



CARIBBEAN DEVELOPMENT BANK

**NOTIFICATION OF APPROVAL BY THE PRESIDENT OF A
TECHNICAL ASSISTANCE GRANT**

**COASTAL HIGHWAY UPGRADING – FEASIBILITY STUDY AND PREPARATION
OF DETAILED DESIGNS – BELIZE**

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Notified at the Two Hundred and Seventy-Fourth Meeting of the Board of Directors on December 8, 2016

BD 139/16

*Director
Projects Department*

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DECEMBER 2016

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CARIBBEAN DEVELOPMENT BANK

TWO HUNDRED AND SEVENTY-FOURTH MEETING OF THE BOARD OF DIRECTORS

TO BE HELD IN BARBADOS

DECEMBER 8, 2016

PAPER BD 139/16

**NOTIFICATION OF APPROVAL BY THE PRESIDENT OF A GRANT –
TECHNICAL ASSISTANCE – COASTAL HIGHWAY UPGRADING – FEASIBILITY STUDY
AND PREPARATION OF DETAILED DESIGNS – BELIZE**

In accordance with the authority delegated by the Board of Directors at its Two Hundred and Seventieth Meeting (Minute 270.32), the President approved a Grant of one million Pounds Sterling (£1,000,000) from the Special Funds Resources of the Caribbean Development Bank (CDB), allocated from funds provided by the United Kingdom through the Department for International Development to CDB under the United Kingdom Caribbean Infrastructure Partnership Fund to the Government of Belize to assist in meeting the cost of consultancy services to update a feasibility study and prepare detailed designs, for the upgrading of the Coastal Highway and associated bridge and drainage works, on the terms and conditions referred to in the attached Paper.

2. It is a condition of the aforementioned authority that each project approved by the President and the terms and conditions thereof be reported to the Board at its first convenient scheduled Meeting after approval of the project.
3. The Board is therefore asked to note the approval by the President of the abovementioned project and the terms and conditions thereof.

TECHNICAL ASSISTANCE

COASTAL HIGHWAY¹ UPGRADING - FEASIBILITY STUDY AND PREPARATION OF DETAILED DESIGNS – BELIZE

1. APPLICATION

1.01 By letter dated April 1, 2016, the Government of Belize (GOBZ) through the Ministry of Economic Development, Petroleum, Investment, Trade and Commerce submitted a request to the Caribbean Development Bank (CDB) to assist in financing the updating of a feasibility study and the preparation of detailed designs for the upgrading of the Coastal Highway between the George Price (GP) and Hummingbird Highways.

1.02 The beneficiary of this Technical Assistance (TA) project will be GOBZ and the implementing agency will be the Ministry of Works (MOW).

1.03 The total cost of the TA is estimated at one million, one hundred and fifty thousand Pounds Sterling (£1,150,000). CDB's contribution will be a TA grant in an amount of one million Pounds Sterling (£1,000,000) from the Special Funds Resources (SFR) of CDB, allocated from funds provided by the United Kingdom through the Department for International Development (DFID) to CDB under the United Kingdom Caribbean Infrastructure Partnership Fund (UKCIF). Counterpart funding, of an amount not exceeding the equivalent of one hundred and fifty thousand Pounds Sterling (£150,000), will be provided by GOBZ.

2. BACKGROUND

2.01 The country of Belize is the only official English-speaking country in Central America. With a population of 377,968² and an area of approximately 2.3 million hectares, Belize has the lowest population density in Central America. The climate is tropical, very hot and humid, with a dry season running from February to May, a rainy season from May to November and a cool transitional period between November and February.

2.02 Belize's road network is divided into 603 km of arterial roads (mainly consisting of the Hummingbird, Southern, Philip S. W. Goldson and GP Highways); 783 km of distributor roads; 2,160 km of feeder roads (also called Farm or Sugar Roads); and 970 km of village streets. Approximately 18% of the total network is paved, of which 65% is in good and 35% in fair condition. The road network includes a total of 313 bridges. Large sections of the road network are subject to flooding during the rainy season. This is as a result of the country's low lying topography together with inadequate maintenance and rehabilitation works, limited land use planning and insufficient drainage infrastructure. Moreover, until recently, road designs have not taken into account the increasing impacts of natural hazards and climate change variability, as well as road safety.

2.03 The Coastal Highway is currently considered a distributor or secondary road and provides an alternative link for vehicles travelling between the northern and southern districts. The 59 km gravel road connects the GP Highway (at Mile 30 and the village of La Democracia) to the Hummingbird Highway (at Mile 9 and the village of Hope Creek). The route of the roadway is mostly low lying and has inadequate drainage. It passes through the Central Belize Jaguar Corridor and the Manatee Forest

¹ Also known as Manatee Road.

² Statistical Institute of Belize 2016 Mid-Year Estimate

Reserves, which are protected areas. There are two villages along the corridor, Gales Point Manatee and Mullins River³, which are located approximately 1.5 km and 3 km respectively off the Highway. Economic activity in these villages is primarily fishing and subsistence farming. There are 20 existing timber, steel and reinforced concrete single and dual-lane bridges along the road, with spans ranging from 5 to 64 metres. The reconstruction of Mullins River Bridge has recently been completed with CDB financing, after being destroyed in June 2008 during Tropical Storm Arthur⁴. Traffic on the road is currently light, due to its poor condition and due to the delay in the reconstruction of the Mullins River Bridge. A feasibility study completed in 2000 identified that upgrading the road would generate significant economic benefits associated with reduced travel times and the opening up of new opportunities for agricultural and tourism developments, however, the project was deferred due to budgetary constraints. A map indicating the location of the Coastal Highway is presented at Figure 1.

3. PROPOSAL

3.01 It is proposed that CDB provide a TA grant to the GOBZ in an amount of £1,000,000 from its SFR allocated from UKCIF, to assist GOBZ in engaging the services of consultants to update a feasibility study and prepare detailed designs for the upgrading of the Coastal Highway to facilitate improved access between GP and Hummingbird Highways. UKCIF resources will be managed under standard CDB systems, policies, procedures and guidelines. The proposed TA is consistent with:

- (a) The purpose and objectives of UKCIF.
- (b) CDB's Strategic Objective of supporting inclusive and sustainable growth and development within its Borrowing Member Countries.
- (c) CDB's Corporate Priority of strengthening and modernising social and economic infrastructure.
- (d) CDB's TA Policy and Operational Strategy of commitment to strengthening the synergies between TA operations and the Bank's investment lending.
- (e) CDB's Gender Policy and Operational Strategy.
- (f) GOBZ's main objectives for the road transportation sector are: to make key investments to improve access to services through the expansion of road infrastructure; and to integrate road safety, natural hazard resilience and climate change and variability considerations into road investment projects.
- (g) Sustainable Development Goals (SDGs) 6, 9 and 13⁵.

4. OUTCOME

4.01 The outcome of this intervention is to establish technically viable solutions to upgrade the Coastal Highway so that it can support economic development, positive social impacts and greater climate change resilience, through the updating of the feasibility study and the preparation of detailed designs. This will

³ With populations of approximately 250 and 100 respectively.

⁴ Natural Disaster Management Bridge Rehabilitation (Tropical Storm Arthur), Paper BD 74/08.

⁵ SDG 6: Ensure available and sustainable management of water and sanitation for all. SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation. SDG 13: Take urgent action to combat climate change and its impacts

be complemented by social and gender interventions based on a Social and Gender Impact Assessment which will enhance the social and gender outputs of the infrastructure project. The goal is not only to have a technically viable solution but also a socially important project. A Design and Monitoring Framework Matrix for this Project is included in Appendix 1.

5. JUSTIFICATION

5.01 Upgrading of the road is expected to significantly contribute to the economic development in both Belize and Stan Creek Districts, through improving access for the agricultural and tourism sectors, and improve the efficiency in the north-south movement of goods to the country's ports. The Coastal Highway could provide a vital alternative communication link between GP and Hummingbird Highways, by reducing travel distances by 45 km. Because of the potential time savings, its relatively flat topography and straighter geometry, it was identified as the preferred north-south alignment for the Plan Puebla Panama Route⁶ through Belize. Significant portions of the road are low lying and prone to flooding, which is expected to be exacerbated by climate change. The upgrading of the road will lead to better access to services and economic opportunities for the communities of Gales Point Manatee and Mullins River. This will yield important social and gender benefits (e.g. time savings, and employment in the agricultural and tourism sectors).

5.02 The proposed TA intervention will assist MOW in identifying the least cost option to upgrading the Coastal Highway (including providing an all-weather driving surface and improving the geometry and drainage features), and in preparing detailed designs in order to facilitate the appraisal and financing of a capital project.

5.03 Based on CDB's TA Performance Rating System, the Project has been assessed as highly satisfactory with a score of 3.5. (Appendix 2 refers). This suggests that it is likely to contribute to development effectiveness.

5.04 The Project is assessed as gender mainstreamed and has significant potential to contribute to gender equality. The Project includes TOR for a detailed gender analysis and is expected to inform the design of a capital project proposal with explicit gender interventions which would impact economic and social outcomes for women and men. Table 5.1 presents the Gender Marker for the Project and Appendix 3 shows the Gender Marker Analysis.

TABLE 5.1: GENDER MARKER SUMMARY

Gender Marker	Analysis	Design	Implementation	M&E*	Score	Code
	0	1	1	1	3	GM ⁷

*M&E – Monitoring and Evaluation

6. EXECUTION

6.01 MOW will coordinate and oversee project implementation. It will be a condition precedent to first disbursement of the grant that GOBZ shall assign the day-to-day coordination and implementation of the Project to a MOW staff member as a Project Coordinator (PC), whose qualifications and experience are acceptable to CDB. The responsibilities of the PC are set out at Appendix 4.

⁶ An initiative of the Mesoamerica Integration and Development Project to link the road transportation networks of Central American countries.

⁷ Gender Mainstreamed: the project has significant potential to contribute to gender equality.

6.02 A consulting firm with expertise in road and bridge engineering, hydrology, climate change risk and vulnerability assessment, disaster risk management, environmental and social impact assessments, will be contracted to update the feasibility study and prepare the detailed design services. The Terms of Reference (TOR) for the Feasibility Study and Detailed Designs Consultancy (FSDC) is attached at Appendix 5. The consultancy has an estimated duration of 12 calendar months. It is expected that the first disbursement of the grant will be made by March 31, 2017. The grant is expected to be fully disbursed by June 30, 2018.

6.03 GOBZ will be required to collect and store, in a location accessible to the consultants, all existing, maps, reports, drawings, studies and any other relevant documentation required for the consultant, including data created as a result of the Project.

7. COST AND FINANCING

7.01 The total cost of the Project is estimated to be £1,150,000 and is detailed in the Budget at Appendix 6. The Summarised Financing Plan is set out Table 7.1 below.

TABLE 7.1: SUMMARISED FINANCING PLAN
(£)

Item	CDB	GOBZ	Total
Professional Fees Airfare, accommodation and local transportation			
Surveys and Investigations Project Management, office accommodation and miscellaneous expenses	900,000	150,000	
Sub-total	900,000	150,000	1,050,000
Contingency	100,000	-	100,000
Total	1,000,000	150,000	1,150,000
%	85	15	100

7.02 CDB will fund the professional fees, surveys and investigations, per diem, and travel, which account for 85% of the costs or £1,000,000. The cost of the assignment is reflective of current rates for similar services. GOBZ will meet the remaining 15% of the costs or the equivalent of £150,000, in kind, which will consist of local project management, office accommodation, and miscellaneous expenses.

7.03 CDB's contribution in the amount of £1,000,000, is eligible for financing from CDB's SFR, UKCIF.

8. PROCUREMENT

8.01 The contract for the FSDC shall be procured in accordance with CDB's Guidelines for the Selection and Engagement of Consultants by Recipients of CDB Financing (October 2011). Further details of the procurement arrangements are provided in the Procurement Plan presented at Appendix 7.

9. REPORTING REQUIREMENTS

9.01 The PC will be required to submit to CDB a quarterly report and the Consultant's Reports required by the TOR.

10. RISK ASSESSMENT AND MITIGATION

10.01 Some risks have been identified which could have an effect on the implementation of the Project and are presented in Table 10.1 below.

TABLE 10.1: RISK AND MITIGATION

Risk Type	Sub Risk	Description of Risk	Mitigation Measures
Financial	Market	Risk that the value of the funds programmed by CDB for the country will diminish as a result of adverse Pounds Sterling (GBP) exchange rate against the United States Dollar (USD), the primary currency for budgeting.	Sufficient contingency has been added to compensate for foreign exchange risk.
Operational	Reputation	Potential reputational risk to CDB if the funds programmed fall short, as a result of adverse movements in GBP exchange rates against the USD.	During supervision CDB staff will ensure that GOBZ is aware of the risk.

11. LOANS COMMITTEE RECOMMENDATION

11.01 Loans Committee considered this proposal on November 18, 2016 and agreed to recommend it for the approval of the President.

12. RECOMMENDATION

12.01 It is recommended that the President approves a grant to GOBZ of one million Pounds Sterling (£1,000,000) (the Grant) from CDB's SFR, allocated from UKCIF resources to assist GOBZ in financing consultancy services to update a feasibility study and prepare the detailed designs for the upgrading of the Coastal Highway between the George Price and Hummingbird Highways in accordance with the TOR set out at Appendix 5 (the Project), on CDB's standard terms and conditions, and on the following terms and conditions:

(1) **Disbursement**

- (a) Except as CDB may otherwise agree, and subject to paragraph (b) below, the Grant shall be paid by CDB to GOBZ as follows:
- (i) an amount not exceeding the equivalent of one hundred thousand Pounds Sterling (£100,000) (the Advance) shall be paid by CDB to GOBZ as an advance on account of expenditure in respect of the Project, after receipt by CDB of:
 - (aa) a request in writing from GOBZ for such funds;
 - (bb) a copy of the signed contract between GOBZ and the consultants engaged to carry out the FSDC (the Consultants); and
 - (cc) evidence acceptable to CDB that the conditions precedent to first disbursement of the Grant set out at paragraph (3) below have been satisfied; and
 - (ii) the balance of the Grant shall be paid to GOBZ periodically after receipt by CDB of an account and documentation satisfactory to CDB, in support of expenditures incurred by GOBZ in respect of, and in connection with, the Project.
- (b) Provided, however, that CDB shall not be under any obligation to make:
- (i) the first payment pursuant to paragraph 1(a)(ii) above, until CDB shall have received an account and documentation, satisfactory to CDB, in support of expenditures incurred by GOBZ in respect of the Advance;
 - (ii) any payment pursuant to paragraph 1(a)(ii) above until CDB shall have received the requisite number of copies of the reports or other deliverables, in form and substance acceptable to CDB, to be furnished for the time being by the Consultants to GOBZ and CDB in accordance with the TOR set out at Appendix 5; and
 - (iii) payments exceeding nine hundred thousand Pounds Sterling (£900,000), representing ninety percent (90%) of the amount of the Grant, until CDB shall have received:
 - (aa) the requisite number of copies of the final report or other deliverables, in form and substance acceptable to CDB, to be furnished by the Consultants to GOBZ and CDB in accordance with the TOR set out at Appendix 5; and
 - (bb) a certified statement of the expenditures incurred by GOBZ in respect of, and in connection with, the Project.

- (c) The first disbursement of the Grant shall be made by March 31, 2017 and the Grant shall be fully disbursed by June 30, 2018, or such later date as CDB may from time to time specify in writing.

(2) **Procurement**

- (a) Procurement shall be in accordance with the procedures set out and/or referred to in the Agreement between CDB and GOBZ providing for the Grant, or such other procedures as CDB may from time to time specify in writing.
- (b) The Procurement Plan approved by CDB is set out at Appendix 7. Any revisions to the Procurement Plan shall require CDB's prior approval in writing.

(3) **Condition Precedent to First Disbursement of the Grant:**

PC referred to in sub-paragraph 4(b)(i) shall have been assigned.

(4) **Other Conditions**

- (a) Except as CDB may otherwise agree, GOBZ shall implement the Project through MOW;
- (b) GOBZ shall:
 - (i) assign from within MOW for the duration of the Project, a PC, with qualifications and experience acceptable to CDB, who shall be responsible for the day to day coordination and implementation of the Project, and shall carry out the duties and responsibilities set out in Appendix 4. The qualifications and experience of any person subsequently assigned as PC shall be acceptable to CDB;
 - (ii) in accordance with the procurement procedures applicable to the Grant, select and engage consultants to undertake the FSDC in accordance with the TOR at Appendix 5 and within a time frame acceptable to CDB implement such recommendations arising from the FSDC as may be acceptable to CDB;
 - (iii) collect and store, in a location accessible to the Consultants, all existing, maps, reports, drawings, studies and any other relevant documentation required by the FSDC, including the data created as a result of the Project;
 - (iv) except as CDB may otherwise agree, furnish or cause to be furnished to CDB:
 - (aa) a quarterly report; and
 - (bb) the reports or other deliverables, in form and substance acceptable to CDB, to be furnished by the Consultants to GOBZ and CDB in accordance with the TOR at Appendix 5;

- (v) ensure that the contract with the Consultants provides for the acknowledgement of, and that each deliverable produced by the Consultants under the Project contains, a visibility statement acknowledging that the technical assistance has been provided by UKaid and that the UKaid logo is utilised;
 - (vi) facilitate and permit, during implementation of the Project, and up to the year 2025, any authorised representative of CDB or DFID to conduct investigations of credible suspicion of or actual fraud, corruption or any other financial irregularity, impropriety or wrong doing and if necessary request an appropriate refund in accordance with sub-paragraph 4(d) below; and
 - (vii) permit CDB, or any person appointed thereby, to audit the expenditures financed by the Grant, and to provide CDB, or the appointed person with all reasonably required assistance, documents and information.
- (c) Except as CDB may otherwise agree, GOBZ shall:
- (i) meet or cause to be met:
 - (aa) the cost of the items designated for financing by GOBZ in the budget for the Grant set out in Appendix 6 (the Budget);
 - (bb) any amount by which the cost of the Project exceeds the amount set out in the Budget; and
 - (cc) the cost of any other items needed for the purpose of, or in connection with, the Project; and
 - (ii) provide or cause to be provided, all other inputs required for the punctual and efficient carrying out of the Project not being financed by CDB.
- (d) CDB shall be entitled to suspend, cancel or require a refund of the Grant, or any part thereof, if UKCIF resources or any part thereof is suspended, cancelled or required to be refunded, except that GOBZ shall not be required to refund any amount of the Grant already expended in connection with the Project and not recoverable by GOBZ, unless that amount already expended was misappropriated due to a proven fraudulent, unethical or other activity of wrong doing.

13. APPROVAL

Signed: W^m Warren Smith
President
Caribbean Development Bank

November 28, 2016
Date

SUPPORTING DOCUMENTATION

- Appendix 1: - Design and Monitoring Framework Matrix
- Appendix 2: - Performance Rating System
- Appendix 3: - Gender Marker Analysis
- Appendix 4: - Duties and Responsibilities of the Project Coordinator
- Appendix 5: - Draft Terms of Reference – Consultancy Services for the Updating of a Feasibility Study and the Preparation of Detailed Designs for the Upgrading of the Coastal Highway
- Annex 1 to Appendix 5 - Social Assessment and Gender Analysis
- Appendix 6: - Budget
- Appendix 7: - Procurement Plan

- Figure 1 - Project Location Map

DESIGN AND MONITORING FRAMEWORK MATRIX

Narrative Summary	Indicators			Means of Verification	Assumptions
<p>1. <u>IMPACT:</u></p> <p>A capital project which will contribute to improved access between the northern and southern districts of Belize.</p>	<p>Project design is utilised by GOBZ/MOW to inform the implementation of Capital Project approved by January 2019.</p>			<p>Project Appraisal Report.</p>	<p>Financing for the capital project is available.</p>
<p>2. <u>OUTCOME:</u></p> <p>GOBZ/MOW has a technically, economically feasible design with significant social and gender effects that will result in improved access between the northern and southern districts of Belize, less travel time and better access to services and economic opportunities.</p>	<p>Acceptance by GOBZ/MOW of project proposal, including social and gender interventions, by October 31, 2018.</p>			<p>PC Reports.</p>	<p>GOBZ priorities remain unaltered.</p>
<p>3. <u>OUTPUTS:</u></p> <p>Recommendations for upgrading the Coastal Highway provided and costed.</p>	<p>Detailed Design Report accepted by GOBZ, MOW and CDB by March 2018.</p>			<p>1. Consultant's Reports. 2. PC Reports. 3. CDB Supervision Reports.</p>	<p>Recommendations of the consultants accepted by GOBZ/MOW and other stakeholders.</p>
<p>4. <u>ACTIVITIES/INPUTS</u></p>	<p align="center">£</p>			<p>1. Consultants selected and engaged. 2. CDB disbursement records.</p>	
<p>Item</p>	<p align="center">CDB</p>	<p align="center">GOBZ</p>	<p align="center">Total</p>		
<p>1. Professional Fees</p>					
<p>2. Airfare, accommodation and local</p>	<p align="center">900,000</p>	<p align="center">150,000</p>			
<p>3. Surveys and investigations</p>					
<p>4. Project Management</p>					
<p>Sub-total</p>	<p align="center">900,000</p>	<p align="center">150,000</p>	<p align="center">1,050,000</p>		
<p>5. Contingency</p>	<p align="center">100,000</p>	<p align="center">-</p>	<p align="center">100,000</p>		
<p>Total Project Cost</p>	<p align="center">1,000,000</p>	<p align="center">150,000</p>	<p align="center">1,150,000</p>		
<p>%</p>	<p align="center">85</p>	<p align="center">15</p>	<p align="center">100</p>		

PERFORMANCE RATING SYSTEM

Criteria	Score	Justification
Relevance	4	The Coastal Highway could provide a vital alternative communication link between the GP and Hummingbird Highways, reducing travel distances by 45 km and significantly contribute to the economic development in both Belize and Stan Creek Districts. The proposed consultancy examines the viability of options towards this objective. It is consistent with CDB's strategic and corporate objectives.
Efficacy	4	The proposed consultancy will address engineering, economic, social, environmental and disaster risk reduction, and climate resilience considerations.
Efficiency	4	The expected cost of the consultancy has been based on current professional rates, and given the expected level of capital investment, is considered reasonable.
Sustainability	3	The proposed approach provides for a high degree of stakeholder consultation to ensure ownership of the outputs. Designs will incorporate climate change variability considerations.
Overall Score	3.5	Highly Satisfactory

GENDER MARKER ANALYSIS

Project Cycle Stage	Criteria	Score
Analysis: Introduction/ Background/ Preparation	Consultations with women/girls/men/boys and relevant gender-related or sector-related public or private organisations have taken place.	0
	Social analysis identifies gender issues and priorities.	0
	Macroeconomic analysis identifies gender issues and priorities.	0
Design: Project Proposal/ Definition/ Objective/ Description	To address the needs of women/girls and men/boys concrete interventions to reduce existing gender disparities have been designed. Effect on project outcome is direct.	0.5
	Project objective / outcome includes gender equality.	0.5
Implementation: Execution	Implementation arrangements (gender mainstreaming capacity building or gender expertise in implementing agency) to enhance the gender capacity of the implementing agency. Effect on project outcome is indirect.	0.5 ¹
	TOR of project coordinating unit / project management unit include responsibilities of gender mainstreaming, especially at the levels of the project coordinator/director and the Monitoring and Evaluation (M&E) Officer.	0.5
Monitoring and Evaluation: Results-Monitoring-Framework (RMF)	Collection of sex-disaggregated data required for M&E (stated and budgeted in Project)	0.5
	At least one gender-specific indicator at the outcome and/or output level in the RMF.	0.5
Maximum Score:		3.0

Gender Mainstreamed: the project has significant potential to contribute to gender equality.

The Project is assessed as gender mainstreamed and has significant potential to contribute to gender equality. The Project includes TOR for a detailed gender analysis and is expected to inform the design of a capital project proposal with explicit gender interventions which would impact economic and social outcomes for women and men.

¹ Intervention benefits from a gender capacity building in the Ministry of Works as part of the Fifth Road (Philip S. W. Goldson Highway Upgrading) Project, Paper BD35/14

DUTIES AND RESPONSIBILITIES OF THE PROJECT COORDINATOR

1. PC will have day-to-day responsibility for project coordination and implementation, arranging contacts with all government and other personnel, project-related discussions, and supervision of the consultants.
2. PC will be responsible for coordinating and monitoring all aspects of the implementation of the Project, including the following:
 - (a) reviewing and finalising of TOR for consultancy services to be undertaken in the Project;
 - (b) ensuring that gender analysis resulting in proposed interventions to enhance gender equality is undertaken as part of the TOR;
 - (c) coordinating the selection and engagement of consultants;
 - (d) collecting all relevant background studies and information;
 - (e) supervising the implementation of the consultancy;
 - (f) organising stakeholder consultations;
 - (g) preparing and submitting claims to CDB for disbursement/reimbursement;
 - (h) submitting to CDB reports prepared by the consultants;
 - (i) updating the procurement plan as necessary and at least annually;
 - (j) submitting to CDB a report each quarter summarising progress, disbursement activities and forecasted expenditures to Project Completion; and
 - (k) preparing a Project Completion Report.

DRAFT TERMS OF REFERENCE

CONSULTANCY SERVICES FOR THE UPDATING OF A FEASIBILITY STUDY AND THE PREPARATION OF DETAILED DESIGNS FOR THE UPGRADING OF COASTAL HIGHWAY

1. BACKGROUND

1.01 The country of Belize is the only official English-speaking country in Central America. With a population of 377,968¹ and an area of approximately 2.3 million hectares, Belize has the lowest population density in Central America. The climate is tropical, very hot and humid, with a dry season running from February to May, a rainy season from May to November and a cool transitional period between November and February.

1.02 Belize's road network is divided into 603 km of arterial roads (mainly consisting of the Hummingbird, Southern, Philip S. W. Goldson and George Price (GP) Highways); 783 km of distributor roads; 2,160 km of feeder roads (also called Farm or Sugar Roads); and 970 km of village streets. Approximately 18% of the total network is paved, of which 65% is in good and 35% in fair condition. The road network includes a total of 313 bridges. Large sections of the road network are subject to flooding during the rainy season. This is as a result of the country's low lying topography together with inadequate maintenance and rehabilitation works, limited land use planning and insufficient drainage infrastructure. Moreover, until recently, road designs have not taken into account the increasing impacts of natural hazards and climate change variability, as well as road safety.

1.03 The Coastal Highway is currently considered a distributor or secondary road and provides an alternative link for vehicles travelling between the northern and southern districts. The 59 km gravel road connects the GP Highway (at Mile 30 and the village of La Democracia) to the Hummingbird Highway (at Mile 9 and the village of Hope Creek). The route of the roadway is mostly low lying and has inadequate drainage. It passes through the Central Belize Jaguar Corridor and the Manatee Forest Reserves, which are protected areas. There are two villages along the corridor, Gales Point Manatee and Mullins River², which are located approximately 1.5 km and 3 km respectively off the Highway. Economic activity in these villages is primarily fishing and subsistence farming. There are 20 existing timber, steel and reinforced concrete single and dual-lane bridges along the road, with spans ranging from 5 to 64 metres. The reconstruction of Mullins River Bridge has recently been completed with CDB financing, after being destroyed in June 2008 during Tropical Storm Arthur³. Traffic on the road is currently light, due to its poor condition and due to the delay in the reconstruction of the Mullins River Bridge. A feasibility study completed in 2000 identified that upgrading the road would generate significant economic benefits associated with reduced travel times and the opening up of new opportunities for agricultural and tourism developments, however, the project was deferred due to budgetary constraints. A map indicating the location of the Coastal Highway is presented at Figure 1.

2. OBJECTIVE

2.01 The objective of this technical assistance is to update the feasibility study and prepare preliminary and detailed designs to upgrade the Coastal Highway incorporating climate change, gender and safety considerations. This will be achieved through the identification of climate change vulnerabilities, assessment of hydrological and hydraulic conditions, assessment of geometric alignment, identification of

¹ Statistical Institute of Belize 2016 Mid-Year Estimate

² With populations of approximately 250 and 100 respectively.

³ Natural Disaster Management Bridge Rehabilitation (Tropical Storm Arthur), Paper BD 74/08.

least-cost civil works, and the preparation of detailed designs to facilitate improved access between the GP and Hummingbird Highways.

3. SCOPE OF WORK

3.01 The scope of services includes, but is not limited to:

(a) Corridor Characterisation and Data Collection

- (i) researching, collecting and analysing existing topographic, land use, hydrological, meteorological, geological, aerial imagery, and hazard event data and studies to characterise the corridor;
- (ii) determine existing and potential diverted traffic volumes on the road;
- (iii) principal hydrological attributes along the corridor should be defined;
- (iv) mapping of critical infrastructure and key land uses and economic activities along the corridor; and
- (v) site visits and field data collection, for data collection and for validation of existing topographic and socio-economic information, as required.

(b) Stakeholder Consultations

- (i) conducting consultative and participatory stakeholder meetings periodically at appropriate points of the Project with community leaders, community groups, residents, ministerial departments and agencies and any other relevant parties;
- (ii) conduct separate meetings for women and men in the communities and their representatives at the community and national level; and
- (iii) consultations should be undertaken with these entities regarding their perspectives, concerns, perceived current needs and priorities, as well as their input to and feedback on proposed designs and implementation.

(c) Feasibility Study

- (i) review previous feasibility study (2000) to upgrade the road;
- (ii) update feasibility level cost estimates;
- (iii) conduct traffic counts and origin and destination surveys and prepare projections to the year 2037. Review development plans and assess their impact on future traffic volumes and overall economic impact. Also consider the potential impacts of traffic diverted from the GP and Hummingbird Highways;
- (iv) use the Highway Development and Management (HDM) IV or Roads Economic Decision (RED) Model to evaluate improvement and maintenance options. Identify the relevant economic costs and benefits and determine the Net Present Value (NPV) for alternatives. An analysis period of 20 years and a

discount rate of 12% are required, and should consider multi-criteria considerations. Update financial and economic analysis from the feasibility study; and

- (v) update the feasibility study based on the revised traffic, potential economic benefits and revised costs to validate the continued feasibility.

(d) Climate Vulnerability Assessment and Hydrological Modelling

Identify and evaluate the potential effects of climate change on the road and the surrounding watersheds identify resilience measures to address the identified vulnerabilities. The consultant should undertake a quantitative analysis that includes the following:

- (i) Characterisation of relevant climate variables and establishment of climate baseline. The consultant is expected to apply hydrologic tools to describe the behaviour of the drainage systems along the corridor. The consultant will also define the hydraulic and hydrologic variables for road and drainage design, based on expected climate conditions by mid-century. Mid-century climate change scenarios should be used to define road and hydraulic structure design parameters. Climate variables could include temperature and precipitation changes (and for design purposes maximum 24-hour daily precipitation could be used as the basis for assessing the risk of floods from surface runoff); incidence of hurricanes and tropical storms. Both historical data and future scenarios will be required. The consultant will be expected to provide advice on the appropriate recurrence intervals for meteorological events impacting the proposed design of the infrastructure;
- (ii) Considering and factoring available historic precipitation data, climate model forecasts and scenarios assessed above, catchment surface area, topography, soil conditions, develop hydraulic and roadway design options for the upgrading of the road based on the climate change scenarios identified above, including various storm event scenarios (1-in-10, 50, 100 and 150-year events);
- (iii) Using the predicted water levels and other criteria developed at (i) above, prepare a simple flood vulnerability map for the roadway, at minimum 1:5000 scale, or of a useful size relative to the study catchment, as determined with the Ministry of Works (MOW) and end-users, showing projected water levels for mid-century (2050) expected climate conditions identified above (and for return periods of 1-in-10, 50, 100 and 150-year flood events), current development activities, critical infrastructure and population at risk in the flood zones; and
- (iv) Using this analysis, identify key vulnerable hotspots and potential climate adaptation measures. The consultant will prioritise the identified adaptation measures, conducting an economic analysis of each technically feasible option, showing the costs and benefits, or a cost-effectiveness analysis if the measures are expected to deliver the same benefits.

(e) Preliminary Design

- (i) Based on hydrological modelling, taking account of potential climate change impacts, and in consultation with MOW, recommend optimal options for upgrading the road, its drainage features and bridges. Also identify options for upgrading the access roads for the villages of Gales Point Manatee and Mullins River. The Consultant must also demonstrate how climate change risk and associated capital costs considerations have altered the proposed design (i.e. the specific changes in design in order to take account of climate change);
- (ii) Preliminary design activities should include a Stage 1 road safety audit;
- (iii) Preparing cost and quantity estimates for MOW agreed preferred design. The Consultant should also perform a least-cost analysis and consult with MOW to determine the event horizon to be utilised in the design criteria; and
- (iv) Update financial and economic analysis.

(f) Environmental and Social Impact Assessment (ESIA)

Conducting an ESIA of the proposed works. The ESIA should involve broad stakeholder consultation as per item (b) above. It should include:

- (i) producing a sex-disaggregated demographic profile of communities along the corridor including socio-economic, individual and community characteristics including disability status, crime, gender-based violence, and health issues;
- (ii) identification of key employers and livelihood activities in the communities;
- (iii) identification of risks and vulnerabilities during implementation and operation, including those linked to projected climate change, in the following areas including inter alia: housing; economic activities; employment opportunities; livelihoods; labour force participation; shelter management; natural hazards; security and violence (including gender-based); education; health; transportation; cultural and archeologically heritage; wildlife habitat; and water, sanitation, and drainage;
- (iv) investigate gender-specific risks and vulnerabilities and gender-specific coping mechanisms, including those linked to projected climate change;
- (v) analysis of both qualitative and quantitative socio-economic benefits;
- (vi) prioritise community risks and vulnerabilities and community priorities for potential investments. Include within public consultations women and men equally as well as stakeholders representing the groups.

Preparation of an Environmental and Social Management Plan (ESMP) including recommended mitigation measures, stakeholder engagement plan and grievance mechanisms;

(g) Preparation of Detailed Designs

- (i) Based on the MOW agreed preferred option, prepare detailed designs for the works. The scope of work shall include, but not be limited to, the following main activities:
 - (aa) developing design criteria details for the carriageway (including the access roads to the communities), its geometry, drainage and structural elements;
 - (bb) obtaining subsurface soils and topographical information;
 - (cc) preparing designs of works to be incorporated into the Project;
 - (dd) design activities should incorporate a Stage 2 road safety audit and in particular incorporate considerations for vulnerable road users (pedestrians, persons with disabilities, bicyclists, and motorcyclists) and security features along the road and at bus shelters;
 - (ee) environmental, social and natural hazard management parameters, which are to be defined during the engineering studies, shall be highlighted, identified and incorporated into the final designs;
 - (ff) preparing construction specifications for all the works shown on the drawings for which the Consultant is responsible. The specifications shall be clear and concise with a statement setting forth the general scope of work, followed by a description of the various classes of work, under appropriate sections and headings. The quality control requirements required of the contractor, will be described in detail, including identifying standards or codes that are to apply;
 - (gg) pre-qualification and bidding documents will be prepared in accordance with CDB's standard bidding documents. These documents should be adapted to reflect the requirement to select a qualified and experienced contractor with regards to Environmental, Social, Health and Safety (ESHS) worksite management, provide for comprehensive ESHS Specifications for worksites, provide specifications for HIV/AIDS and gender based violence awareness training for the contractor's and sub-contractors' personnel, and associated cost schedules;
 - (hh) providing the client with an engineer's cost estimate based on the final design. This should indicate the anticipated division between local and foreign costs, and identify the incremental costs associated with climate adaption; and
 - (ii) submitting the plans and specifications, for approval to the client and the appropriate authorities, as required. Attend meetings at the offices of the Government of Belize (GOBZ) and authorities to discuss the designs and provide explanations for the purpose of furthering approvals.

4. IMPLEMENTATION ARRANGEMENTS

4.01 MOW will appoint a Project Coordinator (PC). PC will facilitate the work of the Consultants and make available all studies, reports and data relevant to the completion of the exercise and will act as liaison between the consultants and GOBZ officials and stakeholders.

5. QUALIFICATIONS AND EXPERIENCE

5.01 The consulting team should consist of the following key experts:

- (a) **Key Expert 1: Team Leader/Highway Engineer** with preferably ten (10) years' experience of carrying out feasibility studies, detailed design, conducting road safety audits, and in the preparation of procurement documents for road projects. The Highway Engineer would preferably have a Bachelor's degree with professional qualifications. The candidate must have performed the function of Team Leader on at least two (2) similar projects within the past five (5) years;
- (b) **Key Expert 2: Drainage Engineer/Hydrologist:** with preferably seven (7) years' experience of carrying out hydrological modelling of drainage basins, preparation of feasibility studies and the detailed hydraulic design of bridges, drainage structures and river training works. The Drainage Engineer would preferably have a Bachelor's degree with professional qualifications;
- (c) **Key Expert 3: Structural/Bridge Engineer:** with preferably ten (10) years' experience of carrying out the structural design of bridges, drainage structures, and river defence infrastructure. The Structural Engineer would preferably have a Master's degree with professional qualifications.
- (d) **Key Expert 4: Transport Economist:** with preferably ten (10) years' experience of carrying out the financial and economic analysis and evaluation of road development project proposals. The Transport Economist would preferably have a Master's Degree in Economics, Civil Engineering or related discipline. Experience with HDM-IV and/or RED is considered essential.
- (e) **Key Expert 4: Environmental Specialist** with preferably seven (7) years' experience of carrying out environmental impact assessments, climate change impact assessments, and the development of Environmental Management Plans for road projects. The Environmental Specialist would preferably have a Master's Degree in Environmental Sciences, Environmental Engineering, Environmental Management or related discipline, experience in disaster risk mitigation and in carrying out environmental impact assessments in accordance with the policy, guidelines and requirements of International Financing Institutions (IFIs);
- (f) **Key Expert 5: Social and Gender Impact Specialist** with preferably seven (7) years' experience of carrying out social and gender impact assessments of transport infrastructure projects. The Social and Gender Impact Specialist would preferably have a Master's Degree in Social Sciences, Gender Studies or related discipline, experience in gender analysis, experience utilising participatory approaches to perform social and gender analysis, and experience in preparing associated social impact assessments in accordance with the policy, guidelines and requirements of major IFIs.

It is the consultant's responsibility to ensure that their team has an appropriate mix of key and non-key experts required to satisfy the requirements of the TOR.

6. REPORTING ARRANGEMENTS/OUTPUTS

6.01 The Consultant will be required to submit the following number of reports to GOBZ/MOW and CDB, respectively, within the time periods indicated:

6.02 Inception Report: the report should describe the approaches proposed to be taken to prepare and deliver the scope of works outlined, within one month of the start of the consultancy.

6.03 Feasibility Study Report: the report should be submitted within 3 months of the start of the consultancy. The report will update the previous feasibility study and include the revised traffic, updated financial and economic analysis, show potential economic benefits and revised costs to validate the continued feasibility;

6.04 Climate Vulnerability Assessment Report: the draft report should be submitted within four months of the start of the consultancy. It should include the site characterisation, climate change scenarios, hydraulic modelling, and the vulnerability analysis. It should include an analysis of drainage, hydraulic structures and roadway design options for the upgrading of the road based on various event scenarios.

6.05 Design Reports: the draft Preliminary Design Report should consist of a preliminary design, cost and quantity estimates for the preferred option and should be submitted within six months of the start of the consultancy. The draft Final Design Report should be submitted within ten months of the start of the consultancy and consist of agreed detailed designs, revised cost and quantity estimates and bidding documents.

6.06 ESIA Report: the draft report should be submitted within six months of the start of the consultancy.

6.07 Comments on the Reports should be anticipated within four weeks of receipt and the Consultant(s) will adjust the ongoing work according to the comments received. The Consultants will revise the draft reports within one month of receipt and in accordance with the comments received. Reports should be submitted in three hard copies and electronically. The HDM IV or RED data input files should also be provided.

6.08 Each deliverable produced by the consultant must contain, a visibility statement acknowledging that the technical assistance has been provided by UKaid and the UKaid logo must be utilised.

7. DURATION

7.01 The Consultancy is to be implemented over a period of 12 months.

8. COMMENTS BY THE CONSULTANTS

8.01 The Consultants are requested to make comments on, and suggestions for, improvements to these Terms of Reference. The financial implications, if any, of these recommendations should be indicated separately in the Financial Proposal.

SOCIAL ASSESSMENT AND GENDER ANALYSIS

1. The Social Assessment and Gender Analysis will investigate risks related to the execution of a road construction project and inform possible mitigating measures to safeguard against social and gender risks. It will be conducted in a highly participatory, gender-inclusive manner engaging the communities, in particular representatives of women and men separately so that both voices can be heard. The issues to be considered/reported upon in the social and gender assessment should include, but not necessarily be limited to the following:

- (a) description of the project area including demographic, economic, topographical and socio-cultural data, disaggregated by sex;
- (b) assess the different economic and social activities of men and women in the communities adjacent to the project and assess the effect of the project on the economic and social activities (effect of increased access to transport, effect of construction phase);
- (c) review secondary data including reports, studies, Country Gender Assessment, and relevant policy and legal documents including poverty assessments, census reports, labour force surveys, and episodic hazard reports. Subnational secondary data will include population by sex and name of community, population density by community, school population by sex and name of school, livelihood opportunities by sex, and critical economic linkages in project areas;
- (d) collect primary data through participatory consultations with all categories of stakeholders in order to introduce the project, facilitate feedback, and gauge perception of the project in order to gain and/or strengthen buy-in. Interviews, focus groups and other appropriate differential participatory methodologies may be employed for state and non-state stakeholders directly impacted by the works such as Community-Based Organisations, Non-Governmental Organisations, vulnerable groups, school personnel, private sector entities and relevant public agencies. Where applicable focus groups may be convened for males and females respectively;
- (e) conduct site visit exercises to verify, update and fill gaps using community maps, transect walks, snowballing, as well as photographic documentation, and other appropriate participatory approaches;
- (f) enhance public participation by identifying appropriate gender-sensitive public education communication strategies for providing information on project activities and progress to stakeholders and for receiving timely feedback (pre-project, during implementation and post-implementation);
- (g) identify outstanding social issues and concerns in the project area, including current deficiencies in the transport arrangements – whether with respect to public transportation systems, or to the design of the infrastructure – that hinder women, children and the elderly to fully access services and markets. Assess the different transport patterns and modes of transportation used by women and men due to their different reproductive and productive tasks in the household and the economy;
- (h) assess current public transportation services covering the area, the impacts of the design of the project infrastructure on the public transportation network, and the potential needs of the population, including frequency and safety – disaggregated by sex and vulnerable

groups like the elderly, disabled and children – with respect to transport services during works and after the works are completed.

- (i) take into account in particular the differing needs of women and men with regards to public transportation;
- (j) assess the need and placement of bus stops from the perspectives of different population groups – women, men, the elderly, children;
- (k) accessibility of the project area;
- (l) identify any activity related to transactional and commercial sex in the project area and the possible effect of the construction work;
- (m) describe how the project improves access to services and markets as well as enhanced economic opportunities;
- (n) identify time savings due to improved access to services and markets by sex and investigate how time would be used differently by sex.
- (o) public illumination needs and the potential for preventing crime, including gender-based violence and sexual assault. Identify hot spots together with the police and the communities engaging women and men as they have different perspectives and advice on the placement of street lights;
- (p) description of the potential impacts of the Project at its various stages (preparation, construction, and operation) on the social context in the immediate surrounding communities. Identify any issues pertaining to the design of the Project which may have social impacts (gender, livelihood or other dimensions);
- (q) assess whether resettlement/replacement is necessary as an effect of the project and identify possible gender effects taking into account the distribution of male- and female-headed households in the area and the distribution of land titles by sex. Identify possible gender-responsive resettlement and mitigation mechanisms;
- (r) analyse the local labour force and the potential of engaging communities, in particular women, in the construction and maintenance of the project;
- (s) analyse attitudes towards safe driving, drinking and driving, messaging and driving, speeding and driving disaggregated by sex and feed the results into the Road Safety Audit to derive possible measures of mitigation;
- (t) discuss the adequacy of proposed mitigation measures and measures to enhance social and economic development and gender equality and/or proposed alternative designs for the project; and
 - (i) estimate the cost of these measures and justify their suitability; and
 - (ii) consider measures such as public education in the area of road safety or gender-based violence/HIV/AIDS awareness training; training opportunities for vulnerable people to take part in project activities; timing, frequency and safety

of public transportation; workers code of conduct and grievance mechanisms; and public illumination.

- (u) prepare a detailed monitoring and evaluation plan for monitoring the implementation and evaluating the measures proposed to enhance social and gender outcomes of the project. Identify gender-responsive outputs and outcomes of the project activities to facilitate gender-responsive results monitoring and evaluation; and
- (v) convene a stakeholders' validation workshop to discuss the findings of the consultancy and to seek consensus and clarification on issues from participants for incorporation in the draft final and final reports.

BUDGET
(£)

Item	CDB	GOBZ	Total
1. Professional Fees			
2. Airfare, accommodation and local transportation	900,000	150,000	
3. Surveys and Investigations			
4. Project Management			
Sub-total	900,000	150,000	1,050,000
5. Contingency	100,000	-	100,000
Total	1,000,000	150,000	1,150,000
%	85	15	100

PROCUREMENT PLAN

I. General

1. Project Information:

Country: Belize

Grantee: GOBZ

Project Name: Technical Assistance – Coastal Highway Upgrading – Feasibility Study and Detailed Designs

Project Executing Agency: MOW

2. **Bank’s Approval Date of the Procurement Plan:** November 18, 2016

3. **Period Covered by this Procurement Plan:** November 2016 – May 2018

II. Consulting Services

1. **Reference to (if any) Project Operational/Procurement Manual:** For consulting services, CDB’s Guidelines for the Selection and Engagement of Consultants (2011).

2. **Any Other Special Procurement Arrangements:** To comply with the requirements of UKCIF Finance Agreement, ensure that the contracts with the Consultants provide for the acknowledgement of, and that each deliverable produced by the Consultants under the Project contains, a visibility statement acknowledging that the TA has been provided by UKaid and the UKaid logo must be utilised.

Procurement Packages with Methods and Time Schedule:

1	2	3	4	5	6	7
Ref No.	Assignment (Description)	Estimated Cost (£'000)	Selection Method	Review by Bank (Prior/Post)	Expected Proposal Submission Date	Comments
1.	Coastal Highway Upgrading – Feasibility Study and Detailed Designs		QCBS	Prior	February 2017	RFP subject to prior review.

III. Implementing Agency Capacity Building: MOW staff will be provided with access so that the can participate in CDB’s online procurement course.

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank’s Information Disclosure Policy.

IV. Summary of Proposed Procurement Arrangement:

Project Component	CDB (£'000)										NBF (£'000)		Total Cost
	Primary		Secondary		Other						Country	Institution	
	ICB	NCB	RCB	LIB	Shopping	DC	ICS	QCBS	CQS	SSS			
1. Engineering Services	-	-	-	-	-	-	-	900	-	-	-	-	-
2. Project Management	-	-	-	-	-	-	-	-	-	-	-	-	-
3. Contingencies	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Project Costs	-	-	-	-	-	-	-	-	-	-	-	-	-

- | | | | |
|-----|-----------------------------------|------|-----------------------------------|
| CQS | Consultant Quality Selection | NCB | National Competitive Bidding |
| DC | Direct Contracting | QCBS | Quality- and Cost-Based Selection |
| EOI | Expression of Interest | RCB | Regional Competitive Bidding |
| FA | Force Account | RFP | Request for Proposal |
| ICB | International Competitive Bidding | RFQ | Request for Quotation |
| IDC | Interest During Construction | SSS | Single-Source Selection |
| LIB | Limited International Bidding | | |
| NBF | Non-Bank Financed | | |

This information is withheld in accordance with one or more of the exceptions to disclosure under the Bank's Information Disclosure Policy.

FIGURE 1

PROJECT LOCATION MAP

