 Recruit project supervision consultant Target: completed by mid 2009 3.2 Commission project performance management system and undertake base-line surveys for project indicators Target: end of March 2009 3.3 Prepare project progress reports Target: from end of 2008 and to mid-2014 3.4 Prepare project completion report Target: end of 2013	services: \$13.2 million • Civil works: \$450.6 million  VEC: \$4.6 million • Unexploded ordnance clearance: \$0.6 million • Taxes and duties: \$4.6 million

ADB = Asian Development Bank, HCMC = Ho Chi Minh City, HIV = human immunodeficiency virus, HLD = Ho Chi Minh City–Long Thanh–Dau Giay, JBIC = Japan Bank for International Cooperation, O&M = operation and maintenance, VEC = Vietnam Expressway Corporation.

Note: Road user costs equal vehicle operating costs plus travel time costs.

## ROAD 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% is sealed pavement. While national and provincial roads provide the key links in the road network, in 2004 only 44.8% of the total length of national roads was reported as being in good condition. The existing national road 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; 66% has two or three lanes. Table A2.1 shows the road system by administrative category.

**Table A2.1: Viet Nam Road 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. 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 speed, and low capacity. Motorbikes have increased at more than 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, from 400,000 in 1997 to 600,000 in 2002 (7.5 vehicles per 1,000 population). Trucks comprise 30% of the fleet; 80% of them are small to medium size and only 10% are modern articulated trucks.

### B. Road Administration

3. Administration of the highways is determined by the administrative category of the road. National, provincial, district, urban (cities and towns), and commune authorities administer the corresponding category of road. National responsibility for the road network lies with the Viet Nam Road Administration under the Ministry of Transport (MOT). However, in 2004, Vietnam 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, equivalent to about 7 deaths per annum per 10,000 vehicles. This was a marginal increase 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 not following traffic regulations.



Additional factors 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 where roles and budget are allocated to each ministry concerned. Under this program, campaigns are being undertaken to promote enforcement of traffic laws, road traffic safety, and regulation of the sale and use of motorcycles. However, this program has only had limited effect.<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. Vietnam Expressway Corporation**

4. VEC was established in October 2004 under MOT to develop expressways in Viet Nam. Under Asian Development Bank (ADB) 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 organization structure of VEC, including the role and responsibilities of each VEC department and division, segregation of duty, and staffing; and (iii) VEC's future organization development plan. The study identified several issues that must be addressed, and are discussed in this appendix. Further information on the institutional structure and financial management at VEC are given in Appendix 13.

### **1. Organization**

5. VEC was established with an organization 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. Tolling operations are limited to two toll plazas. VEC does not have any expressway operation and maintenance contracts in place; is not providing any additional support activities to expressways, such as roadside facilities; and has not implemented processes to enable public-private partnerships. Further, VEC has limited capacity to manage the social and environmental impacts of the expressways. To administer the proposed expressway program, VEC needs to expand its capacity to enable it to manage several large complex projects and to take on new activities in terms of additional skills.

6. VEC was established as a fully owned state-owned enterprise under MOT. However, the Law on State Enterprises, 2003, requires all state-owned enterprises be converted into a company operating under the Law on Enterprises before 2010. VEC is expected to operate as a regulator and owner of the expressway network and as a supplier of various services. These demands require revision of the organization structure, particularly to separate the roles of regulator and supplier within VEC. The revisions recommended by the Expressway Network Development Plan report<sup>3</sup> need to be refined for implementation.

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

7. The Expressway Network Development Plan TA reviewed legal and regulatory documents that apply to expressways. The study identified several issues to be addressed

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

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

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

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 for the financial viability of some expressways. The TA also recommends how this circular could be revised to accommodate more flexible toll arrangements.

### **3. Training Needs**

8. 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; a detailed program to address training needs is to be prepared once work on the revised organization structure is complete.

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

9. VEC currently uses 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 identified a need for an asset management system.

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

10. Under The Expressway Network Development Plan TA, ADB provided funding to assist the Government in preparing an expressway master plan for a national expressway system. The plan identifies a logical national network of expressways and prioritizes the construction of each section based on economic and financial viability.

11. The existing national road system was 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 volume is set to grow significantly. Given that critical sections of the existing network are already congested, the capacity of the network needs to be expanded rapidly to accommodate 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 degree 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 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) is proposed that includes another 8 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.

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

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

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

## EXTERNAL ASSISTANCE

Item	Project	Implementation Schedule	Project Cost (\$ million)	External Funding Source
<b>A. 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 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
Loan 2195	Central Region Transport Networks Improvement Project	2005–2009	138.0	ADB (loan): \$94.5 million ADB (grant): \$0.5 million NDF: \$11.0 million
Loan 2374	Ho Chi Minh–Long Thanh–Dau Giay Expressway Technical Assistance Project	2008–2009	11.2	ADB: \$10 million
Loan 2391/2	GMS: Noi Bai–Lao Cai Highway Project	2008–2011	1,216.0	ADB: \$1,096 million
	Highway Rehabilitation Project II and III	Completed	416.6	World Bank
	Road Safety Project	2005–2009	25.0	World Bank
	QL1 Bridge Rehabilitation Project	Completed	162.2	JBIC
	QL1 Bridge Rehabilitation Project (2)	1999–2007	211.0	JBIC
	QL1 Bridge Rehabilitation Project (3)	2003–2009	80.1	JBIC
	QL5 Improvement Project (1), (2), and (3)	Completed	326.3	JBIC
	QL10 Improvement Project (1)	1998–2007	161.3	JBIC
	QL18 (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
	QL18 Widening Projects (2)	2000–2007	232.0	JBIC
	Can Tho, Thanh Tri, Bai Chay, Binh Bridge Construction	2000–2008	882.0	JBIC
	QL10 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
	QL1 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>6,725.7</b>	
<b>B. Rural Roads Network (District and Commune Roads)<sup>a</sup></b>				
	Rural Transport Project	Completed	60.9	World Bank
	Rural Transport II Project	2000–2007	145.3	World Bank, DFID
	Rural Transport III Project	2006–2011	173.0	World Bank, 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, DFID = Department for International Development, GMS = Greater Mekong Subregion, JBIC = Japan Bank for International Cooperation, NDF = Nordic Development Fund, QL = national highway.

<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.

## **SUMMARY RESETTLEMENT PLAN**

### **A. Project Background**

1. The Ho Chi Minh City (HCMC)—Long Thanh—Dau Giay Expressway Project is intended to provide a safe and secure road for high-speed (120 kilometers/hour) vehicles, especially heavy vehicles. The expressway will be constructed as a tolled four-lane facility (two lanes in each direction), with access initially restricted to three locations: the intersection with Ring Road 2, the intersection with National Highway 51 (QL51) at the southern end of Long Thanh town, and at Dau Giay.

### **B. Scope of Land Acquisition and Resettlement Impacts**

2. The Project will require acquisition of 307 hectares (ha) of land (HCMC 62 ha and Dong Nai 245 ha). The census and inventory of losses identified the following:

- (i) A total of 975 households will be affected, of which 167 are in District 9 of HCMC and 808 are in the four districts of Dong Nai Province. Of the affected households, 31 in HCMC will lose more than 10% of their productive assets while in Dong Nai Province, 392 households will lose more than 10%. With regard to relocation, 309 households will have to relocate to new plots of residential land as their land will be totally affected or they will be left with a portion that will no longer be viable; 246 households will have remaining residential land and can move back.
- (ii) Three rubber plantation companies, commune culverts, 15 irrigation canals, church land with a prayer house, and transmission towers (3 tower foundations) will be affected.

### **C. Legal and Policy Framework**

3. The legal and policy framework for compensation, resettlement, and rehabilitation under the Project is defined by the relevant laws and regulations of the Government and ADB policies. In case of discrepancies between the Borrower's laws, regulations, and procedures, and ADB's policies and requirements; ADB's policies and requirements will prevail, consistent with Decree No. 131/2006/ND-CP: which provides that in case of "discrepancy between any provision in an international treaty on Official Development Assistance (ODA), to which the Socialist Republic of Viet Nam is a signatory, and the Vietnamese Law, the provision in the international treaty on ODA shall take precedence" (Article 2, Item 5).

### **D. Project Entitlements**

4. A summary of project entitlements are presented in Table A4.1 and correspond to the impacts identified during the census and inventory of losses. Assistance with regard to amount of cash allowances or additional support (in cash or in kind) will depend on the severity of impact and the specific needs of households. These entitlements may be enhanced, as necessary, following the conduct of the detailed measurement survey and consultation with affected persons to ensure that losses are restored, or the situation is improved. Monitoring will be done regularly and modifications of the program and additional cash and material assistance to the affected households will be provided as and when necessary.

**Table 4.1: Summary Entitlement Matrix**

<b>Impacts</b>	<b>Entitlements</b>
Permanent acquisition of land	For legal and legalizable owners of land and those covered by customary rights, replacement land or cash compensation at replacement cost (i.e., current market value, productive value, and similar location attributes). Lessees of private land are to cover rent and allocation of suitable replacement land that the lessor can lease.
Structures, crops, and trees (irrespective of tenure status)	All owners of structures will be paid based on current market prices of materials and labor with no depreciation or deductions for salvageable materials. For poor and vulnerable households with less than the value of a class-4 house, will be given additional cash assistance to improve the new house to meet the minimum standard house in the area. Landless households will be provided with a plot of land at no cost to the household. Unharvested crops will be compensated based on current market value; trees will be paid based on type, age, and productive capacity.
Public facilities	Cash compensation to cover the cost of restoring the facilities, including irrigation system. Prayer house will be relocated in culturally sensitive and appropriate way.
Severe loss of income and/or livelihood due to loss of 10% or more of total productive land and income sources (irrespective of tenure status)	In addition to the compensation for affected land, rehabilitation measures will include taking part in the income restoration programs that will be designed and implemented in close consultation with the affected persons. Various transition allowances will be provided while they are in the process of restoring preproject income (while the affected households are taking part in income restoration programs) sufficient to provide the minimum basic needs of the households.
Loss of income and/or livelihood due to relocation of houses and shops (irrespective of tenure status)	For relocating households, various allowance will include materials transport, transition subsistence, and bonus for timely moving. For relocating shops, business disruption allowance will be provided to cover income loss during reestablishment of the business. For employees, cash assistance equivalent will be provided to cover loss of salary while business is being established.
Higher risks of impoverishment and/or hardship due to loss of resource base of vulnerable groups regardless of severity of impacts	These persons are entitled to take part in income restoration program and will be provided an additional support allowance while taking part in the program. Cash allowance for households as per Government regulation (social policy households, heroic mothers, wounded, dead soldiers).
Temporary impacts	Monthly rent will be paid for use of nonproductive land. If productive land, no less than the net income that would have been derived from the affected property will be paid. Land will be promptly restored to its preproject condition at no cost to the affected household.

Source: Asian Development Bank.

**E. Relocation of Households**

5. In HCMC, the majority of affected households interviewed and participating in the meetings prefer to receive cash compensation at replacement cost and find replacement land on their own as there is a well developed, active land market in the project area. In Dong Nai Province, four relocation sites in four communes were identified with sufficient capacity to accommodate the number of relocating households and to respond to the households' preference to move to relocation sites. Local officials and households that opted for cash compensation are optimistic that affected households opting to self-relocate will not have difficulty finding a replacement for their lost land as the land market for both productive and

residential land is good. Given this, the Project will ensure that compensation given for affected land is at replacement cost at the time of disbursement of payment. If during updating of the resettlement plan, the suitability of new or potential sites initially identified will be reevaluated and included in the updated resettlement plan. Affected households will not be displaced until the commune or ward allocates land acceptable to them and until affected households receive all compensation and allowances due to them.

#### **F. Income Restoration**

6. As a result of consultation with local authorities, various organizations and affected households, various farm- and nonfarm-based activities and programs were identified for consideration in the planning of a responsive income restoration program. During the detailed measurement survey, the Project will help design and implement the income restoration program. It will lead the process of identifying the livelihood activities of each household by evaluating the household's specific needs against the household's preferences, inclination, and preparedness; and assessing the availability of external support needed by the household to pursue its chosen livelihood activities. In addition to the principles governing the project resettlement policy, the income restoration program will abide by the following precepts: be responsive to the specific needs and attuned to the preparedness of the household; be sustainable and geared toward self-determination and empowerment; foster justice and fairness, camaraderie, and social consciousness; and be gender sensitive and environmentally sound. Monitoring will be done regularly and the programs modified as necessary.

#### **G. Participation, Disclosure, and Grievance Redress**

7. Consultations, public meetings, and village discussions with affected persons and local officials were carried out during the resettlement planning process. Project policies and options with regard to relocation and income restoration were discussed during the meetings. Concerns and suggestions raised by the affected people were incorporated in the initial resettlement plan. The grievance mechanism is designed to ensure that the concerns and grievances of those affected are addressed and resolved in a timely and satisfactory manner. People affected will be made fully aware of their rights verbally and in writing during consultation, survey, and at the time of compensation. The key information in the initial resettlement plan was disclosed to those affected prior to the ADB appraisal mission.

#### **H. Ethnicity and Gender Issues**

8. Separate meetings were held with ethnic minority households and those headed by women. Members of 11 ethnic minority households were found to have similar living standards as Kinh people. The 277 households headed by women were consulted during the planning process. Specific actions for ethnic minorities and a gender strategy are included in the resettlement plan; these include active participation of women and ethnic minorities from consultation to monitoring, representation of women and ethnic minorities in compensation committees, capacity-building targeting of women and ethnic minorities, engagement of a gender specialist during updating and implementation of the resettlement plan, and development of monitoring indicators by gender and ethnic minority.

#### **I. Implementation Arrangements**

9. The Executing Agency for the Project will be the Vietnam Expressway Corporation (VEC). VEC will delegate responsibility for day-to-day project implementation to the Southern

Expressway Project Management Unit (SEPMU). SEPMU is based in HCMC and will establish two field offices in District 9 of HCMC, and in Long Thanh district, Dong Nai Province. SEPMU has a land acquisition and resettlement unit, headed by the SEPMU deputy-director. SEPMU has assigned four staff to represent VEC on a full-time basis in the district compensation committees. In addition, one accountant will be responsible in administering and monitoring loan funds for land acquisition and resettlement.

## J. Implementation Schedule

10. The resettlement plan will be updated by district following detailed design. All resettlement activities will be coordinated with the civil works schedule. Land acquisition and relocation of affected households cannot commence until ADB reviews and approves the updated resettlement plan. VEC will not allow construction activities in specific sites until all resettlement activities have been satisfactorily completed, agreed rehabilitation assistance is in place, and the site is free of all encumbrances. Updating of the resettlement plan is expected to commence in August 2008.

**Table A4.2: Schedule of Resettlement Activities**

<b>Activities</b>	<b>Schedule</b>
Resettlement plan dating (following detailed design)	Aug 2008–Dec 2008
Submission of updated resettlement plans	Nov 2008–Jan 2009
Implementation of updated resettlement plans	Dec 2008–Jan 2010
Monitoring (internal and external)	Aug 2008–Jan 2010
Postevaluation	June 2011
Start of civil works	Dec 2008

Source: Asian Development Bank Estimates.

## K. Resettlement Plan Budget and Monitoring

11. The estimated cost of implementing the resettlement plan is \$186.05 million. The cost of land acquisition and resettlement for the entire Project will be funded from the ADB loan. Second generation imprest accounts (SGIAs) will be established in HCMC and in each district of Dong Nai Province at a commercial bank acceptable to the Government and ADB. The SGIAs will be operated in accordance with ADB's *Loan Disbursement Handbook* (2007, as amended from time to time). Use of the SGIAs will be limited to providing funds for (i) affected persons for land and other assets acquired to facilitate the construction of the HLD Expressway; (ii) affected persons for resettlement compensation and allowances as set out in the approved updated resettlement plan; (iii) relocation site development and income restoration program, and (iv) incremental expenses incurred by the district compensation committees for implementation of the updated resettlement plan.

12. VEC and compensation committees, with the help of project consultants, will set up a system to ensure that channeling of funds is done transparently, efficiently, and effectively; that monitoring is in place; and that resettlement audit reports are submitted in a timely manner. ADB staff will have the right to conduct spot or random checks of expenditures covered by the SGIAs. Financial and audited statements will be made available to the external monitoring agency.



## DETAILED COST ESTIMATES AND FINANCING PLAN

**Table A5.1: Detailed Cost Estimates by Expenditure Category**

Item	Foreign	Local (D million)	Total	Foreign	Local (\$ thousand)	Total	% Foreign Exchange	Costs
<b>A. Investment Costs</b>								
1. Civil works	143,682	6,968,375	7,112,058	8,980	435,523	444,504	2.0	72.1
2. Land acquisition	105,175	1,736,717	1,841,891	6,573	108,545	115,118	5.7	18.7
3. Compensation and resettlement	16,619	315,752	332,370	1,039	19,734	20,773	5.0	3.4
4. Unexploded ordnance clearance	0	7,426	7,426	0	464	464	0.0	0.1
5. Consulting service	190,979	116,431	307,410	11,936	7,277	19,213	62.1	3.1
6. Taxes and duties	0	105,561	105,561	0	6,598	6,598	0.0	1.1
<b>Subtotal (A)</b>	<b>456,455</b>	<b>9,250,263</b>	<b>9,706,717</b>	<b>28,528</b>	<b>578,141</b>	<b>606,670</b>	<b>4.7</b>	<b>98.3</b>
<b>B. Recurrent Costs</b>	0	163,383	163,383	0	10,211	10,211	0.0	1.7
<b>Total Base Costs</b>	<b>456,455</b>	<b>9,413,645</b>	<b>9,870,100</b>	<b>28,528</b>	<b>588,353</b>	<b>616,881</b>	<b>4.6</b>	<b>100.0</b>
<b>C. Contingencies:</b>								
Physical	41,036	817,428	858,464	2,565	51,089	53,654	4.8	8.7
Price	25,786	2,308,250	2,334,036	1,612	144,266	145,877	1.1	23.6
<b>Subtotal (C)</b>	<b>66,821</b>	<b>3,125,678</b>	<b>3,192,499</b>	<b>4,176</b>	<b>195,355</b>	<b>199,531</b>	<b>2.1</b>	<b>32.3</b>
<b>D. Financial Charges during Implementation</b>								
1. Interest during construction	1,829,384	0	1,829,384	114,337	0	114,337	100.0	18.5
2. Commitment charges	26,050	0	26,050	1,628	0	1,628	100.0	0.3
3. Front-end fees	0	0	0	0	0	0		0.0
<b>Subtotal (D)</b>	<b>1,855,435</b>	<b>0</b>	<b>1,855,435</b>	<b>115,965</b>	<b>0</b>	<b>115,965</b>	<b>100.0</b>	<b>18.8</b>
<b>Total (A+B+C+D)</b>	<b>2,378,711</b>	<b>12,539,323</b>	<b>14,918,034</b>	<b>148,669</b>	<b>783,708</b>	<b>932,377</b>	<b>15.9</b>	<b>151.1</b>

Source: Asian Development Bank estimates.

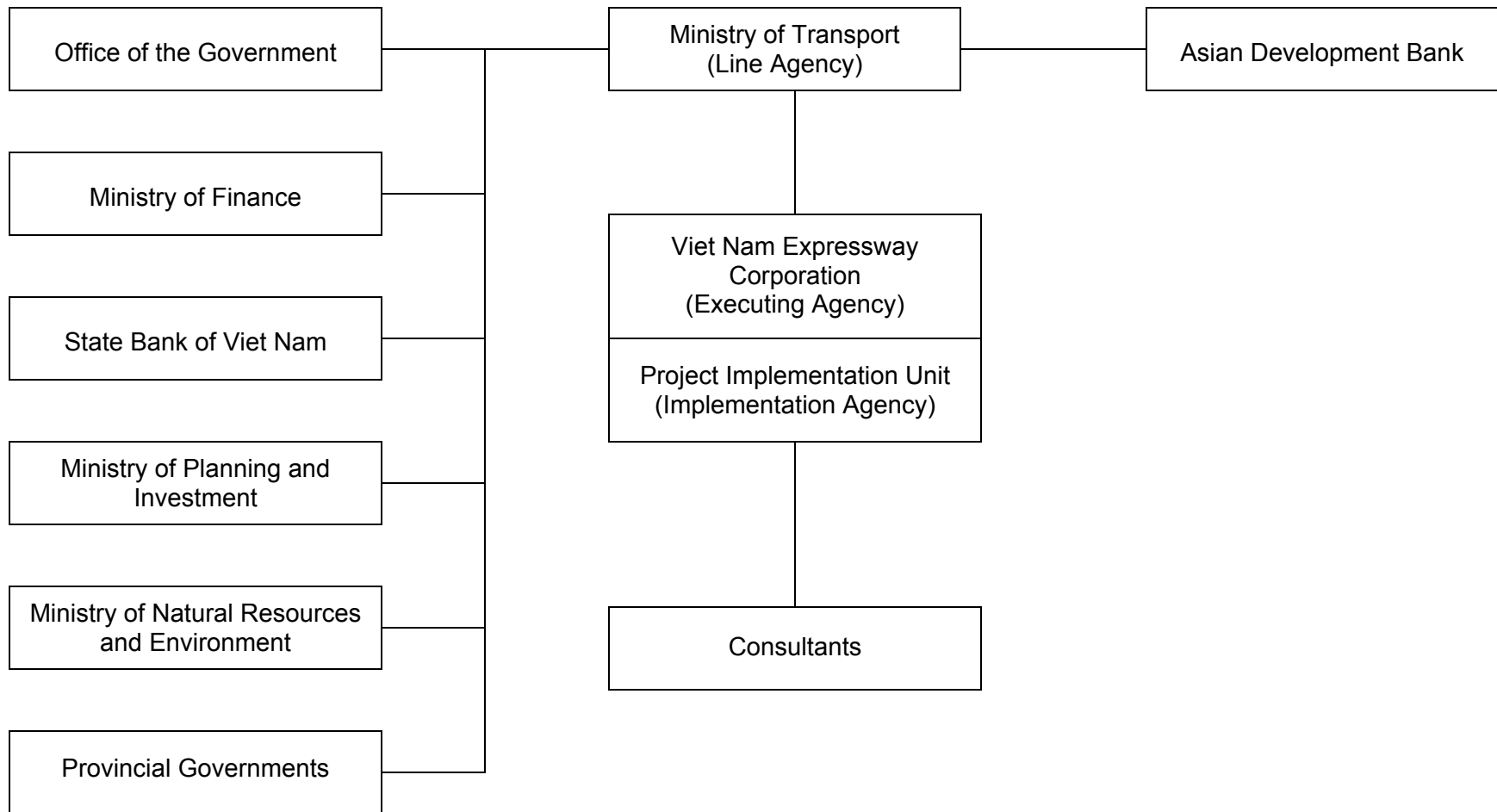
**Table A5.2 Financing Plan**  
(\$ million)

Item	ADB Loans		JBIC Loans		VEC		Total Amount
	Amount	%	Amount	%	Amount	%	
<b>A. Investment Costs</b>							
1. Civil works	133.5	22.9	450.6	77.1	0.0	0.0	584.2
i. Long Thanh–Dau Giay section	133.5		0.0		0.0		
ii. HCMC–Long Thanh section and TCTIM	0.0		450.6		0.0		
2. Land acquisition	157.6	100.0	0.0	0.0	0.0	0.0	157.6
3. Compensation and resettlement	28.5	100.0	0.0	0.0	0.0	0.0	28.5
4. Unexploded ordnance clearance	0.0	0.0	0.0	0.0	0.6	100.0	0.6
5. Consulting services	10.6	44.6	13.2	55.4	0.0	0.0	23.7
6. Taxes and duties	2.6	39.4	0.0	0.0	4.0	60.6	6.6
<b>Subtotal (A)</b>	<b>332.8</b>	<b>41.5</b>	<b>463.8</b>	<b>57.9</b>	<b>4.6</b>	<b>0.6</b>	<b>801.2</b>
<b>B. Recurrent Costs</b>	15.3	100.0	0.0	0.0	0.0	0.0	15.3
<b>Total Base Costs</b>	<b>348.1</b>	<b>42.6</b>	<b>463.8</b>	<b>56.8</b>	<b>4.6</b>	<b>0.6</b>	<b>816.4</b>
<b>C. Financial Charges during Implementation</b>							
1. Interest during construction	61.5	53.8	52.8	46.2	0.0	0.0	114.3
2. Commitment charges	0.6	37.5	1.0	62.5	0.0	0.0	1.6
3. Front-end fees	0.0		0.0		0.0		0.0
<b>Subtotal (C)</b>	<b>62.1</b>	<b>53.6</b>	<b>53.8</b>	<b>46.4</b>	<b>0.0</b>	<b>0.0</b>	<b>116.0</b>
<b>Total Disbursement (A+B+C)</b>	<b>410.2</b>	<b>44.0</b>	<b>517.6</b>	<b>55.5</b>	<b>4.6</b>	<b>0.5</b>	<b>932.4</b>

ADB = Asian Development Bank, HCMC = Ho Chi Minh City, JBIC = Japan Bank for International Cooperation, TCTIM = electronic toll collection and traffic information and monitoring system, VEC = Vietnam Expressway Corporation.

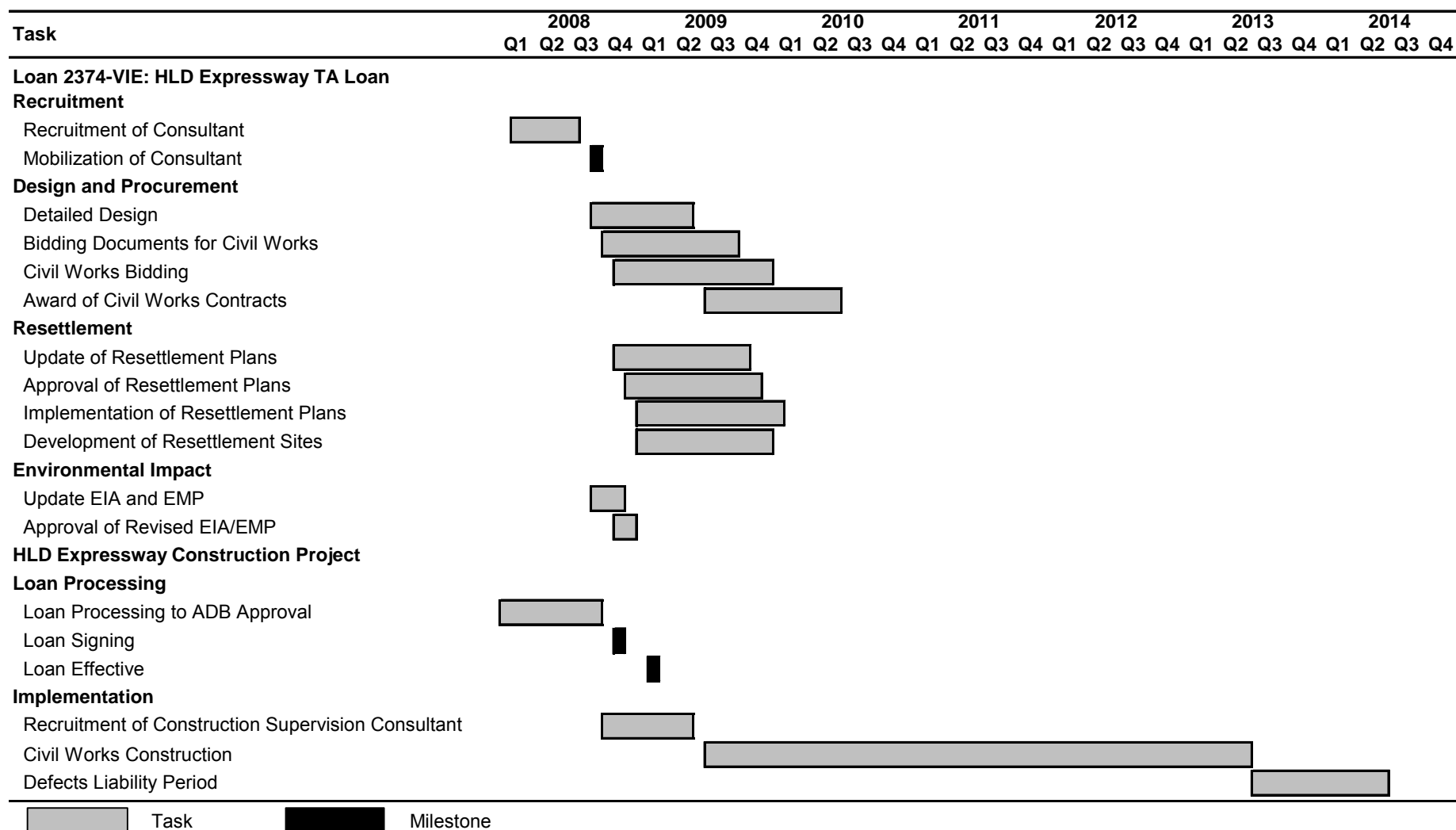
Source: Asian Development Bank estimates.

## PROJECT ORGANIZATION AND IMPLEMENTATION ARRANGEMENTS



Source: Asian Development Bank.

## IMPLEMENTATION SCHEDULE



ADB = Asian Development Bank, EIA = environmental impact assessment, EMP = environmental management plan, HLD = Ho Chi Minh City - Long Thanh - Dau Giay, TA = technical assistance.

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 Construction Project
Loan or TA Reference	Loan: tbd
Date of Effectiveness	tbd
Amount US\$:	\$410.2 million (Government of Japan will provide loans of about \$444.5 million equivalent)
Of which Committed, \$	None. (Loan not yet approved)
Executing Agency:	Vietnam Expressway Corporation of the Ministry of Transport
Implementation Agency:	Southern Expressway Project Management Unit
Approval Date of Original Procurement Plan	tbd
Approval of most recent Procurement Plan	
Publication for Local Advertisements	Not decided
Period Covered by this Plan	2009–2010

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

Procurement Method	Contract Value (\$)
ICB Works	More than \$2 million
NCB Works	Less than \$2 million

### Procurement Thresholds, Consultant Services

Procurement Method	Value
Quality- and Cost-Based Selection	More than \$200,000
Consultants' Qualifications Selection	Less than \$200,000
<b>Exceptional Methods</b>	
For any contract funded by the Japan Bank for International Cooperation	Government of Japan guidelines will apply

**Table A8: Contract Packages and Mode of Procurement**

Reference	Contract Description	Estimated Cost (\$ million)	Procurement Method	Expected Date of Advertisement	Prior Review
<b>A.</b>	<b>Civil Works<sup>a</sup></b>				
CW1	Package 1-A: Expressway construction (km 4–km 7.5)	98.63	JBIC		
CW2	Package 1-B: Expressway construction (km 7.5–km 11)	107.41	JBIC		
CW3	Package 2: Long Thanh Bridge (km 11–km 14.1)	100.33	JBIC		
CW4	Package 3: Expressway construction (km 14.1–km 23.9)	138.78	JBIC		
CW5	Package 5: Expressway construction (km 23.9–km 37.8)	67.93	ADB, ICB		Yes
CW6	Package 6: Expressway construction (km 37.8–km 55.0)	73.58	ADB, ICB		Yes
CW7	Preparation of Long An resettlement site	1.33	ADB, NCB		Yes <sup>b</sup>
CW8	Preparation of Long Thanh town resettlement site	1.33	ADB, NCB		Yes <sup>b</sup>
CW9	Preparation of Song Nhan resettlement site	1.33	ADB, NCB		Yes <sup>b</sup>
CW10	Preparation of Xuan Thanh resettlement site	1.33	ADB, NCB		Yes <sup>b</sup>
CW11	Clearance of unexploded ordnance	0.61	Government guidelines		No
	<b>Subtotal (A)</b>	<b>592.59</b>			
<b>B.</b>	<b>Equipment<sup>a</sup></b>				
E1	Package 4: Electronic toll collection and traffic information and monitoring system	50.52	JBIC (EPC contract)		
<b>C.</b>	<b>Resettlement and Social Mitigation</b>				
R1	Payments for land acquisition	157.58	Government guidelines, resettlement plan	Not applicable	No <sup>c</sup>
R2	Payments of resettlement and social allowances, entitlements, and compensation and funding Income Restoration Program	28.47	Government guidelines, resettlement plan	Not applicable	No <sup>c</sup>
	<b>Subtotal (C)</b>	<b>186.05</b>			
<b>D.</b>	<b>Consulting Services</b>				
CS1	Construction supervision, ADB financed	10.35	ADB guide-lines, QCBS		Yes
CS2	Third party quality assurance consultant	1.13	ADB guide-lines, QCBS		Yes
CS3	Project audit consultants	0.17	ADB guide-lines, CQS		Yes

Reference	Contract Description	Estimated Cost (\$ million)	Procurement Method	Expected Date of Advertisement	Prior Review
CS4	Construction supervision, JBIC financed	14.47	JBIC guide-lines		
	<b>Subtotal (D)</b>	<b>26.12</b>			
	<b>Total</b>	<b>855.28</b>			

ADB = Asian Development Bank; EPC = engineering, procurement, construction; CQS = consultants' qualifications selection; ICB = international competitive bidding; JBIC = Japan Bank for International Cooperation; NCB = national competitive bidding; QCBS = quality-and cost-based selection.

<sup>a</sup> Civil works and equipment including physical contingencies and price escalation, taxes, duties, and insurance of works.

<sup>b</sup> Documentation for the first NCB contract will be subject to prior review, subsequent contracts will be subject to post review.

<sup>c</sup> Payment of compensation and allowances arising from resettlement activities will be in accordance with procedures set out in ADB approved resettlement plans.

Source: Asian Development Bank estimates.

## A. Procurement Procedures

### 1. Civil Works: International Competitive Bidding

1. For international competitive bidding (ICB) contracts funded by the Asian Development Bank (ADB), the procurement method will be the single-stage, one-envelope system, with post qualification. ADB's approval of the evaluation results will be obtained before they are communicated to the applicants. For each ICB contract, a full set of bid documents should be submitted to ADB for review and approval before issuance to bidders.

### 2. Civil Works: National Competitive Bidding

2. For national competitive bidding (NCB) contracts funded by ADB, the requirements of the standard NCB Annex for Viet Nam will apply. Documents will be modeled on those developed for NCB under previous ADB-funded projects. This model is a single-stage, single-envelope model with post qualification. The first draft English language version of the procurement documents will be submitted for ADB review and approval regardless of the estimated contract amount. For subsequent contracts, ADB will review the documents post award. ADB-approved procurement documents will be used as a model for all succeeding NCB contracts financed by ADB for the Project. For all contracts, ADB will review the bid evaluation report and proposal for award of contract on a prior review basis.

## B. Recruitment of Consultants

3. For ADB-funded contracts, quality-and cost-based selection (QCBS) procedures will be applied except for the project audit consultants who will be recruited under consultant's qualification selection (CQS) procedures. Full technical proposals will be required except for the project audit services where combined technical and financial proposals will be required. To calculate the firms' total scores, the technical proposals will be given a weight of 80% and the financial proposals 20%. For contracts fully funded by the Government, recruitment documents and procedures will follow government guidelines. For the project audit consulting services, the shortlist will comprise only national firms.

## OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

### A. Project Supervision Consultant

1. To assist in implementing the Ho Chi Minh–Long Thanh–Dau Giay (HLD) Expressway Construction Project, the proceeds of the Asian Development Bank (ADB) loan will be applied to eligible payments for a single construction supervision consulting services contract: the project supervision consultant (PSC). The consulting services will be undertaken by an international consulting firm with associated national consulting firms. About 1,687 person-months (171 person-months of international and 1,516 person-months of national consulting services) will be required.

2. ADB and the Japan Bank for International Cooperation (JBIC) are cofinancing the construction of the HLD expressway. A separate consultant will be engaged to supervise construction of the JBIC-financed component. The PSC will be required to coordinate with the JBIC component consultant as necessary.

#### 1. Scope of Work and Terms of Reference

3. **Contract Administration.** In accordance with the FIDIC<sup>1</sup>-based contract between the Vietnam Expressway Corporation (VEC), the Executing Agency, and the contractors, the PSC will have the following duties necessary for the adequate supervision of construction activities on-site: (i) represent the interest of VEC and contractors in any matters related to the construction contract and its proper execution; (ii) assess the adequacy of all inputs provided by contractors and methods of work in relation to the required rate of work progress; (iii) examine and make recommendations to VEC on all claims from contractors; (iv) compute quantities of approved and accepted work and materials; and check, certify, and make recommendations to VEC; (v) propose and present to VEC for approval any changes in the plans deemed necessary for the completion of the work; (vi) before issuance of the certificate of completion, carry out the necessary inspection, specify and supervise any remedial works required, and when completed recommend VEC conduct a final inspection and accept the Project; and (vii) closely coordinate with the Southern Expressway Project Management Unit (SEPMU), (to which VEC has delegated day-to-day administration of HLD expressway construction) and the consultants working on JBIC components to address common issues.

4. **Environmental Monitoring.** The PSC will be responsible for implementation of the environmental impact assessment and environmental management plan for the Project, including (i) review and endorse the site-specific environmental management plans to be prepared by contractors prior to conduct of site works; (ii) monitor environmental mitigation activities by contractors provided in the approved environmental impact assessment and environmental management plan; and prepare quarterly environmental monitoring reports during construction; (iii) monitor and report on the environmental impacts during construction and recommend measures to improve them as required; (iv) prepare a monitoring framework and/or mechanism, and communicate this to affected communities to provide guidance on how they can participate during monitoring of environmental effects (to be conducted by a third party monitor) and to monitor contractors' environmental performance.

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<sup>1</sup> FIDIC = International Federation of Consulting Engineers.



5. **Environmental Capacity Building.** The PSC will provide an environmental training program to (i) develop an environment staffing structure and development plan, (ii) help build capacity and procedures in undertaking analyses of environmental impacts of road projects in accordance with Government regulations and development partner guidelines, and (iii) provide training on implementation of environmental management plans.

6. **Resettlement Implementation.** Under the Ho Chi Minh–Long Thanh–Dau Giay Expressway Technical Assistance Project<sup>2</sup> (HLD TA) work is to be undertaken to (i) update resettlement plans, (ii) prepare an income restoration program, and (iii) implement the resettlement plan sufficient to allow the commencement of construction activities. Activities related to implementation of the resettlement plan will continue during project construction and the PSC consultant will undertake the following tasks: (i) assist VEC and district compensation committees (DCCs) to implement procedures for (a) minimizing adverse social impacts from land acquisition and loss of other assets during implementation, (b) ensuring that options or agreements reached with affected persons in terms of replacement of assets, i.e., cash or in-kind, are provided in a timely manner, (c) ensuring that gender concerns are incorporated during implementation and monitoring, (d) tracking compliance with project policies; and (e) implementing promptly corrective actions and resolving grievances; (ii) assist VEC and the DCCs in updating replacement costs, as required, during implementation; (iii) help VEC and the DCCs implement detailed income restoration programs for people severely affected by loss of livelihood and income, and for vulnerable affected persons; (iv) coordinate with the external monitoring agency, ensuring that findings and recommendations made by the agency are discussed with VEC and the DCCs for appropriate action to ensure that resettlement implementation is undertaken properly and effectively; and (v) provide guidance and help implement resettlement activities such as compensation payment, income restoration programs, and relocation; monitor construction activities for unforeseen or temporary impacts; and prepare quarterly monitoring reports on all resettlement activities.

7. **Social Development and Gender.** The PSC will be responsible for addressing overall social development, poverty, ethnic minority, and gender issues; and help VEC plan, implement, and monitor the social dimension of the resettlement plan including capacity development training, ethnic minority specific activities, overall project-specific gender strategy, and community awareness of the HIV awareness and prevention of human trafficking program.

8. **HIV Awareness and Prevention of Human Trafficking.** The PSC will work closely with VEC, relevant provincial and district authorities, and women's unions to implement the program for communities in the project districts and construction camps based along the project road. Activities include (i) undertake an assessment and prepare capacity-building training plan for VEC's social development unit, provincial and district health authorities, women's unions, and other organizations; (ii) in coordination with the national consultants for HIV and human trafficking, prepare the design for the HIV awareness and prevention of human trafficking campaign and training programs based on review of the campaign materials prepared by Action Aid, CARE International, and other development partners; (iii) develop a program for community peer educators for community mobilization and awareness of HIV and the prevention of human trafficking, and develop community groups for community monitoring; (iv) prepare advocacy actions program on HIV, sexually transmitted disease, and trafficking prevention through the women's unions and other organizations, catering specifically to the needs of communities

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<sup>2</sup> ADB. 2007. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Ho Chi Minh–Long Thanh–Dau Giay Expressway Technical Assistance Project*. Manila (Loan 2374-VIE).

along each of the project roads as identified in a rapid assessment exercise; (v) prepare a plan for provision of HIV, and sexually transmitted disease medical packages to clinics and medical centers along the road; and (iv) develop project performance monitoring indicators on HIV, sexually transmitted disease, and human trafficking prevention by gender and ethnicity.

9. **Project Performance Monitoring.** At the beginning of project implementation, the PSC will establish baseline data for the performance indicator and targets for evaluating project performance in relation to its impacts, outcomes, and outputs in the Project's design and monitoring framework. The performance indicators and targets will be measured 6 months after project completion, and compared with the baseline data. The PSC will prepare a report summarizing key findings of the project performance monitoring and evaluation.

10. **Toll Rates.** At the final stage of project implementation, the PSC will assist VEC in completing a financial assessment and setting a toll structure and rates for the expressway.

11. **Road Safety** The PSC will assist VEC in improving the road safety of the project expressway by (i) carrying out a road safety audit of the highway design and facilities after completion of construction; and installation of roadside safety equipment such as warning signs, delineators, and illumination based on outputs of the road safety audit (in accordance with ADB guidelines on road safety audits);<sup>3</sup> (ii) providing a road safety program with a focus on awareness of access-controlled highway operation immediately after the highway starts operation (to minimize risk of traffic accidents between local residents and highway traffic), and undertaking a road safety awareness campaign, and (iii) investigating causes of traffic accidents that happen during the 6 months after the transfer of the first project highway section to VEC, and proposing necessary countermeasures against traffic accidents.

12. **Operation and Maintenance.** Under the HLD TA, documentation is to be prepared for use in engaging an operation and maintenance concession for O&M of the completed expressway. The PSC will (i) review the documentation prepared under the HLD TA, and (ii) complete bidding documents for the concession and help VEC with the bidding process.

## 2. Schedule and Reporting Requirements

13. The PSC services will be required from July 2009 to June 2014.

14. The PSC will prepare the following documents and reports, and submit them to VEC and ADB: (i) an inception report for all consulting services 1 month after commencing consulting services; (ii) monthly project progress reports for all consulting services during the entire consulting services period; (iii) environmental monitoring reports quarterly during construction; (iv) land acquisition and resettlement monitoring reports until the livelihood development and income restoration program for project-affected persons is completed; (v) a resettlement completion report, and a resettlement and social impact assessment report; (vi) project performance monitoring and evaluation reports 3 months after commencing the consulting services and 6 months after project completion; (vii) a project completion report 3 months after project completion; and (viii) short reports on the studies as specified in the terms of reference upon request by VEC and ADB.

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<sup>3</sup> ADB. 2003. *Road Safety Audit for Road Projects: An Operational Toolkit*. Manila

## **B. Third Party Quality Assurance Consultant**

15. On completion of construction work on any part of the Project, testing will be undertaken to confirm that work was constructed in accordance with the project specifications. This testing will be undertaken by a third party as an independent check that the civil works contractors and the PSC have complied with the requirements of project specifications and quality control measures. The consulting services will be undertaken by a national consulting firm. About 101 person-months (29 person-months of international and 72 person-months of national consulting services) will be required. Expertise will be required in providing quality assurance services for major highway projects, including construction of major bridges.

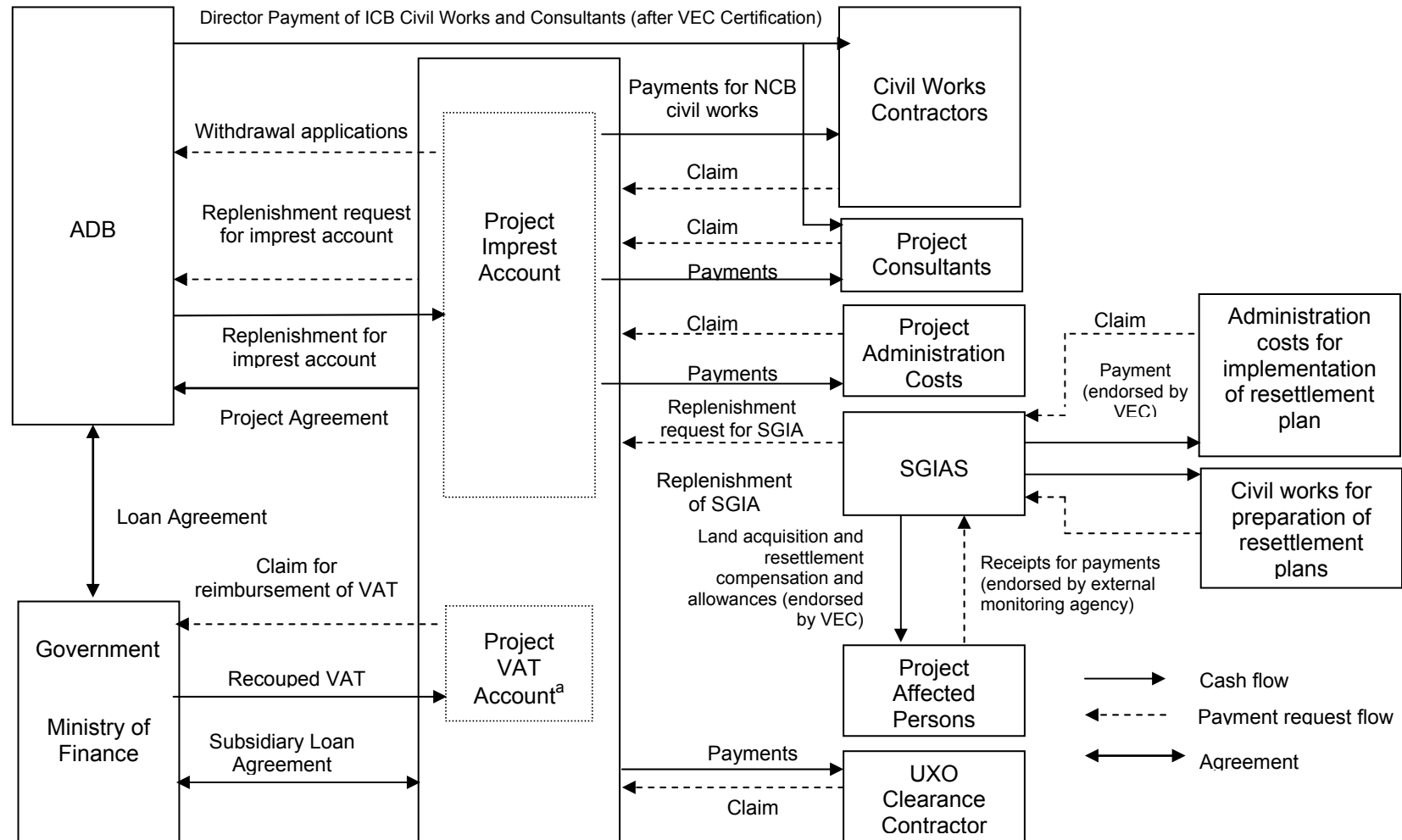
### **1. Scope of Work**

16. The third party quality assurance consultant will provide testing, analysis, and reporting services on an on-demand basis. When requested by VEC, the consultant will undertake testing of any part of the works constructed under the Project to ensure that the work was completed in accordance with contract documentation. Tests may be made on foundations, earthworks, bridge works (including sub- and superstructures), drainage, pavements, and electrical and mechanical systems. The consultant will be required to mobilize all required equipment required for testing, including uncovering work, sampling, and testing. For each item of work requested, a report will be prepared detailing the work done and an opinion on the acceptability of the work tested.

### **2. Schedule and Reporting Requirements**

17. The consulting services by the third party quality assurance consultant will be required from January 2010 to December 2013. The consultant will prepare reports as required for each assignment, and submit a final report at the end of the assignment summarizing the work undertaken and giving an opinion on the acceptability of the completed works.

## FUNDS FLOW DIAGRAM



<sup>a</sup> Recouped VAT will be placed in the Project VAT Account and applied to eligible payments under ICB contracts for the construction of the Long Thanh–Dau Giay section of the expressway.

ADB = Asian Development Bank, ICB = international competitive bidding, NCB = national competitive bidding, SGIA = second generation imprest account, UXO = unexploded ordnance, VEC = Viet Nam Expressway Corporation.

Source: Asian Development Bank.

## SUMMARY ECONOMIC ANALYSIS

### A. Alternative Analysis

1. Additional road capacity is required to accommodate traffic growth in Ho Chi Minh City (HCMC) for vehicles traveling from the city center to the northeast. This additional capacity can be provided by either widening existing highways or constructing a new facility. The existing route follows National Highway (QL) 1 from District 9, in the center of HCMC, through the city of Bien Hoa and to the north via Dau Giay. Land use along most of this route comprises dense developments of mixed residential and commercial use, while in Bien Hoa the route passes large industrial parks. Widening the existing highway would require large-scale clearance of existing structures that would be socially unacceptable and very expensive, given that much of the developments are in what are considered to be prime locations. Due to the magnitude of the social impacts alone, widening the existing highway is not feasible, and any increase in highway capacity must be provided by constructing a new facility. The project preparatory technical assistance considered various mutually exclusive project alternatives such as different pavement types, horizontal and vertical road alignments, alternative bridge designs, culverts, underpasses, and overpasses. The Ho Chi Minh City–Long Thanh–Dau Giay Expressway Construction Project is based on the most cost-effective and least-cost option of those that are technically feasible, and socially and environmentally acceptable.

### B. Traffic Forecast

2. The Project will serve as a new link between HCMC and Dau Giay, and provide access to the proposed Long Thanh international airport. The Project will provide a shorter route for the existing HCMC–Bien Hoa–Long Thanh and Long Thanh–Bien Hoa–Dau Giay routes. The Project's traffic demand was forecast for 25 years for without-project and with-project scenarios. Baseline routine traffic counts were determined at three locations (HCMC, Long Thanh, and Dau Giay) along the proposed project route. Roadside interviews were undertaken at two sites for origin–destination and willingness-to-pay surveys. The origin–destination survey found that 50%–80% of users of the existing roads would use the expressway if no toll was applied. For the with-project scenario, an expressway toll rate of D900 per passenger car unit per km was assumed, giving the highest revenue over the appraisal period. Trip assignment was carried out by allocating interzonal trips to various travel routes within the road network. The routes were selected according to the lowest travel cost, comprising travel time, vehicle operating cost, and the project expressway toll. The willingness-to-pay survey showed that 53% of those who would use the expressway with a zero toll would still use the expressway at a toll rate of D900 per passenger car unit per km. As a result, about 30%–40% of the traffic on the parallel highways (QL1 and 51) would divert to the project expressway.

3. Traffic demand was projected by taking into account expected increases in the gross domestic product (GDP) and estimated elasticity of passenger and freight transport with respect to GDP growth. The GDP growth rates were projected to be 10% for 2007–2010, 8% for 2011–2020, and 6% for 2021–2030. Demand elasticity for passenger and freight traffic to GDP was estimated based on a regression analysis for the three provinces nearest the Project. An allowance was made in the risk analysis (para. 8) for variations of traffic growth to take account of possible variations in the values of the elasticity of demand selected. Given this, the values adopted for elasticity of demand are considered appropriate. The traffic demand of the proposed Long Thanh international airport, starting operation in 2015, was incorporated into the forecasts. The new airport will handle all international passengers in southern Viet Nam and about 10% of

domestic passengers. The traffic forecast for the project expressway is shown in Table A11.1. The forecast traffic volume from 2013 to 2020 is expected to grow at 8.1%–8.5% annually. It will then grow more slowly at 6.4%–6.6% per annum from 2021 to 2025.

**Table A11.1: Traffic Forecast on the Project Expressway**  
(average annual daily traffic)

Year	Passenger			Freight			Total Vehicles	Average Annual Growth Rate (%)
	Car	Small Bus	Large Bus	Small Truck	Medium Truck	Large Truck		
HCMC–Long Thanh								
2013	3,913	4,534	1,828	2,795	2,301	1,830	17,201	
2020	7,250	7,855	2,998	5,026	4,071	3,201	30,401	8.5 (2013–20)
2025	10,022	10,466	3,954	6,969	5,621	4,406	41,438	6.4 (2021–25)
2030	10,110	10,295	3,873	7,061	5,685	4,451	41,475	0.0 (2026–30)
Long Thanh–Dau Giay								
2013	1,874	2,770	1,273	2,075	2,149	1,337	11,477	
2020	3,406	4,616	2,051	3,671	3,770	2,335	19,848	8.1 (2013–20)
2025	4,746	6,192	2,737	5,138	5,265	3,258	27,337	6.6 (2021–25)
2030	6,293	7,970	3,520	6,827	6,986	4,320	35,915	5.6 (2026–30)

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

### C. Valuation of Costs and Benefits

4. The Project's economic costs include (i) capital costs, including physical contingency, land acquisition, and resettlement costs, but excluding taxes and price contingency; and (ii) the operation and maintenance costs including periodic road maintenance. The financial costs were revalued at economic prices by separating the cost items into tradable and nontradable goods and services. The tradable goods and services were converted to the domestic price numeraire using a shadow exchange rate factor of 1.04. A shadow wage rate factor of 0.55 was used to convert the financial wage rate for unskilled labor to an economic opportunity cost of labor.

5. The economic benefits include savings in vehicle operating cost (VOC), passenger time savings on the project expressway, and passenger time savings on the existing road network of the project area. Reduced VOC is the main source of economic benefits for the Project. VOC was calculated for eight vehicle types using the Highway Development and Management Model 4 (HDM-4), taking into account the differences of terrain, road alignment, road roughness, and travel speed. Traffic diverting from existing roads to the project expressway would travel at faster speeds on a smoother road surface, with better vertical and horizontal alignment, less congestion, and a shorter journey distance. Traffic remaining on the existing road network will benefit from a reduction in traffic volume and congestion. All these changes affect vehicle speeds and VOC for all vehicle types. Savings in travel time will occur on the project expressway and the existing road network. After completion of the Project, the travel time between Dau Giay and HCMC is expected to be 0.65 hours—a reduction of about 1.0 hour. The values of travel time savings (Table A11.2) were used to estimate the benefit of reduced travel times. Work-related travel time, which accounts for 30% of total travel time, was evaluated for passenger cars and motorcycles, and 25% of total travel time was evaluated as work-related for the buses. A shadow wage rate factor of 0.55 was applied to unskilled labor. Non-work-related trips were estimated at 30% of the value of work-related trips.

**Table A11.2: Value of Travel Time**

Item	Motorcycle	Car	Small Bus	Large Bus
Average passenger time cost (\$/hour)	0.22	0.75	0.22	0.22
Passenger occupancy (number)	2.00	3.00	10.00	28.00
Total passenger time cost (\$/hour)	0.37	1.72	1.47	4.11

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates

#### D. Project Economic Internal Rate of Return

6. The economic analysis covers 25 years including 5 years of implementation and 20 years of operations. The economic internal rate of return (EIRR) was estimated by comparing the with-project and without-project scenarios for the road network in eastern HCMC. Without the Project, traffic will use the existing road network, which will be congested and expensive to maintain because of rapidly increasing traffic. With the Project, the congestion on existing roads will be reduced, and traffic on the project expressway and existing roads will benefit from faster travel. The Project yields an EIRR of 15.5% for the base-case scenario, indicating the Project is economically viable (Table A11.3). The distribution analysis shows that road users will receive the largest share of net project benefits, accounting for 95% of the total net benefits.

**Table A11.3: Economic Internal Rate of Return**  
(constant 2007 economic prices, domestic price numeraire, \$ million)

Year	Costs			Benefits		Total	Net Benefits
	Capital	O&M	Total	Normal and Diverted Traffic			
				VOC Savings	Time Savings		
2008	4.3		4.3				(4.3)
2009	355.0		355.0				(355.0)
2010	107.3		107.3				(107.3)
2011	107.3		107.3				(107.3)
2012	107.3		107.3				(107.3)
2013		0.6	0.6	15.1	13.7	28.8	28.2
2014		0.6	0.6	67.6	28.0	95.6	95.0
2015		0.7	0.7	99.1	39.4	138.5	137.8
2016		0.7	0.7	96.4	37.6	134.1	133.3
2017		0.8	0.8	93.4	41.3	134.7	133.9
2018		0.7	0.7	99.2	45.4	144.6	143.9
2019		0.9	0.9	105.6	50.1	155.7	154.8
2020		6.1	6.1	112.4	56.1	168.5	162.5
2021		1.1	1.1	111.3	61.4	172.7	171.6
2022		1.2	1.2	114.0	67.0	181.0	179.8
2023		1.3	1.3	119.6	73.0	192.7	191.4
2024		1.4	1.4	124.4	79.1	203.6	202.2
2025		1.4	1.4	150.5	85.3	235.9	234.4
2026		1.4	1.4	175.4	87.8	263.2	261.8
2027		1.7	1.7	201.1	90.5	291.5	289.9

Year	Costs			Benefits			Net Benefits
	Capital	O&M	Total	Normal and Diverted Traffic		Total	
				VOC Savings	Time Savings		
2028		6.9	6.9	229.6	94.1	323.7	316.8
2029		2.0	2.0	260.5	98.2	358.7	356.8
2030		2.1	2.1	326.6	126.2	452.8	450.6
2031		2.1	2.1	326.6	126.2	452.8	450.6
2032	(408.7)	2.1	(406.6)	326.6	126.2	452.8	859.4
Economic Net Present Value = \$							248.6
Economic Internal Rate of Return =							15.6%

( ) = negative, O&M = operation and maintenance, VOC = vehicle operating cost.

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

## E. Sensitivity Analysis

7. Sensitivity analysis was undertaken for key risk factors and assumptions that could influence the Project's viability. The analysis confirms the robustness of the Project's economic viability. The capital cost would have to increase by 45% or project benefits decrease by 32% for the EIRR to fall below the cutoff rate of 12%. The Project remains economically viable in all tested scenarios (Table A11.4).

**Table A11.4: Sensitivity Analysis**

Scenario	Change (%)	EIRR (%)	Economic Net Present Value (\$ million)	Switching Value (%)
Base case		15.6	249	
Increase in costs	plus 10	14.6	191	45.1
Decrease in benefits	minus 10	14.5	171	31.9
Implementation delay	1 year	15.4	237	
Cost and benefit	plus 10, minus 10	13.6	116	

EIRR = economic internal rate of return.

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

## F. Risk Analysis

8. A risk analysis was carried out to determine the degree of uncertainty of the Project (Table A11.5). The analysis was based on 5,000 iterations of a Monte Carlo technique. The EIRR's values range from a maximum of 17.3% to a minimum of 13.9%, with a mean of 15.6%. The simulations indicate a minimum EIRR above 12%.

**Table A11.5: Distribution Used in the Risk Analysis**

Input	Distribution	Maximum	Minimum	Mean	Standard Deviation
Capital cost	Triangular	1.10	0.90	1	0.04
Benefit	Triangular	1.10	0.90	1	0.04

Source: Asian Development Bank estimates.



## FINANCIAL ANALYSIS

1. The financial viability of the Project was assessed by analyzing the financial internal rate of return (FIRR) and the Project's financial statements. The FIRR analysis assesses the project return, comparing it to the weighted average cost of capital (WACC). The analysis of the financial statements focuses on the Project's debt service repayment capacity and capital structure. The financial analysis examines the aggregated costs and benefits from toll revenues of the Ho Chi Minh City–Long Thanh–Dau Giay Expressway. The FIRR of the Project is calculated for 2008–2033 using constant 2007 prices. The projected financial statements are prepared in current terms, over the same period. The foreign inflation rate was assumed to be 0.8%, and the local inflation rate 18.3% for 2008, 10.2% for 2009, 6.5% for 2010, 4% for 2011, and 5.0% for 2012 onward during the projection period. The foreign exchange rate used for 2008 is D16,000 to \$1.

### A. Analysis

2. **Assumptions.** The main project costs are capital investment and operation and maintenance (O&M) costs. The capital costs for the highway include civil works such as earthwork, pavement and bridges, and land acquisition costs. The O&M costs include annual expenses incurred in operating the highway. All capital costs are expressed in real terms using constant 2007 prices. The FIRR was calculated on the basis of the base costs, excluding price contingency and financial charges during implementation.

3. The financial benefits for the Project are measured by the operating revenue from toll collection by users. The revenues are projected based on the forecast of future traffic and a base toll rate of D900 per passenger car unit per kilometer (km). Tolls to be applied to the operation to the Project are in constant 2007 prices.

4. **WACC.** The FIRR was compared with the WACC of 1.1% (Table A12.1). The WACC, after-tax, in real terms was calculated using estimated capital mix and costs of funds. The assumptions are as follows: (i) the applicable 5-year swap rate plus a provision for ADB's spread of 0.2% and onlending premium of 0.2% are used for ADB's ordinary capital resources debt; (ii) for the loan financed by the Japan Bank for International Cooperation (JBIC), 1.2% for construction and 0.01% for consulting service plus onlending premium of 0.2%; and (iii) the cost of counterpart funding is assumed to be 10.5%, which is the estimated interest of government-guaranteed bonds. The cost of debt is adjusted to reflect the impact of income tax of 28%. The nominal cost of debt is converted to the real cost of debt by applying the average domestic inflation rate for domestic debt, and the average international inflation rate for foreign-currency-denominated debt.

5. **FIRR.** The FIRR for the Project, computed on an after-tax basis, is 4.0%. This exceeds the WACC of 1.1%. The results of sensitivity tests are shown in Table A12.2. The FIRR exceeds the WACC for each sensitivity scenario.

**Table A12.1. WACC Computation**

Item	Amount (\$ million)	Weight	Nominal Cost	Tax Adjustment Nominal Cost	Inflation Rate	Real Cost	Composite Cost
ADB OCR	410.1	44.0%	4.36%	3.14%	0.80%	2.32%	1.02%
JBIC construction	503.3	54.0%	1.40%	1.01%	0.80%	0.21%	0.11%
JBIC consultancy	13.3	1.4%	0.21%	0.15%	0.80%	0.00%	0.00%
VEC	5.7	0.6%	10.50%	7.56%	8.50%	0.00%	0.00%
<b>Total</b>	<b>932.4</b>	<b>100.0%</b>					<b>1.13%</b>

ADB = Asian Development Bank, OCR = ordinary capital resources, JBIC = Japan Bank for International Cooperation, VEC = Vietnam Expressway Corporation.

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

**Table A12.2. Sensitivity Analysis**

		FIRR	WACC	NPV
	Scenario	(%)	(%)	(\$ million)
1.	Base case	4.0	1.1	356
2.	Traffic volume decreased by 10%	3.4	1.1	283
3.	Capital cost increased by 10%	3.5	1.1	321
4.	O&M costs increased by 10%	3.9	1.1	354
5.	Combination of 2, 3 and 4	3.0	1.1	246

FIRR = financial internal rate of return, NPV = net present value, O&M = operation and maintenance, WACC = weighted average cost of capital,

Source: Vietnam Expressway Corporation and Asian Development Bank estimates.

## **B. Financial Projections**

6. Projected financial statements for the Project (income statement, balance sheet, and cash-flow statement) were prepared to monitor the debt service repayment capacity and capital structure of the Project on a stand-alone basis.

7. **Assumptions.** The financial projections are presented in current price terms, which take into account the potential impact of domestic and foreign inflation. The assumption of the domestic and international inflation rates is described in paragraph 1. Depreciation of the dong against the dollar is assumed to be 1.3% per annum, based on the historical trend of the past 5 years. Toll rates will be adjusted to account for domestic inflation; there will be no real increase in toll rates over the project life span. A corporate tax rate of 28% is assumed, in line with corporate tax laws, which allows for the following: (i) in the first 2 years of profit-making operations, Vietnam Expressway Corporation (VEC) is tax exempt; (ii) in the following 3 profit-making years of operations VEC will pay 50% of the 20% corporate tax; (iii) in next 10 years VEC will pay 20%; and (iv) in years thereafter, VEC will pay the full 28% corporate tax. The 10% value-added tax is included in the toll rate.

8. The projected O&M costs, comprising annual routine costs and periodic road maintenance costs, are based on the results of engineering studies. The annual O&M costs are approximately \$0.6 million at 2007 prices. The cost of periodic maintenance to overlay the highway is assumed to be \$6 million every 8 years starting in 2020. These O&M costs are

assumed to increase in accordance with the domestic inflation rate of 5% per annum. A depreciation period of 40 years is assumed, which reflects the current depreciation regulation.

9. **Financing Plan.** The project cost will be funded by ADB's ordinary capital resources, the JBIC loan, and government counterpart funds (Table A12.3). For ADB's ordinary capital resources and the JBIC loan, VEC will borrow the funds from the Ministry of Finance based on subsidiary loan agreements. VEC plans to borrow in Vietnamese dong, and will pay an onlending premium of 0.2% per annum in addition to the interest rate for ADB loans. The counterpart funds will be provided from VEC's own internal source.

**Table A12.3. Financing Plan**

Funding Source	Financing Plan
ADB OCR	Onlending from the Government to VEC
JBIC loan	Onlending from the Government to VEC
VEC	VEC's internal source
ADB = Asian Development Bank, JBIC = Japan Bank for International Cooperation, OCR = ordinary capital resources.	
Sources: Asian Development Bank and Vietnam Expressway Corporation.	

10. **Financial Projections.** The financial projections show that the accumulated net cash flow remains positive (Table A12.4), which means that VEC will not require subsidies throughout the operation period. As explained in para. 5, since the amount of the counterpart funds from VEC will be only 0.6% of the total project cost, the initial debt–equity ratio for the Project is about 98:1 in 2013. However, in 2022, or after 10 years of operation, the ratio will be improved to 75:25 because of increasing toll revenue. Although the Project will have a debt service coverage ratio of less than 1.0 in 2020 because of periodic maintenance, it will achieve a sufficient debt service coverage ratio of more than 1.2, except in 2020, and maintain enough accumulated cash flow to cover the debt service. Therefore, the Project's debt service capacity is considered to be sufficient and sustainable.

**Table A12.4. Summary Financial Statements for the Project (2013–2025)**  
(\$ million)

Item	2013	2015	2018	2020	2022	2025
Gross Revenue	43.7	51.5	73.8	99.7	131.1	179.6
Depreciation	17.6	17.6	17.6	17.6	17.6	17.6
Net Operating Profit / (Loss)	15.2	7.7	21.4	27.9	57.2	90.7
Accumulated Cashflow	43.9	76.6	150.8	169.6	220.8	360.9
Total Asset	914.7	925.5	965.4	948.9	964.9	1,052.1
Equity	15.3	27.8	86.1	145.5	242.3	462.7
Loan	899.4	897.7	879.3	803.5	722.6	589.4
Debt Service Coverage Ratio (%)	—	1.69	1.54	1.12	1.55	1.99
Debt to Total Assets	0.98	0.97	0.91	0.85	0.75	0.56
Cash Available for Debt Service	32.9	42.7	57.3	67.1	94.5	124.6
Debt Service	0.0	25.3	37.1	60.1	60.8	62.5

— = not applicable.

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

11. **Conclusion.** Considering the financial outcome that (i) the FIRR exceeds the WACC, and (ii) the Project has adequate cash flow to cover its O&M costs and debt service repayment, the Project is considered financially viable.

**Table A12.5. Financial Internal Rate of Return**  
(\$ million)

Year	Capital Investment (excl. VAT)	Cost			Total	Revenue	Cash Flow (After Corporate tax)
		O&M	VAT	Corporate Tax			
2008	70.6				70.6		(70.6)
2009	177.6				177.6		(177.6)
2010	171.6				171.6		(171.6)
2011	172.0				172.0		(172.0)
2012	74.2				74.2		(74.2)
2013		0.6	2.8	4.4	7.8	30.8	23.0
2014		0.7	2.9	4.8	8.4	32.3	23.9
2015		0.7	3.1	5.3	9.1	33.8	24.8
2016		0.8	3.8	7.3	11.8	41.6	29.7
2017		0.8	3.9	7.5	12.2	42.6	30.3
2018		0.9	4.0	7.7	12.6	43.6	31.0
2019		1.0	4.9	10.2	16.0	53.5	37.5
2020		7.0	5.0	8.8	20.8	54.8	34.0
2021		1.1	5.1	10.5	16.7	55.6	38.9
2022		1.2	6.1	13.1	20.4	67.0	46.6
2023		1.3	6.2	13.2	20.7	68.0	47.3
2024		1.4	6.3	13.3	21.0	69.1	48.1
2025		1.6	7.5	16.2	25.2	82.5	57.2
2026		1.7	7.4	15.6	24.7	80.9	56.2
2027		1.8	7.2	15.1	24.1	79.4	55.2
2028		7.9	8.4	16.2	32.5	91.9	59.4
2029		2.1	8.2	17.1	27.4	90.3	62.9
2030		2.3	8.1	16.5	26.9	88.8	61.9
2031		2.3	8.9	18.2	29.5	97.9	68.5
2032		2.3	8.5	17.1	27.9	93.3	65.4
2033	(345.0)				(345.0)		345.0
						<b>FIRR (%)</b>	3.99
						<b>WACC (%)</b>	1.13
						<b>NPV</b>	356.5

( ) = negative, excl. = excluding, FIRR = financial internal rate of return, NPV = net present value, O&M = operation and maintenance, VAT = value added tax, WACC = weighted average cost of capital.

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

## FINANCIAL AND INSTITUTIONAL ANALYSES OF VIETNAM EXPRESSWAY CORPORATION

1. Vietnam Expressway Corporation (VEC) was established in late 2004 with a mandate to promote expressway development. VEC does not yet own its expressway assets and is in the process of developing three expressway projects. Institutional and financial management analyses of VEC were conducted to monitor its financial management capacity. Financial analysis of VEC was assessed from VEC's consolidated projected financial statements for 2008–2025.

### A. Institutional and Financial Management Analysis

2. VEC was established as a state-owned company on 6 October 2004 by the Ministry of Transport Decision No. 3033. VEC's operation is mainly governed by two important legal documents: its corporate charter, promulgated by Ministry of Transport Decision No. 3466, 12 November 2004; and the Law on State Enterprise. Pursuant to Decision No. 3033, VEC's main activities include (i) investing in expressway construction, management, and maintenance; and organizing toll collection on national highways; (ii) investing in construction of other transport infrastructure in all modes; (iii) managing and operating services adjacent to its expressways, such as motels, restaurants, advertisements, and construction materials; (iv) providing technical consulting services in the transport sector, research and development of national highway systems, and design and supervision of transport facility works; and (v) providing research and development of services in areas adjacent to expressways. In accordance with Article 166 of the Law on Enterprises, VEC will be converted from a state-owned company to either a limited liability company or a shareholding company no later than 1 July 2010.

3. VEC's operations are divided into five functional divisions and three project management units. VEC currently has 120 employees. VEC's organization structure was established in accordance with the provisions of the Law on State Enterprises and includes (i) management board and internal audit unit, (ii) management, and (iii) eight operation departments including three project management units. The organization structure is given in Figure A13.

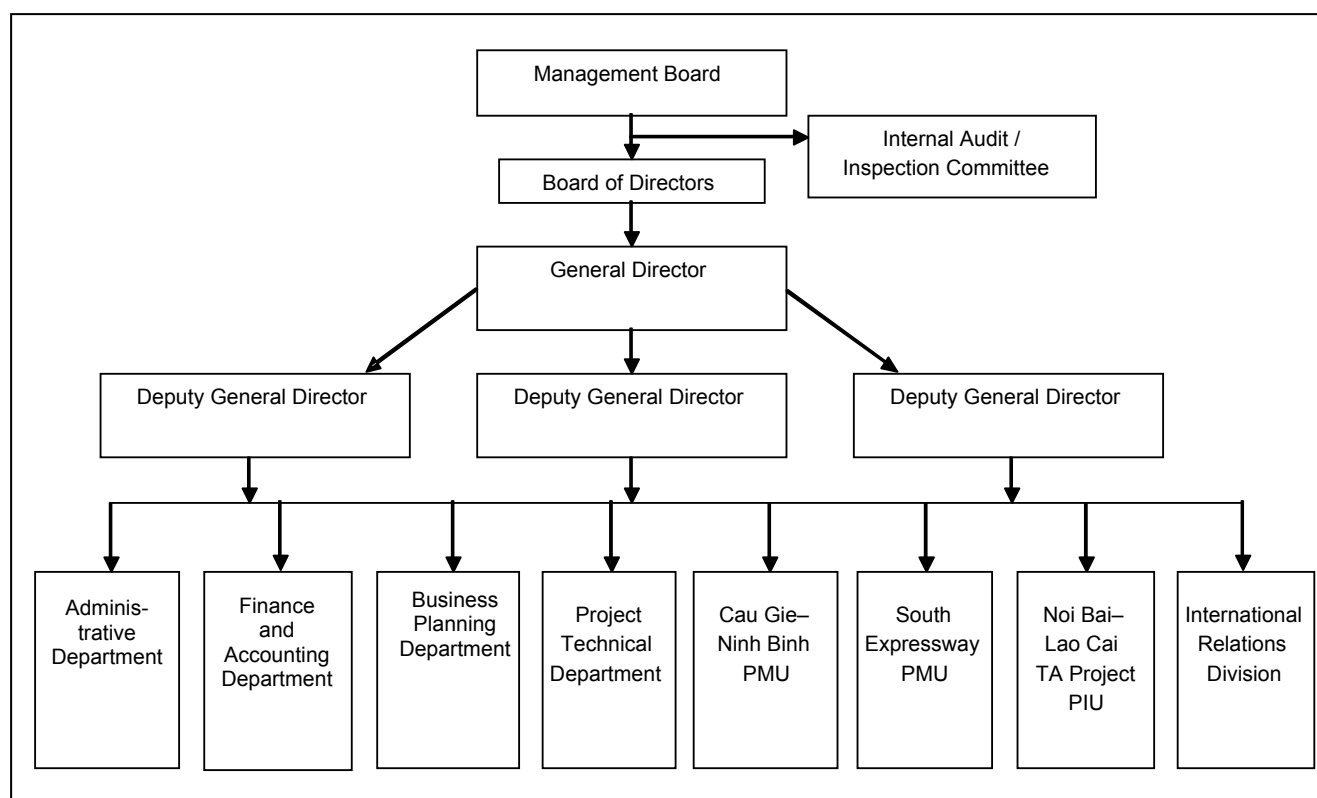
4. The finance and accounting department is responsible for funds and asset management, and implementation of financial accounting and bookkeeping. VEC has issued audited financial statements for 2004, 2005, and 2006. The financial statements are prepared in accordance with the Vietnamese accounting system issued by the Ministry of Finance. The reports include a balance sheet, profit and loss report, and cash-flow statement. They are prepared by accountants using a computerized accounting system connected to all transactions in an online general ledger. The reports are reviewed by an internal auditing control board, and audited by an independent external auditor annually. An external auditor has reviewed the audited financial statements of past years and rated them satisfactory with unqualified opinion. The financial management system and VEC staff are considered adequate for accounting purposes. However, VEC should develop its own financial information system to make a financially sustainable expressway investment plan that takes into account monitoring and planning cost-recovery tariffs, forecasting traffic volume, making projected financial statements, and developing a debt-management strategy. Under the ADB-funded Ho Chi Minh City–Long Thanh–Dau Giay Technical Assistance Project<sup>1</sup> (HLD TA), tasks have been included under the

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<sup>1</sup> ADB. 2007. *Report and Recommendation of the President to the Board of Directors on a Proposed Loan to the Socialist Republic of Viet Nam for the Ho Chi Minh City–Long Thanh–Dau Giay Expressway Technical Assistance Project*. Manila (Loan 2374-VIE).

consulting services contract to design, procure, and commission a new financial management system.

**Figure A13: Organizational Structure of Vietnam Electricity Corporation**



PMU = project management unit, PIU = project implementation unit, TA = technical assistance, VEC = Vietnam Expressway Corporation.

Source: Vietnam Expressway Corporation.

## B. Financial Projections

5. VEC is currently engaged in the realization of three expressway projects and estimates that initial expressway operation will launch in 2011. Therefore, VEC will begin generating toll revenues from 2011. Financial statements of fiscal year 2006 show the company's modest profitability of \$3 million; this income came from interest earned from deposits, not from toll revenue. VEC's charter capital is D1,000 billion, or about \$62 million.

6. **Financial Projections:** The financial analysis of VEC is carried out in current terms on an after-tax basis. VEC's projected financial statements are prepared by consolidating VEC's current assets and the three expressway projects that are currently under construction or at the detailed feasibility study stage: (i) the Cau Gie–Ninh Binh Expressway (50 km, currently under construction); (ii) the Noi Bai–Lao Cai Expressway (244 km); and (iii) Ho Chi Minh City–Long Thanh–Dau Giay Expressway (55 km). Total capital expenditures on the three projects will exceed \$2.5 billion. The financial projections assume that VEC will charge D900 per passenger car unit per km for the Ho Chi Minh City–Long Thanh–Dau Giay Expressway (the Project), and that the toll rate will be adjusted to account for inflation. Other assumptions, such as corporate taxes, value-added taxes, depreciation, and international and local inflation rates, reflect the assumptions used in Appendix 12.

7. **Results:** The financial projections of VEC and the key financial ratios are shown in Table A13. VEC will have net operating losses until 2016 because the toll revenue is not sufficient to cover depreciation costs and interest in the initial operation stage. However, VEC can maintain positive accumulated cash flow throughout the operating period to cover debt services. Gross revenue will increase to generate net operating profit from 2017 with the gradual increase of traffic volume. The debt–equity ratio will be 95:5 in 2013, and improve to 77:23 in 2022 because of increased retained earnings. Despite its large-scale investment plan, VEC will maintain its financial viability in the medium and longer term without additional subsidies during operations.

**Table A13: Financial Projections of Vietnam Electricity Corporation (2013–2025)**  
(\$ million)

Item	2013	2015	2018	2020	2022	2025
Gross Revenue	120.4	152.1	276.8	343.5	496.6	635.7
Depreciation	57.2	57.2	57.2	57.2	57.3	57.3
Interest	46.4	123.3	126.6	124.3	115.9	71.9
Net Operating Profit / (Loss)	(0.9)	(49.5)	63.4	105.8	222.8	361.7
Accumulated Cashflow	120.5	173.8	308.6	393.7	627.1	991.1
Total Assets	2,557.3	2,564.0	2,545.7	2,516.3	2,638.6	2,830.7
Debt	2,441.4	2,513.7	2,416.0	2,234.2	2,025.5	1,343.1
Net Equity	115.9	50.3	129.7	282.1	613.2	1,487.6
Cash Available for Debt Service	107.6	137.9	212.2	243.4	311.9	381.7
Debt Service	1.1	132.3	184.5	209.4	212.6	221.2
Debt Service Coverage Ratio (%)	—	1.04	1.15	1.16	1.47	1.73
Debt to Total Assets	0.95	0.98	0.95	0.89	0.77	0.47

( ) = negative, — = not applicable.

Sources: Vietnam Expressway Corporation and Asian Development Bank estimates.

8. **Proposed Financial Covenants.** A minimum debt service coverage ratio of 1.2 is proposed as a financial covenant to ensure VEC's debt service capacity and efficient operation. The debt service coverage ratio could undercut the limit of initial operations until 2020 and will achieve the limit after 2021. VEC will submit the proposed toll structure and rates for Asian Development Bank review and comment; they should satisfy the minimum debt service coverage ratio of 1.2 times within 6 months of the opening of the project highway.

## SUMMARY POVERTY REDUCTION AND SOCIAL STRATEGY

**Country/Project Title:** Viet Nam: Ho Chi Minh City–Long Thanh–Dau Giay Expressway Construction Project

**Lending/Financing  
Modality:**

Project Loan

**Department/  
Division:**

**Southeast Asia Department /  
Infrastructure Division**

### I. POVERTY ANALYSIS AND STRATEGY

#### A. Linkages to the National Poverty Reduction Strategy and Country Partnership Strategy

Viet Nam's record in poverty reduction has been impressive in the last decade. The proportion of the population living 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 the percentage of 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.

To support the Government in pursuing balanced economic growth and poverty reduction, the Country Strategy and Program Update 2006–2008 for Viet Nam and the Poverty Partnership Agreement between Viet Nam and the Asian Development Bank (ADB) emphasize trade and access to markets within the country and the region. In the recent years the Southern Focal Economic Zone (SFEZ) has made a great contribution to economic development in Viet Nam. The country is experiencing rapid economic growth, centered on exports to world markets; and through increasingly bilateral trade in agriculture, aquatic, mining, and industrial products. Sustained development requires improved infrastructure that accommodates trade within the country and bilateral trade.

#### B. Poverty Analysis

**Targeting Classification:** General intervention

##### 1. Key Issues

In the SFEZ, the Ho Chi Minh City (HCMC)–Long Thanh–Dau Giay Expressway (HLD expressway) will be an essential trunk road for the highway network. The general area that will be served will include the provinces in the SFEZ, Mekong Delta, highlands, and south central Coast. The expressway will provide a connection to the proposed Long Thanh international airport for HCMC, which will serve international and national traffic. Expressways are intended to serve long distance traffic; they do not necessarily benefit people who are local to the expressway. Even though expressways generally do not directly address local poverty they do address it indirectly by facilitating continued economic growth. The proposed HLD expressway is located in HCMC and Dong Nai Province, one of the least poor provinces with a poverty rate of 10.33% (Viet Nam Household Living Standard Survey 2002). Given the low rate of poverty in the project area, and that the expressway is intended to serve long distance traffic, the 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, and increasing access to employment opportunities. Remoteness and disconnection are often identified as factors for poor people's inability to benefit from economic growth. Road connectivity under the Project might contribute to local people's ability to benefit from economic growth in the long run. The Project is classified as GI based on these reasons.

##### 2. Design Features.

The Project does not include pro-poor design except for the potential for daily wage employment generation for the poor during construction.

#### C. Poverty Impact Analysis for Policy-Based Lending

Not Applicable.

### II. SOCIAL ANALYSIS AND STRATEGY

#### A. Findings of Social Analysis

##### Key Issues.

The 51-kilometer HLD expressway is located within the main engine of economic growth in Viet Nam. The establishment of expressway will contribute to an improved transport system and support economic development of the area. The expressway will benefit major business centers in the south of Viet Nam, including: HCMC, Ba Ria, Vung Tau, and Dong Nai Province.



The primary beneficiaries of the Project include large investors, traders, and vehicle operators. The expressway will benefit business and investors by reducing transport costs and reducing travel time for the transportation of goods and materials. With increased investment in the SFEZ this will create employment opportunities for skilled and unskilled labor. During construction the demand for unskilled labor will increase and both skilled and unskilled labor will benefit from increased access to the labor market. The socioeconomic profile of the Project shows that 27% of the population is between 18 and 35 years of age; they will benefit from better access to the labor market. The socioeconomic profile of the Project districts indicates that 35% of households own small businesses. They are less likely to benefit from the expressway since the expressway will be more cost-effective for transport of large quantities of goods. Most people in the project area do not travel long distances to their place of work; therefore, the expressway will only generate limited benefits in terms of easier commuting to work for the local people.

The main social and livelihood impacts of the Project are related to resettlement and relocation, HIV, human trafficking, and road safety. During construction an additional impact for local residents may be increased dust and noise pollution. Construction of the expressway may lead to an increase in land prices in the project area. This may attract outsiders to purchase land for residential and business purposes resulting in a change in the social nature and demographics of the project districts. Of the 957 households that will be directly affected by expressway construction, about 30% will be relocated. Relocation and livelihood restoration are the key issues in terms of the social impact of the Project. The resettlement plan addresses the relocation and livelihood impact of the Project.

The expressway will increase the risk of exposure to HIV and the trafficking of women and children during construction and postconstruction phase due to increased transit traffic along the highway. In 2003, HCMC had the greatest number of HIV infected people, accounting for a fourth of all infections in the country. The city has the fastest growing epidemic in the country with HIV prevalence among adults aged 15–29 estimated to be about 1.2. The number of infected females relative to males is increasing each year, indicating increasing heterosexual transmission. The influx of construction workers in the Project during the construction phase and increased volume of transit traffic in the postconstruction period will increase the risk of HIV and human trafficking. With improved transportation and infrastructure, existing risks and vulnerabilities for HIV transmission, drug use, and trafficking along the highway will significantly increase if targeted risk mitigation initiatives are not implemented. Data from social assessments show that 53% of the households in the project area have had some HIV awareness training or promotional activities on HIV. However, awareness about trafficking issues is much lower among surveyed households than for HIV. Reports from nongovernment organizations and aid organizations indicate that a high rate of human trafficking in the south. To mitigate these risks, a HIV awareness and prevention of human trafficking component is included in the Project to minimize exposure of the local population to these issues. The program includes capacity building of the Executing Agency; awareness campaigns in construction camps, and communities in the project districts; development of peer educators; and community monitoring distribution of medical equipment to relevant health facilities. The program includes community awareness programs on human trafficking, safe migration, and community monitoring.

A road safety awareness program is included in the Project to address the need for behavioral change on the part of road users when the expressway opens. The environment management plan includes measures to address dust and pollution related issues.

## **B. Consultation and Participation**

1. Provide a summary of the consultation and participation process during the project preparation.

Consultation meetings were held with project affected people to discuss the impact of the Project in terms of resettlement and environmental impacts. Meetings were held in all of the communes within the project area and the results of these meetings were incorporated into the project resettlement plan, environmental impact assessment, and EMP.

2. What level of consultation and participation (C&P) is envisaged during project implementation and monitoring?  
☐ Information sharing    ☒ Consultation    ☐ Collaborative decision making    ☐ Empowerment

During project construction, consultation will mainly relate to the preparation and implementation of the updated resettlement plan. A series of consultations with affected people will be held during the detailed measurement survey and updating of the resettlement plan.

To minimize the risk of the expressway dividing local communities by disrupting existing local road communications, options for including underpasses, overpasses, and frontage roads will be discussed with local communities during the early stages of detailed engineering design. The communities will be consulted to determine the maximum distance between facilities to cross the expressway, by either overpasses or underpasses, so that livelihood and social networks and the existing local road system are not significantly disrupted. Community consultations will be facilitated by social development specialists engaged as part of the construction supervision consultant's team.

3. Was a C&P plan prepared? ☐ Yes ☒ No

If a C&P plan was prepared, describe key features and resources provided to implement the plan (including budget, consultant input, etc.). If no, explain why.

A separate C&P plan is not required. Consultation and participatory processes have been mainstreamed in relevant project components and documents such as the resettlement plan, environmental impact assessment, gender strategy, and program for the prevention of HIV and human trafficking. The resettlement plan and environmental impact assessment report include appendixes on the consultation process.

## C. Gender and Development

### 1. Key Issues.

The Project will improve the transportation system and facilitate economic development. In terms of gender, the Project impacts relate to (i) increased risks of exposure to HIV and trafficking of women and children during construction and postconstruction phase due to the large volume of transit traffic along the road; (ii) poor women in the project area at risk economically (loss of productive asset due to land acquisition) and socially (risks posed by HIV, road safety, and possible human trafficking) than males. However, the Project will create employment opportunities for poor women during construction. In addition, in the long run the increased investments in the SFEZ will create demand for both skilled and unskilled labor. An increase in labor market demand will have an impact on employment opportunities for women. However, the employment in the factories in the economic zone can have both positive and negative impacts. The women migrant workers might face exploitative working conditions with low wages in the SFEZ. In addition, women migrant workers could be deceived and be trafficked to the SFEZ. Measures to address the potential negative impacts of women migrant workers in the SFEZ are outside the project scope. The potential negative impacts relating to resettlement, HIV, and human trafficking will be addressed through the gender strategy in the resettlement plan and HIV awareness and prevention of human trafficking program.

2. Key Actions. ☐ Gender plan ☒ Other actions/measures ☐ No action/measure

A project-specific gender strategy is been prepared and included in the resettlement plan, the HIV and human trafficking awareness program includes action targeted at women. The following are the key features of the gender strategy.

The gender strategy includes specific activities to ensure that project benefits will accrue to women. The project area includes a small number of households from ethnic minorities who are generally well-integrated into mainstream society. However, as appropriate, representatives of women from these ethnic minorities will be included in all meetings and discussions.

- consultation meetings on resettlement activities will be held separately with women, households headed by women, and elderly women;
- the district resettlement committees will include representatives from district women's unions, and women from affected households;
- at project inception, a capacity-building training program on resettlement activities will be designed for both women and men commune officials, and women and men from affected households to orient them about resettlement activities; participation of poor women, and households headed by women in the training will be ensured; the training will include representatives from the Executing Agency, women's unions, and youth unions will be involved in resettlement committees;
- the training will include information on resettlement activities, compensation, management of compensation money, grievance procedures, and impacts of the Project on livelihood activities related to loss of agricultural produce and other productive assets; the objective of the training is to provide affected communities with an understanding of resettlement issues, better access to compensation resources, and information on grievance procedures;
- the capacity-building training on resettlement issues will be conducted separately for women, including households headed by women;
- during preparation of the detailed measurement survey, men and women from the households will participate in discussions of detailed measurement survey activities;
- livelihood activities will be planned with active involvement of women; needs assessments for livelihood activities and skill development of livelihood activities will be conducted separately for women, poor women, households headed by women, and elderly women;
- monetary compensation will be given to both men and women from the households; specific attention will be provided for poor women, households headed by women, and elderly women in paying the compensation on time and developing relevant livelihood activities;
- the resettlement plan will include joint registration of land rights in the names of husband and wife in instances where land is acquired;

- relocation of houses in the resettlement sites will include separate discussions with women from affected persons households, households headed by women, and elderly women that include the selection of sites, housing structure, and other social infrastructure;
- special measures will be taken in the relocation of elderly, disabled, and households headed by women in terms of location of houses together with their extended families/relatives; elderly and disabled women and men will not be allocated to apartments so that they do not have to climb stairs; compensation and housing options must be provided according to their choice;
- an HIV and human trafficking awareness campaign will be conducted during construction by the Executing Agency, and provincial and district authorities with active involvement of communities, women's unions, youth union, health workers, and female community leaders and members. Women from affected households will be involved in local monitoring of the program at the local level. The educational materials, workshop, and campaign on HIV and human trafficking prevention program will be conducted separately for women;
- gender sensitization training related to gender and resettlement, HIV, and human trafficking will be conducted for resettlement committees, relevant staff from the Executing Agency, and staff of project Implementing Agency;
- as per the Labor Code (as amended in 2002) all employment for the Project will respect Government commitments to gender equity including staffing in the project implementation unit and resettlement committees. Construction contractors will ensure that (i) no child labor will be used; (ii) no differential wages will be paid to men and women for work of equal value; (iii) basic facilities (water, sanitation) for men and women workers will be provided in the construction camps; (iv) separate bathing and toilet facilities are provided for women workers; (v) day-care services will be provided for the children of women construction workers;
- disaggregated monitoring indicators by gender will be developed for monitoring social benefits, economic opportunities, livelihood program, road safety, resettlement activities, and the HIV and human trafficking prevention program. Monitoring indicators will include (i) women's participation in resettlement committees, capacity-building training, consultation meetings; participation in livelihood training; restoration of income; (ii) recruitment of women laborers in construction, provision of separate bathing and toilet facilities in the construction site; child care facility in construction camp; (iii) participation of women in road safety awareness campaign; (iv) women and girls' awareness on safe migration, human trafficking, and HIV;
- the gender strategy will be implemented by the Executing Agency in collaboration with the project construction supervision consultants; and
- international and national consultants on social development and gender will be included in the consulting services for implementing the gender strategy. Terms of reference for social development and gender specialists are included in consulting services. The budget to implement the gender strategy is included in the resettlement plan and consulting service package, separate budget is allocated for the HIV awareness and prevention of human trafficking program. The international and national social development and gender specialists will monitor implementation of overall gender strategy in various components of the Project.

### III. SOCIAL SAFEGUARD ISSUES AND OTHER SOCIAL RISKS

Issue	Significant/Limited/ No Impact	Strategy to Address Issue	Plan or Other Measures Included in Design
Involuntary Resettlement	Significant	A full resettlement plan was prepared	<input checked="" type="checkbox"/> Full Plan <input type="checkbox"/> Short Plan <input type="checkbox"/> Resettlement Framework <input type="checkbox"/> No Action
Indigenous Peoples	Limited	Of the 800 affected households, only 11 are ethnic minority households. The 11 households are spread around the project districts and are integrated into the mainstream Kinh society in terms of language, education, housing, clothing, and daily livelihood activities and do	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> Indigenous Peoples Framework <input type="checkbox"/> No Action  Specific measure is included in the resettlement plan to ensure that the 11 households do not get marginalized during the process

Issue	Significant/Limited/ No Impact	Strategy to Address Issue	Plan or Other Measures Included in Design
		not maintain any distinct livelihood pattern. There is no differential impact of the Project on the 11 ethnic households.	of resettlement.
<b>Labor</b> <input checked="" type="checkbox"/> Employment opportunities <input type="checkbox"/> Labor retrenchment <input checked="" type="checkbox"/> Core labor standards	No Impact	The Project will not have direct impact on labor retrenchment. It will create wage employment opportunities during construction. The construction contracts will include provision of fair wages, equal wages for men and women for equal work, and basic facilities in the construction camp.	<input type="checkbox"/> Plan <input checked="" type="checkbox"/> Other Action <input type="checkbox"/> No Action  Civil works contracts will include requirements for core labor standards.
<b>Affordability</b>	No Impact	The expressway project will promote economic growth. Affordability will increase through improved economic opportunities.	<input type="checkbox"/> Action <input checked="" type="checkbox"/> No Action
<b>Other Risks and/or Vulnerabilities</b> <input checked="" type="checkbox"/> HIV <input checked="" type="checkbox"/> Human trafficking <input type="checkbox"/> Others(conflict, political instability, etc), please specify	Significant	The expressway can increase potential risk of HIV and human trafficking. To address this risk a HIV and human trafficking program was designed	<input checked="" type="checkbox"/> Plan <input type="checkbox"/> Other Action <input type="checkbox"/> No Action  An HIV and human trafficking program is included in the Project
<b>IV. MONITORING AND EVALUATION</b>			
Are social indicators included in the design and monitoring framework to facilitate monitoring of social development activities and/or social impacts during project implementation? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			