

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

BRAZIL

**URBAN UPGRADE PROGRAM IN THE WESTERN AREA OF ARACAJU –
BUILDING FOR THE FUTURE**

(BR-L1411)

LOAN PROPOSAL

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OPTIONAL
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ABBREVIATIONS	
AWP	Annual work plan
CRAS	Centro de Referência de Assistência Social [Social Assistance Resource Center]
CREAS	Centro de Referência Especializado de Assistência Social [Specialized Social Assistance Resource Center]
DMV-SE	State of Sergipe Traffic Department
DNIT	National Department of Transportation Infrastructure
EAR	Environmental Assessment Report
EIS/RIMA	Environmental Impact Study and Report
ESMP	Environmental and social management plan
ESMR	Environmental and Social Management Report
GDP	Gross domestic product
IBGE	Brazilian Institute of Geography and Statistics
IRR	Internal rate of return
MCMV	Minha Casa, Minha Vida [My House, My Life]
MEP	Multiyear execution plan
PCU	Program Coordination Unit
PLHIS	Local low-income housing plan
PMA	Prefeitura Municipal de Aracaju [Aracaju Municipal Government]
PTTS	Social technical work plan
SEMA	Municipal Environmental Department
SEPLOG	Planning, Budget, and Management Department

PROGRAM SUMMARY

BRAZIL

URBAN UPGRADE PROGRAM IN THE WESTERN AREA OF ARACAJU – BUILDING FOR THE FUTURE (BR-L1411)

Financial terms and conditions				
Borrower: Município of Aracaju			Flexible Financing Facility^(a)	
			Amortization period:	25 years
Guarantor: Federative Republic of Brazil			Disbursement period:	5 years
Executing agency: Município of Aracaju, through the Municipal Planning, Budget, and Management Department			Grace period:	5.5 years ^(b)
			Interest rate:	LIBOR-based
Source	Amount (US\$ million)	%	Credit fee:	(c)
IDB (Ordinary Capital):	75.2	50	Inspection and supervision fee:	(c)
Local:	75.2	50	Original weighted average life:	15.25 years
Total:	150.4	100	Approval currency:	U.S. dollars from the Bank's Ordinary Capital (OC)
Program at a glance				
Program objective/description: The general objective is to help upgrade the urban spaces in Aracaju. The specific objectives are to: (i) improve access to urban infrastructure, housing, and social services for the population in the northern and western areas; (ii) reduce travel time between neighborhoods; and (iii) increase the number of green and protected spaces in the município.				
Special contractual conditions precedent to the first disbursement: The borrower will present evidence of: (i) publication in the official gazette of the Município of Aracaju of the administrative act creating the program coordination unit (PCU) with the appointment of its members who will work full-time for the program (paragraph 3.2); (ii) contracting of the specialists needed to support the PCU in accordance with the professional profiles previously agreed upon with the Bank (paragraph 3.2); (iii) entry into force of the program Operating Regulations, under terms satisfactory to the Bank (paragraph 3.9); (iv) the condition precedent to the first disbursement referred to in Annex III, Fiduciary Agreements and Requirements; and (v) the special condition precedent to the first disbursement referred to in the Environmental and Social Management Report (ESMR) – Annex B.				
Special contractual execution conditions: (i) prior to the start of the first works financed with the loan proceeds, contracting of the company responsible for technical and environmental supervision of the works under the terms agreed upon with the Bank; (ii) prior to the start of the bidding process for a specific section of the works on Avenida Perimetral, under the jurisdiction of the National Department of Transportation Infrastructure (DNIT), evidence that the agreement between the borrower and the DNIT has been signed; and prior to the start of the bidding process for the specific section of the works on Avenida Perimetral under the jurisdiction of the Município of São Cristóvão, evidence that the agreement between the borrower and the Município of São Cristóvão has been signed; (iii) the execution conditions referred to in Annex III, Fiduciary Agreements and Requirements; and (iv) the socioenvironmental conditions referred to in the ESMR – Annex B.				
Exceptions to Bank policies: None				
Strategic alignment				
Challenges^(d):	SI	<input checked="" type="checkbox"/>	PI	<input type="checkbox"/>
			EI	<input type="checkbox"/>
Crosscutting issues^(e):	GD	<input type="checkbox"/>	CC	<input checked="" type="checkbox"/>
			IC	<input type="checkbox"/>

^(a) Under the Flexible Financing Facility (document FN-655-1), the borrower has the option of requesting changes to the amortization schedule, as well as currency and interest rate conversions. The Bank will take market conditions as well as operational and risk management considerations into account when reviewing such requests.

^(b) Under the flexible repayment options of the Flexible Financing Facility, changes to the grace period are permitted provided that they do not entail any extension of the original weighted average life of the loan or the last payment date as documented in the loan contract.

^(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the applicable policies.

^(d) SI (Social Inclusion and Equality); PI (Productivity and Innovation); and EI (Economic Integration).

^(e) GD (Gender Equality and Diversity); CC (Climate Change and Environmental Sustainability); and IC (Institutional Capacity and Rule of Law).

I. PROGRAM DESCRIPTION AND RESULTS MONITORING

A. Background, problem to be addressed, and rationale

- 1.1 Aracaju, the capital of the State of Sergipe, is located in the Northeast region of Brazil. It covers an area of 181 km² and has a population of 623,000.¹ Between 2004 and 2011, Aracaju's economy grew more than 42% in real terms as its gross domestic product (GDP) went from R\$6.4 billion to almost R\$9.2 billion (in constant December 2011 reais). Average monthly per capita income increased from R\$701 in 2000 to R\$1,052 in 2010. The municipal human development index rose from 0.54 in 1991 to 0.77 in 2010.
- 1.2 Aracaju lies barely four meters above sea level on average. This topographic position favors the formation of lagoons, sand dunes, and mangroves, which have been altered through landfills, clearing of dunes, and piping of streams to allow urban development. Aracaju is also characterized by intense urban dispersion. This has facilitated development of residential complexes and irregular occupation of land without proper planning. In recent years, the city has expanded to the west and to the south.
- 1.3 Aracaju's urban growth began to intensify in the 1950s. Between 2000 and 2010, the population increased by 23.7%. This expansion took the form of urban sprawl, giving rise to a large number of informal settlements.² An accelerated migration of low-income inhabitants to the município, coupled with insufficient investment in urban infrastructure and basic services and a limited supply of low-cost housing, are the main factors driving the problem of informal settlements in the city. In 1991, informal settlements housed 2.4% of the city's total population. In 2010, an estimated 61,847 people, representing 11% of the city's total residents,³ were living in 73 informal settlements. Within this population, 95.7% of households earn less than three times the minimum wage. This situation has aggravated the challenges facing the municipal government, which include: (i) lack of adequate housing and urban infrastructure such as sewer and trash collection services in low-income neighborhoods; (ii) shortage of green spaces and heavy pressure on environmental protection units; (iii) weak municipal environmental management instruments; and (iv) limited road connections among the city's various neighborhoods (particularly in the northern and western areas of the city).
- 1.4 **Lack of urban infrastructure in low-income neighborhoods.** In 2010, there were an estimated 26,149 inadequate housing units,⁴ accounting for 16.6% of all

¹ Source: Brazilian Institute of Geography and Statistics (IBGE), 2014.

² Informal settlements are defined by the IBGE as areas characterized by the absence of property titles and exhibiting at least one of the following features: (i) irregularities in the traffic routes and in the size/shape of lots; and/or (ii) lack of essential public services.

³ According to the IBGE, 2010.

⁴ Local low-income housing plan (PLHIS), 2010. Inadequate housing is housing that lacks infrastructure, is excessively dense, has titling problems, and lacks sanitary facilities.

housing units in the city. The informal settlements with the greatest shortage of infrastructure and public services are concentrated in the western and northern areas, which include the neighborhoods of Bugio, Cidade Nova, Jardim Centenario, Lamarão, Olaria, and Santa Maria, where the poorest and most disadvantaged portion of the population lives. The number of households in these areas is estimated at 17,538 (10% of the total in the município). These neighborhoods were prioritized under the local low-income housing plan (PLHIS) through Municipal Supplementary Law 112/2012. Despite recent efforts to address their needs, these areas continue to face significant shortages in terms of sanitary and road infrastructure, social facilities, green spaces, and housing. The sewer deficit service affects 86% of households,⁵ and only 53% of the streets are paved.

- 1.5 Of these neighborhoods, Santa Maria is the most populous, with 33,375 residents. It is also the fastest growing neighborhood of Aracaju. Between 2000 and 2010, its population rose by 91.3%. Several low-cost housing complexes were built there and are occupied by the low-income population. Moreover, part of the poorest population, which did not have access to this housing, illegally settled in the fringe areas of the neighborhood. As a result, there is now a large concentration of poor families (average monthly income of R\$112 per capita) lacking social facilities and basic infrastructure (60% of households have no sewer service).⁶
- 1.6 **Urbanization of the 17 de Março complex.** In addition, the 17 de Março complex was created by the municipality in 2011 with a view to reducing the quantitative housing deficit in the population earning zero to three times the minimum wage. A total of 1,025 low-income housing units were built to resettle 2,697 families, the majority of which had previously been living at risk. An additional 1,165 units are currently being built with financing from the program Minha Casa, Minha Vida [My House, My Life] (MCMV).⁷ However, coverage of urban services is incomplete: 50% of streets are unpaved; it is estimated that more than 50% of households are not covered by Social Assistance Resource Centers (CRAS);⁸ public lighting is unreliable; and there is a shortage of schools, green areas, health care centers, senior care facilities, and police stations.
- 1.7 **Environmental considerations.** There is a severe shortage of green spaces in the município. The average ratio of public green spaces in the município is a mere 4.4m² per inhabitant, and in some neighborhoods the ratio is less than

⁵ Sewer system coverage in each of these neighborhoods is as follows: Bugio (0%), Cidade Nova (10%), Jardim Centenario (0%), Lamarão (5%), Olaria (30%), and Santa Maria (40%). Source: Municipal sanitation plan (2015).

⁶ Source: Municipal sanitation plan (2015).

⁷ Households living in risk areas or headed by a woman will be prioritized under the MCMV program. The selection process also requires setting aside 75% of an entire housing project for applicants who meet four or five of the criteria determined by the federal government, the states, and the municípios.

⁸ The social assistance facilities in the municípios are the Specialized Social Assistance Resource Center (CREAS) and the [Social Assistance Resource Centers](#) (CRAS). These centers serve the population in the area of the neighborhood of Santa Maria and the 17 de Março complex. There is only one CRAS in this area, which means that 4,504 households are not served. The Social Assistance Department estimates that at least one more CRAS and one more CREAS would be needed to serve all households in this area.

1m²/inhabitant. This is considered unacceptable by the Sociedade Brasileira de Arborização Urbana [Brazilian Urban Tree-planting Society] (the minimum recommendable level is 15m²/inhabitant). There are also adverse environmental impacts associated with the degradation of permanent preservation areas, such as riverbank vegetation and mangrove remnants. There are three large areas of environmental interest in the city, located in the city's north and west/south. Protecting them requires: (i) consolidating and protecting the Poxim Ecological Park; (ii) developing a project to create the Lamarão Park; and (iii) recovering the Sementeira Park.

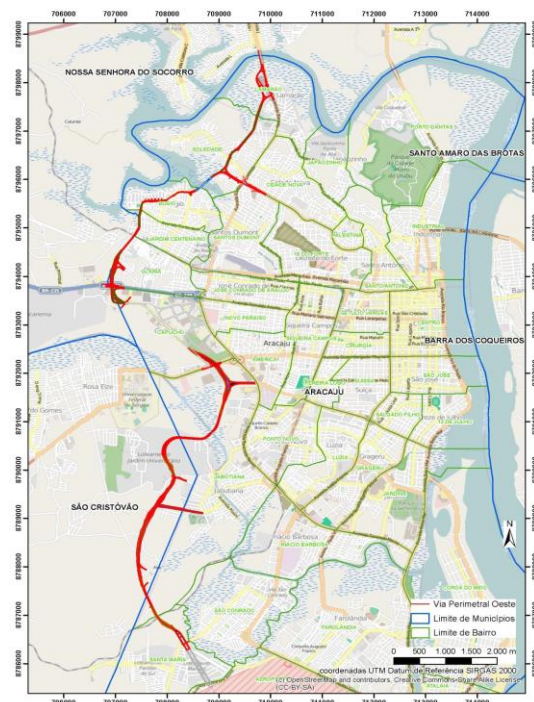
- a. In the case of the Poxim Park, the local ecosystem consists of a biome fragment characterized by mangrove ecosystems. The high degree of ecosystem fragmentation is primarily due to the building of condominiums and urban roads. The area is also used for dumping untreated domestic sewage, and there is illegal settlement on the mangrove banks, accumulated solid waste from civil construction, and vegetation degradation and deforestation.
- b. In the north, particularly the neighborhood of Lamarão, there is degradation of one of the most significant mangrove areas of Aracaju. There is intensive irregular settlement of land, with housing units built using the vegetation from the mangroves. A comprehensive study is required in order to subsequently create an environmental preservation area aimed at preventing illegal settlement within its bounds and involve the local population in the area's preservation, including fishing and recreational activities.
- c. The Sementeira Park is the only municipal urban park. The [diagnostic assessment](#) shows that in order to become an important component of the urban landscape, the park needs to: (i) upgrade its current infrastructure; (ii) implement more suitable administration and management methods; and (iii) create recreational spaces for leisure, sport, and environmental education of visitors.

1.8 SEMA, the entity responsible for setting environmental policies for the município, is not properly equipped to fulfill its legal mandate. It is too weak to implement environmental education programs or undertake oversight and supervision of environmental management policy in the city. Proper performance of these activities requires interconnecting the município's various management areas that carry out or approve activities with a potential environmental impact by means of an information system that can provide data allowing SEMA to exercise its legal powers efficiently and effectively.

1.9 With regard to the recycling of solid waste, the studies performed showed that the Município of Aracaju currently produces roughly 500 tons of waste per day, 30% of which is potentially recyclable. However, less than 5% of that volume is actually recycled on a monthly basis. In the city's north there are people who, organized into a collectors' association, work gathering recyclable materials. Yet due to a lack of proper infrastructure and of fixed collection points, the association's members have to gather and separate materials individually, resulting in a significant loss of value. Setting up collection points and providing a facility to process materials would both address the needs of collectors and bring benefits to the entire community.

1.10 Intra-urban connectivity. In 1980, the metropolitan area of Aracaju had a population of 330,943 residents. By 2010, the population had risen to 810,840, a growth rate of 145%. One of the characteristics of the Município of Aracaju is the connectivity of its roads with all municipal seats in the state. This reinforces the município's centrality but also puts pressure on its infrastructure and services. Although the road infrastructure of Aracaju is relatively consolidated, its size and structure is insufficient for the current volume of traffic following the increase in the number of vehicles in recent years. According to data from the State of Sergipe Traffic Department (DMV-SE), the private vehicle fleet grew 50% between 2007 and 2013, from 98,650 to 149,624 vehicles. The northern section of the município's road network is deficient, making it difficult to access neighborhoods in this area and impeding north-south connection in the city. The Aracaju land-use plan (2015) and mobility master plan (2015) recommend creating a consolidated main artery to be named Avenida Perimetral Oeste. This avenue will interconnect major roads, creating a new alternative for north-south traffic. This will favor access to safer passenger transportation, reduce travel time (currently 40 to 43 minutes), and facilitate inter-neighborhood flows.

1.11 Previous programs: Low-income Neighborhood Improvement Program “Habitar-Brasil” (1126/OC-BR)⁹ and Integrated Urban Development and Social Inclusion Program of Aracaju (2258/OC-BR).¹⁰ The Bank has been supporting the Prefeitura Municipal de Aracaju [Aracaju Municipal Government] (PMA) through programs 1126/OC-BR and 2258/OC-BR in its strategy to: (i) reduce the qualitative housing deficit,¹¹ particularly for the household income bracket of zero to three times the minimum wage; and (ii) improve socioenvironmental and accessibility conditions. The two previous programs helped consolidate the infrastructure and upgrading of the old informal settlements.¹² Specifically in the case of loan 2258/OC-BR approved in 2009, the



⁹ Loan 1126/OC-BR, finalized on 13 October 2008, encouraged income generation and development of informal settlements and neighborhood improvement. It included activities such as: (i) construction of new homes; (ii) implementation of urban infrastructure; and (iii) recovery of environmentally degraded areas.

¹⁰ Loan 2258/OC-BR was approved under the [PROCIDADES](#) lending mechanism aimed at financing Brazilian municípios. Individual operations under the PROCIDADES framework were for a maximum amount of US\$50 million.

¹¹ Qualitative housing deficit refers to the concept of inadequate urban homes as used by the Government of Brazil, which is based on three components: deficient urban infrastructure, lack of exclusive sanitary services, and excessive density in the homes themselves.

¹² According to the 2010 census, the município had a qualitative deficit of 25,615 homes, representing a 17.7% reduction in the number of informal homes in relation to the 2007 figure.

PMA has been implementing a set of actions aimed at improving the quality of life of the município's residents through comprehensive urban projects. This program, still in execution,¹³ includes: (i) developing urban and environmental planning and management instruments, consisting of: (a) georeferenced systems, (b) updating assessment rolls, and (c) acquiring satellite images to update the land registry for geoprocessing, among other purposes; (ii) implementing comprehensive projects for urban development of informal settlements; (iii) improving urban mobility; and (iv) revitalizing buildings of historic and/or cultural value.

- 1.12 This program seeks to: (i) provide give continuity for the studies and activities financed under loan 2258/OC-BR, as well as address the strategic guidelines established by the município under the three municipal plans: (a) [local low-income housing plan](#) (PLHIS, 2010); (b) [land-use plan](#)¹⁴ (2015);¹⁵ and (c) [mobility plan](#) (2015); (ii) support the efforts of the PMA to systematically develop different areas of the city (with an emphasis on the north/west), particularly where, in accordance with the PLHIS, the municipality will be expanding the supply of low-cost housing with support from the program MCMV;¹⁶ and (iii) supplement this investment with the urban and social infrastructure needed to ensure a good quality of life and basic services to the (primarily low-income) population and [improve its connection with the rest of the city](#).¹⁷
- 1.13 **Evidence, sector knowledge, and lessons learned.** Preparation for this operation took into account the lessons learned and the Bank's almost 20 years of experience in preparing and executing comprehensive neighborhood improvement, riverbank recovery, and urban transportation projects. There are studies confirming the multiple positive impacts of works aimed at improving infrastructure and housing conditions in marginal neighborhoods, with positive effects on the real estate values, health, and overall satisfaction of the beneficiary communities.¹⁸ The lessons and successful practices in Brazil and

¹³ Loan 2258/OC-BR has been completely disbursed. The closing period ends on 22 January 2017. The program's midterm evaluation was completed in February 2015. The evaluation showed that: (i) there has been improvement in the institutional-political structure regarding mobility issues; (ii) there are established partnerships among the various municipal departments directly related to the program; (iii) there is interest in incorporating lessons learned from the program into the município's public policies; and (iv) the training provided by the Bank helped strengthen the Program Coordination Unit (PCU).

¹⁴ The new land-use plan deals with issues of land use and occupation, infrastructure, low-income housing, environment, urban mobility, historical heritage, and regulatory instruments.

¹⁵ The Planning, Budget, and Management Department (SEPLOG) is responsible for providing support for the [local low-income housing plan](#) and the [land-use plan](#). The Municipal Transportation and Traffic Superintendency, jointly with SEPLOG, is responsible for implementing the [mobility plan](#). Further details are available in the respective plans.

¹⁶ [MCMV](#) is a Brazilian federal government program that finances subsidized housing for low-income families. The construction of housing units will follow the gender perspective of this program, whereby the conditions for delivery of the subsidy provide that properties are to be "preferably" registered under the name of the woman in the family.

¹⁷ See pages 47 to 61 of the [master mobility plan of Aracaju](#), describing the road system in the município.

¹⁸ See, for example, Gonzalez-Navarro, M. and C. Quintana-Domeque. 2010. Urban infrastructure and economic development: experimental evidence from street pavement, IZA Discussion Paper 5346, November 2010.

throughout Latin America have been extensively studied and described in various publications, including some of the Bank's own.¹⁹

- 1.14 The work experience with the city of Aracaju in the context of loan 2258/OC-BR was also taken into account. The main lessons include the following: (i) interventions in informal settlement areas should be comprehensive, combining basic infrastructure with social services and community development; (ii) environmental protection areas occupied by informal settlements and targeted by interventions should be protected immediately, preferably by being converted to public parks, sports areas, or other forms of community use; (iii) management plans should be developed to ensure proper use and maintenance of the environmental preservation areas; and (iv) following construction of the social facilities, the responsible municipal agencies should ensure that personnel are available to allow immediate use of this infrastructure. These lessons learned have been incorporated into this operation, which will combine urban projects with environmental protection actions to supplement social services in the program's areas of intervention.
- 1.15 The proposed program also takes into account the following lessons learned in executing the Bank's Transport Division (INE/TSP) programs in Brazil and other countries in the region: (a) the process of providing compensation and securing the right of way should be completed before, rather than simultaneously with or subsequent to, the start of construction of the road so as to minimize conflicts; (b) the expropriation process should have a strong social emphasis; and (c) the environmental liabilities in each section of the road should be fully inventoried so as to prepare a suitable action plan. In the context of this new operation: (i) the households affected by Avenida Perimetral have been surveyed during the preparation stage; (ii) plans have been made for introducing a dedicated team to implement the social safeguards associated with Avenida Perimetral; and (iii) the major environmental liabilities in Avenida Perimetral Oeste have been identified with a view to preparing a suitable action plan.
- 1.16 **The Bank's strategy with the country.** The program is consistent with the Bank's institutional mission of reducing poverty and social inequalities, responding to three strategic areas set forth in the IDB Country Strategy with Brazil (2016-2018) (document GN-2850): (i) reduce inequity and improve public services, by expanding and reforming the transport and logistics infrastructure through increasing the proportion of paved roads; (ii) expanding and upgrading water and basic sanitation conditions through a narrowing of the gaps in water and basic sanitation services coverage; and (iii) institutional strengthening at the three levels of government through the implementation of urban planning and control tools. The program also addresses the criteria of multisectorality promoted in the strategy.
- 1.17 **Strategic alignment.** The program is consistent with the Update to the Institutional Strategy 2010-2020 (document AB-3008) and is aligned with the

¹⁹ Urbanização de Favelas: Lições Aprendidas no Brasil [Slum Upgrading: Lessons Learned from Brazil], BID (2012), Building Cities: Neighbourhood Upgrading and Urban Quality of Life, IDB (2009).

development challenge of social inclusion and equality by contributing to the Corporate Results Framework (CRF) 2016-2019 (document GN-2727-4): (i) households benefitting from housing solutions; and (ii) households with new or upgraded access to sanitation. It is also aligned with the crosscutting area of climate change and environmental sustainability through an increase in the green spaces protected by the municipality. It is estimated that approximately 3.47% of the operation's resources are invested in climate change mitigation activities, according to the multilateral development banks' joint [methodology](#) for estimating climate finance. These resources contribute to the IDB Group target of increasing financing for climate change-related projects to 30% of all approvals of operations by the end of 2020.

- 1.18 In addition, the program is aligned with the Sector Strategy Institutions for Growth and Social Welfare (document GN-2587-2) by strengthening institutions that provide support for urban development. It is also aligned with the IDB Infrastructure Strategy: Sustainable Infrastructure for Competitiveness and Inclusive Growth (document GN-2710-5) by helping to develop urban infrastructure, and with three dimensions of success under the Urban Development and Housing Sector Framework Document (document GN-2732-6)²⁰ and the main points of the Transportation Sector Framework Document (document GN-2740-7).²¹
- 1.19 Lastly, it is worth noting that this operation contains a strong comprehensive urban infrastructure component. The program provides for investments in urban transportation, paving of urban roads, street furniture, and housing construction, all of which is carried out simultaneously. Since the urban infrastructure works will be exposed to climate change and natural disasters (in addition to the issue of green spaces), the program was designed under a multisector perspective to ensure that the interventions result in greater mutual synergy and help in resisting climate change.

B. Objectives, components, and cost

- 1.20 **Objective.** The program's general objective is to help upgrade the urban spaces in Aracaju. The specific objectives are to: (i) improve access to urban infrastructure, housing, and social services for the population in the northern and western areas; (ii) reduce travel time between neighborhoods; and (iii) increase the amount of green and protected spaces in the município. The program is divided into the following three components:
- 1.21 **Component I. Urban integration (US\$94.02 million).** This component will finance activities including: (i) construction of approximately 694 housing units;²²

²⁰ The three dimensions are: (i) city residents gain access to quality urban infrastructure and services; (ii) the region's cities intervene in their habitat to prevent its degradation and to make it more sustainable; and (iii) local institutions improve their urban governance capacity.

²¹ The overall aim is for Latin America and the Caribbean to have accessible, efficient, inclusive, sustainable, and safe transportation systems that reduce poverty, promote quality of life and economic development.

²² The program will deliver 70% of the units to households headed by women.

(ii) implementation of urban infrastructure (paving of 33.4 km of road network and approximately 12.5 km of sewer network²³ in the neighborhood of Santa Maria and the 17 de Março complex); (iii) construction of social infrastructure (around four CRAS and CREAS; four health care centers; two social assistance units; and three municipal basic education schools); and (iv) construction of 11 squares and two sports and/or recreation units.

- 1.22 **Component II. Environmental recovery (US\$6.4 million).** This component will finance activities including: (i) implementation of Poxim Park; (ii) revitalization of Sementeira Park; (iii) creation of a recycling center making it possible to reuse the solid waste generated in the northern area of the city; (iv) implementation of eco-points to support selective collection of solid waste; (v) performance of environmental studies, such as: (a) an inventory of urban tree planting in Aracaju; (b) a management plan for Poxim Park; and (c) a diagnostic assessment and management plan for Lamarão Park; and (vi) implementation of an information system for SEMA that will be connected to the information systems of other municipal departments and thus support environmental oversight and licensing.
- 1.23 **Component III. Intra-urban connectivity (US\$37.8 million).** This component will finance construction of an urban artery²⁴ (Avenida Perimetral) with a total length of approximately 7.7 km, including: (i) paving of Avenida Perimetral; (ii) storm drainage works; (iii) road signage works; and (iv) construction of a bridge over the Cabral stream.
- 1.24 **Administration, studies, and supervision (US\$8.2 million).** In addition, the program will finance activities including: (i) monitoring and evaluation consulting services; (ii) administration and engineering, which will consist of: (a) contracting of consulting services for technical and environmental supervision of the works; (b) contracting of specialists to support the Program Coordination Unit (PCU); (c) training of the PCU staff; (d) implementation of a plan for communication and dissemination of the program actions; and (e) administration expenses (including procurement of equipment and vehicles for the PCU); (iii) external audits; and (iv) design and evaluation of projects not included in the program sample.
- 1.25 **Environmental compensation and expropriation (US\$3.9 million).** This will finance the environmental mitigation actions required in order to carry out the program and implementation of the resettlement plan²⁵ (including: (i) regularization of land; (ii) communication plan; (iii) social technical work; (iv) claims system; and (v) independent evaluations). In addition, the program calls for expropriations in relation to the works to be performed on Avenida Perimetral. These expropriations will be financed with local counterpart resources.

²³ The public services considered in this program will not include a household connection; therefore, the Public Utilities Policy does not apply.

²⁴ The designs for the Avenida Perimetral works were completed during the program preparation stage.

²⁵ The construction of the housing needed for the resettlement of families is provided under component 1.

C. Key results indicators

- 1.26 The following outcome indicators were identified for the program: (i) real estate appreciation in the north and west of the city;²⁶ (ii) expansion of protected areas in the município; (iii) average vehicle speed in the city; and (iv) travel time. The output indicators and other details on indicators and their values are shown in Annex II, Results Matrix and in the monitoring and evaluation plan.
- 1.27 **Economic analysis.** A cost-benefit analysis of the main program components was performed using a discount rate of 12%. The analysis yielded the following results:
- 1.28 **Components I and II.** The upgrading and expansion of housing and infrastructure in the neighborhood of Santa Maria and the 17 de Março complex under Component I yields an internal rate of return (IRR) of 41.6% and a cost/benefit ratio of 1.22.²⁷ The revitalization of the Sementeira Park under Component II yields an IRR of 31.9% and a cost/benefit ratio of 2.8%. The sensitivity analysis considered a reduction in the benefits and an increase in investment costs. The economic return (12% IRR) of the projects in the Santa Maria neighborhood and the 17 de Março complex allows cost increases of up to 22.3% or an economic benefit reduction of up to 18.2%. The project for revitalization of the Sementeira Park allows cost increases of up to 195.4% or an economic benefit reduction of up to 64%.
- 1.29 **Component III.** The economic analysis included all the works involved in building Avenida Perimetral.²⁸ The benefits were quantified in terms of: (i) reduction in travel time and operating expenses; and (ii) economic investment, operation and maintenance costs arising from the implementation of Component III as compared to a without-project scenario, with an annual discount rate of 12%. The analysis period was 25 years. The estimated IRR was 38.6%, and the net present value turned out to be R\$481.4 million. The sensitivity analyses confirmed the robustness of the program when faced with more unfavorable scenarios, showing that a benefit reduction on the order of 25% would lower the IRR to 32.8%, a cost increase of 25% would result in an IRR of 34.1%, and a scenario combining a 12.5% benefit reduction and a 12.5% cost increase would yield an IRR of 35.1%.

²⁶ According to the hedonic pricing method, changes in property prices when one of the property's attributes changes (and all else remains constant) determine individuals' equilibrium valuation of this attribute. The change in property prices when they are provided with new urban infrastructure would be reflected in the marginal willingness to pay for each of the attributes. Accordingly, the conclusion may be drawn that the urban infrastructure intervention has had a positive impact if the price of properties in the treatment group (those which have benefitted from the urban investments) is higher than it would have been in the absence of an investment (as estimated through the control group or through properties with similar characteristics that were not the beneficiaries of investments).

²⁷ See [economic analysis of components I and II](#).

²⁸ See [economic analysis of component III](#).

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 This operation is structured as an investment loan chargeable to the Bank's Ordinary Capital. The total cost of the program is US\$150.4 million, 50% of which will be financed by the Bank and the remaining 50% contributed by the Município of Aracaju, to be distributed in accordance with the investment sources and categories described in Table 1.

Table 1. Summary of program costs (US\$ millions)

Categories	IDB	Local	Total	%
Component I. Urban integration	20.935	73.084	94.019	62.5
Component II. Environmental recovery	6.404	N/A	6.404	4.3
Component III. Intra-urban connectivity	37.805	N/A	37.805	25.1
Administration, studies, and supervision	7.973	0.269	8.242	5.5
Environmental compensation and expropriation	2.083	1.847	3.930	2.6
Total	75.200	75.200	150.400	100

- 2.2 The disbursement period will be five years. The disbursement schedule is summarized in Table 2.

Table 2. Disbursement schedule (US\$ millions)

Source of financing	Year 1	Year 2	Year 3	Year 4	Year 5	Total
IDB	13.7	37.0	18.8	3.8	1.9	75.2
Município of Aracaju	38.2	19.8	13.0	4.2	0.0	75.2
Annual total	51.9	56.8	31.8	8.0	1.9	150.4
%	34.5	37.8	21.1	5.3	1.3	100

- 2.3 **Financial analysis.** According to the analyses performed by the federal government, the Município of Aracaju is in a position to take out this Bank loan and is in compliance with the ratios required under the Fiscal Responsibility Law. However, to authorize the signing of the loan contract, the federal government will once again examine the fiscal condition of the município in order to grant final approval.

B. Environmental and social risks

- 2.4 The program has been classified as a Category A operation since its footprint is significant, its direct and indirect impacts are large-scale, with localized, permanent geographic effects, and with some impacts that are reversible, while others are irreversible, for which known mitigation and compensation measures exist, but which are complex and costly to implement. A large part of the direct negative impacts will be produced during the construction stage of the housing and road works considered under components I and III of this program, notably the permanent physical and/or economic displacement caused by the Avenida Perimetral works and the temporary resettlement during the road construction; in addition to the impact on approximately two hectares of mangroves (considered a critical natural habitat) and the typical impacts caused by construction works. The

level of natural disaster risk has been determined to be moderate, due to the program's vulnerability to floods. The works designs and mitigation measures were prepared on the basis of technical studies to prevent and minimize the moderate flood risks, by improving drainage, proposing a greater number of appropriate engineering works and construction solutions, and the periodic maintenance of canals and sewers. It also considers vegetation restoration and erosion control measures, as well as the management of solid waste that could obstruct the drainage systems.

- 2.5 During the operation's preparation, an environmental impact study and an environmental and social management plan (EIS/ESMP) were prepared for the entire program; along with a social and environmental impact study (EIS/RIMA) for Avenida Perimetral, which include various management programs aimed at preventing or mitigating the identified impacts and risks, including a program for vegetation removal, recovery of degraded areas, quality control of works, social assistance, creation and consolidation of protected areas, social communication and education, and environmental and social monitoring. There is also an involuntary resettlement plan that establishes the procedures and alternatives for compensation of approximately 701 families who will be physically and/or economically displaced by the program. All of these studies and plans are available on the Bank's external website. The ESMP, RIMA, and involuntary resettlement plan will be annexes to the program's Operating Regulations.
- 2.6 A broad, meaningful consultation process has been implemented regarding the program's impacts and the proposed mitigation measures, including two rounds of consultations with those affected by the involuntary resettlement plan. These are considered to have satisfied the Bank's consultation requirements for an operation of this category.

C. Fiduciary risks

- 2.7 An evaluation of the fiduciary risks of program execution identified the following: (a) the risk of delays in processing the program's accounting and financial information and in issuing reports; and (b) the risk that the team responsible for program execution will not be familiar with the Bank's procurement policies. The mitigation actions are as follows: (i) **as a special contractual condition precedent to the first disbursement, the borrower will present evidence of publication in the Município of Aracaju's official gazette of the administrative act creating a Special Bidding Committee for the program, including the appointment of its members**, which is necessary for the program's procurement; (ii) appointment of a specialist specifically to analyze the program processes; (iii) training for the program execution team; and (iv) ex ante review of bidding processes during the first 12 months of execution.

D. Other program risks

- 2.8 Other risks were also identified, as follows: in terms of public management and governance, the risk of changes in the composition of the PCU in the event of a change in administration; in terms of development, the risk of failure by the State of Sergipe to obtain the required environmental licenses in timely fashion, potentially leading to delays in the execution of works under this program; and in terms of

macroeconomics and fiscal sustainability, the risk of a need to raise the counterpart contribution in the event of an increase in the exchange rate. The mitigation actions are: (i) creation of the PCU and appointment of the technical team in keeping with the professional profiles agreed upon with the Bank, as well as contracting of a support team for program execution; (ii) performance of the necessary steps with the public entities for the granting of environmental licenses during program preparation; and (iii) approval of the program Operating Regulations with selection criteria that allow including other urban development interventions in the pre-identified neighborhoods during program preparation.

- 2.9 Another sustainability risk was identified, namely the possibility that the Prefeitura Municipal de Aracaju [Aracaju Municipal Government] (PMA) will not have the necessary resources to carry out future maintenance of the works to be implemented under the program. The mitigation actions are as follows: (i) the borrower will agree to take the necessary steps to ensure that the works financed with program resources are maintained in accordance with generally accepted technical standards; (ii) in addition, the borrower will present a maintenance report and plan to the Bank on an annual basis (during the first quarter) until three years have elapsed following the last disbursement; and (iii) the borrower will agree to require third parties to maintain any works transferred to them in accordance with the program and under the aforementioned terms.

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Execution mechanism.** The borrower will be the Município de Aracaju, and the Federative Republic of Brazil will guarantee the financial obligations arising from the loan. The executing agency will be the Município of Aracaju through the Planning, Budget, and Management Department (SEPLOG) or any other agency replacing it, with the same authority and legal jurisdiction, in agreement with the Bank.
- 3.2 The PCU, reporting directly to SEPLOG, will be responsible for coordinating, planning, monitoring, and executing the program activities. The PCU will consist of a general coordinator and four coordination divisions: (a) administrative and financial; (b) procurement; (c) projects and works; and (d) socioenvironmental and social. The duties of the PCU will include: (i) preparing and presenting the program's operational planning (including the annual work plan (AWP), multiyear execution plan (MEP), procurement plan, and financial plan); (ii) evaluating the detailed designs for the works and the terms of reference for contracting professional services in relation to other program activities; (iii) preparing the terms of reference and respective budgets; (iv) preparing and supporting the bidding processes for the procurement of works, goods, and services; (v) controlling and supporting supervision and oversight of the works and the professional services contracts; (vi) coordinating and supervising environmental matters; (vii) controlling the accounting and files, presenting disbursement requests, and rendering accounts; (viii) performing physical and financial inspections and preparing progress reports; (ix) coordinating fulfillment of the conditions set forth in the loan contract; (x) monitoring and evaluating the midterm outcomes and the targets and

- indicators of the results matrix and the program monitoring report; and (xi) procuring the management systems needed to provide physical and financial support. The PCU will have the support of individual consultants who will be contracted with the loan proceeds to provide support services for program execution. **As a special contractual conditions precedent to the first loan disbursement, the borrower will present evidence of: (i) publication in the official gazette of the Município of Aracaju of the administrative act creating the PCU, with the appointment of its members who will work full-time for the program; and (ii) contracting of the specialists needed to support the PCU in accordance with the professional profiles previously agreed upon with the Bank.** These conditions are considered essential to ensure the Bank that the executing agency will have the team necessary to begin execution of the operation.
- 3.3 The PCU will carry out its duties in coordination with other agencies of the Município of Aracaju that will provide technical support for execution. These agencies include: (i) the Municipal Environmental Department (SEMA); (ii) the Municipal Transportation and Traffic Superintendency (SMTT); (iii) the Municipal Education Department (SEMED); (iv) the Municipal Family Services and Social Assistance Department (SMFAS); (v) the Municipal Health Department (SMS); and (vi) the Municipal Infrastructure Department (SEMINFRA), or any other agency replacing it, with the same authority and legal jurisdiction, in agreement with the Bank. The program Operating Regulations describe the coordination arrangements for program implementation, explaining and detailing the role performed by the other departments and entities involved in the program's execution (see paragraph 3.9). The PCU will be supplemented by a technical and environmental works supervision company and also by a Special Bidding Committee that will be created to conduct the procurement processes involving the loan proceeds. The Special Bidding Committee will be an integral part of SEPLOG.
- 3.4 **Special contractual execution conditions.** The following will be special contractual execution conditions: (i) prior to the start of the first works financed with loan proceeds, contracting of the firm responsible for the technical and environmental supervision of the works, under the terms agreed upon with the Bank; and (ii) prior to the start of the bidding process for the specific section of the works on Avenida Perimetral, under the jurisdiction of the DNIT, evidence that the agreement between the borrower and the DNIT has been signed, and prior to the start of the bidding process for specific ceiling of the works on Avenida Perimetral under the jurisdiction of the Município of São Cristóvão, evidence that the agreement between the borrower and the Município of São Cristóvão has been signed. These conditions are considered essential to ensure the right of way and property and usage rights.
- 3.5 **Advances of funds.** The program will operate with resources advanced by the Bank to satisfy the actual liquidity needs of the program. These advances will be provided pursuant to the Bank's disbursement procedures, and further advances may be processed following justification of at least 80% of the funds received.
- 3.6 **Procurement of works, goods, and services.** Related procurement and contracting of consulting services will be conducted in accordance with the Policies for the procurement of goods and works financed by the Bank (document

GN-2349-9) and Policies for the selection and contracting of consultants financed by the Bank (document GN-2350-9). The procurement of works, goods, and services is described in the procurement plan and will be carried out as set out in Annex III, Fiduciary Agreements and Requirements.

- 3.7 **Recognition of expenditures.** The Bank may recognize, to be charged against the local counterpart, eligible expenses incurred by the borrower prior to the loan approval date in relation to the supervision of works, engineering studies, and works described in Components I, II, and III in an amount of up to US\$15 million (20% of the estimated local contribution), provided that requirements substantially similar to those set out in the loan contract have been fulfilled. Under no circumstances will expenditures incurred more than 18 months prior to the loan approval date be included.
- 3.8 **Audits.** During the disbursement period and within 120 days after the end of each fiscal year of the borrower, the borrower will present the program financial statements to the Bank, audited by an independent external audit firm acceptable to the Bank and/or by the State of Sergipe Audit Office. The last of these audited financial statements will be presented within 120 days after the date of the last disbursement.
- 3.9 **Program Operating Regulations.** These Operating Regulations will describe the arrangements regarding execution and interagency coordination between the PCU and the entities or agencies that will provide execution support. They will include the eligibility criteria and socioenvironmental actions provided in the ESMP, RIMA, and involuntary resettlement plan approved by the Bank. Given the need to ensure proper program execution, **this will be a special contractual condition precedent to the first loan disbursement, under terms satisfactory to the Bank.**

B. Summary of arrangements for monitoring results

- 3.10 **Monitoring system.** Monitoring activities include: (i) program monitoring using the Results Matrix, the Risk Matrix, the MEP, the AWP, and the procurement plan; (ii) preparing semiannual and annual progress reports; and (iii) financial management audit.
- 3.11 **Program evaluation.** Evaluation activities include: (i) a midterm evaluation and a final evaluation to measure outcomes achieved based on the indicators in the program's Results Matrix; and (ii) an ex post cost-benefit evaluation that will compare the costs and benefits arising from the execution of the three interventions (see [monitoring and evaluation plan](#)). The midterm evaluation will be performed 24 months following the effective date of the contract or when 50% of the loan proceeds have been disbursed, whichever occurs first, and the final program evaluation will be performed when 90% of the resources have been disbursed. The evaluations will use the reflexive method, comparing outcomes before and after the interventions. A budget of US\$266,000 for conducting program evaluations has been agreed upon with the PMA.

Development Effectiveness Matrix		
Summary		
I. Corporate and Country Priorities		
1. IDB Development Objectives	Yes	
Development Challenges & Cross-cutting Themes	-Social Inclusion and Equality -Climate Change and Environmental Sustainability	
Country Development Results Indicators	-Property value within project area of influence (% change)* -Roads built or upgraded (km)* -Government agencies benefited by projects that strengthen technological and managerial tools to improve public service delivery (#)* -Households with wastewater treatment (#)*	
2. Country Development Objectives	Yes	
Country Strategy Results Matrix	GN-2850	Reduce inequity and improve public services
Country Program Results Matrix		The intervention is not included in the 2018 Operational Program.
Relevance of this project to country development challenges (If not aligned to country strategy or country program)		
II. Development Outcomes - Evaluability		Evaluable
3. Evidence-based Assessment & Solution	7.3	
3.1 Program Diagnosis	1.8	
3.2 Proposed Interventions or Solutions	4.0	
3.3 Results Matrix Quality	1.5	
4. Ex ante Economic Analysis	9.0	
4.1 Program has an ERR/NPV, or key outcomes identified for CEA	3.0	
4.2 Identified and Quantified Benefits and Costs	3.0	
4.3 Reasonable Assumptions	0.0	
4.4 Sensitivity Analysis	2.0	
4.5 Consistency with results matrix	1.0	
5. Monitoring and Evaluation	7.2	
5.1 Monitoring Mechanisms	2.5	
5.2 Evaluation Plan	4.7	
III. Risks & Mitigation Monitoring Matrix		
Overall risks rate = magnitude of risks*likelihood	Medium	
Identified risks have been rated for magnitude and likelihood	Yes	
Mitigation measures have been identified for major risks	Yes	
Mitigation measures have indicators for tracking their implementation	Yes	
Environmental & social risk classification	A	
IV. IDB's Role - Additionality		
The project relies on the use of country systems		
Fiduciary (VPC/FMP Criteria)	Yes	Reduce inequity and improve public services
Non-Fiduciary	Yes	Monitoring and Evaluation National System, Environmental Assessment National System.
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:		
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project		

Note: (*) Indicates contribution to the corresponding CRF's Country Development Results Indicator.

The general objective of the project is to improve the conditions of the urban space of Aracaju. The project is expected to reduce housing deficits and social services in the north and west areas of the municipality, reduce travel times between the neighborhoods of the city, and increase the access to green and protected areas.

The document presents the problems that the project will address and the factors that contribute to them. The first component will benefit the inhabitants of the north and west areas, however, it is not clear from the document if the interventions are concentrated only in the neighborhoods of Santa Maria and 17 de Marzo. The proposed interventions are linked to the problems that have been identified in the diagnosis and the document offers empirical evidence on aspects related to sewage and paving infrastructure in the neighborhoods of Santa Maria and 17 de Marzo, however, no empirical evidence is found that gives an idea of the magnitude of the deficits related to the other basic services, housing, roads and social infrastructure, as well as travel times.

The results matrix keeps a good vertical logic in general, although there is not always a clear and direct relationship between some of the products (such as health centers and schools) and the results. Likewise, the inclusion of certain indicators as products (such as the indicator for access to sewerage services) is not clear. All indicators in the matrix have baselines, goals and information sources and most of them comply with the SMART criteria. However, some indicators of product and result must be defined more specifically. The outcome indicators include the increase in the value of the properties affected by the intervention, reduction of the quantitative housing deficit, reduction of the sewage deficit, paving and urban facilities, increase of the protected green areas and the number of visitors to the Sementeira park, increase of recycled solid waste, and indicators related to the reduction of travel time and the increase in speed in the municipality.

The executing agency is the Municipality of Aracaju, through the Secretariat of Planning, Budget and Management (SEPLOG). The Program Coordination Unit will be responsible for coordinating, planning, monitoring and executing program activities.

The economic analysis of the project was carried out through a cost-benefit analysis for each of the components, and in all cases the Economic Return Rate reached or exceeded 31%, revealing the economic viability of the project. However, not all assumptions used for the analysis are supported by empirical evidence or the existent literature. The monitoring and evaluation activities have been planned and budgeted. It is planned to make an intermediate and final evaluation of the program that measures the progress of the outcome indicators, as well as an ex post cost-benefit analysis.

RESULTS MATRIX

Objective:	The general objective is to help upgrade the urban spaces in Aracaju. The specific objectives are to: (i) improve access to urban infrastructure, housing, and social services for the population in the northern and western areas; (ii) reduce travel time between neighborhoods; and (iii) increase the number of green and protected spaces in the município.
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Indicators	Unit of measure	Baseline (2015)	Final target		Source	Comments
		Value	Value	Year		
Expected outcome 1: Real estate appreciation in the northern and western areas						
Increase in property values in the area of the 17 de Março complex.	R\$/m²	R\$535.02	1.25	2023	Field survey and Public Finance Department.s	Appreciation on the order of 25.5% for properties in the intervention area.
Expected outcome 2: Reduction of the quantitative housing deficit for those earning 0 to 3 times the minimum wage						
Reduction of the quantitative housing deficit for the population earning 0 to 3 times the minimum wage in the city of Aracaju.	Housing units	18,693	17,440	2023	Report by the Municipal Infrastructure Department (SEMINFRA). Source PLHIS 2007.	Municipal Infrastructure Department (SEMINFRA).
Expected outcome 3: Reduction of the sewer service deficit at the 17 de Março complex						
Reduction of the deficit in sewer services in the area of the 17 de Março complex.	Deficit % (percentage)	60%	55%	2023	SEMINFRA report. Update of the Aracaju sanitation plan – PNAD data.	Deficit reduction of 5%.
Expected outcome 4: Reduction of the social facilities deficit at the 17 de Março complex						
Reduction of the deficit in social facilities in the area of the 17 de Março complex.	CRAS and CREAS units	2	0	2023	Works progress reports (measurements). Municipal Family and Social Assistance Department (SMFAS).	Under current national legislation, Aracaju is classified as a large município (100,000 to 900,000 inhabitants), requiring each CRAS to georeference up to 5,000 households. In the area of 17 de Março and Santa Maria there are more than 9,300 households but only one CRAS, which means that one more CRAS is needed for coverage to be complete. In addition, the area does not have a CREAS to provide highly complex social services.
Expected outcome 5: Reduction in the paving deficit in the 17 de Março complex						
Reduction in the paving deficit in the 17 de Março complex.	Deficit percentage	50%	45%	2023	Works progress reports (measurements). Semiannual program report – PCU. SEMINFRA report.	Paving deficit reduction of 5%.

Indicators	Unit of measure	Baseline (2015)	Final target		Source	Comments
		Value	Value	Year		
Expected outcome 6: Protected areas in the município						
Increase in the green areas protected by the municipality.	Hectares	2.5	182.5	2023	Report by SEMA.	Areas protected by municipal legislation. To add to the currently existing Tramandai Municipal Ecological Park, the program will develop the Poxim Park. Protected means regulated by law as well as fenced in.
Expected outcome 7: Increase in the number of visitors to the Sementeira Park						
Increase in the number of visitors to the Sementeira Park.	Persons	5,228	6,780	2023	Survey conducted in the park.	Survey by the park gatekeeper over the course of two weeks. Average per day (includes weekends).
Expected outcome 8: Increase in the percentage of solid waste recycled in Aracaju						
Increase in the percentage of solid waste recycled in Aracaju.	Percentage	5%	8%	2023	Report by the Municipal Environmental Department.	
Expected outcome 9: Average speed of transportation users						
Increase in average speed in the city of Aracaju.	Km/hour	19.3	21.2	2023	Field survey.	Estimated 2023 baseline without rehabilitated Avenida Perimetral. Estimated 2023 target with Avenida Perimetral in operation.
Expected outcome 10: Travel time for users of Avenida Perimetral						
Reduction in travel time from the city's north to the city's south. (*)	Minutes	40.43	36.39	2023	Survey of travel time on Avenida Perimetral.	Travel time for users of Avenida Perimetral from the bridge over the Cabral stream to Avenida Principal in the Santa Gleide subdivision; i.e., from one end to the other. North-south survey. Peak and off-peak hours.

(*) Travel time reduction was four minutes, having been estimated for 2023. The budget takes into account the rate of growth in the number of vehicles in the city. Thus, the number of vehicles is expected to grow in the coming years, creating further traffic congestion in the city.

OUTPUTS

Indicators	Unit of measure	Baseline	Midterm measurements					Final target		Source/ Means of verification	Comments
			Year 1	Year 2	Year 3	Year 4	Year 5				
		Value	2019	2020	2021	2022	2023	Value	Year		
Component I – Urban integration											
Housing units built in the neighborhood of Santa Maria.	Unit	0	206	-	-	-	-	206	2019	Certificate of completion / Progress reports (measurements).	Vista Nova development.
Housing units built in the neighborhood of Lamarão.	Unit	0	-	488	-	-	-	488	2020	Certificate of completion / Progress reports (measurements).	
Kilometers of road built or rehabilitated.	Km	0	33.4	-	-	-	-	33.4	2019	Certificate of completion / Progress reports (measurements).	Paved roads.
Sewer network.	Km	0	12.5	-	-	-	-	12.5	2019	Certificate of completion / Progress reports (measurements).	
Households with new or improved access to sewer services.	Unit	0	91	-	-	-	-	91	2019	Certificate of completion / Progress reports (measurements).	
Health care units built.	Health care unit	0	-	2	-	-	2	4	2023	Certificate of completion / Progress reports (measurements). Municipal Health Department (SMS).	
Social Assistance Resource Centers and Specialized Social Assistance Resource Centers (CRAS / CREAS) built.	Unit	0	-	-	-	2	2	4	2023	Certificate of completion / Progress reports (measurements). Municipal Family and Social Assistance Department (SMFAS).	
Social assistance units built (Casa Lar and Nursing Home).	Unit	0	-	-	-	2	-	2	2022	Certificate of completion / Progress reports (measurements). SMFAS.	

Indicators	Unit of measure	Baseline	Midterm measurements					Final target		Source/ Means of verification	Comments
			Year 1	Year 2	Year 3	Year 4	Year 5				
		Value	2019	2020	2021	2022	2023	Value	Year		
New educational institutions that include municipal basic education schools built.	Educational institutions	0	1	-	1	-	1	3	2023	SEMED administrative records and Official Gazette of the Aracaju Município.	Built means construction completed and equipment installed, pursuant to the standards of the Fundo Nacional de Desenvolvimento da Educação [National Educational Development Fund] (FNDE) (Manual Padrão Mínimo de Funcionamento da Escola).
Squares built in the neighborhoods of Santa Maria, 17 de Março, Olaria, and Bugio.	Unit	0	-	2	3	3	4	12	2023	Certificate of completion / Progress reports (measurements). Semiannual program report – PCU.	
Sports and/or recreational units built in the neighborhoods of Santa Maria and 17 de Março.	Unit	0	1	-	-	1	2	4	2023	Certificate of completion / Progress reports (measurements). Semiannual program report – PCU.	

Indicators	Unit of measure	Baseline	Midterm measurements					Final target		Source	Comments
			Year 1	Year 2	Year 3	Year 4	Year 5				
		Value	2019	2020	2021	2022	2023	Value	Year		
Component II – Environmental recovery											
Poxim Ecological Park developed.	Park	0	-	-	-	-	1	1	2023	Certificate of completion / Progress reports (measurements).	
Sementeira Park upgraded.	Park	0	-	-	-	1	-	1	2022	Certificate of completion / Progress reports (measurements).	Area 36.1 hectares.
Recycling center built and equipped.	Center	0	-	-	-	1	-	1	2022	Certificate of completion / Progress reports (measurements).	
Environmental studies prepared.	Study	0	-	1	1	1	-	3	2022	Certificate of completion / Progress reports (measurements).	The studies are the following: (i) inventory of urban tree planting in Aracaju; (ii) Poxim Park management plan; and (iii) diagnostic assessment and management plan for Lamarão Park.
Eco-points installed.	Eco-point	0	-	5	5	-	-	10	2021	SEMA report.	Facilities for selective collection of recyclable materials.
Selective waste collection plan prepared.	Plan	0	-	-	1	-	-	1	2021	Municipal decree.	Approved by SEMA.
Information system for environmental monitoring in operation.	System	0	-	1	-	-	-	1	2020	Certificate of completion / Progress reports (measurements).	System implemented by SEMA. Deemed as being “in operation” when the system issues reports containing current data.

Indicators	Unit of measure	Baseline	Midterm measurements					Final target		Source	Comments
			Year 1	Year 2	Year 3	Year 4	Year 5				
		Value	2019	2020	2021	2022	2023	Value	Year		
Component III – Intra-urban connectivity											
Avenida Perimetral – Section 1 – paved.	Linear meters	0	-	-	2,000	3,840	1,860	7,700	2023	Certificate of completion / Progress reports (measurements).	
Bridge over the Cabral stream built on Avenida Perimetral – Section 1.	Bridge	0	-	-	-	1	-	1	2022	Certificate of completion / Progress reports (measurements).	

SECTOR INDICATOR – GENDER

Indicator	Unit of measure	Baseline	Midterm measurements					Final target		Source/ Means of verification	Comments
			Year 1	Year 2	Year 3	Year 4	Year 5				
		Valor	2019	2020	2021	2022	2023	Valor	Year		
Housing units ¹ built and headed by women.	Unit	0	-	-	-	-	486	486	2023	Certificate of completion / Progress reports (measurements). List of women who received housing units.	

¹ This number represents 70% of all housing units delivered, following the MCMV guidelines.

FIDUCIARY AGREEMENTS AND REQUIREMENTS

COUNTRY: Brazil

PROJECT NUMBER: BR-L1411

NAME: Urban Upgrade Program in the Western Area of Aracaju – Building for the Future

EXECUTING AGENCY: Município of Aracaju, SE

PREPARED BY: Leíse Estevanato, Financial Specialist, and Marcos Teixeira de Almeida, Procurement Specialist

I. THE COUNTRY’S AND THE EXECUTING AGENCY’S FIDUCIARY CONTEXT

- 1.1 Brazil’s fiduciary systems have significantly improved in recent years in all spheres of federal, state, and municipal government, allowing for sound management of administrative, financial, and procurement processes and generally complying with the principles, of transparency, economy, and efficiency. At the same time, the Bank recognizes that the use of the country’s fiduciary systems, primarily in the municipal sphere, involves initial risks until such systems can be brought fully in line with international standards. In this regard, the Bank has been supporting efforts to strengthen these systems so they may continue to improve.
- 1.2 For this operation, the executing agency will be the borrower, through the Planning, Budget, and Management Department (SEPLOG). The Program Coordination Unit (PCU), responsible for coordinating, planning, monitoring, and executing the program activities, will report to SEPLOG.
- 1.3 The PCU will conduct its activities in coordination with other agencies of the Município of Aracaju that will provide technical support for execution: (i) the Municipal Environmental Department (SEMA); (ii) Municipal Transportation and Traffic Superintendency (SMTT); (iii) the Municipal Education Department (SEMED); (iv) the Municipal Family Services and Social Assistance Department (SMFAS); (v) the Municipal Health Department (SMS); (vi) the Municipal Infrastructure Department (SEMINFRA), or any other agency replacing it, with the same authority and legal jurisdiction, in accordance with terms agreed upon with the Bank; and (vii) a technical and environmental works supervision company and also by a Special Bidding Committee that will be created to conduct the procurement processes involving the loan proceeds. The Special Bidding Committee will be an integral part of SEPLOG.
- 1.4 The Município of Aracaju has an Integrated Financial System (SIF), which despite its name is not integrated across the entire municipal government. The budget is prepared in another system and then transferred to the SIF. The same is the case for human resources management. As a result, the SIF is being gradually replaced. For program management purposes, the PCU will need to

develop a module that generates reports based on official data from the município or procure a specific software for financial management of the program. Within a term of up to six months following the signing of the loan contract, it will be confirmed that a management and financial/accounting system with characteristics and capabilities acceptable to the Bank has been implemented and is in operation.

II. INSTITUTIONAL CAPACITY ASSESSMENT, FIDUCIARY RISK, AND MITIGATION MEASURES

- 2.1 The evaluation for fiduciary management of the program was based on: (i) the country's and the state of Sergipe's current fiduciary context; (ii) the results of evaluating the main fiduciary risks; (iii) an institutional capacity assessment using the ICAS tool; and (iv) work meetings conducted by the Bank's project team with the PCU and with the technical specialists and managers of the municipal departments involved in the program. In addition, the exercise considered the program preparation documents, the discussions and outcome of the analysis mission, and the Bank's experience with the previous operation, loan 2258/OC-BR—Procidades Aracaju, now in its final execution phase. Fiduciary agreements regarding procurement and financial management for program execution were prepared as a result of this work.
- 2.2 The fiduciary risk evaluation exercise identified the following risks: (i) the risk of delays in processing the program's accounting and financial information and issuing reports; and (ii) the risk of unfamiliarity with the Bank's procurement policies on the part of the team responsible for executing the program. The mitigation actions are: (i) creating a Special Bidding Committee for the program; (ii) appointing a specialist specifically to analyze the program's processes; and (iii) training the execution team.
- 2.3 The município's procurement processes are carried out by the Special Bidding Committee, which is responsible for all tendering and contracting by the município. To streamline operations, the program will receive professional technical, operational, and legal support from the PCU for the preparation and prior review of documents. No problems are expected in relation to these activities, considering the prior experience of the município with loan 2258/OC-BR – Procidades Aracaju, in the final phase of execution. The specific fiduciary risks and their mitigation measures are described in the program's risk matrix. The operation was classified as medium risk in terms of both financial management and procurement.

III. CONSIDERATIONS FOR THE SPECIAL CONDITIONS OF THE CONTRACTS

- 3.1 The fiduciary agreements and requirements to be considered in the loan contract are the following:
 - a. Prior to the first disbursement, the borrower will present evidence, to the Bank's satisfaction, of publication in the Município of Aracaju's official gazette

of the administrative act creating a Special Bidding Committee for the program, including the appointment of its members. This condition is considered necessary for program procurement.

- b. As an execution condition, within six months following the signing of the loan contract, confirmation of implementation and operation of a financial accounting system for program management with characteristics and capacities acceptable to the Bank. This condition is considered necessary so the Bank can support program execution.
- 3.2 **Audited financial statements.** Financial statements will be audited by an independent external audit firm or by the State of Sergipe Audit Office (TCE), should it be duly accredited by the Bank.
 - 3.3 **Other financial management requirements.** Review of the support documentation for expenditures incurred will be conducted ex post by the external audit firm or the TCE, as the case may be, and/or by a consultant appointed by the Bank.
 - 3.4 **Exchange rate to be used.** For purposes of rendering accounts with regard to the loan proceeds and the local contribution funds, amounts paid in local currency will be converted to the approval currency at the effective exchange rate on the date of conversion of the disbursement pursuant to the loan contract.

IV. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

A. Procurement execution

- 4.1 **Bidding documents.** Procurement will be conducted through the Special Bidding Committee / PCU to be created for the program. When financed by the Bank, works, goods, and nonconsulting services will be procured pursuant to the Policies for the procurement of works and goods financed by the Inter-American Development Bank (document GN-2349-9); and consultants will be selected and contracted pursuant to the Policies for the selection and contracting of consultants financed by the Inter-American Development Bank (document GN-2350-9), both documents dated March 2011. Procurement processes will be reviewed by the Bank as indicated in the procurement plan.
- 4.2 **Use of the country procurement system.** Brazil's country procurement system will be used for procurement of standard goods and services in accordance with the models approved by the Bank. Any subsequently approved system or subsystem will also be applicable to this program. The program's procurement plan and its updates will indicate which procurement will be conducted under the approved country systems.
- 4.3 **Direct contracting.** Not applicable.
- 4.4 **Selection of individual consultants.** Individual consultants will be selected on the basis of their qualifications to do the work, with a comparison being made of the

qualifications of at least three candidates. Where appropriate, announcements may be published in the local or international press to obtain information on qualified consultants.

4.5 **Recurring expenditures.** Not applicable.

4.6 **Recognition of expenditures.** The Bank may recognize procurement expenditures incurred or to be incurred during the periods provided in the loan contract. The Bank may recognize, to be charged against the local counterpart, eligible expenses incurred by the borrower prior to the loan approval date in relation to the supervision of works, engineering studies, and works described in Components I, II, and III in an amount of up to US\$15 million (20% of the estimated local contribution), provided that requirements substantially similar to those set out in the loan contract have been fulfilled. These expenditures are to have been incurred on or after 28 July 2014 (the Project Profile approval date); however, under no circumstances will expenditures incurred more than 18 months prior to the date of loan approval by the Board of Executive Directors.

4.7 **Other.** Not applicable.

B. Thresholds for international competitive bidding (ICB) and shortlists

1. International:

- a. ICB for works: amounts greater than US\$25 million;
- b. ICB for goods and services: amounts greater than US\$5 million;
- c. International advertising for consulting services: amounts greater than US\$200,000; and national shortlist: up to US\$1 million

C. Major procurement processes

Activity	Selection method	Estimated date	Estimated amount (US\$)
Works			
1. Works under Components I and II, 17 de Março complex, and supplementary urban interventions under Components I and II	NCB	Sep/16	11,138.45
2. Infrastructure Component II - 17 de Março complex	NCB	Nov/16	15,215.22
3. Construction of Av. Perimetral – Section I	ICB	Nov/16	67,520.10
Consulting firms			
1. Support for management and supervision of works	QCBS	Sep/16	6,000
2. Support for the program's environmental activities	QCBS	Sep/16	2,000
Services			
1. Technical training for the municipal departments participating in the program	NCB	Aug/16	2,169.63

D. Procurement supervision

4.8 The supervision method will be:

- a. ex ante: (i) for all ICB for works, goods, and services; (ii) for all consulting services in amounts of more than US\$1 million; and (iii) for the first two procurement processes under any other procedure.
- b. ex post: all other procurement.

4.9 Procurement reviews by the Bank will be done in accordance with the procurement plan for the program.

E. Special provisions. Not applicable.

F. Records and files

4.10 Program files will be located in the PCUs' offices under the appropriate security conditions.

V. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

A. Programming and budget

5.1 SEPLOG, acting through the PCU, will be responsible for planning and carrying out activities as provided in the program execution plan (PEP), the budgets, and the annual work plan (AWP). The budget for program activities will be approved through the municipal budget law. SEPLOG uses planning instruments such as the multiyear plan and the annual budget law. The budget for program activities is part of the annual budget law.

5.2 The SEPLOG team will ensure that the budgetary resources for the program, both IDB and local contributions, are duly budgeted each year and are assured for execution in accordance with the operational programming. Program resources will be used to execute SEPLOG's budget. These budgetary resources will be recorded in the municipio's official system as an external source in the year of execution. The annual budget law will provide for the necessary funds for execution with regard to both the external loan and the local counterpart.

B. Accounting and information system

5.3 The process of recording commitments, approvals, settlements, and payments, as well as the program's corresponding accounting records, will follow the rules and procedures of the municipio.

5.4 The municipio's official recording system will record all program transactions by source of funds, using the municipio's official chart of accounts. This system does not yet have the operating capabilities required to record the accounting information according to the investment categories set out in the loan contract. Furthermore, it is unable to generate financial reports since it does not

automatically allow for the issuance of project reports in U.S. dollars by investment category and by source of financing as required by the Bank.

- 5.5 To overcome this limitation, the PCU is planning to procure a financial management system that meets the conditions for financial control of the program and makes it possible to prepare disbursement tables, monitoring reports, and reports for external audit purposes, as required by the Bank. The system to be procured will require the Bank's prior approval signifying that its functionalities meet the Bank's requirements.
- 5.6 In view of the foregoing, within a term of up to six months following the signing of the loan contract, the borrower, through SEPLOG, will demonstrate that a management and financial/accounting system with characteristics and capabilities acceptable to the Bank has been implemented and is in operation.

C. Disbursements and cash flow

- 5.7 The program will use the município's cash management system. Expenditures will be subject to the budgetary and financial execution process and will be duly recorded in the SIF and in the program's computerized financial management system.
- 5.8 The IDB resources used for the payment of program expenditures will be managed through an account that allows independent identification of the loan proceeds. This includes incoming funds and payments.
- 5.9 Disbursements will be made in U.S. dollars in the form of advances of funds to meet the program's actual liquidity needs for a period of up to six months (180 days). For that purpose, advances will be requested by the executing agency, accompanied by financial planning indicating the need for funds for the intended period. For future advances of funds, at least 80% of advances previously received will need to be accounted for.
- 5.10 Expenses deemed ineligible by the Bank will be reimbursed out of the local counterpart resources or other funds, at the Bank's discretion, depending on the nature of the ineligibility.

D. External control and reports

- 5.11 The financial statements and the eligibility of program expenditures will be audited each year by an independent audit firm or by the State of Sergipe Audit Office (TCE), once it is eligible. As specified in the Financial management policy for IDB-financed projects (document OP-273-6), the auditor will be required to present a report on the eligibility of the program expenditures and will conduct onsite physical inspection visits in addition to the Bank's activities and reviews. The program's audited financial statements will be delivered to the Bank no later than 120 days after the end of each fiscal year of the executing agency in accordance with the procedures and terms of reference previously agreed upon with the Bank.

E. Supervision plan

- 5.12 The supervision plan will be designed for a medium-risk operation and may be modified during program execution based on observed risk circumstances or in the event of additional control needs as determined by the Bank.

Supervision activity	Supervision plan			
	Nature-scope	Frequency	Responsible entity	
			Bank	Executing agency
Procurement	Review of works procurement processes and contracting of consulting services	As indicated in the procurement plan	Sector and procurement specialists	PCU/SEPLOG
	Review of processes exceeding ICB and direct contracting thresholds	Throughout the execution period	Sector and procurement specialists	PCU/SEPLOG
	Inspection visit	Annual	Sector specialist and fiduciary team	PCU
Financial	Ex post review of disbursements and procurement	Annual	Fiduciary team	PCU – Audit firm and/or State Audit Office
	Annual audit	Annual	Fiduciary team	Audit firm and/or State Audit Office
	Review of disbursement requests	Periodic	Fiduciary team	PCU
	Inspection visit	Annual	Sector specialist and fiduciary team	PCU

F. Execution arrangements

- 5.13 The borrower will be the Município de Aracaju, and the Federative Republic of Brazil will guarantee the financial obligations arising from the loan. The executing agency will be the Município of Aracaju through SEPLOG.
- 5.14 The PCU, reporting directly to SEPLOG, will be responsible for coordinating, planning, monitoring, and executing the program activities. The PCU will consist of a general coordinator and four coordination divisions: (a) administrative and financial; (b) procurement; (c) projects and works; and (d) socioenvironmental and social. The duties of the PCU will include: (i) preparing and presenting the program operational planning (including the annual work plan (AWP), multiyear execution plan (MEP), procurement plan, and financial plan); (ii) evaluating the detailed designs for the works and the terms of reference for contracting professional services in relation to other program activities; (iii) preparing the terms of reference and their respective budgets; (iv) preparing and supporting the bidding processes for the procurement of works, goods, and services; (v) controlling and supporting supervision and oversight of the works and the professional services contracts; (vi) coordinating and supervising environmental matters; (vii) controlling the accounting and files, presenting disbursement

- requests, and rendering accounts; (viii) performing physical and financial inspections and preparing progress reports; (ix) coordinating fulfillment of the conditions set forth in the loan contract; (x) monitoring and evaluating the midterm outcomes and the targets and indicators of the results matrix and the Program Monitoring Report (PMR); and (xi) procuring the management systems needed to provide physical and financial support. The PCU will have the support of individual consultants who will be contracted using loan proceeds to provide support services for program execution. **As a special contractual condition precedent to the first disbursement, the borrower will present evidence that the specialists needed to support the PCU have been contracted in keeping with the professional profiles previously agreed upon with the Bank.** This condition is considered essential to ensure the Bank that the executing agency will have the team needed to start program execution.
- 5.15 The PCU will carry out its duties in coordination with other agencies of the Município of Aracaju that will provide technical support for execution. These agencies include: (i) the SEMA; (ii) the SMTT; (iii) the SEMED; (iv) the SMFAS; (v) the SMS; and (vi) the SEMINFRA. The PCU will be supplemented by a Special Bidding Committee that will be created to carry out the procurement processes involving loan proceeds. The Special Bidding Committee will be an integral part of SEPLOG. **As a special contractual condition precedent to the first disbursement, the borrower will present evidence of publication in the Município of Aracaju's official gazette of the administrative act creating the Special Bidding Committee for the program, including the appointment of its members.** This condition is necessary for program procurement.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/18

Brazil. Loan ____/OC-BR to the Municipality of Aracaju
Urban Upgrade Program in the Western Area of
Aracaju – Building for the Future

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 Municipality of Aracaju, as Borrower, and with the Federative Republic of Brazil, as Guarantor, for the purpose of granting the former a financing aimed at cooperating in the execution of the Urban Upgrade Program in the Western Area of Aracaju – Building for the Future. Such financing will be for the amount of up to US\$75,200,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ____ 2018)