



**Board of Executive Directors**  
**Simplified Procedure**  
On or after 18 November 2015

PR-4338  
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Original: English  
**Public**  
**Simultaneous Disclosure**

**To:** The Executive Directors  
**From:** The Secretary  
**Subject:** Barbados. Proposal for a loan for the project “Road Rehabilitation and Improving Connectivity of Road Infrastructure”

**Basic Information:** Loan type .....Global Multiple Works Operation (GOM)  
Borrower ..... Government of Barbados  
Amount ..... up to US\$25,000,000  
Source .....Ordinary Capital

**Inquiries to:** Christopher Persaud (telephone Country Office in Suriname 597-52-1225) or Sergio Deambrosi (extension 2461)

**Remarks:** Under the provisions set forth in document AB-2990, “Enhancing Macroeconomic Safeguards at the Inter-American Development Bank” (paragraph 2.4), there is a restriction on the disbursement speed of this investment loan, as indicated in the loan proposal.  
  
Management has determined that this loan proposal meets the requirements for presentation by Simplified Procedure, in accordance with Part III, Section 2 (paragraph 3.29(b)) of the Regulations of the Board of Executive Directors and document GN-1838-1, paragraph 2.

**Reference:** AB-2990(5/14), AG-9/14, GN-1838-1(7/94), DR-398-17(1/15), GN-2805(3/15), PR-1911(4/93), DE-62/93



DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

**BARBADOS**

**ROAD REHABILITATION AND IMPROVING CONNECTIVITY OF  
ROAD INFRASTRUCTURE**

**(BA-L1035)**

**LOAN PROPOSAL**

This document was prepared by the project team consisting of: Christopher Persaud (TSP/CSU); Project Team Leader; Sergio Deambrosi (INE/TSP); Alternate Team Leader; Luis Uechi, Agustin Elvira Mastache, Jacob Veverka and Caterina Vecco (INE/TSP); Betina Hennig (LEG/SGO); Denise Salabie (FMP/CBA); Christopher Johnson and Soraya Senosier (VPS/ESG); and Eleanor Carryl (CCB/CBA).

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## ABBREVIATIONS

AADT	Annual Average Daily Traffic
AFS	Audited Financial Statements
AOPs	Annual Operation Plans
BNRSC	Barbados National Road Safety Council
EA	Executing Agency
EIRR	Economic Internal Rate of Return
ESMR	Environmental and Social Management Report
ESS	Environmental and Social Strategy
FFF	Flexible Financing Facility
GCI-9	Ninth General Capital Increase
GDP	Gross Domestic Product
GoBA	Government of Barbados
HDM-4	Highway Development and Management 4
IDB	Inter-American Development Bank
INE/TSP	Infrastructure and Environment/Transport Division
IRI	International Roughness Index
MTI	Ministry Tourism and International Transport
MTW	Ministry of Transport and Works
OC	Ordinary Capital
OEL	Optional Electronic Link
OM	Program Operation Manual
OM	Operation Manual
PCR	Project Completion Report
PD	Project Division
PEP	Project Execution Plan
PEU	Project Execution Unit
PFM	Public Financial Information Management
POD	Proposal for Operation Development
PP	Procurement Plan
REL	Required Electronic Link
TMP	Barbados Tourism Master Plan 2014
TR-INT	Transport Networks Connectivity
VOC	Vehicle Operating Cost
WEF	World Economic Forum

## PROJECT SUMMARY

### BARBADOS

#### ROAD REHABILITATION AND IMPROVING CONNECTIVITY OF ROAD INFRASTRUCTURE (BA-L1035)

Financial Terms and Conditions				
<b>Borrower:</b> Government of Barbados (GoBA)			<b>Flexible Financing Facility<sup>(a)</sup></b>	
			<b>Amortization Period:</b>	25 years
<b>Executing Agency:</b> Ministry of Transport and Works (MTW)			<b>Original WAL:</b>	15.25 years
			<b>Disbursement Period:</b>	5 years
<b>Source</b>	<b>Amount (US\$)</b>	<b>%</b>	<b>Grace Period:</b>	5.5 years
<b>IDB (OC)<sup>(d)</sup>:</b>	25,000,000	100	<b>Supervision and Inspection Fee:</b>	<sup>(b)</sup>
			<b>Interest Rate:</b>	LIBOR
<b>Total:</b>	25,000,000	100	<b>Credit Fee:</b>	<sup>(b)</sup>
			<b>Currency of Approval:</b>	US Dollars chargeable to the Ordinary Capital
Project at a Glance				
<p><b>Project objective/description.</b> The main objective of the operation is to improve the quality of road infrastructure and its connectivity, in order to <i>inter alia</i> enhance Barbados tourism competitiveness and growth. Specifically, the program aims to: (i) rehabilitate sections of road networks and lower logistic cost, particularly transportation costs and travel times and improve safety; and (ii) provide a framework for institutional strengthening to improve transport sector planning capacity, road investment's sustainability and financial mechanisms for rehabilitation and regular maintenance interventions undertaken by the MTW.</p>				
<p><b>Special Contractual Clauses prior to the first disbursement.</b> Prior to the first disbursement of the resources of the loan, the Executing Agency (EA) shall provide: (i) evidence that the Project Execution Unit (PEU) has been staffed with or assigned a project manager, project engineer, senior accountant, procurement officer, administrative officer and an environmental/social officer in accordance to the profiles agreed with the Bank; and (ii) evidence that the operations manual, including a grievance mechanism for the Program, has been approved in the terms agreed with the Bank and has been entered into effect (¶3.4).</p>				
<p><b>Special Contractual Clauses prior to execution.</b> Prior to signing any of the civil works contracts financed through the program, the EA shall submit evidence that it has selected and hired a firm to supervise the execution of the respective civil works and that two public consultations were held and documented (¶3.5).</p>				
<p><b>Special Contractual Clauses of execution.</b> The period required for physical initiation for all of the civil works shall not exceed 36 months from effective date of the loan contract (¶3.6).</p>				
<p><b>Exceptions to Bank Policies:</b> none.</p>				
<p><b>The project qualifies for<sup>(c)</sup>:</b>      SV <input checked="" type="checkbox"/>      PE <input type="checkbox"/>      CC <input type="checkbox"/>      CI <input checked="" type="checkbox"/></p>				

<sup>(a)</sup> Under the Flexible Financing Facility (FN-655-1), the borrower has the option to request modifications to the amortization schedule as well as currency and interest rate conversions. In considering such requests, the Bank will take into account operational and risk management considerations.

<sup>(b)</sup> The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors during its review of the Bank's lending charges, in accordance with the relevant policies.

<sup>(c)</sup> SV (Small and Vulnerable Countries), PE (Poverty Reduction and Equity Enhancement), CC (Climate Change, Sustainable Energy and Environmental Sustainability), CI (Regional Cooperation and Integration).

<sup>(d)</sup> Pursuant to Document AB-2990, the disbursement of Bank financing will be subject to the following maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors (¶3.10).

## I. DESCRIPTION AND RESULTS MONITORING

### A. Background, Problem Addressed and Justification

- 1.1 **General context.** Barbados is a small island territory (430 km<sup>2</sup>) located on the eastern border of the Caribbean Sea and Atlantic Ocean with a population of 289,683.<sup>1</sup> The country is a stable democracy with high living standards and in 2013 the nominal per capita income was US\$15,373.<sup>2</sup> Barbados has the best human development indicators in the Latin American and Caribbean region<sup>3</sup> which is characterized by high standards of equity and social protection. The international economic downturn of 2008 exposed the country's vulnerability to external shocks, and it has since been characterized by low economic growth and constrained fiscal space along with relatively high unemployment and flat exports. This along with high public debt of 98% of Gross Domestic Product (GDP) are stifling economic activities.
- 1.2 **Tourism activity.** Barbados is a mature Caribbean touristic destination mostly known for beach-resort tourism and cruises. Tourism has been, since the late 1970's, the pillar of the island's economy, and contributed in 2013, approximately 36.2% of GDP. Barbados positioned itself in 2012 as the 6<sup>th</sup> Caribbean destination in terms of stay over arrivals and 7<sup>th</sup> in terms of stay over receipts.<sup>4</sup> In 2015, the country was rated No. 46 among 141 economies in terms of the overall competitiveness of its travel and tourism industry World Economic Forum (WEF 2015). Barbados was also ranked No. 6 amongst 141 countries in terms of the importance given to the tourism and travel sector by the Government (WEF 2015), and public spending in support of tourism activity grew by 20% between 2007 and 2012.
- 1.3 Barbados is appealing to tourists because of its attributes, which includes its climate and coastal environment, its stable political environment, unique culture and also natural heritage. In this sense, revitalizing the importance of the Barbados "brand"<sup>5</sup> in the tourism sector is essential since the country's growth strategy is built on stimulating the tourism sector. This strategy entails public and private projects in infrastructure (cruise terminal and roads),<sup>6</sup> tourism (hotel construction, condominium and gated communities), the support for alternative energy development and sugar cane farms and its products, such as rum and sugar. Recent measures include an expansion in cruise passenger arrival capacity, generous tax incentives for an all-inclusive resort, and airline promotions, including low-cost airlines.<sup>7</sup> These measures are encouraging the development of other sectors of the economy; such as agriculture, which presents a new potential source of growth given to the growing demand for fresh and locally produce products for the cruise ships and hotel markets.
- 1.4 Since Barbados seeks to improve its competitiveness in the sector through enhancing public and private investments in tourism, it will require a good-quality transport network in order to accommodate the increased tourism demand derived from these new investments. There is empirical evidence to demonstrate the importance of road

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<sup>1</sup> [http://www.indexmundi.com/barbados/demographics\\_profile.html](http://www.indexmundi.com/barbados/demographics_profile.html).

<sup>2</sup> Since 2007, GDP per capita decreased by around 6% from US\$16,336 to US\$15,373 (2007-2013). Exchange rate: US\$1.00 = 2.02 Barbadian dollars (B\$). (IDB Country Strategy 2015-2018 (GN-2812).

<sup>3</sup> IDB Country Strategy 2015-2018 (GN-2812).

<sup>4</sup> UNWTO and Ministry of Tourism: 536,000 arrivals and US\$872 million.

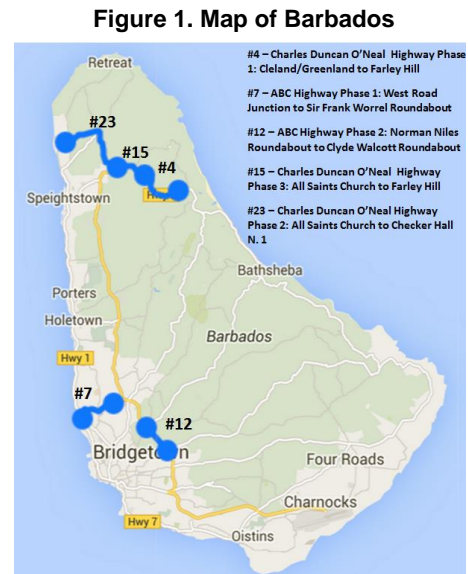
<sup>5</sup> The government is confident in the quality of the Barbados brand and the desirability of Barbados as a tourist destination stemming from its high levels of human capital, good infrastructure, and a safe, business-friendly environment.

<sup>6</sup> Currently, 30% of Barbados's roads are classified as being in poor condition (¶1.6).

<sup>7</sup> Barbados Article IV IMF 2014 recommendations: <http://www.imf.org/external/pubs/ft/scr/2014/cr1452.pdf>.

investments on tourism development. According to the WEF 2013 report; prioritization of travel and tourism, air transportation infrastructure, ground transportation infrastructure, and tourism infrastructure are factors that foster a nation's competitiveness. Among these four factors, ground transportation infrastructure, especially road transportation, is one of the major concerns since the significant growth in transportation demand coupled with maintenance failures, could increase transportation cost and time, and reduce traveler's safety.<sup>8</sup>

1.5 **The road network.**<sup>9</sup> The Barbados road network system consists of 1,950 km of roadways of which approximately 80% are paved with 30% of these paved roads being in poor condition<sup>10</sup> (have symptoms of surface failure as determined by technical analysis). All roads in the network are at least 20 years old, given that the last new road construction was the ABC highway at the end of the 1980's. The seven major primary numbered highways (highways 1 to 7) radiate from the city of Bridgetown and serve as the primary corridors for traffic between the rural areas and Bridgetown. In general, these primary roads connect the island's touristic, industrial, and business areas with the Bridgetown Port and the Grantley Adams International Airport via the ABC highway. This road network supports transportation for the productive sectors which comprises mainly of tourism, light manufacturing, quarrying, and agriculture. Road based transportation on the island is facilitated through a fleet of approximately 115,000<sup>11</sup> vehicles of which 5,000 are heavy trucks and 600 are public transport vehicles.



1.6 In the last 15 years, the country has undergone a rapid increase in the number of motor vehicles on the roads affecting traffic flow and patterns. Between 1997 and 2006, the growth rate in vehicles was close to an average of 10% per year, and reflects the major impact of the reconditioned vehicle market on vehicle ownership.<sup>12</sup> This phenomenal growth in vehicle purchases was affected by the 2008 global financing crisis, reflecting a decrease in the growth rate for all categories

<sup>8</sup> Moreover, Kadharoo & Seetana (2007) found that the transport infrastructure of Mauritius has been contributing positively to tourist numbers. According to them, 10% increase in the stock of infrastructure capital yields a 3.2% increase of tourism arrivals in the island, they argue that inhabitants of developed countries are accustomed to modern high-quality infrastructure and they prefer similar infrastructure in their tourism destinations. Mauritius is an island in the Southeast coast of Africa and resembles Barbados in the type of tourism (beach resort and cruise tourism) and type of tourist (international, mainly from developed countries). The tourism contributes directly for more than 14% of the economy of the island. The authors based their studies in a group of important empirical evidences, such as Kaul (1985), who is among the first to recognize the importance of transport infrastructure as an essential component of successful development in that it induces the creation of new attractions and the growth of existing ones; Prideaux (2000), who argues that a destination should be easy to get to and easy to get around; and The Tourism Task Force (2003) of Australia that asserts that transport is a big part of the equation due to the fact that his system is responsible for connecting tourism-generating regions to destinations as well as providing transport within the latter.

<sup>9</sup> View Map of Barbados [\(OEL#3\)](#).

<sup>10</sup> MTW classifies roads according to the percentage of pothole per kilometer.

<sup>11</sup> Barbados: Productive Infrastructure Sector Note. IDB Country Strategy 2015-2018 (GN-2812).

<sup>12</sup> Barbados Tourism Master plan 2014 (TMP).

of vehicles. However, the actual volume of traffic on the roads, especially at peak periods, is a cause of major concern. The number of actual vehicles per head of population is high, being approximately 1:2.5. However, the regular and periodic maintenance and infrastructure upgrading has not been sufficiently financed to keep the road network in good condition. This has resulted directly in difficulty with transport logistics and number of road accidents; and indirectly, the loss of man hours and ambience which are all important to a tourism economy.

- 1.7 **Road safety.** The road fatality rate is one of the lowest in the Caribbean with the 2014 rate being 4.85 per 100,000 inhabitants. However, annually there are more than 8,000 reported road accidents and those with victims have increased by 46% in the last 20 years.<sup>13</sup> The Barbados National Road Safety Council (BNRSC) is mandated to develop policies, set goals, plan, coordinate stakeholders, and monitor and evaluate road safety works for the country. Despite this, the BNRSC does not have a national strategy to provide the guidance for the implementation of its mandate. This key instrument for road safety management corresponds to Activity 3 of Pillar 1: road safety management of the United Nations Decade of Action for Road Safety 2011-2020.
- 1.8 **Institutional arrangement.** The institution responsible for the road subsector in Barbados is the Ministry of Transport and Works (MTW) which is a fairly large ministry with a staff of approximately 1,600. Apart from transportation and public works functions, the MTW also has responsibilities for public buildings, traffic management, vehicle registration and public transport. Road infrastructure projects are contracted to the private sector while routine maintenance is carried out by MTW with its current technical and administrative staff from the central office located in Bridgetown, and in 11 depots located around the island. The 11 depots are staffed and equipped to undertake routine maintenance works for the road network. The MTW is challenged in performing its duties as it does not conform to international norms in transportation development plans, maintenance plans, regular data collection throughout the network, laboratories and respective equipment for quality assurance purposes. Furthermore, the sector has seen a marked drop in budgetary allocations and greater demand for mobility and connectivity compounding the MTW's deficiencies.<sup>14</sup> As such, within the MTW, there is a need for technological and modern tools to plan, design, manage and monitor repairs and supervise roads to international norms.
- 1.9 **Sector financing.** The periodic maintenance and rehabilitation of roads which has traditionally been funded directly by government has been affected by budget constraints, causing Barbados to reconsider seeking support from multilateral financing institutions. The constraint to the sector is due to reduced cash flow to the sector rather than reduced fiscal space. The MTW budget decreased from approximately US\$70 million in 2009-2010 to US\$30 million in 2013-2014.<sup>15</sup> According to Barbados 2015 National Budget Report, 2014 actual expenditure in the

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<sup>13</sup> In 1993 there were 1,362 road accidents involving injured victims. This figure increased to 1,988 in 2012. Source: Royal Barbados Police Force.

<sup>14</sup> The main players in the transport sector in Barbados are the MTW and the Ministry Tourism and International Transport (MTI). However, the Prime Minister's Office, through the Chief Town Planner -in conjunction with MTW-, is in charge of setting and maintaining standards for Barbadian network of roads, and the Ministry of Finance provides government's financial support to the components of the ground transport sector.

<sup>15</sup> According to Adam and Bevan (2014), road operations and maintenance spending is sometimes one of the first budget items to be pared back in times of fiscal pressure. But reducing maintenance expenditure is not equivalent to true fiscal savings from a longer term perspective: potholes that are not filled today will have to be filled eventually, possibly at a higher cost.

road subsector accounted for US\$30.5 million,<sup>16</sup> of which US\$9.2 million (approximately 30%) were allocated for works relating to highway construction and maintenance services. The available budget went to routine maintenance leaving rehabilitation activities unfunded. The remaining 70% of the budget went to employees' salaries and administrative expenses. The budget planning and execution is done by the MTW which allocates the resources to construction and maintenance works in the 11 parishes across the island. Since the last road planning master plan (part of the National Transport Plan) dates back to 1996, the budget allocation to works is conducted based on road classification, observed condition, traffic and public request by the Deputy Chief Technical Officers (projects and operations) within the MTW. The MTW currently undertakes routine maintenance in-house and reserves the hiring of private sector contractors only for major road interventions.

- 1.10 **Program rationale.** The unique combination of increasing traffic on the country's roads (¶1.6), the fact that much of the country's primary road network has reached or is well beyond its design life (¶1.5), and a drastic drop in the MTW's budget due to the economic constraints (¶1.9) have resulted in a need for external financing for the rehabilitation of key segments of its primary highway network, along with technical support that could be provided by the Bank to improve governance and institutional capacity to address efficiency and sustainability. Additionally, the MTW has maintained its road network well allowing many roadways to exceed their design life. It is imperative that road infrastructure and its management evolve to keep a pace with transport demand and to support the country's productive sectors (tourism/construction/agriculture) by providing adequate quality and effective connectivity. The immediate interventions in this key subsector have to be twofold: addressing the institutional governance as well as the infrastructure requirements in order to meet future demands from tourism and fleet expansion. Institutional interventions are needed in order to address the weakened capacity of the MTW, sustainability and financing within the road sector and at the same time, is infrastructure needed to address maintenance, rehabilitation, upgrade, and construction of roads, drainage structures and safety features. While the institutional issues are known it would be beneficial to have a detailed institutional diagnosis in order to prioritize and address human resource training needs, technical knowledge development and technological improvements regarding road sector planning, implementation and operation followed by specific interventions. Furthermore, the MTW recognizes the long-term financial and economic savings that come from systemized routine and periodic maintenance. The current system of using in-house maintenance has caused maintenance financing to be subject to discretion. The MTW has expressed interest in piloting the use of private sector contractors through performance based contracts for maintenance on key road segments to determine whether contracted routine maintenance is more reliable, efficient and cost effective than current methods.
- 1.11 **Lessons Learned.** It is important to highlight that since this is the first loan in the road sector by the Bank to Barbados in more than 20 years (the last one was BA0047; 755/OC-BA in 1993), the operation creates an important additionality of reigniting the Bank's involvement in the sector in the country. By renewing the relationship with the MTW from this effective operation, the ground work is being laid toward a more complex agenda in the future to address financial sustainability (e.g., development of a road maintenance fund). Notwithstanding this, there are few past experiences still

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<sup>16</sup> According to this source, 0.7% of the GDP is allocated in the road sector as public investment.

pertinent to project implementation regarding the use of local counterpart funding and the need for a dedicated Project Execution Unit, which were incorporated into this operation. There are also important experiences within the region that provide valuable experience on how to move forward on the subject of sustainability. Both Jamaica and Nicaragua have developed Road Maintenance Funds (RMF) to provide a dedicated mechanism to finance road maintenance. The processes in each of these countries took substantial time (ten years in Jamaica) or a disaster (Hurricane Mitch in Nicaragua) to develop the urgency and conviction necessary for the government to move forward with development of a RMF. The Bank as well as other entities had financed studies, had dialogue, and provided incentives assist the governments to size, mold, and structure that their RMF over time.<sup>17</sup> Even after getting approval, the process of passing all the necessary laws to allow the RMF to effectively operate required ten years in the case of Nicaragua. In addition to the RMF, mechanisms must be in place to provide adequate financing source and a good quality maintenance and implementing mechanism.

- 1.12 **Cross cutting focus.** Since the 2008 financial downturn, public investment in Barbados has been reduced by half to around 4% of GDP annually and will be further reduced to 1.5% of GDP in the next four years. In the same period, the actual funds available for road investments (construction/rehabilitation/maintenance) were reduced by 58%. This lack of investment, compounded by the issues detailed in ¶1.6, is taking a toll on the existing road network and on private sector competitiveness. Research suggests that public infrastructure investments have some of the highest multipliers, in the economy of any fiscal interventions.<sup>18</sup> As such, investment in transportation is important for Barbados since it would positively impact private sector competitiveness and raise long term output. Consequently, in the short term the positive impact on demand from raising public investment in labor intensive projects would help ease the current economic downturn and also generate inclusive jobs.<sup>19</sup> Over the long term, such investments raise infrastructure capital stocks by expanding productive capacity while improving the country's competitiveness.
- 1.13 **Strategic alignment.** The general objective of the IDB's Country Strategy with Barbados for 2015-2018 (GN-2812) is to help restore sustainable growth in the Barbados economy by supporting greater private sector competitiveness and enhancing efficiency in service delivery by the public sector. Transportation and

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<sup>17</sup> The IDB financed a critical position paper on road maintenance in Jamaica under loan JA0044; 972/OC-JA approved in November 1996, that made the case for a road maintenance fund. This, along with a critical workshop on road management and finance between the World Bank, the IDB, and the Government of Jamaica in June 1998 and the World Bank Public Sector Modernization Project created most of the framework for the Road Maintenance Fund set up in 2001. In Nicaragua, IDB Loan NI-L1005; 1702/SF-NI approved in December 2005, mandated that the road maintenance fund be financed as a condition prior to the loan being disbursed.

<sup>18</sup> Joseph Bivens, in his article *The Short and Long Term Impact of Infrastructure Investments on Employment and Economic Activity in the U.S. Economy*, states that 18 billion annual investments in infrastructure yields a \$29 billion increase in GDP and 216,000 net new jobs by the end of the first year, with the increased levels then sustained over the next decade. According to the IMF 2014 publication "Is it time for an infrastructure push? The macroeconomic effects of public investment" an increase in public infrastructure investment affects the economy in two ways; it raises output in the short term by boosting demand and in the long term by raising the economy's productive capacity. The study finds that increased public infrastructure investment increasing the flow of infrastructure services could be achieved by stepping up investment in new infrastructure projects (such as building new roads), but also by boosting operation and maintenance spending (such as filling potholes in existing roads), which reduces the rate of capital depreciation and extends the lifetime of installed infrastructure.

<sup>19</sup> Unemployment is high at 12.3% at the end of June 2014 (IDB Country Strategy 2015-2018 (GN-2812)).

logistics is one of the four priority areas in the strategy supporting the goal of infrastructural modernization so as to improve competitiveness and efficiency in the movement of goods and people. Consequently, the Bank's approach for this operation centers on helping to restore sustainable growth to the Barbadian economy by assisting the Government of Barbados (GoBA) in its efforts to improve efficiency in the public sector and to foster greater private sector participation and development. The salient issues include transportation, logistics and sector governance; which are all high impact areas that address binding constraints to growth in which the Bank possesses comparative advantage. The interventions proposed for this operation support freight logistics and tourism services, by providing a platform for increasing connectivity between Bridgetown Port and the International Airport through ABC Highway, and promoting a multimodal perspective of the flow of goods and people externally with air and maritime transport and also, the road network which is related to the internal side of the distribution networks. Specific actions would include investments in upgrading and improving key productive infrastructure such as distribution networks aimed at reducing transport costs. Under the country strategy, this contributes to the expected result of improved condition of the road network. The subject of governance will be addressed through the institutional strengthening activities designed to improve planning and maintenance systems and financing mechanisms for the transport sector. The financing of engineering services and works under this operation would allow for greater involvement of the private sector in transport in the future, through the introduction of a continuous involvement of outsourced routine maintenance,<sup>20</sup> rather than a sporadic one, as is the case of the capital works programs. The operation's strategy is aligned with the Barbados Growth and Development Strategy 2013-2020, which for transport seeks to address: (i) the quality of the road network; and (ii) institutional strengthening and process re-engineering to maximize the effectiveness of resources.

- 1.14 The program will contribute to the lending program priorities of the Ninth General Increase in the Resources of the Bank (AB-2764) (GCI-9): (i) small and vulnerable countries; and (ii) support regional cooperation and integration through the sub sector Transport Networks Connectivity (TR-INT). Following the Bank's alignments for the classification and validation of regional integration operations (GN-2733), this operation meets one of the four criteria of the Bank's Sector Strategy to Support Competitive Global and Regional Integration (GN-2565-4), cross-country focus due to the operation being a national project that has a direct effect on improving the country's highway connectivity between the port, airport, and major tourism centers.<sup>21</sup> For a more complete explanation of how the proposed operation meets the GCI-9 Regional Cooperation and Integration Lending Priority see the annex ([OEL#6](#)). It will also contribute to the regional development goals of promoting infrastructure for competitiveness and social welfare contributing to the output of increasing the amount of km of interurban roads built or maintained/upgraded through the rehabilitation and upgrading of roads as defined in the results framework. The program is aligned with the Strategy for Sustainable Infrastructure for Competitiveness and Inclusive Growth (GN-2710-5) as it contributes to ongoing improvements in infrastructure governance as a key to enhancing efficiency in the delivery of infrastructure service. It is also aligned with the Transport Sector Framework (GN-2740-3); contributing to improving

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<sup>20</sup> Outsourced performance based maintenance contracts have been successfully implemented through Bank funded operations in the region, in Guyana (GY0026; 999/SF-GY), (GY-L1008; 1803/SF-GY) and Jamaica (JA-L1027; 2276/OC-JA).

<sup>21</sup> The project focuses on poor segments Barbados's primary road network that which links together the port, airport, and touristic areas.

the quality, coverage, capacity, and connectivity of transportation infrastructure through physical improvements in the road network. Alignment with specific lines of action include: (i) improving coverage and connectivity; (ii) rehabilitating and maintaining degraded road systems; (iii) increasing the capacity of infrastructure; and (iv) enhancing transportation safety.

## **B. Objective, Components and Cost**

- 1.15 The main objective of the operation is to improve the quality of road infrastructure and its connectivity, in order to *inter alia* enhance Barbados tourism competitiveness and growth. Specifically, the program aims to: (i) rehabilitate sections of road networks and lower logistic cost, particularly transportation costs and travel times and improve safety; and (ii) provide a framework for institutional strengthening to improve transport sector planning capacity, road investment's sustainability and financial mechanisms for rehabilitation and regular maintenance interventions undertaken by the MTW.
- 1.16 The program is expected that will contribute to sustainable growth in the Barbadian economy through interventions to rationalize and improve public sector efficiency and by supporting private sector participation and development through greater involvement in the transport sector. Due to the project consisting of key highways that have as a zone of influence on the entire country, the beneficiaries of the program are the population (289,683) of Barbados and more than 1,000,000 tourists<sup>22</sup> who visit the island each year.<sup>23</sup> Of the sample segments evaluated for this project, the Annual Average Daily Traffic using the road is: 4,263 on the Charles Duncan O'Neal Highway Phase 2, 3,241 on the Charles Duncan O'Neal Highway Phase 3, 2,556 on the Charles Duncan O'Neal Highway Phase 1, 16,951 on the ABC Highway Phase 1, and 20,605 on the ABC Highway Phase 2 – West Bound. Though this number is vehicles and not persons, and different vehicles use the road on different days, this daily traffic gives an insight into the beneficiaries of each project segment.
- 1.17 **The program.** The total cost of the program is estimated to be US\$25 million. It is designed as a multiple works operation so as to finance groups of similar works and is divided into the following two Components:
- 1.18 **Component 1. Civil works (US\$21.5 million).** This component includes the rehabilitation and improvement of approximately 31 km of key segments of the primary road network, including drainage, construction of sidewalks, rehabilitation of associated bridges and culverts, and safety features. A pilot project<sup>24</sup> utilizing outsourced performance based contracts for routine road maintenance to evaluate at minimum the methodology, cost and efficiency shall be included in the works contracts under this component (¶1.8).
- 1.19 The country has proposed a representative sample of projects<sup>25</sup> for the multiple works program,<sup>26</sup> with an estimated budget of US\$8.5 million, which represent 34% of the

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<sup>22</sup> Cruise ship tourists are offered many excursion possibilities throughout Barbados using the primary highway network as evidenced by brochures provided to tourists by the cruise companies.

<sup>23</sup> Central Bank of Barbados. Barbados International Competitiveness 2014.

<sup>24</sup> Outsourced performance based maintenance is being introduced to Barbados and will be a part of all road works contracts (also see footnote 20).

<sup>25</sup> The sample is composed of: Charles Duncan O'Neal Highway Phase 1 (from Cleland/Greenland to Farley Hill); Charles Duncan O'Neal Highway Phase 2 (Checker Hall N.1 to All Saints); Charles Duncan O'Neal Phase 3 (from All Saints to Farley Hill); ABC Highway Phase 1 (from West Road Junction to Sir Frank Worrel R'bout); ABC Highway Phase 2 (from Norman Niles Roundabout to Clyde Walcott Roundabout).

resources in this operation. The preparatory studies and designs for the sample road segments have been completed ([OEL#1](#) and [OEL#2](#)) and have been determined to be economically viable as described in ¶2.7 and ¶2.8. The remaining resources in Component 1 will finance civil works that are physically similar to the sample, along one or more road corridors on the island. All civil works projects would have to be compliant with the eligibility criteria of the program indicated in ¶1.20.

- 1.20 **Eligibility criteria for investments.** In order for individual projects to be considered eligible for financing under Component 1 of the program, the said project must: (i) be connected at some point with the primary road network with levels of service similar to those of the project to be carried out; (ii) have detailed designs, including a plan for pavement markings and road signs and other road safety features, with a sufficient degree of detail to be tendered; (iii) have economic feasibility studies, and an Economic Internal Rate of Return (EIRR) of 12% or more; and (iv) have detailed socio-environmental studies consistent with the works to be executed and in conformity to Bank Policies and Environmental and Social Safeguards, including an environmental and social management plan and environmental licenses as required under national legislation. These and other technical criteria are an integral part of the program Operation Manual (OM) ([OEL#5](#)).
- 1.21 **Component 2. Institutional strengthening (US\$2 million).** This component will finance the strengthening of sector governance through capacity building in the following key areas to improve: (i) transport planning and asset management systems, including computerized tools to support the allocation of resources to priority investments; (ii) maintenance financing (develop methodologies for better coverage with the lower levels of financing; and a study of mechanisms to identify a source to sustainably fund maintenance); (iii) technical standards quality control and assurance, to aid in the value for money of expenditures; (iv) gender parity in employment within the MTW (develop a strategy to increase women's participation in technical fields); and (v) road safety, in order to reduce the number of accidents in the network. As a first step, a detailed action plan along with the scope and activities required for each intervention will be conducted. This will be based on an institutional diagnosis, so as to prioritize and address human resource training needs, technical knowledge development, and technological improvements and the introduction of computer based planning and management in the aforementioned areas. The identified priorities will be funded from the financing under this component.
- 1.22 In addition to the above components, the program will provide implementation support of US\$1.5 million directly related to the implementation and supervision of the civil works in Component 1, as well as the required audits, program evaluations, and performance and completion reports. The investment category will also finance the studies for civil works outside of the sample, whose construction will be financed under Component 1, including: (i) designs; (ii) feasibility analyses; (iii) environmental and social assessment; (iv) road safety designs; and (v) highway safety audits.

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<sup>26</sup> According to the Barbados Tourism Master Plan 2014 (TMP) recommendations on ground transportation, there is a need to upgrade the Charles Duncan O'Neal Highway together with other major highways. Also according to the TMP, closer attention should be paid to the road infrastructure in the north, especially in parts of St. Peter, St. Andrew and St. Lucy, as these roads are generally less well maintained. The recommendations consider it strategic to implement special maintenance programs for roads in the northern parishes.

**C. Key Results Indicators**

- 1.23 A comprehensive monitoring and evaluation system will continuously assess the operation’s development and impacts. The main indicators (see [Annex II](#)) of the program outcomes will be: (i) travel time; (ii) vehicle operating costs; (iii) annual average daily traffic; (iv) international roughness index; and (v) total number of traffic accidents. The outputs of the program include: (i) km of rehabilitated roads; (ii) number of persons trained; and (iii) km of roads under an asset management system to be put in place.
- 1.24 The proposed indicators and means of verification maximize the use of the information that MTW will collect directly or indirectly during the execution of the project. The proposed indicators already have baseline data for the year 2015. This baseline is the reference level for the evaluation of the operation. All the output indicators will be measured directly; the outcome indicators will either be measured directly by the MTW, or indirectly by the Royal Barbados Police Force in the case of road accidents. These measures and estimates will be compared with the expected outputs and outcomes presented in the results matrix. The following table presents the selected indicators and their respective means of verifications:

**Table 1. Program indicators and means of verification**

Indicator	Means of verification	Frequency
<b>Impact</b>		
Increase in the quality of roads indicator – global competitiveness index (1)	Global competitiveness report 2019/2020 <a href="http://www.weforum.org">www.weforum.org</a>	End of program
Total number of traffic accidents in the road segments rehabilitated by this program	Data collected and provided by the Royal Barbados Police Force	Annually
Indicator	Means of verification	Frequency
<b>Outcomes</b>		
Vehicle Operating Cost (VOC) on road segment to be rehabilitated by the program – (US\$/veh - km)	Traffic study, specialized equipment (roughness meter), Highway Development and Management 4 (HDM-4)	Midterm and end of program
Average travel times on the segments to be rehabilitated by the program – (minutes/veh - km)		
Annual Average Daily Traffic (AADT) on the segments targeted by the program (veh/day)	Traffic study	Annually
International Roughness Index (IRI) on segments targeted by the program (m/km)	Specialized equipment (roughness meter)	Midterm and end of program
Indicator	Means of verification	Frequency
<b>Outputs</b>		
Km of the country road network rehabilitated by the program	Semiannual progress report, submitted on 28/2 and 31/8 of each year	Semiannual
Asset management system in place for 400 km	Semiannual progress report, submitted on 28/2 and 31/8 of each year, midterm evaluation and final evaluation	
Number of MTW staff technically trained by the program		

- 1.25 **Economic feasibility.** To assess the economic feasibility of this operation, a cost-benefit analysis was conducted for each road project in the representative sample. The evaluation was based on a comparison of costs and benefits in efficiency prices, under scenarios “with” and “without the road works”. The benefits of each individual project were estimated based on an analysis methodology typically used in road projects (consumer surplus), in which savings in generalized transport costs for normal traffic, derived and/or generated/induced, and savings in road maintenance costs are quantified. The Highway Development and Management Model (HDM-4) was used to calculate each project’s return, taking into account the Investment costs (civil works, engineering studies, supervision and the costs of

mitigating direct socio-environmental impacts), vehicle operating costs (including time), and annual maintenance costs identified for the scenarios “with” and “without” the road works.

- 1.26 Economic Internal Rates of Return (EIRR) were calculated for each project (OEL#2), using a discount rate of 12%, which yielded results within the range of 17.8% to 31.5% under the conditions and assumptions of the base case scenario. In addition, the resilience of each project to less favorable scenarios was tested via sensitivity analysis, factoring in: (i) a 20% increase in the investment cost; (ii) a 20% reduction in benefits; and (iii) a combined 10% increase in investment cost and simultaneous 10% reduction in benefits. Under these variations, each project maintains an EIRR above the discount rate used (12%), confirming that the benefits are robust to less favorable scenarios. The following table summarizes the results of the cost-benefit and sensitivity analyses:

**Table 2. Economic cost-benefit analysis**

Project	Length (km)	AADT 2015	Invest. cost US\$000	ENPV US\$000	EIRR (%)			
					Base	Sensitivity analysis		
						Invest. cost: +20%	Benef.: -20%	IC: +10% & B: -10%
Charles Duncan O’Neal Highway Phase 2	5.10	4,263	2,300	1,582	26.40	22.60	20.90	21.40
Charles Duncan O’Neal Highway Phase 3	2.30	3,241	1,353	586	22.40	18.60	17.20	17.70
Charles Duncan O’Neal Highway Phase 1	2.80	2,556	1,599	292	17.80	14.40	12.80	13.30
ABC Highway Phase 1	2.60	16,951	2,942	1,440	27.70	22.70	21.80	22.40
ABC Highway Phase 2 – West Bound	2.00	20,605	1,189	1,639	31.50	27.40	26.20	26.80
<b>Total</b>	<b>14.80</b>	<b>-</b>	<b>9,385</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

## II. FINANCING STRUCTURE AND MAIN RISKS

### A. Financing Instruments

- 2.1 The total cost amount of the program is US\$25 million and, will be drawn from the Ordinary Capital (OC) of the Bank. The financing will have amortization periods of 25 years; and grace period of 5.5 years. This is a multiple works operation in which Component 1 will finance the civil works which has a representative sample as detailed in ¶1.19 that has a budget of US\$8.5 million, representing 34% of the resources in this operation. The remaining resources in Component 1 will finance civil works that are physically similar to the sample, along one or more road corridors on the island. All civil works projects would have to be compliant with the eligibility criteria of the program indicated in ¶1.21. The Table 3 provides a detailed to be financed per category by the present operation:

**Table 3. Investment category (in thousand US\$)**

Category	OC
1. Component 1. Civil works	21,500
2. Component 2. Institutional strengthening	2,000
3. Implementation support	1,500
Engineering services/monitoring and evaluation	1,300
Financial audit	200
<b>Total</b>	<b>25,000</b>

2.2 The expected disbursement period of the project is five years. The table below shows the tentative disbursement schedule. Notwithstanding this, the disbursement speed in the first three years of loan execution would have to comply with the conditions set forth in ¶3.9. It is expected that the physical initiation for all of the civil works would exceed 24 months<sup>27</sup> due to the disbursement schedule; however, all works would be initiated before 36 months from effective date of the loan contract.

**Table 4. Tentative disbursement per year (in million US\$)**

Source	Year 1	Year 2	Year 3	Year 4	Year 5	Total
OC	1,200	4,800	6,500	7,750	4,750	<b>25,000</b>
%	4,80	19,20	26,0	31,0	19,0	<b>100</b>

**B. Environmental and Social Safeguard Risks**

2.3 In accordance with the guidelines of the Policy Environment and Safeguards Compliance Policy (OP-703), the proposed operation is currently classified as Category B as it is estimated that the program will not generate significant negative environmental and/or social impacts. A project Classification of B requires an environment and social strategy that should include three components: (i) environmental analysis, which should include the identification of existing critical environmental and social liabilities and corrective/migratory measures; (ii) development and utilization of appropriate social and environmental procedures for implementation and supervision of the works; and (iii) training for contractors and supervisors in social and environmental safeguards that are relevant to transport planning and road maintenance.

2.4 Temporary environmental impacts from construction activities including traffic congestion due to the presence of construction equipment, potential air and water pollution issues related to transportation and construction practices, noise generation around inhabited areas, potential contamination of soils in campsite facilities and workshops, health and safety issues, the potential for accidents, the disturbance of alternate roads to be used during construction as by-passes, etc. are expected. All of these impacts are easily identifiable; minor to moderate in magnitude; temporary in duration; spatially restricted; easily preventable or controllable with widely available, technically simple and cost-effective mitigation techniques; and reversible in the sense that an affected area can return to its preexisting condition after an impact occurs. Mitigation activities can readily be included in an Environmental and Social Management Report ([REL#5](#)), part of the operating manual, specifically designed for these areas. Temporary social impacts include nuisance from traffic, noise, air and dust emissions, as well as disruption of daily routines and potentially of business activities and services. The potential for impacts to cultural heritage/archaeological sites is low. There will be no resettlement resulting from this project.

**C. Fiduciary Risk**

2.5 The overall fiduciary risk of the project is deemed to be low. Notwithstanding this, a few risks as outlined in the table below were deemed as medium and could impact on the project. They, however, do not affect the overall risk rating of the project since they simple to mitigate.

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<sup>27</sup> Stipulation in PR-202 multiple works program.

**Table 5. Mitigation risk and rating**

Risk	Risk rating	Mitigation measures
Limited availability of reliable and timely financial information for decision making	Medium	The Ministry of Finance and Economic Affairs should be requested to customize the country's Public Financial Information Management (PFM) system; Smart Stream, to facilitate project reporting so that it meets IDB's minimum requirements for project financial reporting. If the customization of Smart Stream is not possible, an off the shelf accounting package should be procured and used to supplement the financial reporting aspect of Smart Stream. <b>Responsibility for implementation:</b> PEU/Borrower. <b>Timeline for implementation:</b> prior to first disbursement of the loan.
Lack of awareness of IDB procurement, disbursements and financial reporting procedures	Medium	Create capacity within the PEU through training on IDB's procurement, financial management procedures and requirements. <b>Responsibility for implementation:</b> IDB. <b>Timeline for implementation:</b> during project design and throughout project execution.
Delays in acquisitions or impossibility of making them	Medium	Training in IDB policies and procedures for procurement. <b>Responsibility for implementation:</b> IDB. <b>Timeline for implementation:</b> during project design and throughout project execution.

#### D. Other Key Issues and Risks

2.6 **Risks.** Key risks classified as medium were identified for the operation: inadequate pace of implementation, lack of fiscal space in government's budget, sustainability of investment made under the program, monitoring and accountability of project activities and financing and public management and governance as it relates to project startup. To mitigate the implementation risks, the operation would require that a Project Execution Unit be put in place as a condition prior to first disbursement. With regards to fiscal space risk, the disbursement would be limited as is elaborated in ¶3.10. The sustainability risk is being addressed through the maintenance pilot and the funding mechanisms incorporated into Component 1 and 2. Monitoring and accountability risks will be mitigated by ensuring the PEU is staffed with a project manager, project engineer, senior accountant, procurement officer, and an environmental/social officer to ensure that a competent team is monitoring the project. Public management and government risks especially that of a legislative delay in project approval will be mitigated by the project team and Bank's Country Office by maintaining a strong relationship with the Barbadian government and having a proactive engagement with the Solicitor General.

2.7 **Inclusive economic growth.** Due to economic contraction in 2009, Barbados experienced a decrease in activity within the construction industry by some 19 percent. This along with a decline in other key economic sectors saw the country experience a worsening in unemployment, reaching 12.3 percent in 2014.<sup>28</sup> Renewed infrastructure investments create an opportunity to revitalize inclusive employment generation especially since women's representation within the construction sector is only 0.16,<sup>29</sup> even though women account for 49% of the working age population. Despite Barbados's achievements in terms of gender parity at all levels of education (half of managers, senior officials and legislators, as well as professional and technical workers are women) the trend does not appear to transcend into the construction industry. The GoBA has identified some priority areas for policy

<sup>28</sup> Central Bank of Barbados and IDB Country Strategy 2015-2018 (GN-2812), June 2014.

<sup>29</sup> Representation index measures the participation of women versus men in a specific sector, divided by women overall participation in the economy. That is 8% participation on the construction industry on 49% of women labor workforce.

improvement pertaining to gender<sup>30</sup> including strengthening the capacity for gender analysis, and evidence-based policy-making and programming. Under the institutional strengthening component of this operation, support will be provided for the development of a strategy to start addressing the abovementioned challenge and to mainstream gender from the users' perspective, as well as, to include MTW female staff in technical training programs, thereby enabling an increase of the country's human capital.

- 2.8 **Project execution risks and cost overruns.** Risks in the civil works execution are low due to: (i) the works do not present a particularly high technical complexity; (ii) the MTW has experience in the development of similar works as they perform road rehabilitations with their own financing; (iii) prices from similar projects recently executed in the in the country were used in the estimates; and (iv) the ready availability in the region of specialized construction and supervision firms with experience in similar projects. Thus risk probability of cost overruns is low due to the relative straightforwardness and homogeneity of the projects. Nevertheless, a contingency factor of 10% was built into the project civil works cost estimation and a specialized supervision firm will be contracted to oversee the construction.
- 2.9 **Project sustainability.** Age of the road network and insufficient maintenance has negatively affected the level-of-service of the roads, causing their current poor condition; therefore the risk impact of insufficient maintenance upon project completion is a real concern. The MTW would like to sustainably maintain their roads however lack of funding and maintenance planning affected this in the past. The project addresses this lack of sustainability in three ways: (i) provides institutional strengthening to address the MTW's weak planning and asset management capability; (ii) pilots a project to provide maintenance through a performance based contract on a segment of rehabilitated roadway; and (iii) identification of financing mechanisms that could be used by Barbados towards a road maintenance fund.

### III. IMPLEMENTATION AND MANAGEMENT PLAN

#### A. Summary of Implementation Arrangements

- 3.1 **Borrower and Executing Agency (EA).** The Borrower is the GoBA, and the EA will be the MTW, which will implement the program through its Projects Division (PD) which is being designated as the Project Execution Unit (PEU). The PEU is funded by MTW administrative resources and is responsible for the execution of major transport works projects for the MTW. For this program, the PEU will be responsible for the fulfillment of technical, administrative and financial management related to execution, as well as the planning, monitoring, supervision and evaluation functions. In order for the PEU to adequately perform its function, the EA will have to ensure that the key personnel identified in ¶3.4 are in place at the PEU and covered by its administrative budget.
- 3.2 The responsibilities of the EA in the execution of the program include the following: (i) to carry out the procurement processes in accordance with the Bank's policies and procedures; (ii) to prepare and obtain Bank approval for all bidding documents required to hire the civil work contractors and consulting firms; (iii) to carry out the financial management of the program resources, including the performance of internal control and registration of all administrative and accounting procedures needed for

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<sup>30</sup> Allen, C. and J. Maughan (2014). Barbados Gender Assessment. Caribbean Development Bank.

the program execution; (iv) to monitor the civil works and construction contracts through consulting firms specifically hired to that effect; (v) to maintain adequate accounting and financial controls as well as appropriate support documentation filing systems for verification by the Bank and the external auditing firm; (vi) to prepare and submit to the Bank disbursement requests and corresponding justification of expenses; (vii) to prepare and submit to the Bank reports on the progress of the program's execution, as well as updates of the annual operations plan, audited financial reports, and other financial reports as required by the Bank; (viii) to record and control the results of the program through the agreed indicators; and (ix) to address and resolve contractor claims and related contract adjustments. In addition, the EA will maintain separate files for the operations of the program, and allow for financial and accounting monitoring of the Bank and local counterpart resources, in accordance with Bank requirements. Details of all execution arrangements will be elaborated in an OM to be prepared for the program.

- 3.3 **Institutional capacity of the executing agency.** The PD is currently staffed with project management, engineering, quantity/land surveying, and field staff. In order to have a complete complement of skillset required for the implementation of this program, the PD will need strengthening through the addition of project accountant, procurement and social/environmental personnel. The procurement unit of the MTW will support the procurement activities for the program. This unit is headed by a senior quantity surveyor and is staffed with two quantity surveyors and two assistants. One of the quantity surveyors would be assigned full time to the operation with oversight from the unit head. With regards to the accounting staff, the position of senior accountant has been created in the MTW and will be filled once the loan has been approved. The two social and environmental personnel from the design department of the MTW would be assigned the responsibility of monitoring this technical area of the loan operation and works.
- 3.4 **Special Contractual Conditions Clauses prior to the first disbursement. Prior to the first disbursement of the resources of the loan, the EA shall provide: (i) evidence that the PEU have been staffed with or assigned a project manager, project engineer, senior accountant, procurement officer, administrative officer and an environmental/social officer in accordance to the profiles agreed with the Bank; and (ii) evidence that the operations manual, including a grievance mechanism for the Program, has been approved in the terms agreed with the Bank and has entered into effect.**
- 3.5 **Special Contractual Clauses prior to execution.** Prior to signing any of the civil works contracts financed through the program, the EA shall submit evidence that it has selected and hired a firm to supervise the execution of the respective civil works and that two public consultations were held and documented.
- 3.6 **Special contractual clause of execution.** The period required for physical initiation for all of the civil works shall not exceed 36 months from effective date of the loan contract.
- 3.7 **Procurement.** Procurement of goods and works as well as the procurement of consulting services using program resources will be carried out by the Borrower, through the EA in accordance with the Policies for the Procurement of Works and Goods Financed by the Bank (GN-2349-9); and the Policies for the Selection and Contracting of Consultants Financed by the Bank (GN-2350-9).

- 3.8 The contractors who will carry out the civil works will be overseen by engineering supervision firms hired by the MTW with funds from the program. The contractors will be hired using competitive bidding procedures and in accordance with scope of works agreed with the Bank. The bidding documents for the civil works and the respective final contracts signed shall incorporate the following requirements: (i) the final technical designs; (ii) the technical specifications; and (iii) environmental and social management plan.
- 3.9 **Disbursements.** The Bank will disburse the project resources in accordance with the liquidity needs of the project, as evidenced by the current and anticipated commitments and obligations of the project. It is expected that the advance of funds methodology will be used. These advances, which will cover liquidity needs for a period not exceeding six months, will be calculated based on the semiannual cash flow program allocated for the program and on investment categories, products and/or activities to be executed during the period. Subsequent advances may be disbursed once 80% of the total accumulated balance pending justification has been submitted and accepted by the Bank. Disbursements' review will be performed on the ex post modality.
- 3.10 Pursuant to Document AB-2990, the disbursement speed by the Bank of the OC financing will be subject to the following limits: (i) in the first 12 months, a maximum of 15% of the total amount of Bank financing approved may be disbursed; (ii) in the first 24 months, a maximum of 30% of the total amount of Bank financing approved may be disbursed; and (iii) in the first 36 months, a maximum of 50% of the total amount of Bank financing approved may be disbursed. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors. These limitations may be rendered inapplicable to the extent that the requirements set forth in the Bank's policy regarding said limitations have been fulfilled, provided that the borrower has been notified of the same in writing.

**B. External Audit**

- 3.11 The external audit of the program will be done by independent public accountants acceptable to the Bank or to the Barbados Audit Office (subject to availability), and will follow the guidelines set forth in Documents OP-273-6 Financial Management Guidelines, and the Financial Reports and External Audits Handbook for Bank financed operations. Standard financial reporting requirements of the Bank will apply including: (i) annual AFS of the program, which will be submitted to the Bank within 120 days following the end of each fiscal year of the EA; and (ii) a final AFS of the program, which will be submitted within 120 days following the date of the last disbursement of the loan. The costs for the audits will be financed from resources of the loan.

**C. Summary of Arrangements for Monitoring Results**

- 3.12 The monitoring of program performance and progress throughout execution will include the following: (i) annual Audited Financial Statements (AFS); (ii) Project Execution Plan (PEP) and annual Operation Plans (AOPs); (iii) annual Procurement Plans (PP); (iv) semiannual progress reports, inclusive of the Progress Monitoring Report (PMR); (v) administrative missions; (vi) midterm evaluation; and (vii) final evaluation.

- 3.13 The EA shall submit to the satisfaction of the Bank, within 30 days prior to the conclusion of each calendar year during the execution of the program, the corresponding AOP for the next year. Semiannual progress reports are to be submitted by the EA at the end of February and August of each calendar year containing at least the following elements: (i) an updated PEP (in MS Project and pdf format); (ii) a financial statement; (iii) a status of contractual clauses; (iv) an updated results matrix reporting on the accomplishments and progress made on the output indicators included in the results framework; (v) a section identifying possible development and events that could jeopardize the program execution; (vi) a Plan of Activities (POA) or work/implementation plan for the next calendar semester; (vii) disbursement projections; (viii) an updated procurement plan; (ix) progress with the collection of information on the quality of the road network and of its ancillary infrastructure; (x) a section about the socio-environmental management of the project; and (xi) other annexes (such as detailed Gantt Charts, photos, videos and/or visual materials).
- 3.14 Using loan's resources, independent evaluators will be hired to conduct: (i) a midterm evaluation at the end of 30 months from the date of the signature of the loan contract or after disbursement of 50% of the resources, whichever comes first; and (ii) a final evaluation of the program, after 90% of loan resources have been disbursed, which will include an ex post economic evaluation. The evaluations will include: (i) the impacts produced by the project execution; (ii) procurement procedures and results for goods, related services, consultancies and works; (iii) environment and social issues and on safeguards compliance; and (iv) ex post economic assessments. The EA shall collect, store and retain all necessary information, indicators and parameters, including the semiannual plans, the midterm evaluation, and final evaluations, in order to assist the Bank to prepare the Project Completion Report (PCR). An impact evaluation of the project as defined by the Bank will not be completed. See monitoring and evaluation plan for more details ([REL#3](#)).

**D. Significant Design Activities Post Approval**

- 3.15 The economic, engineering, social and environmental studies and preparation of detailed technical designs and specifications needed for tendering civil works projects outside of the sample for inclusion in the program will be financed with program resources allocated to investment category 3: implementation support.

Development Effectiveness Matrix			
Summary			
<b>I. Strategic Alignment</b>			
<b>1. IDB Strategic Development Objectives</b>	<b>Aligned</b>		
Lending Program	-Lending to small and vulnerable countries -Lending to support regional cooperation and integration		
Regional Development Goals	-Paved road coverage (Km/Km2)		
Bank Output Contribution (as defined in Results Framework of IDB-9)	-Km of inter-urban roads built or maintained/upgraded		
<b>2. Country Strategy Development Objectives</b>	<b>Aligned</b>		
Country Strategy Results Matrix	GN-2812	Improved condition of the road network	
Country Program Results Matrix	GN-2805	The intervention is included in the 2015 Operational Program.	
Relevance of this project to country development challenges (If not aligned to country strategy or country program)			
<b>II. Development Outcomes - Evaluability</b>	<b>Evaluable</b>	<b>Weight</b>	<b>Maximum Score</b>
	8.6		10
<b>3. Evidence-based Assessment &amp; Solution</b>	<b>8.2</b>	<b>33.33%</b>	<b>10</b>
3.1 Program Diagnosis	3.0		
3.2 Proposed Interventions or Solutions	2.4		
3.3 Results Matrix Quality	2.8		
<b>4. Ex ante Economic Analysis</b>	<b>10.0</b>	<b>33.33%</b>	<b>10</b>
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis	4.0		
4.2 Identified and Quantified Benefits	1.5		
4.3 Identified and Quantified Costs	1.5		
4.4 Reasonable Assumptions	1.5		
4.5 Sensitivity Analysis	1.5		
<b>5. Monitoring and Evaluation</b>	<b>7.5</b>	<b>33.33%</b>	<b>10</b>
5.1 Monitoring Mechanisms	2.5		
5.2 Evaluation Plan	5.0		
<b>III. Risks &amp; Mitigation Monitoring Matrix</b>			
Overall risks rate = magnitude of risks*likelihood	<b>Medium</b>		
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	<b>B</b>		
<b>IV. IDB's Role - Additionality</b>			
The project relies on the use of country systems			
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, External	
Non-Fiduciary			
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:			
Gender Equality			
Labor			
Environment			
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			
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan			

The main objective of this project is to improve the quality of road infrastructure and its connectivity to enhance Barbados' tourism competitiveness. Specifically, the program aims to: (i) rehabilitate sections of road networks and lower logistic costs, particularly transportation costs and travel times, and improve safety; (ii) to provide a framework for institutional strengthening to improve transport sector planning capacity, road investment's sustainability and financial mechanisms for rehabilitation and regular maintenance of interventions undertaken by the Ministry of Transport and Works.

The project presents a complete problem diagnosis. However, given the small amount of evidence that exists on the effectiveness of investments in transport, the document does not present evidence to justify the effectiveness of this intervention in terms of its impacts on competitiveness and traffic safety. In terms of the results matrix, all indicators reported are SMART and have means of verification. However, points are deducted because the indicator "Km of inter-urban roads built or maintained/upgraded" is duplicated.

The economic analysis is solid and the evaluation plan is based on an ex post cost-benefit analysis. Given that the project is only tracking indicators over time, without any further theoretical analysis to explore causal relationships, it is not considered that the project also includes a before-and-after evaluation method. The risks identified are sound and include mitigation measures and metrics for monitoring.

## RESULTS FRAMEWORK

<b>Project objective</b>	The main objective is to improve the quality of road infrastructure and its connectivity, in order to inter alia enhance Barbados tourism competitiveness. Specifically, the program aims to: (i) rehabilitate sections of road networks and lower logistic cost, particularly transportation costs and travel times, and improve safety; and (ii) provide a framework for institutional strengthening to improve transport sector planning capacity, road investment's sustainability and financial mechanisms for rehabilitation and regular maintenance interventions undertaken by the MTW.
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Impact indicator	Baseline (2014-2015)	Goal (2019-2020)
Increase in the quality of roads indicator – global competitiveness index (1)	5.06 Global competitiveness report 2014/2015 <a href="http://www.weforum.org/reports/global-competitiveness-report-2014-2015">http://www.weforum.org/reports/global-competitiveness-report-2014-2015</a>	5.31 Global competitiveness report 2019/2020 <a href="http://www.weforum.org">www.weforum.org</a>
Decrease in the total number of traffic accidents in the road segments rehabilitated by this program (2)	180 MTW/PEU based on data provided by the Royal Barbados Police Force	171 MTW/PEU based on data provided by the Royal Barbados Police Force

- (1) The World Economic Forum's Quality of roads indicator used in the calculation of the global competitiveness index will be used as a proxy to demonstrate the overall improvement or perception thereof of the quality of Barbados's road infrastructure due to the project. The indicator is calculated biennially and reported on in the global competitiveness report. It is determined by a survey of business executives operating in the country on their perception of the quality of the country's road infrastructure with one 1 being the lowest quality and 7 being the highest.
- (2) Total number of traffic accidents includes: fatal, serious, slight and non-injury accidents.

<b>Expected outcomes</b>	Lower logistic cost, particularly transportation cost and travel times directly in the targeted areas of the civil work, and indirectly by improving the ministry capability to manage the whole road network, positively influencing the outcome indicators included in the Banks Country Strategy with Barbados 2015-2018 (GN-2812).
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Outcome indicators	Baseline (2017)					Goal (2020)									
<b>Outcome indicator 1</b>	<b>Vehicle Operating Cost (VOC) on road segment to be rehabilitated by the program – (US\$/veh-km)</b>										<b>Means of verification</b>				
	Baseline (2015)					Goal (2020)									
	Type of vehicle	#23	#15	#4	#7	#12	Type of vehicle	#23	#15	#4	#7	#12			
Segments:	Motorbike	0.070	0.079	0.076	0.069	0.069	Motorbike	0.063	0.066	0.060	0.059	0.065	Traffic Study Specialized equipment (roughness meter) Highway Development and Management 4 (HDM-4) - Responsibility of PEU of the Ministry of Transport and Work		
Road #23 - Charles Duncan O'Neal Phase 2	Car	0.252	0.281	0.280	0.263	0.245	Car	0.237	0.242	0.238	0.237	0.238			
Road #15 - Charles Duncan O'Neal Phase 3	Pick up / Van	0.293	0.331	0.342	0.313	0.282	Pick up / van	0.271	0.272	0.284	0.276	0.272			
Road #4 - Charles Duncan O'Neal Phase 1	Bus	0.853	0.913	1.137	1.046	0.793	Bus	0.780	0.740	0.962	0.921	0.757			
Road #7 - ABC Highway Phase 1	Truck	T2	0.703	0.796	0.899	0.836	0.664	Truck	T2	0.661	0.659	0.785		0.756	0.644
Road #12 - ABC Highway Phase 2		T3	1.123	1.255	1.431	1.322	1.070		T3	1.051	1.039	1.239		1.194	1.036
		Articulated	1.301	1.504	1.757	1.606	1.251		Articulated	1.227	1.259	1.566		1.453	1.214
	<b>Weighted average</b>	<b>0.318</b>	<b>0.352</b>	<b>0.390</b>	<b>0.296</b>	<b>0.264</b>	<b>Weighted average</b>	<b>0.297</b>	<b>0.299</b>	<b>0.333</b>	<b>0.265</b>	<b>0.256</b>			

Outcome indicator 2	Average travel times on the segments to be rehabilitated by the program – (minutes/veh-km)											Means of verification		
	Baseline (2015)						Goal (2020)							
Segments: Road #23 - Charles Duncan O'Neal Phase 2 Road #15 - Charles Duncan O'Neal Phase 3 Road #4 - Charles Duncan O'Neal Phase 1 Road #7 - ABC Highway Phase 1 Road #12 - ABC Highway Phase 2	Type of vehicle	#23	#15	#4	#7	#12	Type of vehicle	#23	#15	#4	#7	#12		
	Motorbike	4.610	2.228	2.931	3.177	1.653	Motorbike	4.585	1.862	2.784	2.823	1.639		
	Car	4.967	2.205	3.161	3.370	1.783	Car	4.956	1.795	3.092	3.034	1.772		
	Pick up / van	4.393	2.219	2.924	3.112	1.551	Pick up / van	4.358	1.830	2.759	2.752	1.536		
	Bus	6.489	1.450	4.270	4.566	2.395	Bus	6.478	1.379	4.253	4.397	2.388		
	Truck	T2	5.789	2.480	3.996	4.192	2.108	Truck	T2	5.775	2.240	3.980	3.951	2.098
		T3	6.517	2.495	4.089	4.548	2.407		T3	6.506	2.266	4.092	4.375	2.400
		Articulated	5.772	2.698	3.986	4.185	2.099		Articulated	5.761	2.288	3.924	3.944	2.089
<b>Weighted average</b>	<b>4.899</b>	<b>2.233</b>	<b>3.229</b>	<b>3.345</b>	<b>1.776</b>	<b>Weighted average</b>	<b>4.880</b>	<b>1.841</b>	<b>3.155</b>	<b>3.008</b>	<b>1.764</b>			

Traffic study specialized equipment (roughness meter)  
Highway Development and Management 4 (HDM-4) - Responsibility of PEU of the Ministry of Transport and Work

Outcome indicator 3	Annual Average Daily Traffic ( AADT) on the segments targeted by the program (veh/day)											Means of verification		
	Baseline (2015)						Goal (2020)							
Segments: Road #23 - Charles Duncan O'Neal Phase 2 Road #15 - Charles Duncan O'Neal Phase 3 Road #4 - Charles Duncan O'Neal Phase 1 Road #7 - ABC Highway Phase 1 Road #12 - ABC Highway Phase 2	Type of vehicle	#23	#15	#4	#7	#12	Type of vehicle	#23	#15	#4	#7	#12		
	Motorbike	132	23	26	446	142	Motorbike	150	26	30	502	161		
	Car	2.445	2.491	1.920	12.732	18.484	Car	2.781	2.778	2.184	14.324	21.025		
	Pick up / van	1.199	439	320	3.208	1.478	Pick up / van	1.364	490	364	3.609	1.681		
	Bus	11	1	1	6	10	Bus	13	1	1	7	11		
	Truck	T2	405	149	127	317	198	Truck	T2	461	166	144	357	226
		T3	51	129	158	96	161		T3	58	144	180	108	183
		Articulated	20	9	4	146	132		Articulated	23	10	5	164	150
<b>Total</b>	<b>4.263</b>	<b>3.241</b>	<b>2.556</b>	<b>16.951</b>	<b>20.605</b>	<b>Total</b>	<b>4.849</b>	<b>3.614</b>	<b>2.907</b>	<b>19.071</b>	<b>23.437</b>			

Traffic study - responsibility of PEU of the Ministry of Transport and Work

Outcome indicator 4	International Roughness Index (IRI) on segments targeted by the program (m/km)				Means of verification
	Baseline (2015)		Goal (2020)		
Segments: Road #23 -Charles Duncan O'Neal Phase 2 Road #15 -Charles Duncan O'Neal Phase 3 Road #4 - Charles Duncan O'Neal Phase 1 Road #7 - ABC Highway Phase 1 Road #12 - ABC Highway Phase 2	#23	5.15	#23	3.34	Specialized equipment (roughness meter) - Responsibility of PEU of the Ministry of Transport and Work
	#15	8.54	#15	3.32	
	#4	8.47	#4	3.39	
	#7	5.74	#7	3.28	
	#12	4.09	#12	3.28	

Output indicator	Base	Year 1	Year 2	Year 3	Year 4	Year 5	Target	Comments
<b>Component 1: Civil works</b>								
Km of inter-urban roads built or maintained/upgraded	(Km rehabilitated <sup>1</sup> in sample projects) 0 km	0 km	6 km	8.8 km	0 km	0 km	31.0 km	Semiannual progress report. Sector indicator: Output Contribution, as defined in Results Framework (CRF) of IDB-9) (aggregated).
	(Km rehabilitated not included in the sample) 0 Km	-	-	2.3 km	5.6 km	8.3 km		
<b>Component 2: Institutional Strengthening</b>								
Asset management system in place for 400 km	0	-	-	-	-	1	1	Semiannual progress report
Number of MTW staff technically trained by the program	Male 0	-	-	40	-	52	92	
	Female 0	-	-	10	-	13	23	

<sup>1</sup> Rehabilitation implies the structural or functional enhancement of a pavement by the works. Generally, the works remain within existing right-of-ways and do not require existing of the current roadway plan.

## **FIDUCIARY ARRANGEMENTS**

**Country:** Barbados  
**Project:** Road Rehabilitation and Improving Connectivity of Road Infrastructure  
BA-L1035  
**Executing agency:** Ministry of Transport and Works (MTW)  
**Prepared by:** Denise Salabie and Roy Parahoo (FMP/CBA)

### **I. EXECUTIVE SUMMARY**

- 1.1 The fiduciary management evaluation of the project was performed during the second quarter of 2015 using the Institutional Capacity Assessment System (ICAS) methodology, as well as through a series of interviews with the management team of the MTW. The evaluation indicates that the project has a low fiduciary risk, and as such, it is believed that the MTW, based on the current structures and fiduciary systems in place, has the capacity to execute the project as per loan agreement.
- 1.2 During the third quarter of 2013, an assessment of the public financial management system for use in projects, using the Inter-American Development Bank (IDB)'s tool for determining the level of development and use of Public Financial Management (PFM) systems was conducted. The assessment indicated a medium level of development of the public financial management subsystems of budgeting, treasury, accounting and reporting and internal audit. The main limitations relate to the narrow capacity of the budget classification system that is used to facilitate accounting and reporting on projects in a manner that is adequate for: (i) monitoring project execution and expenditures; and (ii) the partial implementation of the internal audit function in the central government.
- 1.3 Notwithstanding the limitations noted in the public financial management system, it is recommended that the project uses: (i) the country's PFM system, Smart Stream, to facilitate the financial administration of the project, supplemented by an off the shelf accounting software for financial reporting, should the Smart Stream's project reporting capability not be implemented in time for the start of project execution; and (ii) the Barbados audit office for external audit, depending on availability and staffing capacity/complement. If unavailable, a firm of independent public accountants acceptable to the Bank should be contracted.
- 1.4 The total cost amount of the program is US\$25 million and, will be drawn from the Ordinary Capital (OC) of the Bank. The financing will have amortization periods of 25 years; and grace period of 5.5 years and it will be managed by the IDB and as such will be guided by the IDB's fiduciary policies and procedures.

### **II. EXECUTING AGENCY'S FIDUCIARY CONTEXT**

- 2.1 The MTW is guided by the Financial Management and Audit Act (FMAA), for financial management and procurement and uses the country's integrated financial management system, Smart Stream, which applies computerized and decentralized procedures. The system integrates budget, treasury and accounting functions and allows for a centralized payment and funds control system.
- 2.2 The fiduciary management model used by central government agencies, including MTW, is decentralized for operational procedures, but centralized for approvals and

processing of procurement and personnel-related issues based on the amount and/or type of the expenditure.

- 2.3 The government procedures and Smart Stream system adequately facilitates project financial management in the areas of treasury, accounting and internal control functions. Whilst the Smart Stream system is able to report at the aggregate level on projects as a whole, it is unable to report on projects based on source of funding and project component. Notwithstanding this limitation, the government is undertaking an exercise to enhance the financial reporting function of Smart Stream so that it is better able to facilitate project execution, monitoring and reporting.

### III. FIDUCIARY RISK ASSESSMENT AND MITIGATING ACTIONS

- 3.1 The overall fiduciary risk of the project is deemed to be low. Notwithstanding this, there were a few risks as outlined below that were deemed medium risk and which could impact on the project. These risks however do not affect the overall risk of the project:

**Table 1.Mitigation risk and rating**

Risk	Risk rating	Mitigation measures
Limited availability of reliable and timely financial information for decision making	Medium	The Ministry of Finance and Economic Affairs should be requested to customize the country Public Financial Information Management (PFM) system, Smart Stream, to facilitate project reporting so that it meets IDB minimum requirements for project financial reporting. If the customization of Smart Stream is not possible, an off the shelf accounting package should be procured and used to supplement the financial reporting aspect of smart stream. <b>Responsibility for implementation:</b> PEU/Borrower <b>Timeline for implementation:</b> Prior to 1 <sup>st</sup> disbursement of the loan
Lack of awareness of IDB procurement, disbursements and financial reporting procedures	Medium	Create capacity within the PEU through training on IDB's procurement, financial management procedures and requirements <b>Responsibility for implementation:</b> IDB <b>Timeline for implementation:</b> during project design and throughout project execution
Delays in acquisitions or impossibility of making them	Medium	Training in IDB policies and procedures for procurement <b>Responsibility for implementation:</b> IDB <b>Timeline for implementation:</b> during project design and throughout project execution

### IV. ASPECTS TO BE CONSIDERED IN THE SPECIAL CONDITIONS OF THE CONTRACT

- 4.1 To facilitate the execution of the operation, outlined below are agreements and requirements which should be incorporated into the special conditions:
- a. **Special conditions: precedent to first disbursement**, to include the following requirements: (i) The submission of an operations manual for the project, which includes details of the fiduciary management and internal control system of the project; and (ii) The appointment of the project accountant to the Project Execution Plan (PEU).
  - b. **Rate of exchange agreed with the executing agency**. For purposes of determining the equivalency of expenditures incurred in local currency of the reimbursement of expenditures chargeable to the loan, the agreed exchange rate shall be the exchange rate on the effective date on which the borrower, the Executing Agency (EA), or any other person or legal entity in whom the power to incur expenditures has been vested makes the related payments to the contractor, supplier or beneficiary.

- c. **Audited financial statements and reports.** Annual Audited Financial Statements (AFS) of the project are to be submitted to the Bank within 120 days after the close of each fiscal period of the EA, in addition to final audited financial statements, which are due for submission to the Bank within 120 days of the close (last disbursement date) of the project. The AFS should be duly audited by a firm of independent public accountants acceptable to the Bank or the Barbados audit office (subject to availability).
- d. **Disbursement restrictions.** Pursuant to Document AB-2990, disbursement by the Bank of resources will be subject to the following maximum limits: (i) up to 15% during the first 12 months; (ii) up to 30% during the first 24 months; and (iii) up to 50% during the first 36 months. All these periods will be counted from the time the loan operation is approved by the Board of Executive Directors. These limitations may be rendered inapplicable to the extent that the requirements set forth in the Bank's policy regarding said limitations have been fulfilled, provided that the borrower has been notified of the same in writing.

## V. FIDUCIARY ARRANGEMENTS FOR PROCUREMENT EXECUTION

- 5.1 Procurement for the proposed project will be carried out in accordance with the Policies for the Procurement of Works and Goods Financed by the IDB (GN-2349-9) and the Policies for the Selection and Contracting of Consultants Financed by the IDB (GN-2350-9), and with the provisions established in the loan contract and these procurement fiduciary arrangements.
  - a. **Procurement of works, goods and non-consulting services.** The contracts for works, goods, and non-consulting services<sup>1</sup> generated under the project and subject to international competitive bidding will be executed through the use of the Standard Bidding Documents (SBDs) issued by the Bank. The processes subject to National Competitive Bidding (NCB) will be executed through the use of bidding documents based on the above mentioned standard documents and satisfactory to the Bank. The technical specifications review during the preparation of the selection process is the responsibility of the project sector specialist.
  - b. **Selection and contracting of consultants.** The consulting services contracts generated under this project will be selected and contracted using the Standard Request for Proposals (SRFPs) issued by the Bank, when advertising at the international level and a document satisfactory to the Bank when advertising at the local level. The review of terms of reference for the selection of consulting services is the responsibility of the project sector specialist.
  - c. **Selection of individual consultants.** The contracting of individual consultants will be carried out using procedures as per Section 5 of Policies GN-2350-9. Posting of opportunities for individual consultant contracts may be advertised internationally or locally in order to attract qualified individuals.
  - d. **Training.** Training will be provided to MTW staff in charge of the financial management and procurement execution prior to starting activities and based on the annual operations plan.

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<sup>1</sup> Policies for the Procurement of Goods and Works Financed by the IDB ([GN-2349-9](#)), Paragraph 1.1: The services different to consulting services have a similar process as procurement of Goods. The exchange rate considered was 1 US dollar=2 BA dollars.

- e. **Recurrent expenses.** The project contains coverage of recurrent expenses that are required to start and maintain the project during execution and will be financed by the project within the annual budget approved by the Bank and Barbados financial parameters.
- f. **Retroactive financing.** None.
- g. **Thresholds.** In US\$ thousands.

Works		Goods*		Consulting services	
International competitive bidding	Shopping	International competitive bidding	Shopping	International advertising	100% national short list
≥3,000	≤150	≥150	≤50	>200	<200

\* Including different services other than consulting.

## 5.2 Main procurement activities:

Activity	Procurement method	Estimated date	Estimated amount 000'US\$
<b>Goods</b>			
Lab Equipment	Shopping	1Q2018	80
<b>Consulting firms</b>			
Supervision sample projects	FBS	2Q2016	400
supervision global projects	FBS	3Q2017	600
Designs services global projects	QCBS	2Q2016	200
Priorized Interventions for MTW	QCBS	2Q2016	250
<b>Works</b>			
Road works sample projects	ICB	2Q2016	8,500
Road works global projects	ICB	3Q2017	13,000

- 5.3 **Procurement supervision.** The supervision method for procurement execution will be established ex ante.

## VI. FIDUCIARY ARRANGEMENTS FOR FINANCIAL MANAGEMENT

- 6.1 **Programming and budget.** Each year, the Ministry of Finance and Economic Affairs publishes a budget circular requesting the submission of estimates of income and expenditure from ministries and other agencies for inclusion in the national budget for the following fiscal year, April to March.
- 6.2 The PEU will prepare annual estimates in the required format for the review and approval by the permanent secretary of the MTW, which will be included in the MTW's overall budget estimates. The estimates will consider the total cost of financing required for execution of the program. The budget (appropriation bill) is presented to Parliament before the close of the fiscal year. Once the budget is approved, amendments are made through the submission of supplementary appropriation bills by the Minister of Finance.

- 6.3 It is anticipated that the borrower will commit to allocate, for each fiscal year of project execution, adequate fiscal space to guarantee the unfettered execution of the project.
- 6.4 **Accounting and information systems.** Project accounting will be performed using the Government's financial management system (Smart Stream), and in accordance with the financial management and audit Act, IDB financial management requirements and the International public sector accounting standards, when applicable. It is expected that the financial management system of the project will facilitate the recording and classification of all financial transactions, provide information related to: planned versus actual financial execution of the project. Should the Smart Stream system not have the capacity to report in accordance with the Bank's requirements, it will be supplemented with financial reporting software.
- 6.5 The MTW, via the PEU, will have responsibility for financial management of the loan financing in the project currency, US\$.
- 6.6 **Disbursements and cash flow.** Treasury authorized bank accounts with the Central Bank of Barbados will be used for the management of loan resources. An account should be established to manage and maintain the loan resources.
- 6.7 The Bank will disburse the project resources according to the true liquidity needs of the project, as evidenced by the current and anticipated commitments and obligations of the project. The following disbursement methodologies will be used for the project:
- a. Advance of funds (it is anticipated that this methodology will be mainly used).
  - b. Direct payment to supplier.
  - c. Reimbursement of payments made.
- 6.8 Advance of funds when used, will be based on the liquidity needs of the project for a period not exceeding six months. Subsequent advances may be disbursed once 80% of the total accumulated balance pending justification has been submitted and accepted by the Bank.
- 6.9 Disbursements will be processed using the ex post methodology.
- 6.10 It is expected that the Bank's eDisbursements system, which will facilitate the electronic submission of disbursement requests to the Bank, will be used for the project. Final determination of its use will be determined based on the readiness of the PEU and a cost-benefit analysis to be conducted.
- 6.11 As Barbados will not have an Independent Assessment of Macroeconomic Conditions (IMAC) at the time the loan proposal for this project is distributed to the Board, disbursements for the first three years will follow the criteria established by the macro-economic safeguards of the IDB. See paragraph 4.1 (d) of this annex for details.
- 6.12 **Internal control and internal audit.** The MTW will (i) assume the responsibility for designing and implementing a sound system of internal controls for the project, and; (ii) include the project in the audit work plan of the internal audit department.
- 6.13 **External control and reports.** The EA will be required to submit audited financial statements. See paragraph 4.1 (c) of this annex for details. The financial statements will be audited by a firm of independent public accountants acceptable to the Bank or the Barbados audit office (subject to availability). Should the option of a private audit firm be selected, the selection should be done through a competitive process and in accordance with the Bank's procurement procedures for audit (Document AF-200)

- 6.14 **Financial supervision plan.** The initial financial supervision plan of the project will focus on: (i) activities related to the implementation and follow-up of arrangements and systems being implemented for the fiduciary management of the project; (ii) follow-up on the implementation status of risk mitigating measures; and (iii) capacity building of PEU personnel in the Bank's procedures and requirements.
- 6.15 **Execution mechanism.** The EA will be the MTW, which will implement the program through its Project Management Department (PMD). This department is currently staffed with project management, engineering, quantity/land surveying, and field staff. A MTW staff has been identified to carry out procurement functions and the post of project accountant is expected to be filled as a condition prior to first disbursement of the loan.
- 6.16 The PMD will be responsible for the fulfillment of technical, administrative, procurement and financial management related to execution, as well as the planning, monitoring, supervision and evaluation functions.
- 6.17 The responsibilities of the EA in the execution of the program include the following: (i) to carry out the procurement processes in accordance with the Bank's policies and procedures; (ii) to prepare and obtain Bank approval for all bidding documents required to hire the civil work contractors and consulting firms; (iii) to carry out the financial management of the program resources, including the performance of internal control and registration of all administrative and accounting procedures needed for the program execution; (iv) to monitor the civil works and construction contracts through consulting firms specifically hired to that effect; (v) to maintain adequate accounting and financial controls as well as appropriate support documentation filing systems for verification by the Bank and the external auditing firm; (vi) to prepare and submit to the Bank disbursement requests and corresponding justification of expenses; (vii) to prepare and submit to the Bank reports on the progress of the program's execution, as well as updates of the annual operations plan, audited financial reports, and other financial reports as required by the Bank; (viii) to record and control the results of the program through the agreed indicators; and (ix) to address and resolve contractor claims and related contract adjustments. In addition, the EA will maintain separate files for the operations of the program, and allow for financial and accounting monitoring of the Bank and local counterpart resources, in accordance with Bank requirements. Details of all execution arrangements will be elaborated in an Operations Manual (OM) to be prepared for the program.

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-\_\_\_/15

Barbados. Loan \_\_\_\_/OC-BA to the Government of Barbados  
Road Rehabilitation and Improving Connectivity of  
Road Infrastructure

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 Government of Barbados, as Borrower, for the purpose of granting it a financing to cooperate in the execution of a road rehabilitation and improving connectivity of road infrastructure program. Such financing will be for the amount of up to US\$25,000,000 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 \_\_\_\_\_)