

## SOUTHERN HIGHWAY PROJECT

(BL-0001)

### EXECUTIVE SUMMARY

**BORROWER AND GUARANTOR:** Government of Belize

**EXECUTING AGENCY:** Ministry of Works (MOW)

**AMOUNT AND SOURCE:**

|                         |                         |
|-------------------------|-------------------------|
| IDB (Ordinary Capital): | US\$16.0 million        |
| Cofinancing:            | US\$11.8 million        |
| Local contribution:     | <u>US\$ 4.6 million</u> |
| Total:                  | US\$32.4 million        |

**FINANCIAL TERMS AND CONDITIONS:**

|                             |          |
|-----------------------------|----------|
| Amortization period:        | 25 years |
| Disbursement period:        | 4 years  |
| Interest rate:              | variable |
| Inspection and supervision: | 1%       |
| Credit fee:                 | 0.75%    |

**CURRENCY:** US dollars from the single currency facility of the Bank's ordinary capital.

**COFINANCING:**

|        |                         |
|--------|-------------------------|
| ICDF:  | US\$10.0 million        |
| CDB:   | <u>US\$ 1.8 million</u> |
| Total: | US\$11.8 million        |

**OBJECTIVE:** The Project's overall objective is to improve the economic opportunities for the people living in the southern region by integrating that part of the country into the rest of Belize. The specific goals are to: (i) improve transport conditions for agricultural products and thereby reduce production losses and transport costs, as well as increase production in response to expanded markets; (ii) improve access of the southern districts to the increasingly important tourism sector by providing reasonably comfortable travel and short traveling times; and (iii) facilitate the accessibility of the local population to social services such as education and health.

**DESCRIPTION:** The Project will upgrade 64 km of the existing Southern Highway, rehabilitate about 176 km of rural feeder roads, and provide funding for road maintenance equipment and private sector contracting of maintenance. The Project will mitigate direct and immediate environmental, social and archeological impacts associated with the construction of the road itself.

A supporting TC Loan project, the Environmental and Social Technical Assistance Project, or ESTAP, (999/OC-BL) was signed on March 18, 1997 and declared eligible for disbursement on August 8, 1997. ESTAP encourages sustainable economic and social development of the region by addressing the broader indirect environmental and social impacts generated by the integration of the southern region. ESTAP plays a critical role in preparing for accelerated development following road re-habilitation.

The GOB has divided the rehabilitation of the Southern Highway into four segments: the first consists of the upgrading of 30 km in the southern part of Toledo District currently being implemented with Kuwait Fund parallel financing; the second segment, about 39 km in central Toledo District, will be considered for upgrading at a later date; the third consists of about 41 km in the northern part of Toledo District to be financed by UK/ODA parallel financing; and the fourth consists of about 64 km in Stann Creek District to be financed by the Bank with cofinancing from the ICDF.

The Executing Agency for the Project will be the MOW. A Project Execution Unit (PEU) will be established at MOW, with financing from the Caribbean Development Bank (CDB). The PEU will have overall responsibility for project execution including control, monitoring, and evaluation of all activities.

**ENVIRONMENTAL  
CLASSIFICATION:**

The Environmental Management Committee, at its meeting of May 18, 1993, classified this Project as a Category IV operation. The Environmental Summary was approved on June 13, 1997 and made available through the Bank's Public Information Center on July 25, 1997.

**IMPACT ON  
POVERTY:**

The Project does not qualify as a poverty targeted operation, see ¶1.14 and ¶4.25. However, the companion ESTAP project is designed to broaden the distributional impact of the Project by protecting the assets of vulnerable groups living in the area of influence of the road and facilitating their participation in the development process.

**BENEFITS:**

By improving travelling conditions and reducing vehicle operating costs, the Project will have the following main benefits for the southern region leading to higher regional and national Gross Domestic Product (GDP): (i) increased traditional and non-traditional agricultural activities; (ii) expansion of tourism into the region; (iii) improved

access to education, health and other social services; (iv) improved integration with the rest of the country, and with Central American neighbors through the expansion of port traffic to Guatemala and Honduras and easier road access to the southern border; and (v) improved maintenance capacity of the MOW. The Project's internal rate of return is 15.9 percent.

**RISKS:**

The following main risks are associated with the Project: (i) potential delays in the provision of adequate local contribution; and (ii) adverse social and environmental impacts resulting from the accelerated development of the region.

The following have been done to manage these risks: (i) maximize the amount of cofinancing and set local counterpart at achievable levels; and (ii) design and approve a dedicated environmental and social project (ESTAP) to establish policy responses and administrative mechanisms to address the process of environmental and social transformation anticipated as a consequence of the highway upgrading.

Representatives of the Mayan community within the area of influence of the Project have expressed the view that tenure over their lands be legally secured before the project moves forward. This is based upon the concern that pressures on their land will rise once construction is completed. This has been the subject of extensive discussion between Government and the Bank Administration. Because of the issue's sensitivity it has not been possible to reach full agreement, but the ESTAP program does provide support to the communities to define proposals and negotiate with Government, see ¶4.23 and ¶4.24.

**THE BANK'S  
COUNTRY AND  
SECTOR STRATEGY:**

The Bank's strategy for Belize emphasizes: (i) provision of physical and institutional infrastructure and complementary technical assistance to stimulate private sector development in tourism, agriculture, and agroprocessing; and (ii) improvement of the human capital base through increased education and training.

**PROCUREMENT:**

International public bidding shall be required for the procurement of goods or related services equal to or exceeding the equivalent of US\$200,000 or of works equal to or exceeding the equivalent of US\$1,000,000. Prequalification of bidders shall be used in bidding for the execution of works with a cost equal to or exceeding US\$500,000 (see ¶3.17).

SPECIAL  
CONTRACTUAL  
CONDITIONS:

1. Prior to First Disbursement the Borrower will present to the Bank evidence the Project Execution Unit has been created within the Ministry of Works, and assigned responsibility for overseeing the supervision and construction of the Southern Highway Project, including the segments to be financed by the Bank and the ICDF (see ¶3.3 and ¶3.2).

2. Prior to issuing the call for bids for physical works the Borrower will demonstrate that it has completed to the satisfaction of the Bank the four ESTAP accomplishments in progress, as previously agreed to with the Bank (see ¶3.9).

3. Other Special Contract Conditions.

a. Prior to the date established in the bidding documents as the deadline for submission of tender offers for the Project construction works, the Executing Agency shall present to the Bank the contract signed between the Borrower, acting through the Executing Agency, and the engineering firm responsible for supervising said works, subject to the terms of reference agreed with the Bank (see ¶3.4).

b. The contracts entered into for the construction of the Project Works shall incorporate, to the Bank's satisfaction: (i) the requirement to ensure special efforts are made to hire local labor from the southern region; (ii) the applicable environmental and social mitigation measures; and (iii) the requirement that the contractors implement all new measures which may arise as a result of changes in Belize's environmental laws and regulations (see ¶3.5).

c. Throughout the Project execution period, annual review meetings will be held to evaluate the results obtained under the Project during the previous year and plan Project activities for the following year. The meetings will include, *inter alia*, review of the feeder roads completed and to be completed and the Project's direct environmental and social impact mitigation measures. The Executing Agency will carry out the corrective measures as agreed during these meetings (see ¶3.6 and ¶3.13). On the same occasion as the annual review meeting, a separate review meeting shall be held in which the Ministry of Economic Development (MED), the ESTAP Project Steering Committee and the Bank will evaluate the project impact indicators set out in ¶3.14.

d. The Bank may authorize the Borrower to use up to US\$300,000 of the resources of the financing to reimburse Project expenditures incurred during the 12 month period prior to the loan signature date, and may recognize as part of the local counterpart up to the equivalent of US\$300,000 incurred during the 18 month period prior to the same date.

## I. FRAME OF REFERENCE

### A. Background

- 1.1 Belize has a territory of 22,965 square kilometers with a multi-ethnic population of 222,000 of which about one-fifth live in the Toledo and Stann Creek Districts in the South, the poorest and least accessible region in the country. Per capita income in 1996 was estimated to be equivalent to US\$2,760 nationally although that figure is substantially lower in the southern region. The natural environment is the foundation for the Belizean economy which relies heavily on the development of natural resources for employment and foreign exchange. Agriculture and to a lesser extent tourism contribute over 30 percent to GDP; these two sectors are the largest employers in southern Belize.
- 1.2 The upgrading of the Southern Highway to a paved standard is the central feature of the Government's strategy for economic development in the southern region. To anticipate and prepare for the process of environmental and social transformation resulting from the upgrading of the Highway, on March 10, 1997 the Bank approved a US\$2.6 million Technical Cooperation Loan for the Environmental and Social Technical Assistance Project (ESTAP), BL-999/OC-BL. The contract was signed on March 18, 1997 and declared eligible for disbursement on August 8, 1997.

### B. Recent macroeconomic developments

- 1.3 GDP growth averaged almost nine percent annually between 1986 and 1992, driven by a rapid expansion of public investment to improve basic infrastructure and services, a boom in the tourism sector, and a moderate expansion of agriculture. By 1994, GDP growth fell to 2.2 percent due largely to a scaling back of public investment. The fiscal deficit reached 7 percent of GDP in FY1994-95. In 1995, Belize's GDP grew at an unexpectedly high rate of 3.7 percent, largely because of the exceptional growth in the production of citrus concentrate. Fiscal conditions improved considerably, with the deficit falling to 4 percent of GDP in 1995/96, mainly because of a massive retrenchment of the public sector work force. Inflation has remained manageable.
- 1.4 To improve revenue generating capabilities, the GoBL introduced a value-added tax (VAT) in April 1996. Increased revenues associated with the VAT are expected to offset declining revenues from tariffs which Belize will gradually reduce between 1996-2000, in line with the Caribbean Common Market (CARICOM) Common External Tariff.
- 1.5 GDP growth in 1997 is expected to be modest for the second year in a row, with slight improvements expected in tourism and modest growth in bananas, sugar and citrus exports. Inflation should moderate due to lower import tariffs and the diminishing effect of the introduction of the VAT. Caution would need to be taken to

control Central Government expenditures not to greatly worsen the fiscal situation.

C. Government's medium term economic strategy and the transport sector strategy

- 1.6 At the Consultative Group meeting in June 1994, the GoBL announced its Medium Term Economic Strategy (MTES), which included: (i) a macroeconomic framework to support growth and the resumption of fiscal stability; (ii) structural reforms, including tax reform, trade liberalization, measures to improve the investment climate, and financial sector reforms; and (iii) a human resources development strategy. At the Consultative Group Meeting in June 1996, the Government reported on progress in each of these areas and reaffirmed its commitment to further reforms, including the elimination of quantitative restrictions on imports and introduction of measures to strengthen public sector efficiency. The Government also announced its intention to broaden programs to protect the country's natural resources, as discussed in the Government's National Environmental Action Plan (1996).
- 1.7 As stated in the MTES, the top priorities of the Public Sector Investment program are basic infrastructure, research and agricultural extension services, water and sewage, and basic health and education services. Also emphasized are Belize's serious infrastructure problems, particularly roads and bridges in the south.

D. Project's consistency with the Bank's Country Strategy and Eighth Replenishment Objectives

- 1.8 The Bank's objectives are to assist Belize achieve sustainable economic growth and diversification of its economy by supporting: (i) physical infrastructure projects to stimulate market-led agricultural export promotion, tourism development, and private sector development; and (ii) projects to improve the human capital base through increased education and training for export competitiveness and improvements in health care.
- 1.9 The Bank's strategy incorporates four cross-sectoral issues, which are to be incorporated into project designs: (i) support for women, youth, and indigenous groups; (ii) private sector development; (iii) Central American integration; and (iv) attention to environmental issues.

E. Debt servicing capacity and debt exposure

- 1.10 At year end-1996, Belize's external debt amounted to US\$263 million, or 44 percent of GDP, with a debt service ratio of 13.2 percent. Despite these currently manageable levels, debt servicing capacity must be monitored closely over the next several years as the availability of grant funds is being gradually reduced, and

high amortization payments on commercial debt are now falling due. The burden of high interest commercial debt was reduced in early 1996, however, by a US\$26.1 million loan on concessional terms from Taiwan to accelerate the repayment of high cost commercial debt. Also, in October 1997 the UK announced that it would allow Belize to divert loan repayments of about US\$1 million annually (on loans of about US\$5 million) which normally go to the UK, to be used for poverty elimination in Belize. This represents a savings in external debt service requirements.

- 1.11 The nation's outstanding debt with the IDB is currently US\$2.6 million. Even with the Southern Highway Project loan, Belize's projected debt service ratio between 1996 and 2010 will be modest by regional standards and will be well within Bank's debt exposure guidelines.<sup>1/</sup> Debt service for the Project relative to total Government revenues between 1996 and 2010 is also considered manageable.<sup>2/</sup> See Technical File 6.

F. Financing for the Southern Highway

- 1.12 The rehabilitation of the Southern Highway has elicited significant international support and the project will benefit from grant and concessional funding totalling \$33.3 million. This financial package has made the project possible by considerably reducing its cost to the borrower. In addition to the proposed IDB loan (US\$16 million), the following four sources of financing have been secured: (i) the United Kingdom's Overseas Development Administration (ODA), with a £7.5 million grant (equivalent to US\$11.5 million); (ii) the International Cooperation Development Fund (ICDF) of Taipei, China<sup>3/</sup> with an untied concessional loan of US\$10 million; (iii) the Kuwait Fund for Arab Economic

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<sup>1/</sup> Assuming Belize's total non-Southern Highway debt increases by 7.5 percent annually and total debt service increases by 5 percent, and that exports of goods and non-factor services increase by 3.5 percent annually during the 1995-2010 period, the debt service ratio will rise from 13.2 percent in 1994 to 17.3 percent in 2010. If one assumes those same exports increase only 1.5 percent annually (a very conservative scenario), the debt service ratio rises to 22.7 percent by 2010.

<sup>2/</sup> Debt service to the Bank (virtually all accounted for by the Southern Highway and ESTAP projects) relative to total Central Government revenues (assumed to grow at 3.5 percent per year) will equal 0.4 percent in 1998, reach 1.3 percent in 2005, and fall to 1.0 percent by 2010.

<sup>3/</sup> The use of the name "International Cooperation Development Fund of Taipei, China" does not in any way reflect a position by the Bank or any of its member countries regarding issues of national sovereignty or diplomatic recognition.



Development (KFAED) with an untied concessional loan of Kuwaiti Dinars 2,410,000 (equivalent to US\$8 million); (iv) the OPEC Fund for International Development (OPEC) with an untied concessional loan of US\$2 million; and (v) the Caribbean Development Bank (CDB) with an untied concessional loan of US\$1.8 million. The IDB and ICDF will sign a coordination agreement outlining the details of their respective financing, (see ¶2.19).

G. The Southern Region

1. Demographics in the region

- 1.13 The Project region encompasses the districts of Stann Creek and Toledo, with a combined total population estimated at 36,000 or 18 percent of the national total (Census 1991). The population of Stann Creek, which totals 18,000, is 35 percent urban, is centered around the district capital of Dangriga, and is primarily Garifuna in ethnic origin. The rural population of Stann Creek is of multi-ethnic origin and is more representative of the ethnic composition of the country as a whole. The Stann Creek district is commercially important because of its citrus and banana plantations, and the ports at Dangriga and Big Creek which were recently built by private interests. In Toledo, 20 percent of the population lives in the district capital of Punta Gorda. The remaining 80 percent live mainly in Mayan communities of Kechi Maya and Mopan Maya farmers who practice traditional milpa agriculture.

2. Socio-economic development in the region

- 1.14 There is a large and growing regional imbalance in the country in terms of the provision of economic and social services. A recent study has indicated that poverty is disproportionate in the southern region, with more than one-quarter of the country's poor residing there. In Toledo, with its concentration of Maya settlements based on traditional farming systems, 41 percent of the inhabitants are classified as "poor," while 23 percent are considered "extremely poor." Comparable figures for Stann Creek District are 27 percent and 9 percent respectively.<sup>4/</sup> The Southern Highway project will accelerate the pace of development in southern Belize and integrate it more closely with national and regional socio-economic advancement.

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<sup>4/</sup> The "extremely poor" measure of poverty is based on the amount of per capita household expenditure required to cover basic food needs only. "Poor" is determined by inflating food expenditure by the share of food in the total budget of households that just meet food expenditure requirements out of total consumption. See "A Poverty Profile for Belize," Blane D. Lewis, USAID, October 1994.

### 3. Environmental and social issues

- 1.15 The Southern Highway Project was evaluated as Category IV operation by the Bank's Environmental Committee on May 18, 1993 and the initial Project Environmental Summary was approved on October 5, 1995. Late in 1996 an Updated Environmental Summary was prepared and distributed for comment to several U.S.-based environmental NGOs on November 20, 1996. It was also posted for comment on the INTERNET from January 8 to February 7, 1997 and four substantive comments were received. The Updated Environmental Summary was submitted to the Bank on June 4, 1997 and approved on June 13, 1997. See Technical File 3.
- 1.16 The following studies were undertaken during project preparation: (i) Environmental Impact Assessment (EIA) on the Southern Highway Project; (ii) Ecosystems Evaluation and Protection Analysis; (iii) Agricultural Development related to the Southern Highway Project; (iv) Southern Highway Archeological Assessment: Field Reconnaissance; (v) Southern Highway Social Impact Assessment; and (vi) Construction Materials Sites Investigation. In addition, the Compendium on Environmental Protection and Natural Resource Management Legislation of Belize was reviewed.
- 1.17 From these studies it has been concluded that rapid land use changes resulting from agro-industrial expansion, tourism development along the coast and population growth from migration could exert pressure on the southern region's traditional patterns of life and natural resources, potentially leading to increased social problems, accelerated deforestation, increased erosion and losses in biodiversity. The areas of greatest concern are: (i) the impact of change on the indigenous Maya, especially with respect to security of rights to land, livelihood, social organization, and cultural integrity; (ii) the impact of change on fragile natural environments and habitats resulting from natural resource exploitation and the development of tourism; (iii) the potential loss of biodiversity; and (iv) the implications for future availability of government funds for additional social services associated with more rapid development.
- 1.18 The environmental, archeological and social impact studies unanimously recommend an integrated approach to the region's development. They independently proposed a range of measures to mitigate the impact of accelerated economic growth on local communities and natural resources. These measures have been taken into account in the design of the US\$2.6 million Environmental and Social Technical Assistance Project (BL-0011) which was signed on March 18, 1997. ESTAP will address the anticipated indirect social, environmental, and archeological impacts of the Project as described in the Technical Cooperation Loan Proposal dated February 18, 1997 (PR-2187 and PR-2187-1).
- 1.19 To minimize the direct environmental and social impact of the Project, standard mitigation measures related to the environment

and the local population are fully incorporated into the Project design; and monitoring of the direct environmental, archeological, and social impacts of the Project form part of the supervision firm's terms of reference, see Technical File 8.

H. The National highway system

1. Description

- 1.20 Belize's highway system has 2,601 km of roads, of which 533 km are main roads or highways, 612 km are secondary roads, and 1,456 km are rural roads.
- 1.21 Over the past decade the road network in Belize has been greatly improved and now affords good communications within the northern and western regions of the country, and with Guatemala and Mexico. The impact of these roads on development has been substantial, especially in the west of the country where the paving of the final section of the Western Highway has coincided with a surge in tourism activity. It has also stimulated growth in the citrus industry and has helped extend its range from its traditional Stann Creek Valley location into the Cayo area. Similarly, the current rehabilitation of the Hummingbird Highway and the Stann Creek Valley Road has greatly improved communications in the central region of the country and has contributed to expansion of the citrus industry. The upgrading of the Southern Highway will expand the national system of paved roads covering all districts in the nation.
- 1.22 The Southern Highway is the sole link by land between the remote and least developed southern region of the country and centers of administration and commerce. The road branches from the Stann Creek Valley Road 8 km west of Dangriga, and proceeds to Punta Gorda 167 km to the south in the Toledo district. It traverses the steadily developing southern part of Stann Creek District and the whole of the coastal plain of the less developed Toledo District. At present, the road is unpaved and is subject to flooding in the rainy season (June to December), which despite recent improvements to bridges, can make the road treacherous or impassable for significant periods of time. Conversely, in the dry season clouds of dust cause severe traffic hazards and are detrimental to the health and hygiene of communities situated near the road.

2. Vehicle fleet

- 1.23 The country's fleet is estimated at 21,685 vehicles and comprises 9,096 passenger vehicles and 12,589 freight vehicles. Southern Belize accounts for almost ten percent of all vehicles nationwide.

3. MOW institutional capacity

- 1.24 MOW has good systems for work supervision and monitoring of construction firms and good experience in public tendering

processes. However, MOW has a limited number of technical personnel. Details can be found in Technical File 7.

#### 4. Maintenance and road conditions

- 1.25 Maintenance works are done by force account and by private contractors and both approaches are generally satisfactory. Currently the MOW utilizes one large and six small contractors, and in 1995 one-half of the maintenance of the road network was carried out by private sector contractors. In 1996, the MOW raised the private sector portion to 65 percent. While these ratios are somewhat inflated by the current work on the Hummingbird Highway, they are indicative of the heavy reliance on the private sector for road maintenance.
- 1.26 Assistance to the MOW for maintenance management is being provided as part of the ODA's Stann Creek Valley Road project. A British consulting firm has developed and is installing the Roughton International Maintenance Management System (RIMMS) at the MOW, including in three of the country's seven maintenance districts. RIMMS establishes annual routine maintenance resource scheduling programs, generates and justifies requests for budget allocations and prioritizes activities based on the funding received. It can also develop periodic maintenance schedules which must be verified by on-site inspection. Constraints to more rapid implementation of this management system include: (i) lack of knowledge of the new system by the maintenance staff at all levels; (ii) a shortage of vehicles to update the road maintenance inventory, existing road conditions and traffic data; and (iii) need for a computer in each district office linked to the MOW office in Belmopan. To address these constraints the CDB has included US\$180,000 for training for district engineering staff and a vehicle and computers will be added to the equipment to be financed by the IDB. The ODA-funded advisor assisting with the RIMMS system completed his assignment in April 1997 but remained with the MOW assisting with the Western Highway resealing project through July 1997. He reported that RIMMS is fully installed, is being used in all maintenance districts and is working well.
- 1.27 The Government budget for maintenance is reasonably adequate, although fiscal pressures could put a strain on maintenance budgets in future years. Overall the road network is in fair to good condition. Of the 449 km of paved roads, two-thirds are considered to be in good condition, and of the remaining one-third, half are in fair condition and the other half are in poor condition. Of the 1,063 km of gravel roads, 95 percent are in fair condition and the remaining are in poor condition. Of the 866 km of marl roads almost all are in fair condition, and of the 223 km of earth roads, almost all are in poor condition, particularly during the rainy season. The Project provides: (i) modest amounts for maintenance equipment as well as vehicles and computers for the road maintenance division to augment the capacity of the MOW to maintain paved roads (US\$600,000) and (ii) resources for private sector

maintenance contracting (US\$800,000 augmented by US\$1.6 million of local counterpart), see Annex II-1 and ¶2.15.

5. Lessons learned from donor participation in the transport sector

- 1.28 The transport sector, primarily road rehabilitation, has benefitted from considerable investment from almost all major external agencies active in Belize. The ODA financed the upgrading of the Stann Creek Valley Road (f8.5 million) and resurfacing of sections of the Northern Highway (f1.3 million). The World Bank financed the rehabilitation of sections of the Western Highway and carried out some maintenance on roads in Belize City and on the Southern Highway (beginning in 1988), with total external financing amounting to US\$5.6 million. Until recently, the United States Agency for International Development (USAID) was active in supporting rural access roads and constructing 37 bridges (contributing a total of US\$2.4 million), but closed down operations in September 1996. The European Union is currently financing the rehabilitation of the Hummingbird Highway (4.8 million ECU) while the ODA is financing the resealing sections of the Western Highway.
- 1.29 The increase in daily traffic after road upgrading has been particularly high in Belize, out-pacing the high average annual growth rate in GDP in the late 1980s/early 1990s. For example, paving of a section of the Western Highway from Belmopan to the border with Guatemala increased the daily traffic from 416 vehicle before rehabilitation (1985), to 900 vehicles after rehabilitation (1992), which represents a 12 percent annual increase.
- 1.30 Donors have each faced the high costs of building roads in Belize due largely to the need to import most construction materials, the relatively high cost of labor, long rainy seasons, as well as a small technical staff at the MOW. See Technical File 4.
- 1.31 Based on this experience, the design of the proposed Project includes the following measures: (i) to create within MOW a strong PEU that will have overall responsibility for project execution, monitoring, and evaluation; (ii) to have a tendering process based on international competitive bidding that will attract foreign construction firms and stimulate price and service competition; and (iii) to contract experienced supervision firms to assist the MOW to coordinate, schedule and execute civil works and to monitor the direct environmental and social impacts and appropriate mitigation measures.
- 1.32 The MOW has already had experience with project execution units supported by external agencies. Under the USAID-funded Rural Roads/Bridges project two local professionals were hired to run the USAID project execution unit, with the objective of assisting the MOW's Chief Engineer and Permanent Secretary with execution. The local professionals fit well into the existing MOW structure and

resulted in project savings over international consultants. USAID's experience with this arrangement was satisfactory, and it is a model being utilized under the Southern Highway Project. The US\$1.8 million CDB project to finance the PEU was approved on October 17, 1996 and has been declared eligible. To date a project manager and several staff have been hired.

I. Project benefits and development impact

1.33 Benefits expected to flow from the Project are discussed in Chapter IV and summarized below:

- a. **Agriculture sector expansion.** The banana and citrus growers with large scale operations in the region will be prime beneficiaries of road rehabilitation through reduced costs of transportation, hence providing better quality produce and more timely deliveries to port. This translates into increased foreign exchange earnings and employment. Smaller farming operations will also benefit for the same reasons, allowing them to better compete in traditional as well as nontraditional export markets worldwide.
- b. **Tourism development.** Improved access to the South will increase tourism revenues in Southern Belize as many more visitors will choose to venture South (including those traveling the Ruta Maya) and explore the Stann Creek district with its attractive beaches and dive sites in and around Placencia, and in Toledo district with its numerous archeological ruins, caves and waterfalls, and Mayan villages. This will lead to an increase in tourist operations in Southern Belize, including small-scale locally owned operations, which will have positive income and employment impacts on the local economy.
- c. **Improved access to social services.** Rehabilitation of the Southern Highway and connecting feeder roads means local communities will gain improved and more reliable access to schools and health facilities. Travel time for school age children will drop dramatically, and school attendance will rise, particularly during the rainy season where the road in the current state is often closed. Social service delivery providers will have better access to remote villages, many of which lack proper access to primary health care. The health of communities along the highway will benefit from reduced dust-related optical and respiratory infections that are now typical during the dry season.
- d. **Integration.** The Project will improve national integration, as year-round access will be possible for the first time on the only road that connects Southern Belize with the rest of the country. The Project will also facilitate Belize's integration efforts with Central America and stimulate regional trade and

tourism. For example, ferry traffic between Punta Gorda and Puerto Barrios in Guatemala (50 km), and Puerto Cortes in Honduras (100 km), is expected to increase significantly following the paving of the Southern Highway. Regional integration would also be facilitated once future road links to the southern border are improved.<sup>5/</sup>

- e. **Support MOW efforts to maintain the national road network.** The Southern Highway project will largely absorb the energies and attention of the MOW for the next four years. To help sustain the MOW's maintenance capacity, the Project will finance the purchase of maintenance equipment for the nation's paved road network, including the Southern Highway, and provide resources to contract with the private sector for routine maintenance on secondary and feeder roads during the life of the Project.
- f. **Environmental protection and social development:** The Project's companion operation, the Environmental and Social Technical Assistance Project (ESTAP), has been designed to generate positive environmental and social impacts in addition to controlling the potential negative impacts. ESTAP is establishing a comprehensive policy response and institutional mechanisms to address the process of environmental and social transformation resulting from the upgrading of the highway. The following types of activities are being encouraged: proper land use planning, strengthening of community based organizations, identification of solutions to indigenous lands issues, cost recovery for the management of protected areas, and support services in the productive and social sectors.

#### J. Conclusions

- 1.34 In summary, the Project development impact is anchored on the integration of the poorest one-third of the country, which is a cornerstone of Belize's 21st century development strategy. Benefits to agriculture, tourism, social services, and the environment will be achieved in a sustainable manner by the complementary actions derived from the rehabilitation of the Southern Highway and feeder roads, and the supporting activities of the ESTAP project.

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<sup>5/</sup> The point on the Southern Highway that lies 21 km east of Punta Gorda currently connects to the southern border of Guatemala by way of an earth road in poor condition 50 km in length.

## II. THE PROJECT

### A. Objectives

- 2.1 The Project's overall objective is to improve the economic opportunities for the people living in the southern region by integrating that part of the country into the rest of Belize. The specific goals are to: (i) improve transport conditions for agricultural products and thereby reduce production losses and transport costs, as well as increase production in response to expanded markets; (ii) improve access of the southern districts to the increasingly important tourism sector by providing reasonably comfortable and acceptably short traveling conditions; and (iii) facilitate the accessibility of people to such social services as education and health, see Annex I-1.

### B. Project description

- 2.2 The Project will upgrade 64 km of the existing Southern Highway, rehabilitate about 176 km of connecting rural feeder roads, and finance the acquisition of road maintenance equipment and fund private sector contracting of maintenance. The total Project cost is estimated at US\$32.4 million, with the Bank's share at US\$16 million. The Project will include financing to mitigate the immediate and direct environmental, social, and archeological impacts associated with construction of the road. A companion project, the Environmental and Social Technical Assistance Project (BL-0011), is addressing the indirect environmental and social impacts to promote sustainable economic and social development of the region and plays a critical role in preparing for accelerated development associated with road rehabilitation.

#### 1. Upgrading of the Southern Highway and feeder roads

##### a. The Southern Highway

- 2.3 The Southern Highway is currently an improved dirt road extending south from its intersection with the Stann Creek Valley Road near Dangriga to Belize's southern-most town, Punta Gorda. Technical specifications for the highway are similar to those of existing paved roads in Belize and neighboring countries. In the Project, special attention has been paid to the engineering design of the drainage system to reduce the erosion caused by heavy rains in order to protect the environment and reduce maintenance costs.
- 2.4 In order to accommodate the availability of financing, the procurement procedures of each donor and differing construction schedules, the upgrading of the Highway has been divided into the following components:



Section No. (from South to North)

- No. 1: Punta Gorda to Rice Mill, 30.1 km
- No. 2: Rice Mill to Bladen Bridge, 38.9 km
- No. 3: Bladen Bridge to Big Creek Port, 41.5 km
- No. 4 & 5: Mango Creek Junction to Stann Creek Valley Rd, 64.4 km

- 2.5 Construction of Section 1 started in February 1996 with Kuwait/OPEC funding, is advancing on schedule and will be completed by July 23, 1998. Because of low traffic count and sparse population the upgrading of Section 2 is not feasible at this time. The Project Memorandum for the ODA/UK financed Section 3 is scheduled for review late in 1997 and construction activities should begin early in 1998. Sections 4 and 5 (IDB and ICDF) are the subject of this Loan Proposal and construction is scheduled to commence late in 1998.

b. Feeder roads

- 2.6 The rehabilitation of about 176 km of rural secondary and feeder roads under the Project will facilitate access to social services to the mainly low-income rural population and will reduce the costs of transporting agricultural products. The preliminary list of roads selected by MOW are existing feeder roads currently in poor condition, and which satisfy the criteria of improving agriculture potential, tourism potential and/or providing better access to schools and health facilities. See Technical File 1. Total cost of the feeder road component is estimated at US\$2 million. The civil works involved in the rehabilitation of these roads will consist mainly of road drainage structures and surface graveling.

c. Road maintenance

- 2.7 Bank financing of equipment for maintaining paved roads and for contracting private sector services will strengthen the road maintenance capability of the MOW. Currently the MOW is able to adequately maintain secondary roads, utilizing a combination of force account and private sector contracting. However, with respect to paved roads there is limited local maintenance capacity because of the shortage of specialized equipment, such as asphalt batching plants, vehicles and computers. The equipment to be provided under the Project (US\$600,000) will provide this capability, while the funds for contract services (US\$800,000) will stimulate the participation of private sector maintenance firms.

d. Direct environmental and social impact mitigation measures

- 2.8 The Project will address the direct and immediate environmental and social impacts during the construction phase through the inclusion of safeguards covering such areas as: vegetation protection, re-vegetation and erosion/siltation prevention; proper management of borrow areas and quarries; environmental, health and sanitary conditions of construction camps and conduct of construction personnel in local communities, forest/nature reserves and

archeological sites. The TORs for the supervision firm responsible for monitoring the direct environmental and social impacts of construction works are provided in Technical File 8.

2. Indirect environmental and social impact mitigation measures

- 2.9 The US\$2.6 million ESTAP project (999/OC-BL) signed on March 18, 1997 is addressing the indirect impacts of accelerated development on environmental and social conditions in Southern Belize resulting from upgrading of the Southern Highway. It aims to ensure that the overall effect of the Project is positive and the negative impacts are contained to tolerable levels. The major task of the ESTAP is to prepare a plan and implementation strategy for land use and management of the environmental and social aspects of development of the southern region.

C. Status of project preparation

- 2.10 The detailed engineering designs for the Project have been completed. The documents were prepared by an international firm hired by the Government through international competitive bidding in October 1994. Financing for the engineering design was provided by ICDF, KFAED and Government. The final report was presented in July 1995. The Bank has reviewed the studies' TORs and the final engineering report and found the design technically suitable for international tendering.

D. Project costs

- 2.11 The cost of the Project is estimated at US\$32.4 million as follows:

**TOTAL COST AND FINANCING OF THE SOUTHERN HIGHWAY PROJECT (BL-0001)**  
(In US\$ million equivalent)

| INVESTMENT CATEGORIES                    | IDB (US\$)  | Other Financing |             |            | TOTAL       | %           |
|--|-------------|-----------------|-------------|------------|-------------|-------------|
|  |             | CDB             | ICDF        | GoBL       |             |             |
| <b>1. ENGINEERING AND ADMINISTRATION</b> | <u>1.5</u>  | <u>1.5</u>      |             | <u>0.5</u> | <u>3.5</u>  | <u>11%</u>  |
| 1.1 Engineering                          | 0.3         |                 |             |            | 0.3         |             |
| 1.2 Supervision of Works                 | 1.2         |                 |             |            | 1.2         |             |
| 1.3 Administration (PEU)                 |             | 1.5             |             | 0.5        | 2.0         |             |
|  |             |                 |             |            |             |             |
| <b>2. DIRECT COSTS</b>                   | <u>11.0</u> |                 | <u>9.7</u>  | <u>2.0</u> | <u>22.7</u> | <u>70%</u>  |
| 2.1 Southern Highway                     | 11.0        |                 | 9.1         |            | 19.1        |             |
| 2.1.2 Section #4                         |             |                 | 9.1         |            | 9.1         |             |
| 2.1.3 Sections #5                        | 10.0        |                 |             |            | 10.0        |             |
| 2.2 Rural Feeder Roads                   |             |                 |             | 2.0        | 2.0         |             |
| 2.3 Contingencies                        | 1.0         |                 | 0.6         |            | 1.6         |             |
|  |             |                 |             |            |             |             |
| <b>3. ASSOCIATED COSTS</b>               | <u>1.4</u>  | <u>0.2</u>      |             | <u>1.6</u> | <u>3.2</u>  | <u>10%</u>  |
| 3.1 Road Maintenance                     | 1.4         |                 |             | 1.6        | 3.0         |             |
| 3.2 Training                             |             | 0.2             |             |            | 0.2         |             |
|  |             |                 |             |            |             |             |
| <b>4. FINANCIAL COSTS</b>                | <u>2.1</u>  | <u>0.1</u>      | <u>0.3</u>  | <u>0.5</u> | <u>3.0</u>  | <u>9%</u>   |
| 4.1 Interest                             | 2.0         | 0.1             | 0.3         |            | 2.4         |             |
| 4.2 Credit fee                           |             |                 |             | 0.4        | 0.4         |             |
| 4.3 Inspection & Superv.                 | 0.1         |                 |             | 0.1        | 0.1         |             |
| 4.4 Cofinancier admin. fee               |             |                 |             | 0.1        | 0.1         |             |
| <b>TOTAL</b>                             | <b>16.0</b> | <b>1.8</b>      | <b>10.0</b> | <b>4.6</b> | <b>32.4</b> | <b>100%</b> |
| Percent                                  | 49%         | 6%              | 31%         | 14%        | 100%        |             |

ICDF      International Cooperation Development Fund  
CDB      Caribbean Development Bank

1. Engineering and administration (US\$3.5 million)
- 2.12 This category includes: US\$300,000 to prepare minor complementary engineering studies required for the Project; US\$1.2 million to finance services of consulting firms for supervision of construction works and direct environmental and social impact mitigation; and US\$2 million to finance PEU's operational and logistical costs.

2. Direct costs (US\$22.7 million)

- 2.13 Costs for upgrading the Southern Highway, including direct costs related to the mitigation of the Project's direct environmental impacts, were carefully reviewed by the Bank and are considered realistic and reasonable. Estimates include cost escalation and contingencies of US\$1.6 million.
- 2.14 Estimates for rehabilitation of feeder roads (US\$2 million) were prepared by MOW based on their experience which indicates that cost estimates of the required works are approximately US\$12,000 per km.

3. Associated costs (US\$3.2 million)

- 2.15 These include: US\$3 million for road maintenance (US\$600,000 from the IDB for road maintenance equipment, and US\$2.4 million for local contracting of maintenance work) and US\$200,000 for MOW institutional strengthening, including training of personnel, financed by the CDB.

4. Financial charges (US\$3.0 million)

- 2.16 These comprise financial charges associated with the IDB loan, namely interest during the period of project execution; credit fee; and Bank inspection and supervision during the Project, and estimated finance charges during the disbursement period associated with loans from the CDB and ICDF.

E. Financing plan

1. IDB financing (US\$16 million)

- 2.17 The Bank's financing for the Project will be in US dollars from the single currency facility of the Bank's Ordinary Capital (OC) resources and totaling US\$16 million, which is 49 percent of the total Project cost. The loan proceeds will be used to finance engineering and administration costs, the supervision firm for Sections 4 and 5, the direct costs of Section 5, associated costs for road maintenance, interest during construction and the Bank's inspection and supervision fee.
- 2.18 The terms and condition of the proposed Bank loan are as follows:

|                             |  |
|-----------------------------|--|
| Source of funds:            | US\$ from the Single Currency Facility of Ordinary Capital |
| Interest rate:              | Variable   |
| Credit fee:                 | 0.75 percent   |
| Inspection and supervision: | 1 percent of the loan amount                               |
| Amortization period:        | 25 years   |
| Disbursement period:        | 4 years  |

2. Cofinancing (US\$11.8 million)

2.19 Total parallel financing for the Project amounts to the equivalent of US\$11.8 million, or about 37 percent of total cost. The following institutions have pledged financial support:

- a. The CDB will provide a loan in the amount of US\$1.8 million (with an interest rate of 2.5 percent and an amortization period of twenty years commencing 5 years after the date of first disbursement) to contribute toward the financing of the Project Execution Unit. The loan was approved on October 17, 1996.
- b. The ICDF will provide an untied loan of US\$10 million on concessional terms to finance Section 4. This is the first cofinancing of an IDB project by ICDF. ICDF financing was approved on June 10, 1997, a Contract was signed on September 26, 1997 and a cooperative agreement between the Bank and the ICDF's agent bank will be signed prior to Board review of the Project. The terms of the ICDF loan are: 20 year amortization with a grace period of five years and an interest rate at 3.5 percent. The ICDF loan is untied and will be combined with Bank resources to fund a single construction contract and a single supervision contract.

3. Local contribution (US\$4.6 million)

2.20 Calculated at US\$4.6 million equivalent, the local contribution finances the incremental Project administration costs (US\$0.5 million); counterpart funding for direct costs (US\$2 million); road maintenance costs (US\$1.6 million) and financial costs (US\$0.5 million). The local contribution will be covered by annual appropriations from the national budget.

### III. PROJECT EXECUTION

#### A. The Borrower and the Executing Agency

- 3.1 The Borrower will be the Government of Belize (GoBL), with the Ministry of Works (MOW) as the Executing Agency. The MOW acts as the overall technical advisory body responsible to the Government for all civil engineering and mechanical works. The MOW is responsible for the formulation and implementation of policies on matters concerning public works, including construction and maintenance of roads, public buildings, coastal protection works, and streets and drains in villages. The MOW has a permanent staff of 170 employees with an additional 441 contract and part-time employees located mostly in the country's six regions. While generally receiving high marks for performance, the MOW is thinly staffed with only five executive and eleven professional positions.

#### B. Borrower's implementation arrangements

##### 1. Project Execution Unit

- 3.2 Because the MOW has a limited number of skilled personnel, and the Project requires coordinating the activities of several construction and supervising firms, as a condition prior to first disbursement of the Bank financing, a Southern Highway Project Execution Unit (PEU) will be established within the MOW and six professionals will be hired with financing from the Caribbean Development Bank. <sup>6/</sup> The PEU will be established for the duration of the Project and will be assigned the responsibility for overseeing supervision and construction of the Southern Highway Project, including the sections to be financed by the Bank, ICDF, ODA, OPEC and KFAED. The PEU will have overall responsibility for Project execution, including control, monitoring and evaluation of Project activities. The PEU will be responsible for presenting relevant technical, financial, administrative, environmental and social reports to the Bank and other cofinancing agencies for their analysis and consideration. See Technical File 13 for additional details.
- 3.3 The PEU will have the necessary professional staff and facilities to administer Project activities effectively. The staff will include the following: Engineering Coordinator, Project Engineers (2), Financial Officer, Surveyor and Systems Analyst. The MOW will provide six support staff.

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<sup>6/</sup> See Executive Summary: Special Contractual Condition 1.

## 2. Project supervision

- 3.4 All technical supervision, construction quality control, and monitoring of direct environmental and social mitigation measures to be financed by the Bank or the ICDF will be carried out by a specialized private sector supervision firm. The firm must be selected and contracted as a condition prior to issuing the call for bids for any Project works to be financed by the Bank or ICDF. 7/ The terms of reference for the supervision firm responsible for Sections 4 and 5 are in Technical File 8.

### C. Execution of the Southern Highway and the feeder roads

#### 1. The Southern Highway

- 3.5 The Project will be executed through contracts with private sector firms awarded through International Public Bidding (IPB), see Annex II-1. Prior to the call for tenders, bidding documents will be presented to the Bank for approval. They will include *inter alia* provisions regarding: (i) environmental and social conditions detailed in the Project EIA; and (ii) the requirement that special effort be made to employ labor from the southern region. The supervision services contract, bidding documents and construction contract documents will also require the implementation of all new measures that may arise from any future environmental laws and regulations. 8/

#### 2. Feeder roads

- 3.6 The rehabilitation of the rural feeder roads will be executed by private firms through public bidding or, where this is not feasible due to the very small size of the works, by force account. The preliminary list of 16 feeder and secondary roads is included in Technical File 1, and includes 12 roads in the Toledo District and four in the Stann Creek District. Approximately seven roads will be rehabilitated during the first year of the Project, five during the second year, three during the third year and one during the last year. During the annual review meetings (see ¶3.13) the list of the feeder roads completed and to be completed will be reviewed and modified as necessary. The Bank requires that the selection of all feeder roads to be rehabilitated comply with the selection criteria as outlined in Technical File 1.

### D. Annual road maintenance

- 3.7 In order to maintain the road network in good condition, the Borrower and Executing Agency will: a. ensure that the works

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7/ See Executive Summary: special condition 3.a.

8/ See Executive Summary: special condition 3.b.

included in the national road network be adequately maintained, according to generally accepted technical standards; and b. present to the Bank an annual maintenance report for ten years from the effective date of the loan contract and within the first quarter of each calendar year. If, from inspections by the Bank or from reports it receives, it determines that maintenance does not meet the levels agreed upon, the Borrower and the Executing Agency shall undertake the necessary measures to correct these shortcomings.

- 3.8 For the preparation of the report referred to in ¶3.7.b, the Executing Agency will utilize methodologies such as the RIMMS program outlined in ¶1.28 and will include an evaluation of: (i) the physical and structural conditions of roads; and (ii) the availability of financial resources. The program for the first year of execution will be presented to the Bank for analysis and evaluation within 90 days of loan contract signature. Programs for subsequent years will be evaluated during the annual monitoring meetings (see ¶3.13).

E. Progress in implementing the ESTAP Project

- 3.9 As part of the ESTAP project (999/OC-BL), Government agreed to complete eight accomplishments which would demonstrate Government's full commitment to the objectives of ESTAP and set in place an irreversible long-term process for the sustainable development of the region. The eight accomplishments must be met to the satisfaction of the Bank prior to issuing the call for bids for physical works on the Southern Highway. As early as September 1996 the Executing Agency for ESTAP hired a full-time ESTAP Coordinator to launch ESTAP. With consultant support from the Bank and assistance from members of the ESTAP Steering Committee, the Coordinator began working on the accomplishments. During an August 7-8, 1997 ESTAP Supervision Mission the Southern Highway Project Team concluded that four of the ESTAP accomplishments had been completed to the satisfaction of the Bank and that the remaining four were still in progress. Listed below are the completed accomplishments followed by the accomplishments in progress:

1. Completed ESTAP accomplishments

- (a) Ministerial approval of the Mango Creek Special Development Area (SDA) management plan. This SDA will provide land use guidance and protection to a sensitive area at risk in the short term from effects of rapid land use change.
- (b) Temporary freeze on new applications for government lands on a two-mile (2-mile) corridor along the Southern Highway.
- (c) Adoption at the Ministerial level of the administrative changes required for use of Global Positioning System (GPS) in land surveying.



- (d) Inaugural conference, following ESTAP approval, to bring all parties concerned together to present and discuss the ESTAP four-year (4-year) work program and its activities.

2. ESTAP accomplishments in progress 9/

- (a) Initiate the process for the declaration of Aguacaliente a protected area.
  - (b) Provide a list of priorities and supporting documentation for improved protected areas management in the southern region for potential inclusion in the Protected Area Conservation Trust (PACT) five-year (5-year) strategic plan.
  - (c) Agreement by the Project Steering Committee (PSC) on the community consultation mechanisms for ESTAP based on most appropriate consultation methods and principles.
  - (d) Completion of a regional diagnostic report (baseline), including collection of statistics, on leases, titles and pending applications in Mayan villages.
- 3.10 As previously agreed with Government, the completion to the satisfaction of the Bank of the four accomplishments in-progress will be shown in the loan contract as Special Conditions to the call for bids for physical works on the Southern Highway. 10/

F. Execution period and investment time table

- 3.11 The execution period for the Southern Highway civil works and feeder roads rehabilitation is estimated at 48 months. A tentative timetable of disbursements premised on a four-year time frame is shown below:

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9/ Specific actions to complete the accomplishments in progress were agreed upon by the Bank and Borrower.

10/ See Executive Summary: special condition 2.

**Investment Timetable**  
(US\$ million)

| SOURCE      | YEAR 1 | YEAR 2 | YEAR 3 | YEAR<br>4 | TOTAL  |
|-------------|--------|--------|--------|-----------|--------|
| ICDF        | 2.0    | 2.5    | 3.0    | 2.5       | 10.0   |
| CDB         | 0.5    | 0.5    | 0.4    | 0.4       | 1.8    |
| IDB         | 3.5    | 4.5    | 4.0    | 4.0       | 16.0   |
| Local       | 1.0    | 1.3    | 1.3    | 1.0       | 4.6    |
| TOTAL:      | 7.0    | 8.8    | 8.7    | 7.9       | 32.4   |
| Percentage: | 21%    | 28%    | 26%    | 25%       | 100.0% |

G. Bank Monitoring and evaluation of the Project

1. Bank inspection and supervision

- 3.12 Responsibility for overall administration will lie with the Bank's Country Office in Belize, with ongoing support from the Project Team. The Bank's Supervision Plan is outlined in Technical File 9. Annual monitoring meetings will be scheduled, and will be supported by consulting services which the Bank will hire chargeable to the administrative budget.

2. Annual monitoring meetings

- 3.13 During the execution period, the MOW together with the Bank's Project supervision firm, the MED, the National Environmental Action Committee (NEAC) and, at its option, the ICDF will meet annually with the Bank, no later than April 30 of each year, to review progress to date and plan Project activities for the following year. The meetings will review the targets, objectives and performance benchmarks and agree on necessary corrective measures. They will assess the performance of the MOW and contractors, compliance with direct environmental and social impact mitigation measures and identification and upgrading of feeder roads. Finally, they will review additional consulting services that may be needed. At least 15 working days before each meeting, the PEU will present to the Bank a report on: (i) the degree of achievement of the performance benchmarks described in ¶3.14; and (ii) the discussion points outlined in Technical File 2. 11/

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11/ See Executive Summary: special condition 3.c.

3. Benchmarks for annual monitoring meetings

3.14 Items for review at the annual meetings will fall into two broad categories: (i) progress in completing the outputs of the Project as summarized in Technical File 2, including the miles of road rehabilitated, and bridges constructed; and (ii) progress in achieving the objectives of the Project summarized in ¶2.1. and detailed in Technical File 10. The latter elements are summarized below:

- a. to what extent has the Project improved economic opportunities for the population living in the area of influence of the Southern Highway?
- b. to what degree has the improved highway and feeder roads reduced transport costs for agricultural products, improved the quality of produce and resulted in higher farm-gate prices? What increases in production have come about and who has benefitted? Has trade with Guatemala and Honduras increased? Which producers have benefitted?
- c. has tourism to the Southern District increased and what has been the impact on employment and incomes for those in tourist related occupations? Were there any environmental costs or impacts associated with the changes noted?
- d. has the accessibility of the population to social and government services been improved? What evidence is there that health and education services have increased for those in the road's area of influence?
- e. has the rehabilitation resulted in improved land use and environmental management activities when compared to the pre-rehabilitated situation? Is there evidence of reductions in erosion/sedimentation rates, rates of deforestation, stream and coastal pollution?
- f. what has been the effect of paving on erosion and requirements for fill and maintenance?

3.15 The information and quantifiable indicators needed to review progress in meeting the Project's objectives will be provided by the economic, social, and environmental baseline data to be generated under the ESTAP Project.

4. Ex-post evaluation

3.16 An in-depth ex-post evaluation of the Project will be funded by the Bank and undertaken approximately four years after Project completion. Project impact will be judged by comparing baseline data collected under the companion ESTAP project with changes in those same indicators at the time of the ex-post evaluation, see

Technical File 10. The Borrower has agreed to cooperate with the Bank as necessary in the preparation of this evaluation.

H. Other implementation procedures

1. Procurement of goods and services

- 3.17 The ICDF has agreed that bidding for the physical works that it is financing shall be limited to bidders from the Bank's member countries. Thus, a single construction contract will be awarded for the two highway sections being financed by ICDF and the Bank, respectively. Disbursements from the ICDF funding will take place *pari passu* with Bank funding. In the procurement of goods and services and the contracting of works to be financed from the Bank and ICDF, the IDB's standard procurement policies and procedures shall be followed. International competitive bidding will be required for both goods and services valued at US\$200,000 or more, and for civil works costing US\$1.0 million or more. <sup>12/</sup> The proposed Procurement Plan is shown in Annex II-1.
- 3.18 The procurement of goods or works to be financed totally with local counterpart funds, will be carried out through public bidding which may be limited to the national market.

2. Recognition of earlier counterpart expenses and retroactive financing

- 3.19 The Bank may authorize the Borrower to use up to US\$300,000 of the resources of the financing to reimburse expenditures incurred in the preparation of the Project bidding documents and Project start-up during the 12 month period prior to the loan signature date, and may recognize as part of the local counterpart up to the equivalent of US\$300,000 incurred during the 18 month period prior to the same date.

3. Rights-of-way

- 3.20 The upgrading of the Southern Highway and the rehabilitation of the rural feeder roads will be carried out within the rights-of-way of the existing roads. Therefore, no issues are foreseen regarding the acquisition of rights-of-way for the Project works. Before calls for bids are issued, the Executing Agency will present to the Bank evidence that it has legal possession of the land on which construction is to take place, as well as easements or other rights.

I. Natural disasters

- 3.21 While the geographical location of the Project is subject to flooding and hurricanes, it is impossible to predict where

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<sup>12/</sup> See "Procurement" on page 3 of the Executive Summary.

phenomena of this kind will occur. The Project includes the rehabilitation of existing structures and building of new ones to such specification as may be reasonable to abate and reduce potential damage. The MOW has specialized emergency response units equipped to take action if highway closures should result from natural disasters of this kind.

J. External auditing

- 3.22 In accordance with the General Conditions, the financial statements of the Project are to be presented annually, after being certified by an independent firm of public accountants acceptable to the Bank.

#### IV. PROJECT JUSTIFICATION

##### A. Technical justification

- 4.1 The upgrading, rehabilitation, and maintenance works for the Project meet standard specifications and procedures. The requisite technical, economic, and environmental studies have been completed, including detailed engineering designs for the Southern Highway. No technical problems are anticipated that may affect execution of the Project.
- 4.2 Because of the relatively high cost of the project in relation to the size of the economy, the government authorities, the engineering consultants and the Bank Project Team have taken all possible measures to ensure that the technical specification and the overall costs of the Project, including initial investment and maintenance costs, are fully justified by expected results.
1. Alternative analysis: gravel surface vs. paved road
- 4.3 In order to minimize investments and maintenance costs, an international consulting firm hired by the Bank analyzed different design alternatives for the options of graveling vs. paving the road. The consultants concluded that for the Project as a whole and particularly for the IDB financed-sections, the cost of Double Bituminous Surface Treatment (DBST) sealed pavement was less expensive than a gravel surface. This is due to high rates of gravel loss on unsealed pavements in areas of high precipitation as well as lower long-run maintenance costs. The environmental costs are also less with the DBST option, as the gravel surface requires larger quantities materials from borrow areas which are located some distance from the road. See Technical File 12.

##### B. Institutional viability and counterpart funds

1. Institutional viability
- 4.4 In view of the size of the multi-donor effort to upgrade the Southern Highway (works estimated at US\$57.8 million) <sup>13/</sup> and its complexity (several contractors and supervision firms working simultaneously) and the small number of experienced professionals currently employed by the MOW, a dedicated Project Execution Unit (PEU) will be established for the duration of the Southern Highway Project. The PEU will be staffed by experienced nationals funded by the Project (CDB component) and will be integrated into the structure of the MOW. The TORs for PEU staff are included in Technical File 13.

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<sup>13/</sup> This includes the IDB/ICDF/GOB direct costs of US\$22.6 million plus the direct costs of the ODA and Kuwait/OPEC components (US\$18.8 million).

## 2. Availability of counterpart funds

- 4.5 Funding for the Project is in place, and other donor financing (CDB and ICDF) has been approved. Financing from these sources will represent the bulk of counterpart funds for the Bank loan. In addition, the GoBL will provide US\$4.6 million from its own resources; this amount is in accordance with historic levels of investment expenditure.

### C. Economic justification

#### 1. Methodology

- 4.6 For road projects where vehicle access already exists, economic justification is based on Vehicle Operating Costs (VOC) savings. These savings (benefits) are defined as the reduction in costs realized by vehicle owners from using the improved road compared to the higher costs when using the unimproved road. Benefits take the form of lower costs for fuel, tires, spare parts, maintenance and vehicle replacement. Total benefits are calculated by multiplying the cost savings for each vehicle category (automobiles, pick-ups, trucks/buses) by the number of vehicles using the road (as determined by traffic count). This provides the "benefit" component of the cost/benefit ratio.
- 4.7 The "cost" component is determined by calculating: (i) the investment cost of the project (in terms of shadow prices), and (ii) net increase (or decrease) in road maintenance costs after upgrading compared to costs if the road had not upgraded. The stream of costs and benefits over the 25-year life of the project are discounted using a 12 percent discount rate to determine the Net Present Value (NPV). A positive NPV arises when the Economic Internal Rate of Return (EIRR) is greater than 12 percent. The steps followed to calculate the stream of benefits and costs is outlined in Technical File 11.

#### 2. Economic internal rate of return

- 4.8 The EIRR for the project are shown in the following table: 14/

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14/ The reports used for the economic analysis were: Southern Highway, Feasibility Study, Kocks Consult GMBH, December 1993; Economic Feasibility Study of the Agricultural Development, DHV Consultants, October 1994; and Detail Engineering Design of the Southern Highway, BECA Consultants, July 1995. Traffic count data was updated in March 1997.

### INTERNAL RATE OF RETURN

| Sections   | Economic Cost<br>(US\$ 000) | AADT | Cost per km<br>(US\$ 000) | NPV @12%<br>(US\$ 000) | EIRR<br>(%) |
|--|-----------------------------|------|---------------------------|------------------------|-------------|
| IDB/ICDF component:<br>Mango Creek to<br>Stann Creek Valley<br>Road, 64.4 km | 22,200                      | 415  | 345                       | 5,387                  | 15.9        |

- 4.9 The Project has an EIRR of 15.9 percent, while Section 3 (financed by the ODA) has an EIRR of 14.2 percent.<sup>15/</sup> This is due to higher levels of traffic related to agricultural activities, particularly citrus and bananas in the northern sections of the road. However, as discussed in the following section, the Project's actual rate of return could be higher or lower than expected due to variations in traffic volume and construction and vehicle operating costs.

### 3. Sensitivity analysis

- 4.10 To determine the impact of changes in cost and benefit variables a sensitivity analysis was undertaken and summarized in the following table.

### SENSITIVITY ANALYSIS

| Baseline<br>EIRR | EIRR in the event that there is a:   |                           |                           |                    |
|------------------|--------------------------------------|---------------------------|---------------------------|--------------------|
|                  | 10% rise in<br>construction<br>costs | 1% increase<br>in traffic | 5% increase<br>in traffic | 25% fall in<br>VOC |
| 15.9%            | 14.8%                                | 13.3%                     | 18.6%                     | 12.6%              |

- 4.11 The EIRR is robust and acceptable under a broad range of likely scenarios. For example, if the annual increase in normal traffic is assumed to be 5 percent (instead of 3 percent as in the baseline case), the EIRR would rise to 18.6 percent. Conversely, a reduction in the annual increase in normal traffic to one percent would reduce the EIRR to 14 percent. The impacts on the rate of return from variations in construction and vehicle operating costs

<sup>15/</sup> In preparing its Project Memorandum, the ODA also calculated the rate of return for the IDB/ICDF sections of the road and came up with a figure of 20.2 percent -- higher than the 15.9 percent rate calculated by the IDB team.



were also calculated and support the conclusion that the EIRR is fairly resilient to likely changes in these costs.

4. Additional benefits not included in the EIRR calculation

- 4.12 A number of benefits resulting from rehabilitation of the Southern Highway, particularly those associated with improvements in the quality of life of the inhabitants of the southern region, were omitted from the EIRR analysis, either because the economic model used to generate the EIRRs does not allow for their inclusion or because data were unavailable. As the highway is completed, improved access to social services and better national and regional integration will add a layer of net benefits to those provided under the EIRR analysis. The following benefits are anticipated:

a. Improved access to social services

- 4.13 With a rehabilitated Southern Highway, the local population will benefit from the reduction of health problems from dust-related optical and respiratory infections. Reliable transport will facilitate delivery of health services to remote villages and complicated medical cases can be quickly transported to the country's main hospital in Belize City.

- 4.14 The Project will make education more accessible at both the primary and secondary levels; thus benefits will accrue to pupils -- particularly in the rainy weather -- from reduced travel times, improved access to schools, and reduced likelihood of accidents; and teachers who often live far from where they teach will benefit from easier travel. Improved mobility may also facilitate the amalgamation of smaller schools which could result in economies of scale and in qualitative improvements as a result of cost savings and better staff allocations.

b. Socio-economic integration

- 4.15 Both national and regional integration will be enhanced with reliable regional transportation links. The isolation imposed on many communities because of road closures, particularly the earth feeder roads and secondary roads, can be lifted allowing greater participation in civic affairs and the socio-economic integration of these communities with the rest of the country. Regional integration and trade will be facilitated by improved ferry traffic between Punta Gorda and Puerto Barrios in Guatemala (50 km) and Puerto Cortés in Honduras (100 km), and easier road access to the Southern Border, which is expected to follow in the wake of the Project.

c. Direct environmental benefits

- 4.16 At present, many areas adjacent to the Southern Highway are subject to erosion damage caused by the road's insufficient and inadequate

drainage capacity. Rehabilitation with a sealed surface will significantly reduce erosion damage as well as siltation and downstream sedimentation. Once rehabilitated, the Highway will not require regular addition of gravel for repair and maintenance and will thus eliminate the most egregious and visible negative effects (erosion/sedimentation and landscape) from the use of borrow areas. Additionally, the Project will reduce dust significantly, thereby improving air quality for those living along the road while reducing dust accumulation on crops.

d. Benefits to the productive sector

- 4.17 In order to better understand the likely effects of the Project on the region, a special study was commissioned to evaluate the impact on two pivotal sectors: agriculture and tourism.<sup>16/</sup>

1. Agriculture

- 4.18 Agriculture is the dominant sector of the domestic economy, accounting for some 20 percent of GDP and 25 percent of national employment; and exports of citrus and bananas account for over 25 percent of Belize's total merchandise export earnings. Agricultural benefits result primarily from a more reliable and easier access to market with consequent increased production and reduced spoilage of plantation crops (citrus and bananas), mechanized agricultural produce (rice and vegetables), pisciculture and small-scale agriculture. After rehabilitation of the Southern Highway and selected feeder roads, there will be potential for further development of (i) small businesses and of services such as marketing of fresh fruit, vegetables, meat and fish; and (ii) agricultural processing industries, leading to increased production of papaya, mango, pineapple and other fresh fruits. To realize all the above benefits, costs of upgrading selected feeder roads under the Project and expanding agricultural extension services will be incurred.
- 4.19 The study concluded that the net increase in the value of production in the region attributable to the upgrade and rehabilitation of the highway would be about US\$2.5 million per annum from 2002 onwards. The expected benefits are distributed over the major farm types (estate {bananas and citrus}, mechanized agriculture {mostly rice} and milpa), tourism, industry and services. Taking into account the additional costs for feeder

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<sup>16/</sup> Economic Feasibility Study of the Agricultural Development related to the Southern Highway Rehabilitation Project. DHV Consultants, October 1994.

roads, agricultural extension and public services a net cash flow of US\$1.5 million per annum is expected.<sup>17/</sup>

## 2. Tourism

- 4.20 Development of tourism in the southern region has been restricted because of limited accessibility. Rehabilitation of the Southern Highway will encourage more visitors to the southern region and stimulate private investment in tourism. The DHV study include estimates for the impact on tourism based on the assumption that there will be growth in the region (number of visitor days), but that this could be largely at the expense of visitors in the North of Belize. Hence, a limited increase in tourism has been assumed of some 4,500 visitors-days per year, with a daily expenditure of US\$125. The annual benefits attributable to the Project are thus calculated at US\$42,000 in 2000 increasing to US\$84,500 in 2015.
- 4.21 In summary, when the net positive additional benefits from the rehabilitation of the Southern Highway described above are added to the benefits resulting from VOC savings the economic feasibility of the Project is further assured.

### D. Social and cultural impacts

#### 1. Indigenous communities

- 4.22 According to the last census (1991), 7 percent of the population of the Stann Creek District and 62 percent of the population of the Toledo District are Maya.<sup>18/</sup> Further, the EIA notes that nearly 3,000 Mopan Maya and 3,700 Kekchi (about 60 percent of the Mayan population) live mainly in the Indian Reservations of the Toledo District where they practice Milpa farming. While a portion of the present Mayan population of the Toledo district are descendants of the indigenous Maya who have lived in the region "forever", most are descendants of Kekchi and Mopan Maya who immigrated into

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<sup>17/</sup> In order to avoid the potential for partial double counting, these agricultural benefits could not be incorporated into the EIRR calculation, which is based on VOC savings.

<sup>18/</sup> Population in Stann Creek and Toledo Districts:

|              | <u>Stann Creek</u> | <u>%</u> | <u>Toledo</u> | <u>%</u> | <u>Total</u> | <u>%</u> |
|--------------|--------------------|----------|---------------|----------|--------------|----------|
| Total, all   | 17,477             | 100.0    | 17,486        | 100.0    | 34,963       | 100.0    |
| <u>Mayan</u> |                    |          |               |          |              |          |
| Mopan Maya   | 1,190              | 6.8      | 3,825         | 21.9     | 5,015        | 14.3     |
| Kekchi Maya  | 199                | 1.1      | 7,122         | 40.7     | 7,321        | 20.9     |
| Other Maya   | 23                 | 0.1      | 41            | 0.2      | 64           | 0.1      |
| Total Maya   | 1,412              | 7.0      | 10,988        | 61.8     | 12,400       | 35.3     |

Source: 1991 Population Census, Central Statistical Office

southern Belize at the end of the last century from the Alta Verapaz and Peten provinces of Guatemala.<sup>19/</sup> This mix of traditional and more recent Mayan arrivals produces a complex web of attitudes and approaches to land issues. From available literature and Bank visits to the region, it appears that the region has begun the process of economic and social transition.<sup>20/</sup>

- 4.23 The Maya are vulnerable to the pressures that accelerated development in the area will bring. Given the lack of security of land tenure, many Maya fear that the increased pressures on the their lands will threaten the survival of milpa-based subsistence agriculture and the social organization and cultural identity which depend on it.<sup>21/</sup> The Maya recognize the benefits that will come with improved access to the area, especially in terms of needed diversification of agricultural production, the creation of income generating activities and improved access to education and health services. They also seek solutions to the land tenure issues, which they see as a condition for both their economic development as well as their socio-cultural survival.
- 4.24 To assist in defining appropriate solutions for the indigenous lands issue, the companion ESTAP project provides support for the communities and their organizations to define proposals and negotiate them with the government. The Government has provided written assurances that it will not de-reserve or alter the legal or de facto status of the Toledo Indian Reserves until it has approved and commenced implementation of the land tenure solutions for these communities, including the related legal and policy reforms and institutional arrangements, to be developed by the

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<sup>19/</sup> See Assad Shoman's History of Belize, pages 88-90.

<sup>20/</sup> The transition appears to represent a movement from milpa (swidden agriculture) to permanent agriculture (or possibly subsistence to cash-crop) for those on the Reserves, and a movement from a rural/communal emphasis to an urban/commercial orientation for those outside the Reserves.

<sup>21/</sup> In 1996 the Toledo Maya Cultural Council and the Toledo Alcaldes Association, with support from the U.S.-based Indian Law Resource Center (ILRS), petitioned the Supreme Court of Belize for redress of alleged violations of their constitutional land rights. Among other relief sought, the Applicants request a declaration that Maya aboriginal rights as asserted by Applicants constituted a form of property protected under the Belizean Constitution. To advance their ancestral land claim the ILRS and the Mayan groups with support from the Inter-American Foundation and the National Geographic Society mapped the current and historical boundaries of their land claim. The case is still pending before the Supreme Court.

Borrower with the assistance of the community participation and land use planning components of the ESTAP Project.<sup>22/</sup>

2. Distributive impact

- 4.25 To broaden the distribution impact of the paving of the Southern Highway two measures were taken: adding the feeder road component which will bring the benefits of the road closer to rural communities, and developing the companion ESTAP project which is designed to both protect the assets of vulnerable groups and facilitate their participation in the development process.

3. Archeological impact

- 4.26 Because the southern region contains globally significant archaeological remains -- sites and materials of the Maya civilization -- the Bank undertook an archaeological impact assessment, and a manual was prepared to help construction workers identify archeological sites, see Technical File 5. Direct negative impacts were found to be few and easily minimized. The project will improve prospects for further development and protection of archeological resources in southern Belize. Construction workers under the guidance of the supervision firms will be educated as to what steps to take in the unlikely event that major archeological findings are unearthed. Also, within the ESTAP project issues relating to preservation of archeological remains and sustainable levels of visitors to popular archeological sites will be addressed.

E. Environmental viability

- 4.27 As noted earlier, the negative direct environmental impacts of the Southern Highway resulting from its current condition -- such as erosion of the road surface, poor drainage structures, unsustainable use of borrowing areas, and air pollution in the form of dust -- will be greatly reduced or eliminated by the proposed Project. In addition, the companion ESTAP project will guide and monitor an environmentally sustainable economic and social development of the southern region. The Project is considered environmentally viable in view of the technical and institutional measures to prevent and mitigate direct and indirect adverse environmental effects.

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<sup>22/</sup> See Minutes of Contract Negotiation dated August 12, 1997.

**SOUTHERN HIGHWAY PROJECT (BL-0001)**  
**LOGICAL FRAMEWORK**

| NARRATIVE SUMMARY   | INDICATORS  | MEANS OF VERIFICATION   | ASSUMPTIONS  |
|---|---|---|--|
| <b>PROJECT GOAL</b>   | Measure of Achievement  | At Goal Level   | At Goal Level  |
| To improve economic opportunities for the people living in the southern region by integrating that part of the country into the rest of Belize. | <p>Five years following project completion, the disparity in per capita income and quality of life indicators for people in Toledo and Stann Creek districts (compared to those in the four northern districts) will be less than the 1997 figure.</p> <p>The rate of return on the investment to upgrade the Southern Highway five years after project completion is compatible with a life-of-project return of 12 percent.</p> | <p>Income per-capita and quality of life indicators for Toledo and Stann Creek districts which will be developed under the data base component of the companion ESTAP Project.</p> <p>Economic Internal Rate of Return (EIRR) parameters including VOC savings, road roughness indicators and traffic counts.</p> | <p>GoBL priorities for Southern Highway and ESTAP projects are maintained; counterpart funds are available; and other donor projects in the southern region are implemented on schedule, especially the World Bank's US\$11.7 million Social Investment Fund project.</p> <p>The data needed to calculate the actual EIRR can be obtained from cofinancing and parallel financing agencies and from GoBL records, and</p> <p>All sections of the Southern Highway are completed by the date of the ex-post evaluation.</p> |
| <b>PROJECT PURPOSE</b>  | Measure of Achievement  | At Purpose Level  | At Purpose Level   |
| To improve transportation conditions for agricultural products, the tourism sector and to facilitate access to education and health services.   | Increase in tonnage of agricultural products passing over the road; the number of tourists visiting the region; and utilization of health and education facilities.   | Reports from the Ministry of Agriculture, the Belize Tourism Board and the ministries of Health and Education, utilizing baseline data (generated under the ESTAP Project) for comparison.  | That competitiveness of agricultural sector is improved, that satisfactory substitute crops are developed as preferential markets for bananas are phased out, and that the GOB's current policy to promote sustainable eco-tourism is sustained.   |
| <b>OUTPUTS</b>  | Magnitude of outputs required   | Means of verification   | Assumptions concerning outputs   |
| Sections No. 4 and 5 of the Southern Highway rehabilitated.   | 64.4 km rehabilitated and upgraded by 2002.   | Supervisory consultants, MOW reports, COF/CBL inspections, annual monitoring meetings.  | Counterpart funds are provided in a timely manner and ICDF funding is in place.  |
| Selected rural feeder roads rehabilitated.  | 176 km upgraded no later than 2000.   | Supervisory consultants, MOW reports, COF/CBL inspections, annual monitoring meetings.  | Availability of counterpart funds.   |
| Road maintenance capability strengthened.   | RMMS maintenance system installed and operational in all six maintenance districts.   | MOW reports, CBL inspections, annual monitoring meetings.   | GoBL commitment to RMMS system and availability of funding from the CDB.   |

| NARRATIVE SUMMARY  | INDICATORS  | MEANS OF VERIFICATION  | ASSUMPTIONS   |
|--|---|--|---|
| Direct environmental and social impacts mitigated.   | Mitigation measures incorporated into construction contracts and periodic reporting on mitigation measures and detection of unforeseen direct impacts.  | Supervisory firm reports, DE/NEAC field inspections, MOW reports, CBL inspections, annual monitoring meetings, ESTAP reports.  | GoBL commitment to high environmental standards is maintained and that the ESTAP Project is implemented as planned.   |
| INPUTS (ACTIVITIES)  | Magnitude of inputs required  | Means of verification  | Assumptions concerning inputs   |
| <p><u>Upgrading of Southern Highway</u></p> <p>Selection of and contracting for firms to:<br/>-rehabilitate Sections 4 and 5, and<br/>-perform role of supervisory engineer.</p> <p>Provision of institutional support to the Project Execution Unit.</p> <p><u>Feeder Roads</u></p> <p>Identification of feeder roads.</p> <p>Upgrading of feeder roads.</p> <p><u>Road maintenance.</u></p> <p>Performance of regular and periodic maintenance on paved roads.</p> <p><u>Direct Environmental and Social Impacts</u></p> <p>Mitigation of the negative environmental and social impacts of the rehabilitation works.</p> | <p>IDB financing of US\$16 million<br/>ICDF financing of US\$10 million</p> <p>CDB funding of US\$1.8 million</p> <p>GoBL counterpart funding of US\$2 million equivalent over the four-year project life.</p> <p>CDB financing of maintenance training of US\$200,000.</p> <p>Periodic monitoring of: erosion and sedimentation rates along selected road segments; conditions in and around construction camps; and contractor compliance with re-vegetation (borrow pits and quarries) requirements.</p> | <p>Supervisory consultants, MOW reports, CBL inspection and disbursement reports and annual monitoring meetings.</p> <p>CDB reports, MOW reports, CBL inspections and annual monitoring meetings.</p> <p>Supervisory consultants, MOW reports and annual monitoring meetings.</p> <p>Annual monitoring meetings.</p> <p>Supervision firm report, DE/NEAC field inspections, ESTAP reports, IDB Country Office inspection and annual meetings</p> | <p>Both IDB and ICDF projects approved on schedule and PEU organized and operating.</p> <p>CDB component of the Project is implemented as planned.</p> <p>Counterpart funds are made available on a timely basis.</p> <p>RMMS continues to be supported by MOW.</p> <p>Project Execution Unit fully supports the direct environmental and social mitigation measures associated with the project and acts on recommendations of engineering supervision firm.</p> |

SOUTHERN HIGHWAY PROCUREMENT PLAN  
BL-0001

| Major Procurement for Project   | Financing US\$ Million |        |       | Method (IPB or other) a/ | Prequalification (Yes/No) | Estimated Development Business Publication |
|---|------------------------|--------|-------|--------------------------|---------------------------|--|
|   | IDB                    | Other  | Local |                          |                           |  |
| Description   |                        |        |       |                          |                           |  |
| Rehabilitation and upgrading of Southern Highway  |                        |        |       |                          |                           |  |
| <u>A. Civil works</u>   |                        |        |       |                          |                           |  |
| Sections Number 4&5   | 19.1                   |        |       | IPB                      | Yes                       | 1998                                       |
| <u>B. Supervision</u>   |                        |        |       |                          |                           |  |
| Engineering firm  | 1.2                    | 1.4    | 0.2   | ICB                      | Yes                       | 1998                                       |
| <u>C. Studies</u>   |                        |        |       |                          |                           |  |
| Consultants   | 0.3                    | ---    | ---   | ICB                      | Yes                       | 1998                                       |
| Rehabilitation of Rural Roads   | ---                    | ---    | 2.0   | LCB                      | Yes                       | 1998 to 2001                               |
| Equipment for roads maintenance   | 0.6 c/                 | ---    | ---   | IPB                      | Yes                       | 1998                                       |
| Periodic Maintenance  | .3                     |        |       | LCB                      | Yes                       | 1998                                       |
| Maintenance Contracts   | 0.5                    | ---    | ---   | LCB                      | Yes                       | 1998to 2001                                |
| Consultants and materials for training  | ---                    | 0.2 b/ | ---   | ICB                      | Yes                       | 1998                                       |
| a/ International Competitive Bidding (ICB) for consulting services of US\$200,000 and over.<br>International Public Bidding (IPB) for works of US\$1,000,000 and over.<br>Local Competitive Bidding (LCB) |                        |        |       |                          |                           |  |



b/ MOW, CONSULTANTS AND MATERIALS FOR TRAINING - CDB (US\$200,000)

Short courses and consultants:

- a) Bridge maintenance and inspection
- b) Cement and concrete technologies
- c) Diagnose and trouble shooting for mechanics

Videos, literature, and equipment (computers, printers, etc.) related to:

- a) Maintenance of paved highways
- b) Maintenance of feeder roads
- c) Maintenance, use, and operation of highway equipment

c/ LIST OF EQUIPMENT TO BE PURCHASED FOR MAIN HIGHWAYS (\$600,000)

| Equipment   | COST in US\$ |
|---|--------------|
| - 1 Batching plant; capacity: approx. 4 cubic yards/hour          | 165,000      |
| - 3 Crew Cabs   | 84,000       |
| - 3 Vibroll, 18" diam.  | 44,000       |
| - 6 sets of portable weight bridges (weight control equipment)    | 97,000       |
| - 3 Portable asphalt kettles with heating elements                | 52,000       |
| - 3 Personnel Supervisory Vehicles                                | 75,000       |
| - Computers for district offices and vehicles for Belmopan office | 83,000       |
| Total   | 600,000      |

RGII-BL016P  
BL-0001  
Original: English

PROPOSED RESOLUTION

BELIZE. LOAN \_\_\_\_/OC-BL TO BELIZE  
(Southern Highway Project)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with Belize for the purpose of granting a financing to cooperate in the execution of the Southern Highway Project. Such financing will be for the amount of up to US\$16,000,000, which are part of the resources of the Single Currency Facility of the Ordinary Capital, and will be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" of the Executive Summary of the Loan Proposal.