

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BRAZIL**

**URBAN TRANSPORTATION PROGRAM  
FOR THE FEDERAL DISTRICT**

**(BR-L1018)**

**LOAN PROPOSAL**

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## CONTENTS

### PROGRAM SUMMARY

I.	DESCRIPTION AND MONITORING OF RESULTS .....	1
A.	Background, issues, strategy, and rationale .....	1
B.	The program strategy .....	3
C.	Objective, components, and costs .....	5
D.	Results framework and key indicators .....	7
II.	FINANCIAL STRUCTURE AND MAIN RISKS .....	8
III.	IMPLEMENTATION AND MANAGEMENT PLAN.....	11

## ANNEXES

Annex I	Results Matrix
Annex II	Procurement Plan

## APPENDICES

Proposed resolution

Electronic Links and References	
<b>Required:</b>	
Annual work plan (AWP)	<a href="#">IDBDOCS 1143725 Plan Operativo Anual</a>
Monitoring and evaluation scheme	<a href="#">IDBDOCS 1171233 Esquema de Monitoreo y Evaluación</a>
Relatório de Avaliação Ambiental do Programa [Program Environmental Assessment Report] (RAAP), Plano de Gestão Ambiental e Social	<a href="#">IDBDOCS 1062086 RAAP</a>
[Environmental and Social Management Plan] (PGAS)	<a href="#">IDBDOCS 1146746 PGAS</a>
<b>Optional:</b>	
Analysis of technical and design options	<a href="#">IDBDOCS 1168632 Evaluación Económica</a>
Analysis of technical/economic viability	<a href="#">IDBDOCS 1147087 Evaluación Financiera del DF</a>
Financial management and special fiduciary considerations	<a href="#">IDBDOCS 1145668 Evaluación de Riesgo</a>
Risk assessment (Expert Choice)	<a href="#">IDBDOCS 1145669 SECI</a>
Institutional analysis, Institutional Capacity Assessment System (ICAS), personnel procedures, and implementation capacity considerations	
<u>Maps:</u>	
- Map of the Federal District	<a href="#">IDBDOCS 1143662 Distrito Federal Mapa</a>
- Corridors and location of the works under the program	<a href="#">IDBDOCS 1143665 Obras viales 1er Programa</a>
- Location of stations to be built or renovated	<a href="#">IDBDOCS 1143663 Estaciones 1er Programa</a>

## ABBREVIATIONS

DF	Distrito Federal [Federal District]
EIA	Environmental impact assessment
EPIG	Estrada Parque Indústrias Gráficas [name of a highway]
ESPM	Estrada Setor de Polícia Militar [name of a highway]
ESMR	Environmental and Social Management Report
GDF	Governo do Distrito Federal [Government of the Federal District]
MTS	Mass transit system
OC	Ordinary Capital
OCC	Operational Control Center
PCR	Project completion report
PMU	Program management unit
PPK	Passengers per kilometer
SEFAZ	Secretaria da Fazenda [Secretariat of Finance]
SET	Secretaria de Estado dos Transportes [State Transportation Secretariat]
STN	Secretaria do Tesouro Nacional [Secretariat of the National Treasury]
UNESCO	United Nations Educational, Scientific, and Cultural Organization

## PROGRAM SUMMARY

### BRAZIL URBAN TRANSPORTATION PROGRAM FOR THE FEDERAL DISTRICT (BR-L1018)

Financial Terms and Conditions				
<b>Borrower:</b> Government of the Federal District			Amortization period:	25 years
<b>Guarantor:</b> Federative Republic of Brazil			Grace period:	5 years
<b>Executing agency:</b> State Transportation Secretariat (SET)			Disbursement period:	5 years
Source	Amount	%		
IDB (Ordinary Capital) <sup>1</sup>	US\$176,775,000	65.5%	Inspection and supervision fee: <sup>2</sup>	0%
Local	US\$ 93,110,000	34.5%	Interest rate:	LIBOR
Other/Cofinancing	0	0.0%	Credit fee: <sup>3</sup>	0.25% per annum
Total	US\$269,885,000	100.0%	Currency:	U.S. dollars from the Single Currency Facility
Program at a Glance				
<p><b>Program objective and description:</b></p> <p>The <b>goal</b> of this program is to help improve mobility and urban transportation conditions in the Federal District.</p> <p>The <b>purpose</b> is to improve mobility and accessibility for the population of the Federal District, particularly its low-income segments, by further integrating its communities through financing of a modern mass transit (bus) system. This will help to improve the circulation and safety of motorized and nonmotorized forms of transportation, and will strengthen the Government of the Federal District's initiatives and institutional and management capacity in the area of transportation. The program will invest in road and urban infrastructure, transfer stations, roadway and pedestrian safety, the construction of ramps at crosswalks, sidewalks, and pedestrian walkways for persons with physical disabilities, the modernization of the traffic light system, bicycle paths or lanes, and the strengthening of institutional and management capacity in the area of transportation.</p> <p><b>Special contractual conditions precedent to the first disbursement:</b></p> <p>(i) <u>Prior to the first disbursement, and prior to authorization of a bidding process by any of the program's coexecuting agencies (DFTrans, DER/DF, and NOVACAP), the executing agency will sign and implement coexecution agreements with them on the terms previously agreed upon with the Bank (see paragraph 3.1);</u></p> <p>(ii) <u>Prior to the first disbursement, the executing agency will deliver the terms of reference previously agreed upon with the Bank for the contracting of consulting services to support program management (see paragraph 3.2);</u></p> <p>(iii) <u>Prior to the first disbursement, the executing agency will establish the program management unit (PMU) and appoint its key technical personnel (executive coordinator and advisor).</u></p> <p><b>Exceptions to Bank policies:</b> None.</p> <p><b>Program consistent with country strategy:</b>    Yes <input checked="" type="checkbox"/>                      No <input type="checkbox"/>   </p> <p><b>Program qualifies as:</b>                              SEQ <input type="checkbox"/>                      PTI <input type="checkbox"/>                      Sector <input type="checkbox"/>                      Geographic <input type="checkbox"/>   </p>				

<sup>1</sup> The interest rate, credit fee, and inspection and supervision fee mentioned in this document for Ordinary Capital financing are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendation.

<sup>2</sup> In no case will the inspection and supervision fee exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount, divided by the number of six-month periods included in the original disbursement period.

<sup>3</sup> In no case will the credit fee exceed 0.75%.

## I. DESCRIPTION AND MONITORING OF RESULTS

- 1.1 **Approach.** The Government of the Federal District (GDF) seeks to channel public investment into areas that can make a real difference in improving the population's living conditions and boosting economic growth. It is also pursuing balanced development of communities in the Brasilia metropolitan area. The program will help to improve urban transportation and mobility, especially for lower-income users, by funding investments in infrastructure for public mass transit systems and their operation.
- A. **Background, issues, strategy, and rationale**
- 1.2 **Socioeconomic and urban features.** The Federal District (DF) is an autonomous territory administered by the same type of political structure as a Brazilian state. Brasilia, founded in 1960 and Brazil's federal capital city, is located within the Federal District. It is the seat of the republic's three branches of government and of the GDF. In 1987, Brasilia was declared a UNESCO world historical and cultural heritage site for its significance in the field of urban planning. In 1990, the Plano Piloto<sup>1</sup> district was afforded protection by the Government of Brazil under the legal instrument known as *tombamento*.<sup>2</sup>
- 1.3 The Federal District has an estimated population of 2.5 million, approximately 10% of whom reside in Brasilia.<sup>3</sup> For purposes of local services management, the Federal District is divided into 29 Administrative Regions (ARs). With the exception of Brasilia itself, until recently these Administrative Regions were also known as "satellite cities." The Administrative Regions' rapid growth has resulted in urban sprawl as an uninterrupted stream of migrants flows into the capital. New areas are not being directly integrated with the Plano Piloto, and the degree of social and economic inequality is significant.
- 1.4 Economic activity in the Federal District is geared mainly toward the services sector, which accounts for nearly 75% of all jobs in Brasilia.<sup>4</sup> Because of this multicore metropolis's spatial configuration (with Administrative Regions relying heavily on socioeconomic activities in Brasilia), traffic flows mainly from the Administrative Regions to Brasilia in the morning, and then back in the other direction in the evening. These traffic streams are concentrated in high-speed freeways having few links to the secondary road system. The result is an inefficient

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<sup>1</sup> Original name of the project designed by Lucio Costa for the downtown area of Brasilia.

<sup>2</sup> The term "*tombamento*" is employed in the Federal Conservation Act, which makes the government responsible for the conservation and protection of land and structures of public interest by virtue of their historic, artistic, archaeological, ethnographic, urban planning, scenic, or bibliographic value. The *tombada* (area protected by the *tombamento*) is subject to numerous restrictions on physical modifications to the urban environment as well as habitation, density, and land use regulations.

<sup>3</sup> When certain municípios in the State of Goiás located in the vicinity of the Federal District are included in the count, the population rises to 3.2 million, making Brasilia the country's third-largest urban center, after São Paulo and Rio de Janeiro.

<sup>4</sup> This sector accounts for 92% of the Federal District's total GDP (IBGE, 2003).

urban public transit system. In addition, due to the long distances separating Brasilia from the Administrative Regions (an average of 30 km), public transportation supply is concentrated in the morning and afternoon rush hours. This pattern is so marked that, during the off-peak periods, much of the fleet (around 1,000 buses) stands idle in vacant lots in Brasilia.

- 1.5 **Transportation demand.** Some 2.8 million commutes are made in the Federal District each day; 72% of these trips are made in motor vehicles, and the remaining 28% on foot or by bicycle. In all, 50% of the trips in motor vehicles are made by private automobiles or taxis, 47% in mass transit vehicles (buses and minibuses), and the remaining 3% by other means. The main reasons why commuters make these trips are for work (52%) and school (26%).
- 1.6 **Mass public transportation supply.** Mass transit service in the Federal District is currently divided into five different modes of transport. These modes, which are not integrated in terms of either their fares or operations, are: (i) conventional basic mass transit bus service connecting Brasilia with the Administrative Regions; (ii) special neighborhood services operating in Brasilia with differentiated features and fares; (iii) conventional rural services for the rural areas of the Administrative Regions; (iv) alternative services using low-capacity vans (16 passengers); and (v) the subway ("Metro") linking downtown Brasilia with the cities of Taguatinga and Samambaia. The subway has been operating commercially since 2001; an extension of the Taguatinga line to Ceilândia and four stations within the Plano Piloto district are now under construction.
- 1.7 **Individual means of transportation and road safety.** In the last five years, the motor vehicle fleet has grown by 7% per year, with 900,000 registered vehicles as of 2007 and ratios of 0.37 vehicles/person for the Federal District and of 1.0 vehicles/person for the more limited area of Plano Piloto. There is a great deal of traffic congestion during the morning and afternoon rush hours, both on the Plano Piloto's main arteries and on the Administrative Region access routes (especially along the Estrada Parque Taguatinga (EPTG) corridor).
- 1.8 Despite the growth of the motor vehicle fleet, the Federal District's road safety indicators have improved in recent years thanks to a number of different measures, including the use of an electronic speed control system and the introduction of safety measures at critical points along roadways. In 2005, there were 5.4 fatal accidents per 10,000 vehicles. This was only about one third of the figure recorded in 1995. There are traffic lights at 400 intersections in the Federal District. Most of these are along the Brasilia road network and its main access routes. A majority of the intersections equipped with traffic lights do not have master-controlled detectors that would allow real-time synchronization or optimization of the network.
- 1.9 **Institutional structure of the mass transit system (MTS).** The State Transportation Secretariat (SET) is responsible for transportation policies (including fares) and for the planning and authorization of mass transit service delivery. The SET works through the following agencies: (i) the Transporte Urbano

do Distrito Federal [Federal District Urban Transportation Agency] (DFTrans) is in charge of managing public transportation; (ii) the Departamento de Estradas de Rodagem do Distrito Federal [Federal District Highway Department] (DER/DF) plans, inspects, operates, maintains, and builds highways; (iii) the Departamento de Trânsito do Distrito Federal [Federal District Transit Department] (DETRAN) registers vehicles, issues drivers' licenses, and is in charge of signage, enforcement, and driver education; and (iv) the Companhia do Metropolitano do Distrito Federal (Metro/DF) is a public corporation subject to private law that plans, builds, runs, and maintains the MTS rail system in the Federal District. In terms of infrastructure management, the State Secretariat of Works (SSW) conducts civil engineering projects in urban areas, particularly urban transportation works, operating through Companhia Urbanizadora da Nova Capital (NOVACAP).

- 1.10 **Issues relating to MTS service.** The root problem has to do with the Federal District's urban configuration (low density, overly long commutes, and sprawling community growth), coupled with management shortcomings. As a result, there has been an increasing degree of informal transit activity, an oversupply of openly competing modes of transportation and transit routes, a fragmentation and lack of coordination in services and routes, the use of small-vehicle services (vans, etc.), and no setting of operational priorities. The quality of service provided to the system's primarily low-income users is poor. Commutes are uncomfortable and take a long time due to traffic congestion. In addition, the affordability of transport services is being jeopardized by their low rate of return<sup>5</sup> and the absence of fare integration.
- 1.11 **The GDF's strategy.** The GDF began preparation of this program in 2004, and recently began to implement its 2007-2010 multiyear plan, which includes the "Integrated Brasilia" urban transit initiative. This initiative, which ties in closely with the proposed program, is designed to improve public transportation by streamlining mass transit services and regulating, integrating, and supervising the activities of private operators. The Federal District Legislative Assembly has enacted a new regulatory framework law on public transportation. The GDF has also launched an institutional restructuring plan and is in the process of approving a land use management plan aimed at reducing asymmetries in the Federal District's spatial configuration. (see paragraph 1.10)

## **B. The program strategy**

- 1.12 Program preparation focused on all the activities conducted in the Federal District by the SET and its related autonomous agencies: road construction, expansion, and maintenance; supervision, monitoring, and evaluation of engineering works, studies, and designs; road emergencies, traffic safety, and pilot projects; feasibility and final design studies; social and environmental management studies and plans;

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<sup>5</sup> The impact of the system's low rate of return has been transferred to users via fare increases. MTS users in the Federal District's lowest income quintile spend over one third of their incomes on transportation costs. This is one of the highest ratios in the region.



- planning studies; the expansion, extension, or upgrading of public transportation infrastructure, plant, and equipment involved in the operation and tracking of transit services; and activities related to institution-strengthening and management, and technical, economic, and financial sustainability.
- 1.13 The Bank has worked on five infrastructure projects in the Federal District under loans 296/SF-BR, 526/OC-BR and 814/SF-BR, 622/OC-BR and 856/SF-BR, and 526/OC-BR. Currently in execution are loans 817/SF-BR and 1288/OC-BR, both in the area of water and sanitation.
- 1.14 The program strategy for improving the public transit system involves: (i) **modernization of mass public transit** by setting up a bus route system composed of integrated trunk and feeder lines that also connect up with the subway system, building dedicated priority lanes for trunk and access routes, and building and renovating transfer stations; (ii) **improvement of safety conditions for motorized and nonmotorized modes of transportation** by introducing a new traffic light and control system, building bicycle paths or lanes, conducting educational campaigns, taking steps to improve road safety at critical locations, and building ramps at intersections, sidewalks, and pedestrian walkways for persons with physical disabilities. These measures will be supported through: (iii) **GDF institutional and management capacity-building**, to be accomplished by training DFTrans and SET technical staff, developing the transit and transportation planning system, updating the regulatory framework, streamlining the network, and managing the supply of mass transit services. The program will also support actions required for the operation of an integrated fare collection system (payment and credit clearing house). An international seminar will also be funded to encourage dialogue regarding amendment of the *tombamento* regulations applicable to the Plano Piloto.
- 1.15 The program is built around the construction of an east-west Ceilândia-Taguatinga-Plano Piloto backbone route, introduction and startup of an electronic fare payment system and a systemwide information infrastructure, and the implementation of DFTrans management capacity-building measures. Once construction has begun on the dedicated east-west corridor (which is expected to alter the current overall service delivery scheme substantially), work will continue on the other infrastructure projects (upgrading of feeder routes and construction and renovation of transfer stations).
- 1.16 To ensure program sustainability, steps must be taken to strengthen the SET and DFTrans as the lead transportation policymaking and management agencies, respectively. This will entail ensuring that they have the necessary technical and operational capacity to be effective and efficient, as well as undertake the public transportation planning, line management, and oversight functions required to achieve their objectives and optimize their activities. As part of the DFTrans capacity-building exercise, the program will support the system's operational transition, entailing its regularization, streamlining, and integration. To better track and facilitate implementation, the operational transition will be conducted in the

northern, western, central (Plano Piloto), eastern, southwestern, and southern geographical regions of the Federal District. The objective is to build a more efficient mass transit system that runs reliably (i.e. safely and on time) and meets the Federal District population's real mobility needs (demand).

**C. Objective, components, and costs**

- 1.17 The **goal** of this program is to help improve mobility and urban transportation conditions. The **purpose** is to improve mobility and accessibility for the population of the Federal District, particularly its low-income segments, by further integrating the communities of the Brasilia metropolitan area. The program will finance a modern mass transit (bus) system, help to improve the circulation and safety of motorized and nonmotorized forms of transportation, and strengthen the Government of the Federal District's initiatives and institutional and management capacity in the area of transportation. The program will invest in road and urban infrastructure, transfer stations, roadway and pedestrian safety, the construction of ramps at crosswalks, sidewalks, and pedestrian walkways for persons with physical disabilities, the modernization of the traffic light system, bicycle paths or lanes, and the strengthening of institutional and management capacity in the area of transportation.
- 1.18 This multiple-works program will have a five-year disbursement period. Its total cost will be US\$269.88 million: 65.5% of this sum (US\$176.77 million) will be provided as an IDB loan, and the remaining US\$93.11 million in counterpart resources. The program's estimated cost, broken down by component, is shown in Table I-1. The main categories of investments are described below.
- 1.19 **Component 1. Engineering and administration (US\$16.38 million)**
- 1.20 This component will finance: (i) *engineering studies and designs (US\$6.1 million)*, including the expenses associated with economic, technical, and environmental feasibility studies and final designs for the works covered by the program;<sup>6</sup> and (ii) *administrative expenses (US\$10.28 million)*, including all the services and activities under the responsibility of the program management unit (PMU) for this operation (see paragraph 3.2). It will also finance the cost of management consulting services and the contracting of independent firms for accounting/financial and environmental audits of the program, as well as environmental oversight and socioenvironmental communication expenses.
- 1.21 **Component 2. Investments for the modernization of urban transportation (US\$244.48 million)**
- 1.22 *Modernization and integration of the mass transit system (US\$208.52 million)* will include measures and actions to upgrade mass transit operations and coverage and

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<sup>6</sup> The GDF has already conducted the studies necessary for preparation of the program, such as demand analyses, transit simulations, economic feasibility studies, engineering designs, and environmental and institutional studies. The cost of these studies will be recognized as an eligible expenditure of counterpart resources.

to make the introduction of an integrated system viable. This component includes the infrastructure works needed to prioritize operation of the Federal District Mass Transit System, particularly the east-west corridor (Ceilândia-Taguatinga-Plano Piloto), along with the necessary ancillary infrastructure works (bus terminals, bus-subway transfer stations, bus stops, and secondary local roads). It also covers transport and urban infrastructure projects in: (i) an 11.8-km trunk corridor, 26.13 km of secondary corridors, and 42.5 km of local routes; (ii) renovation of 14 existing terminals, the construction of 17 new terminals/transfer stations, and the construction of some 33 transfer stations and 270 bus stops; and (iii) repairs to 11 intersections to remedy the most critical traffic snarls, giving priority to public transportation.

- 1.23 Improved road safety for motorized and nonmotorized forms of transportation (US\$21.2 million). The designs and budgets for all transportation infrastructure measures to be financed will also include the necessary additional works, monitoring and supervision devices, and signage to ensure an adequate level of road safety and operation. In addition, the program will finance: (i) urban redevelopment of the areas targeted directly by the program; (ii) pedestrian bridges; (iii) ramps at intersections, sidewalks, and pedestrian walkways for persons with physical disabilities; (iv) roadway signage; (v) installation of traffic lights at crosswalks; (vi) some 70 km of bicycle paths or lanes; and (vii) minor works to correct roadway and curve banking angles and to address problems at critical points in the transportation network. In view of Brasília's urban planning tradition, the program will finance projects involving pedestrian crosswalks and walkways in combination with improvements in the urban environment that will serve as a model for actions at other critical points within the city.
- 1.24 Operational Control Center (OCC) and traffic light system (US\$4.2 million). The OCC will be linked to a centralized system of traffic lights and cameras for monitoring and regulation of vehicular traffic.
- 1.25 Mass transit management and operations system (US\$5.12 million). This will include specialized computer hardware to strengthen planning, management, and operational control capacity at DFTrans and SET.
- 1.26 Works supervision (US\$5.46 million). This task will be carried out by specialized consulting firms in order to ensure compliance with timetables and with technical specifications and blueprints. Contracts will be issued in lots corresponding to each bidding category.
- 1.27 **Component 3. Institution-strengthening (US\$8.22 million)**
- 1.28 The proposed activities are divided into the following groups: (i) Support for the SET (US\$2.3 million) through introduction of a public transit information management system; (ii) Support for DFTrans (US\$4.87 million), including activities to build technological, technical, and institutional capacity, as well as finance the setup, testing, and operation of a payments and credits clearing house (necessary for open fare integration and temporary credit); and (iii) Support for the

*State Secretariat for Urban Development and the Environment (SSUDE) (US\$1.05 million)*, to assist it in performing all the environmental tasks associated with the program and in conducting the environmental management of the mass transit system and related infrastructure, as well as purchasing equipment for measuring air quality and noise pollution, and conducting the urban planning seminar and mobility study.

#### **D. Results framework and key indicators**

- 1.29 The program's outcomes will relate to improvements in MTS service delivery throughout the east-west corridor (Ceilândia-Taguatinga-Plano Piloto). A particular aim is to improve users' opinions about the system's level of service, as reflected in readily measurable, objective indicators for the program's main economic benefits (e.g. shorter commute times, lower vehicle operation costs, and a higher rate of return for services).

**Table 2-1**  
**Costs and financing of the credit line program**  
**(in US\$ thousands)**

<b>Investment category</b>	<b>%</b>	<b>Total</b>	<b>Bank</b>	<b>%</b>	<b>Local</b>	<b>%</b>
<b>1. Engineering and administration</b>	<b>6.07</b>	<b>16,380</b>	<b>9,752</b>	<b>59.54</b>	<b>6,628</b>	<b>40.46</b>
1.1 Studies and designs	2.26	6,100	2,300	37.70	3,800	62.30
1.2 Program administration	3.81	10,280	7,452	72.49	2,828	27.51
<b>2. Direct costs</b>	<b>90.59</b>	<b>244,485</b>	<b>159,625</b>	<b>65.29</b>	<b>84,860</b>	<b>34.71</b>
2.1 Modernization and integration of public transportation	77.26	208,520	138,792	66.56	69,728	33.44
2.2 Road safety for motorized and nonmotorized traffic	7.82	21,100	10,550	50.00	10,550	50.00
2.3 Operational Control Center and traffic light system	1.59	4,285	1,785	41.66	2,500	58.34
2.4 Mass transit management and operations system	1.90	5,120	3,584	70.00	1,536	30.00
2.5 Works supervision	2.02	5,460	4,914	90.00	546	10.00
<b>3. Institution-strengthening</b>	<b>3.05</b>	<b>8,220</b>	<b>7,398</b>	<b>90.00</b>	<b>822</b>	<b>10.00</b>
3.1 SET	0.85	2,300	2,070	90.00	230	10.00
3.2 DFTrans	1.80	4,870	4,383	90.00	487	10.00
3.3 SSUDE	0.39	1,050	945	90.00	105	10.00
<b>4. Associated costs</b>	<b>0.30</b>	<b>800</b>	<b>-</b>	<b>0.00</b>	<b>800</b>	<b>100.00</b>
4.1 Expropriation	0.02	50	-	0.00	50	100.00
4.2 Resettlement	0.02	50	-	0.00	50	100.00
4.3 Environmental and social compensation	0.26	700	-	0.00	700	100.00
<b>5. Financing costs*</b>	<b>0.00</b>	<b>-</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>0.00</b>
5.1 Inspection and supervision	0.00	-	-	0.00	-	0.00
<b>Total</b>	<b>100.00</b>	<b>269,885</b>	<b>176,775</b>	<b>65.50</b>	<b>93,110</b>	<b>34.50</b>

\* Financing costs, interest, and credit fees will be paid by the GDF outside the program.

Key indicators	Period measured	Reason selected
Level of user satisfaction with public transit in the Federal District is at least 30%	During program execution	To confirm that financial and human-resource investments are up and running, and that safer, more reliable, and more efficient passenger transportation services are being provided
The MTS operates smoothly on the east-west corridor		
Commute times between Ceilândia, Taguatinga, Águas Claras and the Plano Piloto (east-west backbone) shorten from 67 minutes (current) to 56 minutes (after program) for bus passengers during peak hours	One year after program completion	To confirm that service quality has improved and directly benefits users in their daily commutes
Waiting times of up to 30 minutes at bus stops during morning rush hour for travel from Ceilândia, Taguatinga, and Samambaia to Plano Piloto on the corridors targeted directly by the program shorten by 15 minutes		
The passengers per kilometer (PPK) index increases from 0.9 (current) to 1.2 (after program) passengers/vehicle-km		To confirm that productivity per service unit has increased

## II. FINANCIAL STRUCTURE AND MAIN RISKS

- 2.1 **Environmental and social risk mitigation measures.** In consideration of the Bank's Environment and Safeguards Compliance Policy (OP-703), and the nature and objectives of the program and its environmental and sociocultural impacts and risks as described in paragraph 2.2, this operation has been classified as Category "B."
- 2.2 The Committee on Environment and Social Impact (CESI) approved the environmental strategy at its meeting of 22 September 2006. As part of program preparation: (i) a strategic environmental assessment was done, and (ii) an environmental manual for construction was developed, along with (iii) an environmental and social management plan (ESMP). The ESMP provides detailed information on all environmental impact prevention, mitigation, and remediation measures to be undertaken in connection with this program. Measures have been designed to help generate supplemental incomes for bus drivers and fare collectors who may be impacted by changes in their business model associated with program

implementation. An environmental plan has also been formulated for the section of the EPTG that borders the Guará Ecological Reserve, to offset the associated clearing of vegetation and impacts on permanent conservation areas (watercourses).

- 2.3 The preparatory work for the program did not identify any cases in which low-income housing would be adversely affected. If such cases arise, the appropriate mitigation measures will be taken in accordance with Bank operational policy OP-710.
- 2.4 The main adverse impact identified during program preparation was on 862 street vendors, according to the December 2005 cadastre, whose business activities would be affected by the widening of Hélio Prates Avenue in Ceilândia. To mitigate this impact, the GDF initiated an economic study and began development of a resettlement plan. During program preparation it introduced a broader land-use regularization policy for the entire Federal District, which in the project area took the form of Decree 28214 of 17 August 2007. This decree, issued by consensus with the street vendors' association and others, called for the satisfactory relocation of the street vendors identified by the cadastre, whose number had risen to 1,632. Of these, 888 were relocated to the nearby shopping center complex, and the rest to other open markets of the region. The transfer was conducted by the Ceilândia Administrative Region, under the guidelines and planning of the Federal District's State Secretariat of Justice, and Human and Civil Rights, in compliance with Bank operational policy OP-710.
- 2.5 **Carbon credits.** During program preparation and with technical and financial support under the Sustainable Energy and Climate Change Initiative (SECCI), studies have been conducted to determine the program's potential for improving air quality, in order to explore whether carbon bonds are a possibility and support their development.
- 2.6 **Fiduciary risk.** The GDF has extensive experience in executing operations financed by the Bank and other multilateral agencies. It has already begun institutional strengthening work at SET and DFTrans, which will continue and intensify during program execution. The GDF has directed that the PMU be set up within the SET to handle all arrangements for this operation and its coordination. The PMU will receive support from a management consulting firm (MCF) that works with internationally financed programs. The MCF will provide reinforcement in technical matters and in the execution and support of procurement procedures.
- 2.7 **The GDF's financial condition.** Analysis of the Federal District's financial statements for 2002-2006 and the GDF's 2007 general budget indicates that the Federal District has the capacity to provide the counterpart funding necessary to execute the program. It has also been established that this loan operation falls within its authorized borrowing limits. The limits established in the Fiscal Responsibility Act (LRF) (Supplemental Law 101 of 2000) and in Federal Senate Resolution 43/01 were also considered. Review of these documents indicates that both the primary balance, which is sufficient to cover the scheduled debt service,

and the Federal District's ratio of total financial debt to real liquid revenue comply with the requirements of those two documents, as well as with the executive branch's payroll expenditure limits. In 2004-2006, however, the legislative branch's payroll expenditure limit (which includes the Federal District Office of the Auditor General) exceeded the established limits. The GDF has reported that it is taking administrative steps to comply with the LRF.

- 2.8 A review was also undertaken of compliance with the contractual agreement between the Federal District and the Secretariat of the National Treasury (STN) regarding promissory notes and the assumption, consolidation, and refinancing of debt, under which the Federal District refinanced its debt on favorable terms. This contract requires that fiscal adjustment programs must be prepared each year, and that they are to be reviewed on a regular basis by the STN, and the targets updated based on a performance evaluation of the State's financial indicators. In 2006 the GDF failed to meet two of the six targets contained in the program, which may jeopardize the loan operation with the Bank. To minimize this risk, and as part of its preparation of this operation, the Secretariat of Finance (SEFAZ) provided evidence to the STN justifying the GDF's failure to meet those targets. Since the index is below 1%, the SEFAZ believes that the STN will authorize the loan. In addition, SEFAZ has reported that the GDF has taken steps to ensure meeting the targets for this year.
- 2.9 **Other special considerations and risks.** Risks associated with the program are institutional and operational in nature. The chief institutional risk has to do with the GDF's institutional weakness in this sector and the challenges posed by the operation, technical planning, and operational management of an integrated transportation system. There is also the operational risk that existing operators may oppose the control and management measures proposed for the system by the GDF. In terms of system operation, there is also the risk that fare integration could jeopardize private operators' financial viability, and that the system could come to represent an additional financial burden as a consequence of the Metro/DF's operations.
- 2.10 In order to mitigate these risks, the GDF is already taking a number of specific steps to restructure the DFTrans (which has already received authorization to issue an open call for applications in order to recruit personnel to strengthen its operational structure) and the SET. These actions will be supported by the program's institution-strengthening component. The GDF also has a strong political will to manage, oversee, and run the MTS effectively and efficiently. It has already approved new public transit regulations (see paragraph 1.11), which include instruments for monitoring MTS demand through the introduction of an electronic fare system. This operation also provides for a gradual five-year transition from the existing system to the new fully integrated public transportation scheme. This transition will involve not only physical and technological infrastructure (e-payments), but also institutional, technical, legal, and sociocultural components (user orientation).

- 2.11 The project team is also pursuing approval of an InfraFund technical cooperation operation to support the system's integration and the financial and institutional viability of the integrated system. Consulting services will be engaged to support the definition of the available technological options in terms of the fleet's operation, size, and specifications, institutional and legal studies regarding route concessions and fare integration, the system's financial viability, and the startup of the traffic-control, clearinghouse, and e-payment systems.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

- 3.1 **Summary of implementation measures.** The Government of the Federal District (GDF) will be the borrower. The Federative Republic of Brazil will be the guarantor, and the State Transportation Secretariat (SET) will be the executing agency. A program management unit (PMU) has been established by decree within the SET. **Establishment of the program management unit (PMU) and appointment of its key technical personnel (executive coordinator and advisor) will be a special condition precedent to the first disbursement.** The PMU will be directly responsible for execution. It will carry out the planning, supervision, monitoring, and evaluation of program activities, including those relating to: environmental monitoring; oversight of contract performance; preparation of progress reports, disbursement requests and processing; contracting, administration and oversight of management and supervision services, as well as financial/accounting and environmental audits of the program; and all necessary supporting documentation. The program will be executed through the SET, and the coexecuting agencies DFTrans, DER/DF, and NOVACAP. These agencies' involvement will be **formalized in specific agreements** establishing their responsibility, within the purview of each, for bidding and contracting procedures, the administration and oversight of contracts for works, goods, and services, and the technical supervision of works.<sup>7</sup> **As a condition precedent to the first disbursement and to the bidding processes conducted by each agency, agreements between the SET and each of the coexecuting agencies will have entered into effect.**
- 3.2 In coordinating its activities, the PMU will devote special attention to four areas: (i) works execution; (ii) planning and programming; (iii) monitoring, supervision, and evaluation; and (iv) technical advisory services in connection with environmental and other issues. The PMU will be responsible for the program's financial management. The coexecuting agencies will send payment requests to the PMU for processing. Program execution will be supported by specialized consulting services, chief among which will be: (i) programming and monitoring of

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<sup>7</sup> The DFTrans will be responsible for the construction and renovation of terminals, including subway transfer stations; the DER/DF will be responsible for the construction of road works and works of art; and NOVACAP will be responsible for the construction of urban road works and improvements at critical points.



- physical and financial contract performance, to include support for the supervision of bidding processes; (ii) creation, implementation, and operation of a monitoring plan for use in program evaluation; (iii) support for preparation of terms of reference and bidding documents; (iv) support for the PMU in the supervision and inspection of projects and works and in the procurement of goods and services; and (vi) preparation of specific program progress reports on a regular basis. **As a special condition precedent to the first disbursement, the executing agency will deliver the terms of reference previously agreed upon with the Bank for the contracting of consulting services to support program management.**
- 3.3 Based on the corresponding designs, contracts for the works under each project will be grouped into lots and awarded through a bidding process conducted by a specialized bidding commission to be set up by the Federal District, which will review and select the best proposal based on the Bank's procurement policies and procedures.
- 3.4 Works, goods and services will be procured in accordance with Bank policy (documents GN-2349-7 and GN-2350-7). Program procurements and contracting will be subject to ex ante review by the Bank. The engineering department or corresponding unit(s) within each coexecuting agency will be responsible for the approval of final designs. The construction department or corresponding unit(s) within each coexecuting agency will be responsible for works supervision and oversight. Each coexecuting agency will have a local management unit (LMU) operating on terms set at the appropriate time by the Bank.
- 3.5 **Summary of results-monitoring measures.** Two administration missions will be conducted each year to monitor the relevant technical, financial, and operational aspects of the work, so as to keep delays and cost overruns to a minimum. An area within the PMU will be dedicated to program supervision, monitoring, and assessment, so that preventive or corrective measures can be taken in a way that will not interfere with program performance and all work is focused on keeping the program on track toward its proposed objectives. The PMU will be in charge of monitoring the indicators and other information sources needed to prepare the performance evaluation and final evaluation.
- 3.6 The executing agency will compile, store, and retain all information, indicators, and parameters, including the relevant annual work plans (AWPs), necessary to prepare the loan performance report and project completion report (PCR). Progress toward physical and financial targets will be monitored, and the corresponding effects will be evaluated under the program administration subcomponent.
- 3.7 **Major design activities subsequent to approval.** It will be the GDF's duty to complete the final designs for the intersections that constitute the east-west corridor, along with those of the ESPM, EPIG, and Central Avenue routes, all of which are part of the east-west backbone. Final designs will be prepared for the Asa Norte (north wing) terminal, and work will progress on designing a financial structure and fare calculation method that reflects the integrated system's operating costs.

**URBAN TRANSPORTATION PROGRAM FOR THE FEDERAL DISTRICT  
(BR-L1018)  
RESULTS MATRIX**

<b>RESULTS FRAMEWORK MATRIX OF INDICATORS</b>					
<b>Project objective:</b>	<p>The <b>goal</b> of this program is to help improve mobility and urban transportation conditions in the Federal District.</p> <p>The <b>purpose</b> is to improve mobility and accessibility for the population of the Federal District, particularly its low-income segments, by further integrating the communities of the Brasilia metropolitan area.</p>				
RESULTS INDICATOR	BASELINE		TARGET		
<b>Perception of public transportation</b>					
- Level of user satisfaction with public transit is at least 30%	<b>17.4%</b>		30%	<b>(+72%)</b>	One year after program completion, the percentage of DF inhabitants having a favorable opinion (good to excellent) of the urban transportation system components directly related to mobility on the east-west Hélio Prates, Comercial, Central, EPTG, EPIG corridor, will be higher than before program start. Opinion surveys of DF households.
<b>Shorter commute times</b>					
- For users of public buses	<b>67 min</b>		56 min	<b>(-16%)</b>	One year after program completion, during peak hours in the integrated system on the east-west Hélio Prates, Comercial, Central, EPTG, EPIG corridor.
- For users of public buses who also utilize some type of integrated form of transportation	<b>86 min</b>		82 min	<b>(-5%)</b>	
Shorter average waiting times at stops on the Ceilândia, Samambaia, and Taguatinga corridors	24 min 24 min 30 min		12 min 15 min 12 min	<b>(-50%)</b> <b>(-37.5%)</b> <b>(-60%)</b>	One year after program completion, the average waiting time of up to 30 minutes at bus stops during morning rush hour for travel from Ceilândia, Taguatinga, and Samambaia to Plano Piloto on the corridors targeted directly by the program shorten by 15 minutes.
<b>Increase in per-unit productivity</b>					
- Increase in passengers per kilometer (PPK) index	<b>0.9</b>		1.2	<b>(+ 33%)</b>	One year after program completion, for the public mass transit system.

- Lower bus operating costs	<b>US\$0.862/km</b>		US\$0.777/km	<b>(-10%)</b>	One year after program completion, average reduction in operating costs for the integrated Ceilândia, Taguatinga, Águas Claras - Plano Piloto system (east-west corridor).
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	<b>Base</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5 / Target</b>	
<b>Component. Investments for the modernization of the urban transportation</b>							
<b>(i) Modernization and integration of the mass transit system</b>							
<u>Outputs</u>							
- construction of trunk corridors with dedicated or preferential bus lanes	<b>0</b>	n.d.	16.6	26.13	37.9	37.9 km	
- improvement of local routes	<b>0</b>	n.d.	12.5	22.5	32.5	42.5 km	
- improvement of transfer terminals	<b>0</b>	n.d.	n.d.	10	12	14 units	
- construction of transfer terminals	<b>0</b>	3	9	15	17	17 units	
<u>Final outcomes</u>							
Average commercial-operation speed on the trunk route (east-west corridor) between the Taguatinga terminal and the Rodoviária station	<b>25.23</b>	n.d.	n.d.	n.d.	30.95	30.95 km/h	
<b>(ii) Improved traffic flows and road safety for motorized and nonmotorized forms of transportation</b>							
<u>Outputs</u>							
- construction of bicycle lanes or paths	<b>0</b>	n.d.	15	55	70	70 km	
- interventions at critical points	<b>0</b>	n.d.	15	n.d.	n.d.	15 points	
- interventions to improve pedestrian safety	<b>0</b>	n.d.	100%	n.d.	n.d.	100%	
<u>Final outcomes</u>							
- Reduction in the number of accidents occurring in routes covered by the program	<b>850</b>	n.d.	n.d.	n.d.	n.d.	765	Per 10,000 vehicles registered in the DF accident count for the Hélio Prates, Comercial,

	Base	Year 1	Year 2	Year 3	Year 4	Year 5 / Target	
							Samdu, Central, EPTG, EPIG, and ESPM routes Baseline: 2006
- Reduction of the number of casualty accidents at the 17 critical locations to be addressed by the program	179	n.d.	n.d.	n.d.	n.d.	107	Per 10,000 vehicles registered in the DF Baseline: 2004
- Reduction of the number of accidents involving pedestrians in the routes and at the critical locations to be addressed by the program	136	n.d.	n.d.	n.d.	n.d.	109	Baseline: 2006
- Reduction of the number of accidents in which cyclists collide with vehicles in the routes and at the critical locations to be addressed by the program	1,066	n.d.	n.d.	n.d.	n.d.	1,013	Baseline: 2005
<b>(iii) Operational Control Center and traffic light system</b>							
<u>Outputs</u>							
- Operational control center in operation	0	n.d.	20%	45%	80%	100%	Percentage of intersections covered by the program in which interventions have been undertaken
<b>(iv) Mass transit management and operations system</b>							
<u>Outputs</u>							
- Purchase and operationalization of specialized hardware, databases, and software	0	40%	80%	100%	n.d.	100%	Percentage of the number of pieces of equipment purchased and in operation.
<b>Component. Institution-strengthening</b>							
<u>Outputs</u>							
- Decree setting forth the regulations	0	100%	n.d.	n.d.	n.d.	100 %	

	Base	Year 1	Year 2	Year 3	Year 4	Year 5 / Target	
needed to implement the new mass transit law							
- Decree setting forth the regulations needed to put the clearinghouse into operation	0	n.d.	100%	n.d.	n.d.	100%	
- Set-up of the clearinghouse	0	n.d.	n.d.	100%	n.d.	100 %	
- Introduction of the e-payment system	0	n.d.	100%	n.d.	n.d.	100%	
- Formulation of the plan for the user information system	0	n.d.	n.d.	100%	n.d.	100%	
- Introduction of the plan for the user information system	0	n.d.	n.d.	n.d.	100%	100%	
- Training of SET and DFTrans staff	0	n.d.	30%	50%	n.d.	50%	
- Formulation of a management plan for the transport of hazardous materials	0	n.d.	n.d.	50%	100%	100%	
- Installation of air-quality monitoring stations	0	n.d.	n.d.	n.d.	100%	100%	
- Establishment of a laboratory for air-quality analysis	0	n.d.	n.d.	n.d.	100%	100%	
<u>Final outcomes</u>							
- The MTS operates smoothly on the east-west corridor, based on the parameters set in this Logical Framework.	0	n.d.	85%	n.d.	95%	95%	

**URBAN TRANSPORTATION PROGRAM FOR THE FEDERAL DISTRICT (BR-L1018)**  
**PROCUREMENT PLAN**

Description	Estimated cost (US\$)	Procurement method	Review	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates	Status
				IDB %	Local %		Publication of specific procurement notice	
1. Goods								
1. Equipment for the Operational Control Center (OCC)	2,000,000	ICB	Ex ante	41.7	58.8	No	July 2009	Pending
2. Equipment for the integrated traffic light system	2,285,000	ICB	Ex ante	41.7	58.3	No	July 2009	Pending
3. Equipment for the mass transit management system	5,120,000	ICB	Ex ante	70	30	No	March 2008	Pending
2. Works								
1. Road works (Hélio Prates Avenue, Comercial Avenue, and Samdu Avenue)	34,000,000	ICB	Ex ante	65.4	34.6	No	March 2008	Pending
2. Road works (EPTG)	55,000,000	ICB	Ex ante	65.4	34.6	No	March 2008	Pending
3. Overpasses and pedestrian walkways (EPTG)	23,000,000	ICB	Ex ante	65.4	34.6	No	March 2008	Pending
4. Road works (Central Avenue, Stadium)	10,000,000	ICB	Ex ante	65.4	34.6	No	September 2008	Pending
5. Road, overpass, and pedestrian-walkway projects (ESPM)	10,000,000	ICB	Ex ante	65.4	34.6	No	February 2009	Pending
6. Road, overpass, and pedestrian-walkway projects (EPIG)	12,600,000	ICB	Ex ante	65.4	34.6	No	August 2009	Pending
7. Construction and/or refurbishment of bus transfer stations	25,400,000	ICB	Ex ante	70	30	No	January 2008	Pending
8. Construction and/or refurbishment of bus/subway transfer stations	15,700,000	ICB	Ex ante	70	30	No	September 2008	Pending
9. Improvement of local roads	4,270,000	NCB	Ex ante	70	30	No	July 2008	Pending
10. Shelters and transfer terminals	6,050,000	NCB	Ex ante	70	30	No	August 2008	Pending
11. Bicycle lanes or paths	4,500,000	NCB	Ex ante	50	50	No	March 2008	Pending
12. Pedestrian safety on Eixo Rodoviário	10,350,000	ICB	Ex ante	50	50	No	July 2008	Pending
13. Pedestrian and bicycle walkways	2,500,000	NCB	Ex ante	50	50	No	April 2008	Pending
14. Treatment of critical points	3,750,000	NCB	Ex ante	50	50	No	April 2008	Pending

Description	Estimated cost (US\$)	Procurement method	Review	Source of financing and percentage		Prequalification (Yes/No)	Estimated dates	Status
				IDB %	Local %		Publication of specific procurement notice	
3. Consulting Services								
1. Consulting firm to support program management (MCF)	8,000,000	QCBS	Ex ante	90	10	No	January 2008	Pending
2. Engineering and complementary works for the ESPM, the EPIG, and Central Avenue	4,600,000	QCBS	Ex ante	50	50	No	January 2008	Pending
3. Supervision of all program works (nearly four packages)	5,460,000	QCBS	Ex ante	90	10	No	January 2008	Pending
4. Demand studies, microsimulations, and capacity analysis	1,300,000	QCBS	Ex ante	90	10	No	March 2008	Pending
5. Independent financial audit of the program	280,000	LCS	Ex ante	90	10	No	July 2008	Pending
6. Semiannual environmental program audits	60,000	QCBS	Ex ante	0	100	No	October 2008	Pending
7. Public awareness	1,000,000	QCBS	Ex ante	0	100	No	March 2008	Pending
8. Public transit information management system	1,000,000	QCBS	Ex ante	90	10	No	June 2008	Pending
9. Strengthening of transportation management	4,870,000	QCBS	Ex ante	90	10	No	April 2008	Pending
10. Environmental strengthening studies and socioenvironmental education	950,000	QCBS	Ex ante	90	10	No	April 2009	Pending
11. Organization and holding of an international seminar on urban planning	100,000	QCBS	Ex ante	90	10	No	February 2008	Pending
The works at the EPTG/EPVP intersection (viaduct and earthmoving) have already been tendered. Under Clause 3.03 of the loan contract, up to 10,000,000 of that expenditure may be recognized for reimbursement.								
Under Clause 4.03 of the loan contract, US\$6 million equivalent of the expenditure for the studies and designs for program preparation and the São Sebastião, Riacho Fundo 1, and Brazlândia terminal works, which are now being tendered, may be recognized against the local counterpart.								

**ICB:** International competitive bidding; **LIB:** limited international bidding; **NCB:** national competitive bidding; **PC:** price comparison; **DC:** direct contracting; **FA:** force account; **PSA:** Procurement through specialized agencies; **PAs:** Procurement agents; **IA:** Inspection agents; **PLFI:** Procurement in loans to financial intermediaries; **BOO/BOT/BOOT:** Build, own, operate/build, operate, transfer/build, own, operate, transfer; **PBP:** Performance-based procurement; **PLGB:** Procurement under loans guaranteed by the Bank; **PCP:** Community participation procurement; **QCBS:** Quality- and cost-based selection **QBS:** Quality-based selection **FBS:** Selection under a fixed budget; **LCS:** Least-cost selection; **CQS:** Selection based on the consultants' qualifications; **SSS:** Single-source selection.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/07

Brazil. Loan \_\_\_/OC-BR to the Federal District  
Urban Transportation Program for the Federal District

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 Federal District, as Borrower, and the Federative Republic of Brazil, as Guarantor, for the purpose of granting the former a financing to cooperate in the execution of an urban transportation program for the Federal District. Such financing will be in the amount of up to US\$176,775,000, from the resources of the Single Currency Facility of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Program Summary of the Loan Proposal.