

**INTEGRATION CORRIDORS AND PRIMARY ROAD
IMPROVEMENT PROGRAM**

(UR-0113)

EXECUTIVE SUMMARY

BORROWER: Eastern Republic of Uruguay

EXECUTING AGENCY: Ministry of Transportation and Public Works
[Ministerio de Transporte y Obras Públicas] (MTOP),
through the National Highway Department [Dirección
Nacional de Vialidad] (DNV)

AMOUNT AND SOURCE: IDB: US\$123 million
Local counterpart funding: US\$ 53 million
Total: US\$176 million

**FINANCIAL
TERMS AND
CONDITIONS:** Amortization period: 20 years
Disbursement period: 4 years
Interest rate: variable
Inspection and supervision: 1%
Credit fee: 0.75%
Currency: dollars of the United
States of America

OBJECTIVES: The general objective of the program is to reduce
transportation costs and eliminate constraints on
international traffic along the main integration
corridors and elsewhere within the national highway
system.

The specific objectives of the program are to:

- (a) Improve the features and structural capacity of
national highways and bridges that are part of
the integration corridors, eliminating any
constraints on their use and ensuring safe road
conditions.
- (b) Institute more efficient maintenance management
arrangements for the national highway system.
- (c) Implement measures for institutional streng-
thening designed to improve the effectiveness of
the MTOP and DNV as the agencies in charge of
investment policy in the road sector, and promote
private sector involvement in direct management
of the transportation infrastructure.

DESCRIPTION:

The program consists of three projects: (i) a **highway rehabilitation and bridge improvements project**, under which works will be carried out for replacement of pavement, widening of the roadway, and in certain cases improvements in alignment to remedy problem segments, mainly with respect to road safety, and works on bridges located on the main freight transportation corridors of the country that have insufficient width and other constraints on traffic, and that need to be replaced or upgraded to fulfill MERCOSUR agreements; (ii) a **rehabilitation and maintenance pilot project**, for implementation of a new system for maintenance, under which a road works company will be hired through international competitive bidding, will be assigned a segment of the system and after rehabilitating it to meet preestablished technical standards, will be responsible for its maintenance, guaranteeing a minimal service level. The pilot project will be of four years' duration and will cover 360 kilometers of a portion of the road system in the area surrounding Montevideo; and (iii) an **institutional strengthening project**, to support the measures that the MTOP and DNV will take during the period from 1997 to the year 2000 to improve their management, under the sector reform and reorganization of the DNV. The institutional strengthening activities are divided into three areas: (i) transportation policy, (ii) private sector participation in the road sector, and (iii) strengthening of the DNV.

**ENVIRONMENTAL
AND SOCIAL IMPACT:**

The Environment Committee, at its meeting of July 2, 1996, classified this as a Category III operation. The environment report was approved by the Committee on Environment and Social Impact (CESI) on May 23, 1997, and was forwarded to the PIC on the same date.

BENEFITS:

The program will contribute to current transportation sector activities in various ways: (i) the financial resources contributed will strengthen, in the short and medium terms, current efforts to reverse the trend towards deterioration of the highway infrastructure and eliminate constraints on freight traffic within the main integration corridors, through a bridge improvement plan; (ii) support for implementation of the sector policy in effect, which seeks to increase private-sector participation in direct transportation infrastructure management and related services, will thus allow implementation of maintenance under contract, concessions for toll roads, and outsourcing of services; (iii) the institutional strengthening will help focus public-sector

activities on policy-setting, planning, and control, thereby modernizing MTOP and DNV operations and improving their efficiency, strengthening their institutional capacity, and upgrading their human and technical resources; (iv) the DNV's capacity will be significantly strengthened to properly address environmental concerns connected with road design, construction, and operation, and to control transportation of hazardous substances; and (v) plans will be developed and activities carried out to systematically improve road safety.

RISKS:

The main risk of the program is its long-term sustainability, which will depend mainly on continuity in the strategy that has been implemented in the transportation sector. It is reasonable to expect that the main components of the strategy (redefinition of the functions and reorganization of government institutions, increased private-sector participation in direct management of the transportation infrastructure through concessions and outsourcing of services) will be maintained and developed in the future. Furthermore, during the program execution period, a long-term plan will be drawn up and implemented for road maintenance management, to address the various issues related to sustainability. In addition, the program will contribute directly towards successful implementation of the strategy adopted through implementation of the pilot project and new concessions, statistical traffic surveys, and the various activities to be carried out under the institutional strengthening project. To monitor implementation of the sector and institutional reform measures and overall program execution, periodic meetings will be held with the respective government authorities, the DNV, and the Bank.

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

The Bank's strategy for the period from 1996 to 1998 is to support the government in promoting investment as the engine for development, improving the country's competitive position, and seeks to: (i) deepen the structural reforms to streamline public spending and achieve fiscal equilibrium; (ii) improve the environment for private investment to restore competitiveness and help increase investment; and (iii) improve the quality and targeting of social services, to maintain the high levels achieved by the country and ensure the availability of human capital needed for sustainable growth in the context of MERCOSUR and the globalization of markets. The program is consistent with this strategy, since it calls for complementary public-sector investment in

priority infrastructure works that will help promote private investment and have a positive impact on competitiveness and regional integration, and because it will also support activities for modernization and institutional strengthening to improve public sector management in a key area of basic infrastructure.

POVERTY TARGETING: The proposed program does not meet the criteria for poverty targeting set forth in the Eighth Replenishment document (AB-1704), based on either geographical area of influence or beneficiaries, nor does it specifically target women.

EXCEPTIONS TO BANK POLICY: No exceptions to Bank policy are called for.

PROCUREMENT OF GOODS AND SERVICES: Current Bank policy will be followed for the procurement of goods and the awarding of contracts for works and consulting services to be financed with program resources. When the proceeds of the Bank loan are used, the threshold above which international competitive bidding will be required for procurement is: US\$250,000 for goods, US\$3 million for works, and US\$200,000 for consulting services.

RECOGNITION OF PREVIOUS EXPENDITURES: Expenses incurred after May 15, 1996, the date on which the borrower sent the request for financing to the Bank, will be recognized for highway and bridge works the initiation of which has already been authorized. Expenses incurred for the executing unit will be recognized as part of the local counterpart contribution, as well as advance expenditures for environmental consulting services and engineering firms in charge of construction project design and supervision. Expenditures incurred before July 1997 are not expected to exceed an estimated total of US\$10.5 million (US\$1 million for engineering, supervision, and administration services, and approximately US\$9.5 million for construction contracts), of which US\$7 million would be recognized as chargeable to the Bank contribution and US\$3.5 million to the local counterpart.

SPECIAL CONTRACTUAL CONDITIONS: Conditions precedent to the first disbursement:

An environmental protection unit must be established in the DNV and an environmental specialist hired as advisor to the unit (paragraph 3.14(a)).

Other special conditions:

Monitoring: To monitor overall execution of the program and sector policy development, periodic meetings will be held for consultation among the Bank, the respective government authorities, and the DNV (paragraph 3.40).

Environmental concerns: In addition to the conditions precedent regarding the environment, clauses will be included on: reports on environmental management, results of environmental courses, transportation of hazardous substances, environmental manuals; inclusion in the bidding documents of clauses on surveying environmental liabilities, measures for environmental protection, maintenance of access roads, and construction or upgrading of parallel roads; and follow-up reports on environmental measures (paragraph 3.14).

Rights of way: A clause will be included to ensure timely construction of the works (paragraph 3.10).

Road safety: Clauses will be included on various measures to improve road safety, such as an accident analysis system, driver registration, training in road safety, and preparation of a road safety improvement plan (paragraph 3.18).

Weight control: Clauses will be included on the installation and operation of fixed vehicle and freight weigh stations and mobile scales, and the respective reports (paragraph 3.39).

Long-term sustainability of maintenance: A long-term plan for managing maintenance of the national highway system will be submitted, and must properly address the issues of efficiency, continuity, and financing. The plan will be based on studies evaluating the maintenance practices financed under the program and a user fee study being conducted by the executing agency (paragraph 3.37).

Functional organization of the DNV: A clause will be included regarding submittal to the Bank of a timetable for implementation of the measures for the internal restructuring of the DNV under the ongoing institutional reform, the purpose of which is to improve the operating efficiency of the institution (paragraph 4.5).

Financing for the road subsector: The Bank must be consulted before any substantial modifications are made in the mechanisms for financing of the road sector (paragraph 4.26).

I. FRAME OF REFERENCE

A. The supply of transportation infrastructure in Uruguay

- 1.1 The scope and coverage of Uruguay's infrastructure services are among the highest in the region, considering the length and density of its highway systems. However, the overall state of repair of this infrastructure is poor, due to delays in the replacement and expansion of existing capacity, inadequate maintenance, and in certain cases obsolete designs that fail to meet modern technical standards and current demand.
- 1.2 In response to this situation, the Uruguayan government has been taking a variety of measures in recent years to promote modernization of the transportation infrastructure and to improve efficiency in its management, especially through the participation of private investors in the construction and operation of works and in the delivery of services under the concession system. This opening up to the private sector falls within the broader framework of the economic reform the government has been carrying out, and increasing integration with the other countries of the Southern Common Market (MERCOSUR).

B. The integration process and transportation infrastructure

- 1.3 Opening up the economy, and especially consolidating MERCOSUR – which has led to accelerated growth in trade with Argentina and Brazil, Uruguay's bordering countries and principal trading partners – has spurred an increase in demand on the transportation infrastructure of the country, particularly its highways, since close to 90% of goods entering or leaving Uruguay are transported by truck.
- 1.4 In January 1995, the MERCOSUR member countries agreed to authorize the circulation of vehicles with an increase in maximum load per triple axle from 22 MT to 25.5 MT, and in total gross weight from 42 MT to 45 MT, in order to standardize freight transportation among the member countries. Application of this agreement has been limited in Uruguay because of the limitations of its road infrastructure, especially with respect to bridges, which were designed for lighter loads than those authorized under the MERCOSUR agreements. There are 69 bridges on major national roads linking Uruguay with its neighboring countries, referred to as "integration corridors", that cannot bear the weight of heavier trucks, and another 55 that could only do so at reduced speeds and with restrictions on passing of heavy trucks.

C. Progress in transportation concessions

- 1.5 In this context, in 1992, the Ministry of Transportation and Public Works [Ministerio de Transporte y Obras Públicas] (MTOP) launched a

series of measures in the transportation sector to expand private-sector participation and transfer operation of services previously delivered by State institutions to the private sector. Among these measures are concessions for the widening and maintenance of the divided highway from Montevideo to Punta del Este (which the Bank would help finance through a loan to the private concessionaire, currently being processed); construction and operation of the suburban and intercity bus terminals in Montevideo; freight terminal operations and aircraft assistance services on land at the Carrasco (Montevideo) Airport; reconstruction and widening of the landing strip and terminal, and operation of the Laguna del Sauce (Punta del Este) Airport; and use and development of Montevideo Port zones and facilities, together with the delivery of services to ships. A call for bids has already been issued for the construction of the divided highway on Route 1 between Montevideo and Libertad, including a new bridge on the Santa Lucía River, and outsourcing initiatives are being implemented to transfer weight enforcement and traffic counts on the primary national highway system to private enterprises.

- 1.6 The concessions already granted have helped expand and improve the quality of the services and existing infrastructure. The concession system is being consolidated and institutionalized, with new works and services to be concessioned being or having been identified by the government. In the transportation sector, concessions will be granted for international bridges, commercial and recreational ports, and airports, in addition to highways.
- 1.7 For the strengthening of the concession system, especially in the area of transportation infrastructure, the Bank, through the Multilateral Investment Fund (MIF), provided the government with technical-cooperation funding under operation ATN/MT-5533-UR for the strengthening of the public works and services concession system, which was approved on April 23, 1997 and complements the proposed operation. This assistance will especially benefit the MTOP, by strengthening its capacity to design and implement the concession program for transportation infrastructure, along with that of the agencies that report to it to prepare and implement concessions in their respective areas. In addition, the program will support specific projects such as the concession for the container terminal in the Port of Montevideo and two highway concessions (Route 1 between Libertad and Colonia, and Route 11 between Route 1 and the coastal route (Ruta Interbalnearia).

D. Highway transportation in Uruguay

- 1.8 Highways are the main means of intercity transportation for both freight and passengers in Uruguay, which has a highway system that covers the entire country and is the densest of all the South American countries. The national highway system, administered by the National Highway Department (DNV), currently totals 8,629 km (of which 7,391 km, or 86%, is paved, and 3,466 km represents the

primary system), and has 778 bridges totaling 61,000 m in length. Municipal road systems total approximately 67,000 km and are almost entirely gravel or dirt roads.

- 1.9 Over the past few years, the automotive vehicle stock has been increasing steadily, especially cars and light delivery trucks, which grew at an annual rate of 4.2% from 1985 to 1994. In addition, the transportation of freight in connection with Uruguayan exports has been on the rise, along with intercity passenger transportation, based on the large increase in the stock of individual cars and in local tourism. These trends are expected to sharpen in the coming years due to the increase in trade, greater flows of tourism among MERCOSUR countries, and the development of forest production with soaring demand for transportation.
- 1.10 Because the highway system was built in the first few decades of this century, certain designs, especially that of bridges (45% of which in the national system are more than 40 years old), are ill suited to the demands of current transportation, and many of their segments and masonry structures have outlived their useful life. For the most part, the national highway system is in a poor state of repair, a situation that has deteriorated since the early 1990s, essentially due to the decline in maintenance investments as a result of adjustments in fiscal policy. In 1994, 63% of the national system (5,416 km) was in a fair or poor state of repair, compared with 55% in 1988. Consequently, current sector plans are exclusively geared towards improving and maintaining the existing system and increasing maintenance and improving its efficiency. The plans call for implementing the commitments imposed by the MERCOSUR agreements, especially authorizing traffic of heavier vehicles on the primary network after 1995. This commitment is forcing the country to immediately adjust the infrastructure in the main transportation corridors, especially bridges.

E. Uruguayan transportation strategy

- 1.11 The government is deepening the process of restructuring the transportation sector to streamline public-sector involvement and achieve greater efficiency in the various modes of transport, essentially through the following series of mutually complementary regulatory, institutional, and operational measures:
(i) development of a regulatory and institutional framework to ensure the availability of financial resources in the long term for proper maintenance of infrastructure and to foster greater private-sector participation in direct infrastructure management;
(ii) expansion and extension of concession-granting to new areas and activities, in order to improve infrastructure quality and to increase efficiency in the delivery of related services; and
(iii) reorganization of the activities of government agencies involved in transportation, increasingly redirecting their functions to policy-setting, planning, regulation, and control.

The proposed program is part of a sector action plan, implementation of which will be monitored during program execution (see Annex I-2).

- 1.12 In the specific case of the highway subsector, the government is taking steps to streamline its activity, transferring repair and maintenance of part of the highway system to the private sector through various arrangements. It has redefined the functions and structure of the DNV under the State reform program, through Decree 340 of March 1997, which institutes major changes in its organizational structure to make operations more efficient.
- 1.13 In this context, the program will support current activities in a number of ways: (i) the financial resources will help strengthen, in the short and medium terms, the government's efforts under way to reverse the tendency toward deterioration of the highway infrastructure and eliminate existing restrictions to freight transportation on the main integration corridors, through a bridge improvement plan; (ii) support for implementation of the sector policy under way, under which the private sector will become increasingly involved in direct management of the transportation infrastructure and related services, will help implement arrangements for maintenance under contract, toll concessions, and outsourcing of services; (iii) institutional strengthening will contribute to focusing public-sector activities on policy-setting, planning, and control, thereby modernizing MTOP and DNV operations and making them more efficient, strengthening their institutional capacity and upgrading their human and technical resources; (iv) the DNV's capacity will be significantly strengthened to properly address environmental concerns in connection with highway design, execution, and operation, and for control of transportation of hazardous substances; and (v) plans will be developed and measures taken for systematic improvement of road safety.

F. Highway subsector financing

- 1.14 The government's overall transportation strategy is reflected in the policies set forth in the MTOP Five-Year Plan for Transportation and Public Works for the period from 1995 to 1999. The plan includes a works plan prepared by the DNV, the goal of which is to reverse the trends towards deterioration of the past few years and to improve the general state of repair of the highway system. The plan is divided into a number of programs that would be financed through government resources (from tax revenue specifically earmarked for highways and from general revenue) and a large portion of external financing (39%), which would be from the World Bank, FONPLATA, and the IDB through the proposed program.
- 1.15 The program would provide for priority investments to improve the main highway transportation corridors, which are also corridors for integration with Brazil and Argentina, and other segments of the primary national system. Furthermore, the program will support

MTOP activities for reform and modernization of public-sector management in the transportation sector and the highway subsector in particular.

- 1.16 The World Bank is currently preparing two projects that would complement the proposed IDB program. The first, now in preparation, is designed to improve the infrastructure most directly affected by the increase in freight traffic as a result of the large increase in forest production expected over the coming years. It will finance rehabilitation and expansion in certain segments of the highway system located close to forest plantations and maintenance of municipal road systems, expansion of port facilities in Fray Bentos and Montevideo, and rehabilitation of part of the railroad infrastructure (Rivera-Montevideo and Blanquillo-Montevideo lines). The second project will specifically address new investment needs for the highway system and will be processed once the first project is approved.

G. Experience of the Bank and other financial institutions

- 1.17 The Bank has granted eight loans for the highway sector in Uruguay, totaling the equivalent of US\$161.8 million. The Bank currently does not have any operations being directly executed by the MTOP, although the MTOP is coexecuting agency for the infrastructure components of phase two of the municipal works project (loan 609/OC-UR) and the dairy farm infrastructure project (914/OC-UR). The last highway operation was for phase two of the highway improvement program (loan 241/IC-UR) for US\$83.8 million, finalized in 1992, which was partially cancelled, reducing it to a final amount of US\$12.1 million, due to the government policy on reducing public spending (for the period from 1990 to 1994). In 1993, the Bank began preparation of a transportation corridors project (UR-0073), but the government decided not to move forward on it because of the above-mentioned cutbacks in public spending as part of the adjustments in fiscal policy.
- 1.18 The World Bank has participated in the financing of four programs for US\$180 million. Phase one of the transportation project launched in 1989, financed with IBRD loan 3021-UR for US\$80 million, and cofinanced with the EXIMBANK of Japan (US\$73.9 million), is in its final phase of execution. It covers investments in port works, municipal road systems, and the national highway system, in addition to an institutional strengthening component. MTOP budget constraints and investment caps have led to delays in project execution, but completion is scheduled for June 1997.
- 1.19 Project execution in the highway sector has been generally successful in terms of works, which have been satisfactorily completed, but there have been considerable delays in some cases. In terms of institutional development, however, success has been partial, in part because of technical staff turnover and changes in

sector priorities. Sustainability of the projects has been jeopardized by problems with maintaining adequate levels of maintenance.

H. Long-term sustainability of the program and the highway subsector

- 1.20 During program preparation, account was taken of the lessons learned in the execution of previous loans approved by the Bank and the World Bank. This is reflected in the concern both to ensure proper program execution and to contribute towards sustainability of the long-term objectives.
- 1.21 With regard to program execution, the program design took into account the problems encountered in the past in similar projects. Certain components have therefore been included to strengthen the DNV's execution capacity: (i) the hiring of consultants to design the works planned; (ii) the hiring of consultants to supervise the works and exercise technical control; (iii) the hiring of consultants to provide technical assistance to supervise all construction projects to be financed under the program; and (iv) technical support for the executing unit. By supplementing the internal structure of the DNV with this assistance, all the projects can be assured the proper quality and timely execution within their budgets, thereby avoiding the delays and cost overruns observed in certain cases in the past. In addition, during program preparation, substantial matters were agreed upon with regard to procurement and significant progress has been made in the procedures, which will contribute to timely execution of the program.
- 1.22 With regard to long-term sustainability, the program will have a positive impact in a number of ways. First of all, it will support the implementation of sector policy now under way, the purpose of which is to promote increasing private-sector involvement in direct management of transportation infrastructure and related services. This will be achieved through the financing of the pilot project for rehabilitation and maintenance, the hiring of consultants to conduct the statistical traffic survey, and preparation of toll concessions. Particularly in the case of the pilot project, successful implementation will allow this new type of maintenance management to be extended to other sectors of the highway system, contributing towards sustaining maintenance outlays and adequate maintenance levels in the long term. Secondly, the program will help carry out an objective evaluation of the various means of road maintenance, for preparation and implementation of a long-term maintenance plan. Third, institutional strengthening of the MTOP and DNV will help improve and lend continuity to their operations, thus achieving greater efficiency in the allocation of sector resources. And lastly, the program will strengthen the capacity of the MTOP and DNV in matters pertaining to environmental protection and road safety.

- 1.23 The activities to be carried out under the program for sector sustainability in the long term will be supplemented by other measures supported by the World Bank under the loan being implemented. These include a study on user fees and transportation sector financing, the purpose of which is to provide guidelines for the formulation of proposals to improve the efficiency of resource allocation in the sector and to ensure adequate levels of financing for investment and maintenance in the long term. The study, which will be completed towards the end of 1997, will be used to prepare proposals for reform of the sector regulatory framework, particularly financing mechanisms.

I. The Bank's strategy and rationale for its participation

- 1.24 The Bank strategy for the period from 1996 to 1998 is to support the Uruguayan government in promoting investment as the engine for development, improving the country's competitive position, and seeks to: (i) deepen the structural reforms to streamline public spending and achieve fiscal equilibrium; (ii) improve the environment for private investment to restore competitiveness and help increase investment; and (iii) improve the quality and targeting of social services, to maintain the high levels achieved by the country and ensure the availability of human capital needed for sustainable growth under MERCOSUR and the globalization of markets.
- 1.25 The program is consistent with this strategy, since it calls for complementary public-sector investment in priority infrastructure works that will help promote private investment and have a positive impact on competitiveness and regional integration, and because it will also support activities for modernization and institutional strengthening to improve public-sector management in a key area of basic infrastructure.

II. THE PROGRAM

A. Objectives

- 2.1 The general objective of the program is to reduce transportation costs and eliminate constraints on international freight traffic along the main integration corridors and elsewhere within the national highway system.
- 2.2 The specific objectives of the program are to:
 - a. Improve the features and structural capacity of national highways and bridges that are part of the integration corridors, eliminating any constraints on their use and ensuring safe road conditions.
 - b. Institute more efficient maintenance management systems for the national highway system.
 - c. Implement measures for institutional strengthening designed to improve the effectiveness of the MTOP and DNV as the agencies in charge of investment policy in the road sector, and promote private-sector involvement in direct management of the transportation infrastructure.
- 2.3 The program goals will be achieved as its various components become operational (see logical framework in Annex II-1). The main indicators are described below:
 - a. By December 31, 2001, operating costs for highway transportation on the segments covered under the program will have declined with respect to costs as of March 31, 1996 as follows (expressed in US\$ per vehicle/kilometer: automobiles, from 0.229 to 0.219; buses, from 0.841 to 0.786; trucks, from 0.430 to 0.366; semi-heavy trucks, from 0.704 to 0.603; and heavy trucks, from 0.896 to 0.795.
 - b. By December 31, 1999, three corridors, consisting of Routes 3, 6, 7, and 8, will have been rehabilitated according to MERCOSUR standards.
 - c. By 2001, the rehabilitated highways and bridges will have the following characteristics: (a) the highways will be at least 7.2 m wide, with 1.5 m shoulders, a deterioration index of no less than 80:100 and an international roughness ratio (IRI) of between 2 and 3; and (b) the admissible gross capacity of bridges will be increased from 42 MT to 45 MT and the design capacity for triple axle vehicles from 22 MT to 25 MT. Bridges will have a minimum width of 8 m.

- d. Between 1997 and 2000, 520 km of national highways on integration corridors will be rehabilitated and in operation and 26 bridges totaling 2,200 m in length will have been reconstructed or had their structure reinforced and their decks widened.
- e. Beginning in 2000, the quality of the pavement on the 360 km of roads in the periphery of Montevideo improved under contract with the private sector, will meet the quality standards established in the respective maintenance contract. To achieve this, in 1997 a four-year rehabilitation and maintenance program will be carried out under contract by the private sector.
- f. During the program execution period, the following activities will be completed: transportation planning and policy studies, advisory services for studies on the environment and road safety, a statistical traffic survey program, technical advisory services for the administrative unit of the program and the DNV on project design evaluation, technical training of managerial staff, procurement of computer hardware and software, and the study on transportation of hazardous substances. In addition, the single registry of drivers, vehicles, traffic violations, and traffic violators will be implemented, along with a traffic accident analysis system.

B. Description of the program

2.4 The program consists of three projects:

1. Highway rehabilitation and bridge improvement project

2.5 This project will be carried out through the following two components:

a. Highway rehabilitation

2.6 Twenty-five segments of primary national highways, with a total length of approximately 520 km, have been identified in the corridors linking Uruguay to its neighboring countries. They will have works carried out for replacement of pavement, widening of the roadway, and in certain cases improvements in the alignment to remedy problems concerning mainly road safety.

2.7 The highways selected bear traffic volumes of 500 to 1,500 vehicles/day, with heavy vehicles representing a relatively high proportion of the total, fluctuating between 25% and 35%. The roads are mostly paved with simple pavement consisting of asphalt treatments that are insufficient to bear current traffic and/or an asphalt wearing course that has already completed its useful life. The roadways vary in width from 7 m to 7.2 m and the shoulders are approximately 1.5 m and wider.

- 2.8 The segments that will be executed under the program will be those assigned priority to maintain highway assets, on the basis of the following criteria: (i) they are to be part of the national highway system; (ii) contribute towards improving general traffic conditions in integration corridors; and (iii) be part of the approved five-year investment plan. In addition, for the works in the sample, it was verified that each project had: (iv) engineering, economic feasibility, and environmental studies completed; and (v) an economic internal rate of return equal to or greater than 12%. These conditions must be met for all highway segments to be executed under the program.
- 2.9 Based on the above criteria, segments located in national Routes 2, 3, 5, 6, 7, 8, and 9 were identified (see map). For Routes 2, 3, 5, 6, and 7, the type of pavement used will be standardized along their entire length, improving alignment, widening the roadway, and raising the paving level to asphalt cover where justified by traffic volume, or else replacing simple pavement. For Routes 8 and 9, which already have top quality pavement along most of their lengths, the masonry structures will be upgraded to handle a higher load capacity per axle and the traffic volumes that they will have to bear once the restrictions are lifted on entry into the country of trucks meeting the new standards for weight per axle and total weight.

b. Bridge improvement plan

- 2.10 This component includes works on 26 bridges located in the main freight transportation corridors in the country and which total approximately 2,200 m. The width of the bridges is insufficient (only 6 m for a two-way road), and constitute constraints for traffic, since they were designed for a total capacity of 42 MT, below the 45 MT authorized under the MERCOSUR agreements. In addition, the bridges have other problems: their age, which affects their structural condition, the lack of on-site weight control for loads exceeding that authorized, and water erosion.
- 2.11 In addition to the criteria set forth above for selection of the highway segments, the following criteria must be met for the bridges that will be covered under the program, as applicable: (i) they must be assigned priority in light of traffic in international freight corridors, they must be part of major national transportation routes, and they must be located in areas that have no economically viable alternative routes; (ii) they must be in urgent need of rehabilitation or replacement due to their traffic and/or age; and (iii) to the extent possible, the original location of access to the bridges must be preserved, in order to reduce the cost of the works.
- 2.12 The bridges to be executed under the program are located on Routes 3, 6, 7, 8 and 9. Approximately 40% of them will be fully rebuilt, and the remainder will have their structure reinforced and

their roadway widened in order to bear the traffic in proper road safety conditions. Some 60% of the bridges are longer than 50 m in span and 30% are longer than 100 m.

- 2.13 In the case of reinforcement and widening of existing bridges, the width of the roadway will be symmetrically increased from 5.5 m to 8 m and sidewalks with a useful width of 1.2 m will be built, without altering the bridge structurally or jeopardizing its aesthetic value. The widened structure must be capable of resisting the new maximum load capacity for which the necessary reinforcements will be executed, including all the repairs needed for proper execution of the works.

2. Rehabilitation and maintenance pilot project

- 2.14 This project consists of a new system for maintenance with private-sector participation. For preparation of this project, the DNV received technical assistance from the International Road Federation-Deutsche Gesellschaft für Technische Zusammenarbeit (IRF/GTZ). The pilot project will be carried out on contract by a road works firm selected through international competitive bidding. The contractor will be assigned a segment of the system, and after rehabilitating it to meet preestablished technical standards, will be in charge of its maintenance. The pilot project will have a duration of four years and will cover some 360 km of roads in the periphery of Montevideo in the department of Canelones.
- 2.15 The pilot project will consist of two parts: (i) initial rehabilitation of certain segments of the roads, according to designs drawn up by the DNV, with quality controls according to usual contracting practices and traditional payment methods based on unit prices, with a partial execution term of 1.5 years; and (ii) maintenance of all the roads, including those rehabilitated, during the contract period, with maintenance activities defined and carried out by the contractor, and monitored by the DNV according to state-of-repair or performance-based indicators. The maintenance activities will include the reinforcement works that may be necessary to meet the necessary levels of service. Payment for this part of the pilot project will be made by means of a monthly installment established annually for each type of wearing course, adjustable according to the respective parametric formula established in the bidding documents.
- 2.16 The group of roads selected for the pilot project are paved with asphalt (154 km), concrete (88 km), bituminous treatment (37 km), reinforced priming (21 km), and gravel (59 km).

3. Institutional strengthening project

- 2.17 This third project consists of support for the activities the MTOP and DNV plan to carry out during the period from 1997 to 2000 to improve their management, within the framework of the sector reform

and reorganization of the DNV. The project falls within the broader context of activities being carried out by the government, in some cases with the support of the Bank through other programs, as well as the World Bank (see Annex I-2).

- 2.18 The activities to be financed under the proposed program are divided into three areas: (i) transportation policy; (ii) private-sector participation in the highway sector; and (iii) strengthening of the DNV. These activities are described in greater detail in Annex II-2. As part of the engineering and administration expenses, the following activities in support of project execution will be financed: (i) advisory services for evaluation of highway construction project designs; (ii) the hiring of consultants for the highway construction project designs; (iii) the hiring of construction managers; (iv) the hiring of supervisors for the pilot project contract and a review of past experience in private-sector maintenance arrangements as part of the same services; and (v) advisory services to implement a computerized system for program monitoring.
- 2.19 Under the recurrent costs category, consulting services will be financed to carry out: (i) a study on transportation planning and policy, connected with the study on user fees and taxation in the transportation sector that is being conducted with World Bank resources, and other studies on specific aspects of freight and passenger transportation; (ii) a feasibility study and initiation of new concessions for Routes 5 and 9; (iii) advisory services for strengthening of the environment unit to be set up in the DNV; (iv) various activities under the road safety project, described below; (v) training for DNV managerial staff; (vi) procurement of computer hardware and software for the program coordinating unit for the IDB loan; (vii) a study on environmental liabilities that are not part of the national highway system; (viii) a training course in environmental assessment of highway projects; and (ix) a study on highway transportation of hazardous substances.
- 2.20 Also under the recurrent cost category, a consulting firm will be hired to implement the statistical traffic survey program. The firm will provide the traffic count equipment and will conduct readings and recordings at 52 counting sites. The contract will be for five years, of which the program will finance two thirds of the duration.
- 2.21 As part of the institutional strengthening project, mention should be made of the following activities with Bank financing through other facilities: (i) a study on implementation of the concessions for Routes 1 and 11, under MIF project ATN/MT-5533-UR; and (ii) a course on road safety financed through the training and professional specialization program of the Bank, with FSO/Sweden funding.

C. Program cost and financing

1. Total cost

- 2.22 The total cost of the program, calculated in December 1996 prices, is an estimated US\$176 million, broken down as follows:

TABLE II-1
Total cost of the program and financing
(in thousands of US\$)

Component and investment category	BANK OC	Local contribution	Total	%
1. Engineering and administration	3,465	4,542	8,007	4.5
1.1 Engineering	1,265	291	1,556	0.9
1.2 Supervision	2,200	506	2,706	1.5
1.3 Administration	--	3,745	3,745	2.1
2. Direct costs	102,897	24,136	127,033	72.2
2.1 Highway rehabilitation	79,238	18,586	97,824	55.6
2.2 Bridge improvement plan	11,897	2,791	14,688	8.3
2.3 Rehabilitation and maintenance pilot project	11,762	2,759	14,521	8.3
3. Associated costs	2,478	485	2,963	1.7
3.1 Institutional strengthening	1,478	255	1,733	1.0
3.2 Traffic count	1,000	230	1,230	0.7
4. Unallocated	12,930	3,535	16,465	9.4
4.1 Contingencies	10,230	2,702	12,932	7.3
4.2 Cost escalation	2,700	833	3,533	2.0
5. Finance charges	1,230	20,302	21,532	12.2
5.1 Interest	0	18,845	18,845	10.7
5.2 Credit fee	0	1,457	1,457	0.8
5.3 Inspection and supervision	1,230	0	1,230	0.7
TOTAL	123,000	53,000	176,000	100.0
Percentage	70%	30%	100%	

2. Direct cost components

a. Engineering and administration (US\$8,007,000)

(i) Engineering studies (US\$1,556,000)

- 2.23 The outlays for the engineering studies are needed to prepare the designs for the works, the necessary environmental studies, the respective bidding documents, and the hiring of contractors. The

cost of the services was estimated on the basis of figures provided by the MTOP/DNV and is considered reasonable.

(ii) Works supervision (US\$2,706,000)

- 2.24 This item includes the resources necessary to cover the costs of supervision and technical oversight of the program works, functions which will be carried out by firms specializing in highway engineering. The total cost of supervision was calculated on the basis of information provided by consultants and by the MTOP/DNV.

(iii) Program administration (US\$3,745,000)

- 2.25 This item consists of the expenditures for in-house staff that the MTOP/DNV will assign full-time to make up the program coordination unit.

b. Direct costs (US\$127,033,000)

(i) Highways and bridges (US\$112,512,000)

- 2.26 This item covers the direct construction costs for the pavement and bridge improvement works. Current unit prices as of December 1996 were used for budgeting.

(ii) Rehabilitation and maintenance pilot project
(US\$14,521,000)

- 2.27 This item comprises the financing for the pilot project, for which bidding procedures have already been initiated. The project cost, which was calculated based on information from contracts and indicators from the MTOP/DNV considered acceptable, amounts to an estimated US\$17 million over a four-year period. The balance of US\$2,479,000 concerns outlays for the first half of 2001 and will be financed by the MTOP/DNV with other resources.

c. Associated costs (US\$2,963,000)

(i) Institutional strengthening (US\$1,733,000)

- 2.28 The budgets were calculated on the basis of market prices for local and international consulting services, as applicable, and are considered reasonable.

(ii) Statistical traffic survey (US\$1,230,000)

- 2.29 The budget for this item was prepared by the DNV and revised by the project team and found reasonable. The calculation was based on the cost of the equipment, including depreciation during the contract period, and the services were calculated on the basis of market prices, including applicable taxes.

D. Financing

1. Bank resources

- 2.30 The program will be partially financed with a Bank loan for US\$123 million from the ordinary capital, denominated in dollars of the United States of America, to be disbursed over a four-year period, representing 70% of the total cost of the program. The investment schedule broken down by category of expenditure and by year, indicating the source of financing, can be found in Annex II-4.

2. Local counterpart contribution

- 2.31 The local counterpart contribution, in the amount of US\$53 million equivalent, will be financed from the national budget, in the form of US\$32.7 million from MTOP allocations and US\$20.3 million from allocations to the Ministry of the Economy and Finance for the payment of finance charges.

III. PROGRAM EXECUTION

A. Executing agency

- 3.1 The executing agency of the program will be the Ministry of Transportation and Public Works (MTO), through two offices that report to it: the National Highway Department (DNV) and the Office of the Advisor for External Financing of the Secretariat Department.
- 3.2 The DNV will be the technical executing agency of the program, and will be responsible for preparation of the project designs and bidding documents, establishment of Contract Award Advisory Committees (CAAs), and oversight of construction projects, as described below.
- 3.3 The IDB project coordination unit (PCU/IDB), which reports to the Office of the Advisor for External Financing, will be responsible for program administration. The unit has participated in the administration of other programs with the Bank and will be strengthened for the execution of this one. It will be in charge of administrative duties pertaining to finance, monitoring program execution, monitoring and oversight of the bidding schedule, and the hiring of consulting services. Coordination with the technical executing agency will be ensured through a coordinator appointed by the DNV, who will act as liaison with the various departments of the DNV, for purposes of program execution.
- 3.4 The DNV will carry out all the program works through construction companies that will be hired to that end. The works done by the firms will be supervised by the DNV and, in certain cases of more complex or extensive works, by specialized engineering firms that will be hired specifically for such duties. Terms of reference for these consulting services have been agreed upon, and the firms in charge of works supervision will be hired beginning with the second group of program works.
- 3.5 To supplement the project designs that will be prepared by the DNV by the team of professionals on staff, consulting firms will be hired to prepare the remaining designs, which will consist of approximately 20% of the total works planned.
- 3.6 In addition, a local consultant with extensive experience will be hired to review the designs in order to verify their quality and standardize the technical criteria. This advisor will act as technical supervisor for both the designs prepared directly by the DNV staff and those to be prepared by consulting firms.
- 3.7 The arrangements for program administration were reviewed by the Bank and found compatible with the program needs, the installed

capacity of the MTOP/DNV, and the requirements for program execution. The MTOP/DNV has begun procedures to hire consultants for the project advisory services and design and supervision of works, which were verified in compliance with the requirement for bidding to be initiated. Prior expenditures incurred will be recognized as part of the proposed loan and the local counterpart contribution to the program.

B. Engineering designs and construction plans

- 3.8 The general guidelines for preparation of the final engineering designs were discussed and revised during program preparation. The projects making up the representative sample of the program all have technical studies, final engineering designs, and detailed construction plans for all the pavement and bridge works. For the preparation of these technical documents, topographical, hydrological, geological, geotechnical, environmental, and other studies were conducted, as required for proper execution of this type of works. The general and specific technical specifications for construction and other documents required for the bidding procedures and execution of the respective works were also prepared. The Bank has reviewed all the studies, technical documents, and bidding documents and has found them to be complete and satisfactory.

C. Rights of way

- 3.9 The works called for under the program mainly concern repaving existing roads, while maintaining the roadway within the current right of way wherever possible. In the case of both new bridges and reinforcement and widening of existing bridges, the works will be carried out within the current right of way. However, for certain subsections of highways, there are plans to build detours and lateral widening works, access routes to mid-sized towns, and drainage works that will require the procurement of additional land. The system for procurement of land for highway rights of way in Uruguay is expeditious, through justified expropriation of the respective land to the project on the grounds of public utility and an "urgent taking of possession" decree. Individuals with the right to collect compensation, if in disagreement with the amount offered, may file independent claims exclusively over the amount of the compensation, without such a claims suspending the taking of possession.
- 3.10 The Bank will require that the MTOP demonstrate that it is in legal possession of, or holds easements or other pertinent rights to, the land on which the respective project works are to built, as required to initiate construction.

D. Environmental and social impact

- 3.11 The social and environmental measures to be taken are sufficiently detailed and properly organized. Their cost is an estimated US\$6.9 million, and the financial resources for their implementation were included in the program budget. The timetable for their execution is compatible with the works schedule. Terms of reference for the additional studies recommended have been prepared, and reviewed and approved by the Bank.
- 3.12 The vast majority of the works will be carried out within the existing right of way. A new six-kilometer roadway will be constructed to bypass the city of Sauce in order to minimize traffic through downtown. The criteria followed by the DNV to set the amount of the compensation for expropriation has been generally well received by the individuals concerned, since from the onset the property was assessed at market prices. Altogether, 204 properties to are be expropriated for the bypass, with compensation totaling US\$662,000. There was no need for any resettlement of the population. The resources for measures to mitigate any adverse environmental impact will be financed under the program, while the expropriation costs will be covered with funds from the national budget.
- 3.13 The reports on the environmental studies carried out were disclosed to the public through announcements published in the local press on March 4 and 24, 1997, and submitted to the respective national environmental protection authorities for approval. The environmental permits required for bidding procedures were obtained for all the projects included in the sample.
- 3.14 To ensure proper implementation of the environmental measures planned, it is recommended that the loan contract include the following conditions:
- (a) Prior to the first disbursement, the executing agency must submit evidence to the Bank that the environment unit of the DNV has been formally established and that the environmental specialist has been hired to advise the unit.
 - (b) Within 12 months after signature of the loan contract, the executing agency must submit to the Bank: (i) a report on the work completed, the progress made, the results achieved, the current organization of the environment unit, and the unit's position in the organizational structure of the DNV, including the design of the institutional environmental management system for the DNV; and (ii) the results of the course on environmental assessment and management of highway projects, which is to be organized by the DNV for purposes of the proposed program.

- (c) Also within 12 months after signature of the loan contract, or before the first call for tenders, whichever occurs first, the executing agency must submit to the Bank in cases which the borrower considers to be of interest for Bank financing, the conditions to be included in the bidding documents for highway operation concessions for highways that are part of the national system by private operators that will ensure that:
 - (i) a survey is conducted of the environmental liabilities of the highways to be concessioned and that public- and private-sector responsibilities for their correction are determined;
 - (ii) the environmental protection measures are implemented; and
 - (iii) access roads at least one year old are maintained, and parallel service roads are constructed or upgraded as set forth in the functional highway plans to be prepared prior to issuing the call for bids for the concession.
- (d) Within 24 months after signature of the loan contract, the executing agency must submit evidence to the Bank that:
 - (i) the system for control of hazardous substances is operational;
 - (ii) the survey and assessment of environmental liabilities in all the highways within the purview of the DNV has been conducted; and
 - (iii) the environmental measures set forth in the environmental management and monitoring plans of the environmental impact assessment approved by the National Environmental Protection Department (DINAMA) have been implemented, as well as any additional measures that may have been requested by DINAMA.
- (e) The semiannual progress reports on the program must include a detailed description of the environmental protection measures taken, the results of their implementation, any problems that may have arisen, and the measures taken to resolve them.

E. Road safety

- 3.15 The MTOP is taking a number of steps to implement Law 16,585 of September 1994, which created the National Commission for the Prevention and Control of Traffic Accidents (CNPCAT). The purpose of the commission, which reports to and is chaired by the MTOP and has representatives from other ministries, government agencies, and private concerns, is to examine, plan, and promote programs for activities to improve road safety. The law, which is in its initial stage of implementation, grants authorities to the members of the CNPCAT to intervene in various areas that would decrease traffic accidents: drivers' education and teaching road safety standards and procedures for driver licensing; vehicle inspections and psychological and physical examination of drivers, and the penalty system for violators; the establishment of registers and systems for accident reporting and analysis; and assistance for accident victims and road safety education in general education. The program includes activities to make concrete progress in this

process and that will be used to draw up a plan to improve road safety that will cover the various issues covered in the law.

- 3.16 During program preparation, road safety issues in highway transportation in Uruguay were reviewed, in order to ensure that the projects that make up the program include all the measures considered necessary with regard to road safety and to make recommendations to strengthen the work of the CNPCAT. Based on these elements, a road safety project was prepared and included in the institutional strengthening project under the program. The purpose of the road safety project is to systematically coordinate activities at the institutional level, especially between the MTOP and the Ministry of the Interior, so as to promote measures connected with increasing traffic safety.
- 3.17 The road safety project includes: (i) implementation of a traffic accident analysis system that will incorporate methodologies for consideration of road safety problems in engineering designs, traffic management, statistical accident analysis, and economic evaluation of projects; (ii) support for implementation of the single registry of drivers, vehicles, traffic violations, and traffic violators (RUCVII) established under Law 16,585, implementation of which is the responsibility of the MTOP; (iii) a study on the transportation of hazardous substances, to initiate regulation of that type of transportation in Uruguay, under the agreement to facilitate the transportation of hazardous wastes, signed in September 1995; and (iv) a training course on road safety for DNV staff and other professionals, municipal officials, and police officers (Annex II-2 describes the road safety project in greater detail).
- 3.18 It is recommended that the loan contract include conditions to ensure proper implementation of the road safety activities. In particular, the executing agency will have to submit, within 12 months after signature of the loan contract, the results of: (i) the consulting services for implementation of a traffic accident analysis system and the single registry of drivers, vehicles, traffic violations, and traffic violators; (ii) the training course on road safety; and (iii) a safety improvement plan, with a timetable for its execution.

F. Bidding procedures

- 3.19 As a general rule, all services to be hired and construction contracts to be let that are to be financed by the Bank must be carried out according to Bank procedures. International competitive bidding will be required for consulting services in amounts over US\$200,000, procurement of goods in amounts over US\$250,000, and construction contracts above US\$3 million. These thresholds are justified because in similar projects in Uruguay, no bidders from other countries submitted bids when lower amounts were involved. The procurement of goods and services financed by the

Bank in amounts below the thresholds and those financed exclusively with local counterpart funds must comply with national legislation, provided that it does not conflict with the Bank's procurement policy.

- 3.20 The program works will be carried out according to the Bank's bidding procedures. When the amounts of the office budgets do not exceed US\$8 million, they may be carried out using the postqualification method, under which only the bid evaluated as the lowest is examined for compliance with the technical, financial, legal, and other requirements set forth in the bidding documents. If the bidder meets the requirements, it is awarded the contract; if not, the bid is rejected and the bid evaluated as the second lowest is examined, as so on until the contract is awarded. This system is the one usually used by the DNV for bidding procedures, including those financed by the World Bank, and has been reviewed and found acceptable by the Bank. For bids in greater amounts, the two-envelope prequalification system with deferred opening is used.
- 3.21 For purposes of bidding and the awarding of contracts, the program works have been divided into groups, based on their geographical proximity and the type of works involved. The first group consists of the sample works for repaving of three segments of Route 3 totaling 64 km in length and the reinforcement and widening of four bridges totalling 526 m in span on Routes 3, 8, and 17.
- 3.22 For the second group of works, the designs of which have been completed by the DNV, the bidding procedures were initiated at the beginning of 1997, once the requirements had been met for environmental protection, road safety, rights of way, and economic feasibility. This is the status of the repaving projects for Routes 5 and 11, totalling 41 km, and the reinforcement and widening of three bridges on Route 8, totaling 136 m in span. In addition, bidding procedures were launched for the rehabilitation and maintenance pilot project and the hiring of the engineering firm to be in charge of supervising that contract. These works total US\$29.1 million (equivalent to 22.8% of the direct costs of the program). Annex III-1 details the segments of the representative sample with works already under way (group I), and Annex III-2 sets out the timetable for the execution of future works.
- 3.23 All of the works that would be included in the program have already been identified, and complete designs are available for those in groups I and II. The designs for the remainder will be completed in 1997 and early 1998. The works identified as requiring international competitive bidding account for approximately 80% of total direct program costs, including unallocated expenses.

G. Institutional strengthening activities

- 3.24 The institutional strengthening project consists of three groups of activities to support MTOP initiatives in the following areas:

(i) transportation policy-setting; (ii) private-sector participation in the road sector; and (iii) strengthening of the DNV. The preliminary terms of reference for each activity have been agreed upon, and the outcome of their execution will be monitored throughout the life of the program. The first group includes a study on transportation planning and policy, along with other studies on specific aspects of freight and passenger transportation. The studies will help bolster the planning and policy-setting capacity of the MTOP.

- 3.25 The second group consists of a feasibility study and initiation of highway concessions on Routes 5 and 9; the hiring of a consulting firm for implementation of the statistical traffic survey program; and the hiring of a firm to monitor contract execution under the rehabilitation and maintenance pilot project, including an assessment of past experience with other arrangements for private-sector maintenance as part of the same consulting services. These activities will help implement different systems for private-sector participation in the operation and maintenance of national highways.
- 3.26 The third group is made up of activities to support program execution and monitoring and to strengthen the technical and institutional capacity of the DNV. It will include advisory services to evaluate project designs; the hiring of consultants to design the works and supervise their execution; activities under the DNV road safety project; training for DNV managerial staff; and strengthening of the environmental protection unit to be established in the DNV.

H. Advance procurement of services and awarding of construction contracts and recognition of prior expenditures

- 3.27 Since certain segments of highways and bridges had met all the eligibility criteria for works under the program, and initiation of priority works within the expected program execution period was considered necessary, at the request of the executing agency and with the consent of the borrower, the Bank authorized bidding and hiring procedures for those segments to begin in the second half of 1996. The Bank also expressed its concurrence with the bidding procedures followed for the procurement of services and the awarding of construction contracts. Such eligible prior expenditures may be recognized as part of the local counterpart contribution (Annex III-1).
- 3.28 Advance bidding on the second group of works described above was also authorized. Together, the two groups of works, totaling US\$51.5 million, represent 40% of the total direct cost of the program. Likewise, initiation of the call for bids for preselection of the consulting services for supervision of the pilot project has been authorized. The project team reviewed the bidding documents and found them satisfactory. Other conditions

have also been fulfilled, mainly concerning the establishment and operation of the program coordination unit for IDB projects and the hiring of the consulting firms to supervise construction (including the pilot project).

- 3.29 Among the projects initiated, the MTOP made a minor change in the procedures for two projects regarding the timing of submittal of evidence of legal possession: instead of submitting it prior to the call for bids, it could be submitted prior to award of the contract, thus avoiding delays in the bidding procedures that could affect the investment schedule set forth in the MTOP's five-year plan. It is recommended that this variation be accepted since no problems are anticipated in securing legal possession (see paragraph 3.9).
- 3.30 Expenses incurred after May 15, 1996, on which date the borrower sent its request for financing to the Bank, for the three highway segments and four bridges for which contracts have already been awarded and construction has begun, as well as those to begin as a result of the bidding on the second group of works, will be recognized as part of the local counterpart contribution under the financing of the executing agency. In addition, prior expenditures for environmental consulting services and engineering firms to prepare project designs and supervise works may be recognized. Total prior expenditures as of July 1997 will not exceed an estimated US\$10.5 million (US\$1 million for engineering, supervision, and administration services and US\$9.5 million for works). Of that amount, US\$7 million will be recognized as part of the Bank financing and US\$3.5 million as part of the local counterpart.

I. Execution period and investment schedule

- 3.31 The program execution period will be four years, which is compatible with the type and number of the program works, the construction procedures to be followed to maintain a normal flow of traffic, and the institutional capacity of the executing agency. The term for physical initiation of all the works will be two and a half years.
- 3.32 Each group of works will take an average of 12 months to be executed. International competitive bidding for the program works will be initiated by September 1998 at the latest, and local competitive bidding for the bridge works by April 1999 (with a duration of nine months). As an exception, the rehabilitation and maintenance pilot project will have a duration of 42 months, and bidding procedures for it have already begun. Annex III-3 shows the tentative bidding schedule for the various segments of the program, on which basis the investment schedule has been drawn up (Annex II-4), as summarized in Table III-2.

TABLE III-2
Summary investment schedule
(in thousands of US\$)

SOURCE	1997	1998	1999	2000	TOTAL
Bank	26,600	49,000	40,000	7,400	123,000
Government	8,700	16,300	16,900	11,100	53,000
TOTAL	35,300	65,300	56,900	18,500	176,000
% of total	20.1	37.1	32.3	10.5	100.0

- 3.33 According to the disbursement schedule for the proposed Bank loan, the borrower will not require any advances in excess of 10% to finance the investments.

J. Highway maintenance

- 3.34 The agency responsible for operation and maintenance of national highways is the DNV. Maintenance is carried out by 10 decentralized DNV regional offices (*distritos zonales*) located throughout the country. Traditionally, all maintenance activities have been carried out on force account, and plagued with low productivity due to rigid operating practices and a lack of continuity because of inadequate resources allocated to maintenance during certain periods.
- 3.35 To remedy these problems, the government is taking a series of measures, beginning with granting concessions to private operators for part of the primary system through toll operations. Beginning with the proposed program, private maintenance services will be hired through the pilot project. The DNV has also launched another pilot project under which microenterprises are being hired to perform maintenance, through another IDB-financed program, the State reform program (loans 995/OC-UR and 996/OC-UR). The enterprises, staffed by former DNV employees who have basic road maintenance equipment, are awarded two-year contracts to cover segments of the highway system that have less traffic, totaling 300 km. A second group of contracts is to be included in the future to bring the total to 1,000 km of roads maintained through this arrangement.
- 3.36 At the same time, the ongoing reorganization of the DNV will lead to a ranking of maintenance practices and improve efficiency in the duties performed on force account, a practice that will be gradually replaced with other arrangements based on direct maintenance by the private sector. Other concurrent activities for efficient maintenance management consistent with the remaining measures, such as weight control and traffic surveys in the road system, are also being performed by private enterprises under long-term contracts.

- 3.37 Under the institutional strengthening component of the program, the maintenance performed under the pilot project will be compared with that performed on force account by the DNV, as part of the contract for consulting services for supervision of the pilot project. It is recommended that within 18 months after the date of the loan contract, the borrower submit to the Bank a long-term plan for maintenance of the national highway system based on this evaluation, in order to ensure sustainability of the subsector by addressing the issues of efficiency, control, continuity, and the availability of financial resources.
- 3.38 For the works carried out under the program, the borrower, through the executing agency, must agree to properly maintain the highways and immediate access roads according to acceptable technical standards, and must submit to the Bank a satisfactory maintenance plan by August 1998. By August 31 each year, for 10 years beginning in August 1999, the MTOP/DNV must submit to the Bank maintenance reports that include, among other information, an evaluation of the maintenance performed during the previous fiscal year and a plan for the next fiscal year, with a proposed budget for implementation.
- 3.39 Using non-program resources, the DNV will finance a contract for the installation and operation of a system of fixed vehicle and payload weigh stations and a series of mobile scales so that it can control weight. For purposes of the contract, the country is divided into three areas. The winning bidder will be awarded a contract for exclusive weight control services in a given area. The data it collects will be delivered to an MTOP/DNV inspection officer who will be present at all operations carried out by the contractor and who will charge the fines applicable in cases of truck weight violations. For the highways to be rehabilitated under the program on which vehicle weigh stations are located, the executing agency must submit annually to the Bank, in addition to the above-described report and also for a period of 10 years, information on the results obtained during the previous year, including statistics on the number of freight vehicles that were weighed at each station, the number and size of the weight violations detected, and the fines charged to violators.

K. Monitoring

- 3.40 To monitor overall implementation of the program and the development of sector policy, it is recommended that periodic meetings be held for consultation among the concerned government authorities, the DNV, and the Bank, the first of which would be scheduled at the end of the first half of the year after the year in which the loan contract is signed. Three months prior to each meeting, the borrower and the Bank will suggest the topics to be discussed, on which basis the agenda for the meeting will be agreed upon and steps taken for its preparation, including matters pertaining to information needs. In general, the following topics will be raised

in principle at the period meetings, as listed in Annex I-2: progress on reforms of the regulatory and institutional framework and in the policy for financing of the highway subsector, in the context of the general transportation strategy; the process of concession-granting and outsourcing of highway subsector services; progress in the implementation of the DNV reform plan; progress on the execution of the investment projects included under the program, including environmental and road safety concerns, any problems that may have arisen, and the measures taken to remedy them; progress on the various components of the institutional strengthening project, discussion of the findings of the studies and plans for implementation of their recommendations; and any other matters the parties may deem relevant to achieving the program objectives. The meetings will in principle be annual, but the parties may agree on another interval as desired.

L. Ex post evaluation

- 3.41 Pursuant to Bank policy and following consultations, the borrower decided not to include an ex post evaluation as part of the program activities. However, it should be noted that information will be available on the sector, costs and performance of the projects comprising the program, and on major economic indicators, should it become necessary to evaluate the economic impact of the program after its completion.

IV. THE BORROWER AND THE EXECUTING AGENCY

A. The borrower and the executing agency

- 4.1 The borrower will be the Eastern Republic of Uruguay. The technical executing agency of the program will be the National Highway Department (DNV) of the MTOP, which will be assisted in administration and coordination of the operation by the MTOP Office of the Advisor for External Financing.

B. Legal authority of the borrower

- 4.2 According to Uruguayan legislation, the Executive Branch, in this case through the MTOP, may request loans from international organizations to which Uruguay belongs, subject to approval by the Planning and Budget Office (OPP). In addition, contracts entered into by the Executive with such international organizations do not require legislative ratification, although the Executive must report to the General Assembly on any such contract within 10 days after it is entered into.

C. The executing agency

1. Introduction

- 4.3 The DNV is an agency that reports to the MTOP. Its purpose is to efficiently manage (study, plan, maintain, construct, and promote) the national highway system, adjusting it to the demands of international traffic on the corridors connecting the member countries of MERCOSUR, and taking into account its environmental impact.

2. Organization

- 4.4 The government has launched a program to redefine the role of the State in the economy. By enactment of the National Budget Act for 1995-1999, it created an Executive Committee for Reform of the State (CEPRE), whose duties are to: (i) issue an opinion on the proposed organizational structures of the ministries and other agencies; (ii) promote the related restructuring; (iii) follow up on measures for streamlining and administrative modernization; and (iv) follow up on programs for outplacement and business development services. In March 1997, the Bank approved loans 995/OC-UR and 996/OC-UR for the State reform program to support government activities to implement its reform program.
- 4.5 Under the above-described reform, the DNV is being restructured and important changes made in its functional organization. The purpose of the DNV reform is to improve its operating efficiency so that the objectives set forth in its charter can be better attained. In

March 1997, the proposed DNV reorganization was approved, and implementation of these measures has begun. The new structure specifies the activities to be contracted out either in whole or in part to third parties. The contract for the proposed loan will include a condition requiring the borrower to ensure that the DNV submits to the Bank, within six months after the effective date of the loan contract, the timetable for implementation of those measures. Each year, the Bank will review with the borrower the progress achieved in the fulfillment of the goals agreed upon.

- 4.6 The new structure of the DNV provides for total or partial execution of various activities by the private sector. These include: (i) routine highway maintenance; (ii) concessions for works on national highways; (iii) execution of departmental roadworks; (iv) preparation of highway and masonry projects; (v) repair and maintenance of equipment; (vi) survey of the road system; (vii) traffic counts; (viii) traffic safety activities; (ix) execution of works on national highways under contract; and (x) support services (accounting, payroll, and administrative services). The proposed operation will contribute to strengthening the DNV through the components to be carried out under the institutional strengthening project.

3. Information system

- 4.7 The DNV, through the MTOP, has a budget, accounting, and financial information system established by the Comptroller's Office (CGN), which is linked through an electronic network. Although the budget system in use does provide information on actual balances immediately, the computer equipment available does not adequately meet current needs. The institutional strengthening component of the proposed program provides for financial assistance for the procurement of the computer hardware and software needed for proper monitoring of loan execution.

4. Staffing

- 4.8 As of December 31, 1995, the DNV had a staff of approximately 3,400. Due to attrition and an early retirement incentive program, the number had declined to 3,042 by 1996. Table IV-1 charts the history of DNV staffing.

TABLE IV-1
History of DNV staffing

YEAR	NUMBER
1993	3,361
1994	3,345
1995	3,377
1996	3,042

- 4.9 At present, under the State reform program, some 400 employees have volunteered for a separation plan that includes a financial incentive and assistance for training for outplacement with an employer or as microentrepreneurs. A total of approximately 600 employees are expected to participate in this program. It should be noted that

under the State Reform Act, the position of separated employees may not be filled. Retraining and technical assistance for outplacement have been included in the State reform program for separating employees.

- 4.10 The specific purpose of the above-mentioned State reform program is to: (i) modernize the central government by redefining its core functions and adjusting its structure; (ii) help employees affected by the reforms find other employment or start up businesses; (iii) modernize the State's fiscal administration; and (iv) forge a stronger relationship between State and citizens as the end beneficiaries of public policies. The sector loan from the Bank centers around policy reforms being pursued under the program, and defines and sets specific targets for the central government restructuring, for voluntary retirement by employees declared redundant, and for services to be provided to such employees to help them find other gainful employment.

- 4.11 Of the 3,042 employees currently working in the DNV, 624 work at the central office in Montevideo in technical and administrative positions, while the remaining 2,418 work in the regional offices in charge of routine maintenance. Table IV-2 shows a breakdown of the staff by type.

TABLE IV-2
Breakdown of DNV staff

CATEGORY	NUMBER
Professional	102
Technical	192
Administrative	234
Service	89
Manual workers	2,425
Total	3,042

5. Internal audit

- 4.12 Internal auditing of the DNV is exercised by the CGN. Internal auditing of economic and financial management is carried out by the central accounting offices, which report to the CGN. The CGN also controls budget execution and accounting.

6. External audit

- 4.13 Formal oversight of the DNV is carried out by the Office of the Auditor General (TCR), with the MTOP having an outstanding TCR report in the ministry. The TCR also audits loans from international financial institutions. For the proposed program, it is recommended that the financial statements for the projects partially financed by the Bank be examined by the TCR.

7. Financial standing of the DNV

- 4.14 The internal resources of the DNV consist of funds from the MTOP Investment Fund (FIMTOP) and from federal revenues. External resources are from external financing. Through the FIMTOP, Uruguay has a budget instrument to finance its investments and MTOP maintenance expenses.

- 4.15 The history of the DNV's main sources of funding is shown in Table IV-3 below.

TABLE IV-3
History of DNV sources of funding
(in millions of US\$)

Source	1993	1994	1995	1996
FIMTOP	56.2	59.5	40.6	51.4
General revenue	0.0	0.0	15.3	16.3
Total internal resources	56.2	59.5	55.9	67.7
World Bank	12.6	13.5	10.4	12.9
FONPLATA	0.0	2.7	5.9	8.5
Total external resources	12.6	16.2	16.3	21.4
GRAND TOTAL/ALL SOURCES	68.8	75.7	72.2	89.1

- 4.16 The figures in the above table reflect execution of the annual budgets of the DNV for the period from 1994 through 1996. The DNV's main source of funding for execution of its investment program has been the FIMTOP. Established by law in 1953, the FIMTOP consists, among other resources, of revenue from taxes on fuel and lubricants, toll collections on national highways and bridges, axle tax, the tax on gross sales for interdepartmental and tourist bus services, and other taxes, fees, and contributions specifically linked by law to investment funding.
- 4.17 It should be noted that the share of the fuel sales tax has averaged 55% of total FIMTOP resources. With the exception of the fuel tax, FIMTOP revenues are collected by the MTOP and deposited in a special account in the Central Bank. Fuel tax revenues are collected by the Fuel, Alcohol, and Cement Authority (ANCAP), which deposits the revenue earmarked for the FIMTOP in the Tax Department of the Ministry of the Economy and Finance. The ministry in turn transfers the funds to the special Central Bank account, according to MTOP needs, and of course in accordance with the budget ceilings approved for the MTOP investment plan.
- 4.18 Of the total resources available for the period under consideration, an average of 68% came from the FIMTOP, 10% from general revenue, and 22% from external financing. The amounts received from that source during the four-year period were 6.6% over the amounts originally budgeted.
- 4.19 DNV expenditures can be broken down essentially into two categories: (a) **operating expenses** for routine maintenance of the highway system and DNV administrative costs; and (b) **investments** basically for rehabilitation of highway segments, alterations to or

reinforcement of bridges, and construction of bypasses on national highways.

- 4.20 The history of the main categories of expenditure of the DNV is shown in Table IV-4.

TABLE IV-4
History of application of DNV funds
(in millions of current US\$)

Category	1993	1994	1995	1996
Maintenance	23.9	23.0	25.6	28.6
Administration	6.6	6.3	8.3	8.3
Total operating expenses	30.5	29.3	33.9	36.9
New works	7.3	13.2	11.2	14.4
Rehabilitation	21.2	24.0	21.8	24.6
Bridges	8.2	7.7	4.1	4.5
Other	1.6	1.5	1.2	8.7
Total investments	38.3	46.4	38.3	52.2
TOTAL APPLICATION	68.8	75.7	72.2	89.1

- 4.21 Review of the figures in the above table show a gradual increase in total DNV spending since 1993. This growth is due to a change in the budget austerity policy that affected the sector and led to a decline in the general state of repair of the national highway system. It should be noted that in 1991, works under contract were increased to reverse this situation. Analysis of the operating expenditures shows a moderate growth trend. Personnel expenses accounted on average for 68% of total operating expenses and 28% of the total application of funds for the period. On average, budget execution during the four-year period represented approximately 98% of the amounts approved.
- 4.22 Based on the budget allocated to the DNV and the five-year plan approved by the legislature, financial projections were prepared for the period from 1997 to 2000 (Annex IV-1).
- 4.23 The projections reflect the expected budget increase for the period to improve maintenance, rehabilitation, and construction of works, and preparation of studies and a reform program for internal management. For calculation of the operating expenses, the Budget Act provisions on salaries and compensation, which call for an annual cumulative decrease of 5%, were taken into account. The investments include the costs of executing the proposed program and initiating a new project to be financed by the World Bank.

- 4.24 In addition to prospective IDB financing for the proposed program, projected external financing includes the last disbursement of the IBRD loan for a project to be completed in 1997, projected disbursements beginning in 1999 for the new project to be financed by the World Bank, and resources from the OECF of Japan and FONPLATA.
- 4.25 The financial resources of the MTOP – and hence of the DNV – have been affected over the past few years by a reduction in the FIMTOP as a result of the decrease in the fuel oil sales tax, cancellation of the tax on vehicles using other types of fuel, and reallocation of an equivalent tax to municipal governments. Because of this situation, beginning in 1995 and throughout the projected period, there has been an increase in the resources from general revenues and a decrease in the FIMTOP.
- 4.26 To effectively address this situation, the government, with financial assistance from the World Bank, is conducting a study on the tax structure of the transportation sector. Since the changes that may arise from implementation of the recommendations made in the study will be important for establishing the transportation revenue structure, it is recommended that the contract for the proposed loan include a condition whereby the borrower would agree to submit to the Bank the draft regulations proposed, along with an analysis of their justification, feasibility, and financial implications, before any substantial amendments are approved.

V. PROGRAM FEASIBILITY

A. Technical feasibility

- 5.1 The program has complete final engineering designs for the sample works, with appropriate technical solutions at reasonable construction costs, and including provisions to cover possible contingencies and construction price escalation. Because the segments not included in the sample are similar to the ones that are, their costs could be reasonably estimated.
- 5.2 The DNV has extensive experience in the execution of road programs similar to the one proposed, and measures have been taken to avoid execution problems that have occurred in the past. To ensure higher project quality, advisory services will be hired for administration and coordination of IDB projects, part of the designs will be done by outside consultants, and an advisor will be hired to supervise the design of projects to be executed under the program. Furthermore, outside consultants will be hired to supervise construction, thereby guaranteeing better quality works. The arrangements specially made for execution of the program activities are considered a special advantage of the program.
- 5.3 The program works are expected to be satisfactorily maintained according to acceptable technical standards, and the loan contract will include specific conditions to that end. The operation will also support improvement in maintenance management through a gradual increase in private-sector participation.

B. Economic feasibility

- 5.4 To assess the economic feasibility of the program, a cost-benefit analysis was conducted of the works included in the representative sample under the highway rehabilitation and bridge improvement project and the rehabilitation and maintenance pilot project. The thrust of the evaluation was to quantify cost savings for users, comparing economic costs and benefits in each case with and without the project. Although traffic on the Uruguayan highway system is relatively low compared with other geographically and economically comparable areas, the analysis conducted showed that the highway rehabilitation projects evaluated had an adequate economic rate of return. The pilot project, located on a segment of the highway system with the densest traffic, and the bridge improvement projects, which will remedy major constraints on the heaviest freight traffic, had considerably higher returns.

1. Highway rehabilitation

- 5.5 The main benefits considered concern savings in vehicle operation costs and in passenger travel time for existing traffic, that is,

for those vehicles that already use the highway and will continue to use it in the future, even if it were not improved. These users receive benefits from a decrease in operating costs (the primary benefit of the projects) and reduced travel time stemming from the improved situation compared with the current state of repair of the system. Another benefit considered, although relatively smaller, is a decrease in road maintenance costs with the project.

- 5.6 The benchmarks used for the economic analysis were taken from the Master Highway Plan updated to 1996. The plan was based on the Highway Design and Maintenance Standards Model III, which allows the selection of the best investment options based on estimated operating costs for different types of vehicles, speed, and maintenance costs under different conditions. Project benefits are computed through simulation of the model using given project demand flows.
- 5.7 To confirm the features and volumes of traffic on the sample highway segments analyzed, a traffic count at strategically located stations was carried out to record vehicle movement in the area of influence of the segments in question. The counts showed average daily traffic, which was adjusted for the day of the week and seasonal variations to estimate average annual daily traffic. Average traffic growth rates in the sample segments varied from 3% to 5%, estimated on the basis of data on the population and GDP in the area of influence of the highways, and then applying to these factors elasticity coefficients confirmed in similar previous studies.
- 5.8 The costs considered were for the highway rehabilitation and improvement works and for the routine and periodic maintenance during the period reviewed, which was 20 years after entry into service. The costs are expressed in economic terms, that is, exclusive of taxes and other transfers, and the market prices were corrected with the respective conversion factors. In each case, the residual value of the works at the end of the period was considered. The findings of the cost-benefit and sensitivity analysis for the projects evaluated are presented in Table V-1.

TABLE V-1
Findings of the cost-benefit and sensitivity analysis

Segment	Length (km)	Economic cost (US\$/km)	EIRR %	NPV (US\$ millions)	EIRR Inv. +10% Ben. -20%
Route 3: Negro Creek-San Manuel	25.8	274,600	21	4.2	17
Route 3: Segment 1	23.5	253,300	17	2.1	13
Route 3: Segment 2	23.2	237,300	15	1.2	12
Route 5: 420 km mark - Sauce Creek	30.0	256,900	15	2.4	12
Route 11: Route 8-Atlántida	11.0	178,000	28	2.8	22

2. Bridge improvement

- 5.9 The bridge projects were evaluated using an approach similar to that used for the highway rehabilitation projects, although separately, since the bridges are not associated with any highway project. This was based on the existing situation, with data on actual traffic on the bridges, including vehicles with payloads greater than the safety limit. The situation without the project was determined based on the restricted flow of traffic with vehicle weights over 22 MT per triple axle, maintaining current bridges for light vehicles and detouring remaining traffic to alternative routes. The situation with the project is represented by current routes with no limits on bridges. The benefits of the projects stem mainly from savings in heavy vehicle operating costs, and also savings in bridge maintenance costs. The costs considered were reconstruction or improvement of the bridges and their maintenance. The analysis period was 15 years after entry into service, and given the features of the works, a residual value of 60% of the investment at the end of the period was estimated. The findings of the cost-benefit and sensitivity analysis are presented in Table V-2.

TABLE V-2
Findings of the cost-benefit and sensitivity analysis

Bridge	Span (m)	Economic cost (US\$ thousands)	EIRR %	NPV (US\$ thousands)	EIRR Inv. +10% Ben. -20%
Bridge at Celestino Creek	41	517.2	35	7,754.2	34
Bridge at Rocha Creek	158	1,510.0	65	50,405.4	62
Bridge at Las Piedras Creek	19	226.5	43	6,142.6	41
Bridge at San Antonio Creek, Sauce and Garrote	136	687.1	19	887.3	16
Bridge at San José River	308	1,279.0	42	4,013.0	34

3. Rehabilitation and maintenance pilot project

- 5.10 Under the project, a new arrangement for highway maintenance management will be introduced, through a standards-based or performance-based maintenance contract. The contract will establish that the contractor must maintain the roads in a state of repair above predetermined parameters. The state of repair will be determined on the basis of indicators applicable to the various works of a given road, which will be assigned acceptable standards which the roads may reach but below which they may not fall. Once the road to be maintained has reached this initial state of repair, since the contractor is not paid by the amount of works executed but according to compliance with minimum standards, this arrangement will stimulate increased efficiency in execution and higher quality in the works, optimizing long-term maintenance activities.
- 5.11 Economic evaluation of the project followed the same methodology as the highway rehabilitation component. Economic benefits from increased productivity of the resources allocated to maintenance as a result of the use of the new arrangement were not considered.
- 5.12 Out of a total of 40 segments of highways included in the pilot project, investments in 18 for which various rehabilitation works were to be carried out were considered. For the remaining segments, new investments were not considered, and it was assumed that the maintenance costs were the same in the situations with and without the project. A slightly higher growth rate than that observed over the past five years was estimated, considering that the project area, due to its proximity to Montevideo, its population density, and its major agricultural growth, was likely to generate greater vehicular traffic than the national average on which the increase in trade and the vehicle stock were based. The findings of the economic analysis of the pilot project showed an economic internal rate of return of 44% for the pilot project works

as a whole, with a net present value of US\$4 million. The sensitivity analysis of a cost increase compounded by a decline in benefits showed an EIRR of 35%.

C. Financial feasibility

- 5.13 The financial feasibility of the operation was examined in light of the DNV's capacity to obtain the counterpart resources necessary for execution of the program components. The resources expected during the program execution period were based on the figures approved by the legislature in the five-year transportation and public works plan for 1995 to 1999.
- 5.14 Financial projections show that the amounts the DNV will have to provide to cover the necessary counterpart funding on a timely basis to meet the program needs are manageable. Counterpart funding will be provided from FIMTOP resources in an estimated amount of US\$32.7 million, representing 19% of the total resources to be obtained from the FIMTOP. This is consistent with the overall investment plan the DNV will execute during the period under consideration.
- 5.15 The financial feasibility of the counterpart resources to be provided is justified by the priority the government has assigned to program execution, the timely provision in recent years of contributions planned, and the fact that local counterpart funding required for program execution represents a relatively low annual share of the DNV's total budget.

D. Institutional feasibility

- 5.16 The internal restructuring of the DNV instituted under the State reform program helped improve its operating efficiency through better use of the available human and material resources, contributing to the fulfillment of the objectives set forth in the DNV charter.
- 5.17 The proposed operation will contribute to institutional reorganization in the sector through the various components of the institutional strengthening project, which will increase the efficiency of the sector and promote private-sector involvement, remedy the problems identified in previous operations carried out with the Bank and the World Bank, and ensure the institutional feasibility required for timely execution of the program.

E. Environmental feasibility

- 5.18 The program as a whole will have a significant positive impact on the country. According to the environmental analysis of the sample projects, the highway works will generally have a medium- or small-scale adverse impact that is localized and foreseeable, and that

can be mitigated, to which end appropriate, feasible measures for mitigation were proposed.

- 5.19 The environmental programs to be executed concern management of the transportation of hazardous substances (including the handling of accidents involving such freight), training in environmental management of road works, review of standards for the design and execution of road works, and addressing environmental liabilities, among other areas. The program calls for institutional mechanisms for proper implementation of the various environmental programs proposed and for appropriate environmental management under the program. For Uruguay, they therefore represent significant progress in the consideration of environmental concerns in the design, implementation, and supervision of works and operations of roads and highways by the DNV.
- 5.20 Moreover, the environmental specifications in the bidding documents for the works include all the measures recommended in the environmental impact assessments and include provisions to ensure that the works are carried out in a timely and appropriate manner (release of the bid bond only once the environmental protection unit of the DNV certifies that all the environmental measures have been executed).
- 5.21 With the conditions in place for strengthening the DNV's capacity to protect the environment and to revise engineering design standards and the specifications for the execution of road works, proper treatment of environmental issues at the various stages of environmental protection activities in Uruguay can be ensured.
- 5.22 The program works not included in the sample may eventually show other types of environmental problems, especially in the case of fragile or protected ecosystems. The program therefore provides for environmental assessment and control procedures that should ensure compliance with the Bank's standards with regard to eligibility, as well as design and construction.

F. Risks

- 5.23 The main risk of the program is its long-term sustainability, which will depend mainly on continuity in the strategy that has been implemented in the transportation sector. It is reasonable to expect that the main components of the strategy (redefinition of the functions and reorganization of government institutions, increased private-sector participation in direct management of the transportation infrastructure through concessions and outsourcing of services) will be maintained and developed in the future. Furthermore, during the program execution period, a long-term plan will be drawn up and implemented for road maintenance management, that will address the various issues related to sustainability. In addition, the program will contribute directly towards successful implementation of the strategy adopted through implementation of

the rehabilitation and maintenance pilot project and new concessions, statistical traffic surveys, and the various activities to be carried out under the institutional strengthening project. To monitor implementation of the sector and institutional reform measures and overall program execution, periodic meetings will be held with the respective government authorities, the DNV, and the Bank.

**TRANSPORTATION SECTOR IN URUGUAY
GENERAL STRATEGY FOR THE HIGHWAY SUBSECTOR**

ITEM	OBJECTIVES	ACTIVITIES	RESPONSIBLE AGENCY	EXPECTED RESULTS	ASSISTANCE MULTILATERAL ORGANIZATION
GENERAL FRAMEWORK – TRANSPORTATION SECTOR					
Institutional private-sector	Increase private investment in infrastructure by creating better legal and institutional conditions and strengthening the concession system	Program to strengthen the system for concessions of public works and services	OPP and MTOP	(See Annex I-1)	MIF
Organization	Strengthen the planning and policy-setting and implementation capacity of the MTOP	<ul style="list-style-type: none"> Establishment and operation of the Planning Department (DP) Strengthening of the concessions unit and support for specific MTOP projects Implementation of new MTOP structure and information systems 	MTOP MTOP MTOP	Planning Department in operation in 3/98 Advisory group on concessions operational in 6/97 Structure and systems implemented in 12/98	IDB (UR-0113) MIF
and financing	Formulation of policies for better allocation of sector resources and more efficient financing mechanisms	<ul style="list-style-type: none"> Study on fees charged to users of national road system Study on transportation planning and policy 	MTOP MTOP	Proposal on activities available in 12/97 Proposal on activities available in 6/98	World Bank (F) IDB (UR-0113)
HIGHWAY SUBSECTOR					
of DNV structure	Strengthen DNV's planning, control and evaluation functions, transferring works execution functions to private sector	Implementation of new organizational structure and incentives provided for in Decree 340/97	DNV	Implementation of new structure by 12/98	IDB (905/OC-UR) (906/OC-UR)
for routes in system	Expand, rehabilitate, and maintain routes in national primary road system through private operators	<ul style="list-style-type: none"> Concession for divided highway from Montevideo to Punta del Este Concession for route 1 and new Santa Lucía River bridge Concessions for: Route 1 (Libertad-Colonia) Route 11 (Route 1-Coastal road) Concessions for routes 5 and 9 Salto-Concordia bridge 	DNV DNV DNV DNV DNV	Concession in operation since 12/94 Concession awarded in 12/97 Call for bids issued in 3/98 Call for bids issued in 8/98 Call for bids issued by 6/98	IDB (PRI) MIF IDB (UR-0113)

ITEM	OBJECTIVES	ACTIVITIES	RESPONSIBLE AGENCY	EXPECTED RESULTS	ASSISTANCE MULTILATERAL ORGANIZATION
management	Implement more efficient arrangements for national road system maintenance management	<ul style="list-style-type: none"> - Rehabilitation and maintenance pilot project - Maintenance contracts with microenterprises for segments of the road system with low traffic density 	DNV DNV	Pilot project operational in 8/97 In execution since 2/97	GTZ/IDB (UR-0113) GTZ/MIF IDB (UR-0113)
n for management	Ensure subsector sustainability by addressing issues of efficiency, control, continuity, and availability of financial resources	Submittal of plan with timetable for implementation	DNV	Submitted by 12/98	IDB (UR-0113)
ic survey	Establish permanent systems for collection and processing of the traffic data needed for planning and management	Hiring of private enterprise to provide service	DNV	Contract in execution in 9/97	World Bank (L IDB (UR-0113)
ment on national order crossings	Establish an effective system for load enforcement and compliance with capacity/load standards	<ul style="list-style-type: none"> - Hiring of private enterprise to provide service for entire national system - Replacement and installation of scales for comprehensive control of international freight at border crossings 	DNV Traffic Department	Contract in execution in 12/97 Program completed in 12/97	World Bank (L Project designe
INSTITUTIONAL STRENGTHENING					
n capacity	Ensure timely, efficient execution of physical investments, hiring of services, and institutional activities	<ul style="list-style-type: none"> - Technical advisory services for evaluation of works designs - Hiring of works managers - Hiring of firms for highway works designs - Hiring of firm for pilot project supervision - Evaluation of arrangements for maintenance by private enterprises - Advisory services for program executing unit for project monitoring system 	DNV DNV DNV DNV DNV	Contract in execution by 7/97 Contract in execution by 7/97 Contract in execution by 7/97 Contract in execution by 7/97 Report in 6/99 Contract in execution by 7/97	IDB (UR-0113) IDB (UR-0113) IDB (UR-0113) IDB (UR-0113) IDB (UR-0113) IDB (UR-0113)

**TRANSPORTATION SECTOR IN URUGUAY
GENERAL STRATEGY FOR THE HIGHWAYS SUBSECTOR**

ITEM	OBJECTIVES	ACTIVITIES	RESPONSIBLE AGENCY	EXPECTED RESULTS	ASSISTANCE MULTILATERAL ORGANIZATION
Capacity	Strengthen the managerial staff within framework of redefinition of DNV role	Training program abroad and assistance by international experts	DNV	Program completed in 6/99	IDB (UR-0113)
Environmental	Ensure proper attention to and monitoring of environmental concerns in road works	Establishment and strengthening of the DNV environmental protection unit	DNV	Environmental protection unit operational in 6/97	IDB (UR-0113)
Project	Improve interagency coordination, strengthen work by the National Committee for Prevention and Control of Traffic Accidents, and include road safety measures in the design and execution of works	- Implementation of traffic accident analysis system	DNV	Systems operational in 12/97	IDB (UR-0113)
		- Implementation of single registry of drivers, vehicles, traffic violations, and traffic violators established under Law 16,585	DNV	Registry operational in 2/98	IDB (UR-0113)
		- Study on transportation of hazardous material	Transportation Department	Study completed in 9/98	IDB (UR-0113)
		- Training course on road safety	DNV	Course completed in 8/97	IDB (PROFEP)
		- Road safety improvement plan	MTOP	Presentation in 6/98	IDB (UR-0113)

PTP) = World Bank Forest Products Transport Project.

LOGICAL FRAMEWORK
INTEGRATION CORRIDOR AND PRIMARY ROAD IMPROVEMENT PROGRAM
(UR-0113)

PROGRAM	HIGHWAY REHABILITATION AND BRIDGE RECONSTRUCTION PROJECT	REHABILITATION AND MAINTENANCE PILOT PROJECT	INSTITUTIONAL STRENGTHENING PROJECT
<p>ate to improving the power of the pro- tectors in the context of international trade</p>			
<p>transportation costs ate constraints to al freight traffic main integration and other segments of al road system</p>	<p>GOAL</p> <p>To help reduce transportation costs and eliminate constraints to international freight traffic along the main integration corridors and other segments of the national road system</p>	<p>GOAL</p> <p>To help reduce transportation costs and eliminate constraints to international freight traffic along the main integration corridors and other segments of the national road system</p>	<p>GOAL</p> <p>To help reduce transportation costs and eliminate constraints to international freight traffic along the main integration corridors and other segments of the national road system</p>
<p>COMPRISING THE PROGRAM:</p> <p>rehabilitation and reconstruction project</p> <p>itation and ance pilot project</p> <p>tional strengthening</p>	<p>PURPOSE</p> <p>To improve the features and structural capacity of national roads and bridges that are part of integration corridors, ensuring safe road conditions</p>	<p>PURPOSE</p> <p>To institute more efficient maintenance management systems for the national road system</p>	<p>PURPOSE</p> <p>To implement measures for institutional strengthening design to improve sector efficiency and promote private-sector participation</p>
	<p>COMPONENTS</p> <ol style="list-style-type: none"> 1. Segments of national routes totalling 520 km in integration corridors rehabilitated and in operation 2. 26 bridges totalling 2,200 m reconstructed or with structure reinforced and roadway widened 	<p>COMPONENTS</p> <ol style="list-style-type: none"> 1. Pilot project for rehabilitation and maintenance of approximately 360 kilometers located in part of the road system in the periphery of Montevideo in operation 	<p>COMPONENTS</p> <ol style="list-style-type: none"> 1. Completion of study on institutional strengthening planning and policy 2. Completion of advisory services for (i) environmental studies and (ii) road safety 3. Completion of statistical survey 4. Completion of technical services for the program administration unit and in evaluation of project

PROGRAM	HIGHWAY REHABILITATION AND BRIDGE RECONSTRUCTION PROJECT	REHABILITATION AND MAINTENANCE PILOT PROJECT	INSTITUTIONAL STRENGTHENING PROJECT
			5. Completion of technical training for managerial staff 6. Completion of procurement of computer hardware and software 7. Implementation of the system registry for drivers, vehicles, traffic violations, and violators 8. Completion of study on transportation of hazardous substances, for eventual establishment of regulations 9. Implementation of a traffic accident analysis system
	ACTIVITIES 1. Identification of segments 2. Design and documentation 3. Call for bids 4. Awarding of contracts 5. Execution	ACTIVITIES 1. Contract for rehabilitation and maintenance entered into with private sector 2. Transfer of maintenance activities to private sector	ACTIVITIES 1. Contracts for advisory services entered into 2. Consultants hired for studies 3. Training programs carried out 4. Calls for bids/procurement of computer hardware and software 5. Activities to implement technical strengthening of regional units

LOGICAL FRAMEWORK
HIGHWAY REHABILITATION AND BRIDGE RECONSTRUCTION PROJECT

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS																		
ce transportation iminate constraints to l freight traffic in integration d other segments of road system	<p>1.1 Vehicle operation costs by type of vehicle, expressed in cents per vehicle/km, will be reduced in each category (cat. 1: cars; cat. 2: buses; cat. 3: trucks; cat. 4: semiheavy trucks; cat. 5: heavy trucks), with a cost structure in constant 1996 dollars, as shown below:</p> <table><tr><td></td><td>1996</td><td>2001</td></tr><tr><td>Cat. 1</td><td>22.9</td><td>21.9</td></tr><tr><td>Cat. 2</td><td>84.1</td><td>78.6</td></tr><tr><td>Cat. 3</td><td>43.0</td><td>36.6</td></tr><tr><td>Cat. 4</td><td>70.4</td><td>60.3</td></tr><tr><td>Cat. 5</td><td>89.6</td><td>79.5</td></tr></table> <p>1.2 By 12/31/99, three corridors (routes 3, 6, 7, and 8) will be upgraded to meet MERCOSUR standards (up to 45 MT total weight).</p>		1996	2001	Cat. 1	22.9	21.9	Cat. 2	84.1	78.6	Cat. 3	43.0	36.6	Cat. 4	70.4	60.3	Cat. 5	89.6	79.5	<p>1.1 Highway Design and Maintenance Standards Model III, adapted to local conditions</p> <p>1.2 Resolution issued by the National Transportation Department authorizing entry of vehicles of up to 45 MT</p>	
	1996	2001																			
Cat. 1	22.9	21.9																			
Cat. 2	84.1	78.6																			
Cat. 3	43.0	36.6																			
Cat. 4	70.4	60.3																			
Cat. 5	89.6	79.5																			
he features and apacity of national idges that are part of corridors	<p>By 2001, the rehabilitated roads and bridges will have the following features:</p> <p>Roads:</p> <p>– Visual inspection: geometric design with minimum width of 7.2 m and 1.5 m sidewalks, and a deterioration rate of no less than 80/100 according to the methodology used by the DNV</p> <p>– Roughness inspection: 2.0 < IRI < 3.0</p> <p>Bridges: Total gross weight will be increased from 42 tons to 45 tons. Bridges will have a minimum width of 8 m.</p>	<p>Routes: Visual inspection. Periodic roughness testing.</p> <p>Bridges: Visual inspection and, if necessary, structural resistance testing.</p>	<p>There are effective controls on maximum loads allowed on the national road system.</p> <p>There are no constraints on the implementation of the maintenance plans.</p>																		

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>of national routes g 520 km in integra- ridors rehabilitated operation</p> <p>ges totalling 2,200 m ructed or with re reinforced and widened</p>	<p>1.1 National road segments will be rehabili- tated according to the following schedule:</p> <p>1997: 94 km 1998: 268 km 1999: 150 km 2000: 8 km</p> <p>2.1 Bridges will be reconstructed or reinforced according to the following schedule:</p> <p>1997: 7 bridges totaling 301 m 1998: 6 bridges totaling 851 m 1999: 7 bridges totaling 481 m 2000: 6 bridges totaling 567 m</p>	<p>2.1 Certificate of final receipt of the works</p>	<p>Proper maintenance is perf</p>
<p>tification of segments gn and documentation for bids ding of contracts ution</p> <p>tification of segments gn and documentation for bids ding of contracts ution</p>	<p>See itemized project budget</p>	<p>1.1 Accounting records kept by the program administration unit</p>	<p>The bidding process is car- under normal conditions.</p>

LOGICAL FRAMEWORK
REHABILITATION AND MAINTENANCE PILOT PROJECT

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS																		
improve transportation eliminate constraints to all freight traffic main integration and other segments of road system	<p>1.1 Vehicle operation costs by type of vehicle, expressed in cents per vehicle/km, will be reduced in each category (cat. 1: cars; cat. 2: buses; cat. 3: trucks; cat. 4: semiheavy trucks; cat. 5: heavy trucks), with a cost structure in constant 1996 dollars, as shown below:</p> <table><tr><td></td><td>1996</td><td>2001</td></tr><tr><td>Cat. 1</td><td>22.9</td><td>21.9</td></tr><tr><td>Cat. 2</td><td>84.1</td><td>78.6</td></tr><tr><td>Cat. 3</td><td>43.0</td><td>36.6</td></tr><tr><td>Cat. 4</td><td>70.4</td><td>60.3</td></tr><tr><td>Cat. 5</td><td>89.6</td><td>79.5</td></tr></table> <p>1.2 By 12/31/99, three corridors (routes 3, 6, 7, and 8) will be upgraded to meet MERCOSUR standards (up to 45 MT total weight)</p>		1996	2001	Cat. 1	22.9	21.9	Cat. 2	84.1	78.6	Cat. 3	43.0	36.6	Cat. 4	70.4	60.3	Cat. 5	89.6	79.5	<p>1.1 Highway Design and Maintenance Standards Model III, adapted to local conditions</p> <p>1.2 Resolution issued by the National Transportation Department authorizing entry of vehicles of up to 45 MT</p>	
	1996	2001																			
Cat. 1	22.9	21.9																			
Cat. 2	84.1	78.6																			
Cat. 3	43.0	36.6																			
Cat. 4	70.4	60.3																			
Cat. 5	89.6	79.5																			
more efficient management arrange- the national road system	<p>1.1 By the year 2000, pavement quality on 360 km of roads in the periphery of Montevideo, improved under contract with private enterprises, will meet the standards established in the respective maintenance contract:</p> <p>Rehabilitation: The geometric design of rehabilitated roads will have a minimum width of 7.2 m and 1.5 m sidewalks, and a roughness index of $2.0 < IRI < 3.0$</p> <p>Maintenance: The following maintenance levels, stipulated in the contract by type of highway, will be maintained:</p> <p>a. asphalt surfacing: $IRI < 2.8$ b. bituminous treatment: $IRI < 3.4$ c. gravel surfacing: between 5 and 10 cm.</p>	<p>1.1 Final evaluation submitted by the pilot project monitoring consulting firm</p>																			

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
<p>Rehabilitation and maintenance of roads in operation</p>	<p>1.1 Beginning in 1997, for a four-year period, the project for rehabilitation and maintenance on contract with the private sector will be in operation for 360 km of roads in the periphery of Montevideo.</p>	<p>1.1 Monthly reports by the consulting firm hired to supervise the project</p>	<p>The contractual obligation is fulfilled</p>
<p>Project contracting:</p> <p>Identification of segments for bidding and other documents</p> <p>Call for bids</p> <p>Awarding of contracts</p> <p>Execution</p> <p>Transfer of maintenance responsibilities in Montevideo</p> <p>Transfer to private sector:</p> <p>Program execution in accordance with contract terms</p> <p>Hiring of a consulting firm for technical supervision of the program</p> <p>In 1998, a long-term plan for maintenance management is developed, specifying measures to increase efficiency, continuity, and reliability of financial resources so as to ensure program sustainability</p>	<p>See itemized project budget</p>	<p>1.1 Accounting records kept by the program administration unit</p> <p>1.2 Accounting records kept by the program administration unit</p>	<p>The bidding process is carried out under normal conditions and acceptable bids are received</p>

LOGICAL FRAMEWORK
INSTITUTIONAL STRENGTHENING PROJECT

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASS																		
ce transportation costs and constraints to international ffic along the main integration and other segments of the national	<p>1.1 Vehicle operation costs by type of vehicle, expressed in cents per vehicle/km, will be reduced in each category (cat. 1: cars; cat. 2: buses; cat. 3: trucks; cat. 4: semiheavy trucks; cat. 5: heavy trucks), with a cost structure in constant 1996 dollars, as shown below:</p> <table><tr><td></td><td>1996</td><td>2001</td></tr><tr><td>Cat. 1</td><td>22.9</td><td>21.9</td></tr><tr><td>Cat. 2</td><td>84.1</td><td>78.6</td></tr><tr><td>Cat. 3</td><td>43.0</td><td>36.6</td></tr><tr><td>Cat. 4</td><td>70.4</td><td>60.3</td></tr><tr><td>Cat. 5</td><td>89.6</td><td>79.5</td></tr></table> <p>1.2 By 12/31/99, three corridors (routes 3, 6, 7, and 8) will be upgraded to meet MERCOSUR standards (up to 45 MT total weight).</p>		1996	2001	Cat. 1	22.9	21.9	Cat. 2	84.1	78.6	Cat. 3	43.0	36.6	Cat. 4	70.4	60.3	Cat. 5	89.6	79.5	<p>1.1 Highway Design and Maintenance Standards Model III, adapted to local conditions</p> <p>1.2 Resolution issued by the National Transportation Department authorizing entry of vehicles of up to 45 MT</p>	
	1996	2001																			
Cat. 1	22.9	21.9																			
Cat. 2	84.1	78.6																			
Cat. 3	43.0	36.6																			
Cat. 4	70.4	60.3																			
Cat. 5	89.6	79.5																			
t measures for institutional g designed to improve sector and to promote private sector on	<p>1.1 During the program execution period, the measures recommended in the studies conducted and as a result of the activities carried out will be implemented.</p>	<p>1.1 Periodic meetings for consultation between the respective government authorities, the DNV, and the Bank</p>																			
ion of the study on transportation and planning	<p>1.1 By 6/30/98, the studies on transportation planning and policy will be completed, allowing the MTOP to evaluate the implications for the transportation sector of the country's economic development and the MERCOSUR integration process. Additional studies will be completed on national freight transportation, passenger transportation monitoring, and rice transportation along the east coast.</p>	<p>1.1 Periodic progress reports by the consulting firm and final report incorporating comments by the MTOP</p>	<p>The goals establ the sector insti strengthening pro being carried out financing from th MIF, and World Ba fulfilled</p>																		

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSU
on of advisory services in: environmental studies and safety	2.1 By 3/1/98, the study to define DNV objectives for environmental protection will be completed. By 1/31/98, training courses on road safety improvements with a minimum duration of 60 hrs each will be given to project consultants, municipal government officials, and police officers.	2.1 Periodic progress reports by each consulting firm hired, and final report on each study or activity to be submitted by each firm, with MTOP comments included	
on of statistical traffic survey	3.1 By 9/30/00, implementation of the statistical traffic survey will be completed.	3.1 Periodic progress reports and final report revised by DNV submitted by the firm in charge of the survey program	
on of technical training for	4.1 By 6/30/99, training of five DNV managers in planning, pavement management, maintenance administration and technology, and construction techniques will be completed.	4.1 Periodic reports by the program administration unit on the courses carried out in Uruguay and abroad and the staff that attended them	
on of technical advisory services program administration unit and DNV ing evaluation of project designs	5.1 By 12/31/97, advisory services will be completed for review of information flow procedures, development of a program monitoring method, and development of computer support systems for tracking loan execution. By 9/30/98, technical advisory services for the DNV for evaluation of construction project designs will be completed.	5.1 Periodic reports by the consulting firm hired and final report submitted to DNV	
on of procurement of computer e and software	6.1 By 12/31/97, procurement of the computer hardware and software needed for development of computer systems to support program monitoring will be completed.	6.1 Report by the program administration unit based on purchase orders and receipt of the respective hardware and software	
tation of the single registry of vehicles, traffic violations, ffic violators	7.1 By 2/28/98, the registry will be fully implemented.	7.1 MTOP report on implementation of the registry	
on of the study on transportation dous substances for eventual shment of regulations	8.1 By 12/31/98, regulations for the transportation of hazardous substances will be drafted.	8.1 MTOP report	
tation of a traffic accident s system	9.1 By 12/31/97, a data bank on traffic accidents will be implemented.	9.1 Periodic reports by the consulting firm and final report submitted to DNV	

OBJECTIVES	INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASS
Road safety improvement plan	10.1 By 6/30/98, the road safety improvement plan will be presented.	10.1 Plan submitted by MTOP	
<p>of consultants for a study on transportation policy formulation and additional studies</p> <p>for advisory services entered</p> <p>of consultants for traffic survey</p> <p>of consultants for technical programs</p> <p>es to implement the technical training plan</p> <p>for procurement of computer and software</p> <p>of consultants for implementation of single registry of drivers, licenses, traffic violations, and traffic accidents</p> <p>of consultants for study on transportation of hazardous substances</p> <p>of consulting services to conduct traffic accident analysis</p>	See itemized project budget	<p>1.1 Accounting records kept by the program administration unit</p> <p>2.1 Accounting records kept by the program administration unit</p> <p>3.1 Accounting records kept by the program administration unit</p> <p>4.1 Accounting records kept by the program administration unit</p> <p>5.1 Accounting records kept by the program administration unit</p> <p>6.1 Accounting records kept by the program administration unit</p> <p>7.1 Accounting records kept by the program administration unit</p> <p>8.1 Accounting records kept by the program administration unit</p> <p>9.1 Accounting records kept by the program administration unit</p>	Acceptable bids received

TENTATIVE BIDDING SCHEDULE

Table A-III-3-1
Integration corridor and primary road improvement program
International competitive bidding (ICB) schedule for works financed

Group A	Length (km)	Direct cost* (US\$ thousands)	Date of SPN
I. Sample works already initiated	65.0	17,909	July 1996
II. New sample works (including pilot project)	391.0	28,200	February 1997
III. Works on routes 5, 6, 15, and 26	77.2	21,912	July 1997
IV. Works on routes 3, 5, 11, 18, and 21	197.8	25,559	January 1998
V. Works on routes 2, 6, 7, and 19	139.2	21,243	July 1998
TOTAL	870.2	114,823	

* The direct costs are indicated in December 1996 prices and are preliminary estimates.

Table A-III-3-2
Integration corridor and primary road improvement program
National competitive bidding schedule for works financed

Group B	Length of bridge (meters)	Direct cost* (US\$ thousands)	Date of call for bids
I. Sample works already initiated (4 bridges)	526.0	4,790	July 1996
II. New sample works (3 bridges)	136.0	910	February 1997
III. Third group of bridges on routes 3 and 8 (4 bridges)	365.0	2,090	July 1997
IV. Fourth group of bridges on routes 3, 6, and 8 (7 bridges)	481.0	2,591	April 1998
V. First group of bridges on routes 7 and 8 (3 bridges)	287.0	1,845	October 1998
VI. Second group of bridges on route 8 (5 bridges)	436.0	2,463	April 1999
TOTAL	2,231.0	14,689	

* The direct costs are indicated in December 1996 prices and are preliminary estimates.

Table A-III-3-3
Integration corridor and primary road improvement program
Bidding schedule for consulting firms

Description	Type of bidding	Prequalification	Direct cost* (US\$)	Date of call for bids
Hiring of works managers (several)	NCB	NO	1,771,000	Beginning in June 1997
Pilot project supervision	NCB	YES	1,069,000	March 1997
Hiring of consultants for engineering designs (several)	NCB	NO	1,476,000	Beginning in July 1997
Transportation sector study	ICB	YES	386,000	July 1997
Study on concessions for routes 5 and 9	ICB	NO	150,000	August 1997
Road safety study	ICB	YES	246,000	August 1997
Single national drivers registry	NCB	NO	185,000	July 1997
Study on transportation of hazardous substances	ICB	YES	200,000	September 1997
DNV training	NCB	NO	70,000	June 1997
Study on rice transportation on east coast	NCB	NO	82,000	September 1997
Study on national freight transportation	NCB	NO	82,000	September 1997
Passenger transportation monitoring	NCB	NO	82,000	September 1997
Traffic survey	ICB	YES	1,230,000	March 1997
TOTAL			7,029,000	

ICB = international competitive bidding

NCB = national competitive bidding

PROPOSED RESOLUTION

URUGUAY. LOAN ___/OC-UR. TO THE REPUBLICA ORIENTAL DEL URUGUAY

Program for the Improvement of Integration Corridors and of the Primary National Highway

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 the República Oriental del Uruguay, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a Program for the Improvement of Integration Corridors and of the Primary National Highway. Such financing will be for the amount of up to US\$123,000,000, which are part of the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the "Terms and Financial Conditions" and the "Special Contractual Conditions" of the Executive Summary of the Loan Proposal.