



2021

ANNUAL TECHNICAL REPORT OF THE MINISTRY OF INFRASTRUCTURE DEVELOPMENT AND HOUSING



**PREPARED: MAY 2022
BY: MINISTRY OF
INFRASTRUCTURE
DEVELOPMENT AND
HOUSING**

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FOREWORD

BY

MINISTER OF INFRASTRUCTURE DEVELOPMENT AND HOUSING

I wish to extend my gratitude to all Belizeans and at the same time provide my assurances to the General Public, whom we have committed to serve, that my team and I at the Ministry of Infrastructure Development and Housing intends to use our best efforts to significantly improve delivery of services to the people of Belize. The Ministry of Infrastructure Development and Housing is legally mandated to maintain and upkeep 2,820 miles of public roads in Belize. It also has another important obligation and that is to review and create the enabling environment for well-designed and affordable housing for the needy in Belize. These services which my Ministry is legally mandated to oversee and implement, have significant potential to create that enabling environment to build resilience, to uplift families and communities to embrace opportunities to escape poverty. This is one of the commitments of #planBelize and I as the Minister responsible along with my dedicated staff of the Ministry will spare no effort with delivering on my obligations.

This report serves to inform the general public, collaborators and partners on the accomplishments over the period, January 2021- December 2021. We have been strategic with our road and housing investments to optimize use of the limited resources. The report will inform that under my leadership, combined with the efforts of the Chief Executive Officer and his team, we have come a long way in building a solid platform for improved delivery of services to the general public in this new fiscal year 2022-23.

Together in Development!

HON. JULIUS ESPAT
MINISTER OF INFRASTRUCTURE DEVELOPMENT
AND HOUSING

ABBREVIATIONS

ADTS	Assistant District Technical Supervisor
B	Billion
BIL	Belize Infrastructure Limited
Bz\$	Belize dollars
CBA	Central Building Authority
CBU	Central Building Unit
CDB	Caribbean Development Bank
CEO	Chief Executive Officer
CVRP	Climate Vulnerability Reduction Program
C.Y	Cubic yards
DBST	Double Bituminous Surface Treatment
DCP	Dynamic Cone Penetrometer
DTS	District Technical Supervisor
EOI	Expressions of Interest
FT	Feet
GoB	Government of Belize
GPHR	George Price Highway Project
HEU	Housing Execution Unit
IBC	International Building Code
ICC	International Code Council
IDB	InterAmerican Development Bank
LBU	Local Building Unit
M	Million
MIDH	Ministry of Infrastructure Development and Housing
MNR	Ministry of Natural Resources
OECC	Overseas Engineering & Construction Company Ltda S.A
OFID	OPEC Fund for International Development
OPEC	Organisation of Petroleum Exporting Countries
OV	Open Vote
PE	Permanent Establishment
PEU	Project Execution Unit
PMU	Project Management Unit
RMU	Road Maintenance Unit
S.Y	Square yards
UKCIF	United Kingdom Caribbean Infrastructure Partnership Fund

1.0 EXECUTIVE SUMMARY

1.01 Background

The Ministry of Infrastructure Development and Housing (MIDH) is an amalgamation of the former Ministry of Works with Ministry of Housing including the Belize Infrastructure Limited (BIL) and the Central Building Authority (CBA).

The total number of officers engaged either under the permanent establishment (PE), open vote (OV) or contract under all portfolios of the MIDH is 433 and a breakdown of the human resources by portfolio is provided below:

- ROAD INFRASTRUCTURE DEPARTMENT: 368 Officers
- PROJECT EXECUTION UNITS: 31 Officers
- HOUSING PORTFOLIO: 20 Officers
- CENTRAL BUILDING AUTHORITY (CBA): 12 Officers
- BELIZE INFRASTRUCTURE LIMITED (BIL): 2 Officers

1.02 Obligations under Works Portfolio - MIDH

We are pleased to record and inform on the MIDH's annual accomplishments over the respective period January 2021 – December 2021 and at the same share more information about the role, challenges, and priorities of the Ministry as it charts a way forward to improve in its delivery of services to the Belizean people. The past year has been another very active year for the MIDH and we are happy to inform that much has been accomplished. Under the "Works" Portfolio of the MIDH, we provide a breakdown of the road network which the Ministry is legally mandated to upkeep and maintain (see Table 1).

Table 1. Distribution of roads by type and district (miles)

TYPE	COROZAL	O-WALK	BELIZE	CAYO	S-CREEK	TOLEDO	TOTAL MILES
Paved	42.1	67.1	122.8	95.0	118.9	81.0	526.9
Gravel	487.7	484.3	164.9	436.6	311.2	286.6	2,171.3
Earth	15.3	22.2	2.4	22.4	48.5	11.7	122.5
TOTAL MILES	545.1	573.6	290.1	554.0	478.6	379.3	2,820.7

1.03 Accomplishments – Works Portfolio - MIDH

The MIDH Works Portfolio has a Road Maintenance Unit (RMU) in every district whose complement of staff includes Office Support Staff; Technical Supervisors, Equipment Operators/ Tradesmen and Mechanics/Welders all under the supervision of a District Technical Supervisor. Their accomplishments in terms of road maintenance for their respective district is summarized below in Table 2.

Table 2.

ROAD MAINTENANCE SUMMARY - ALL DISTRICTS
PERIOD JANUARY 2021 – DECEMBER 2021

MAINTENANCE ACTIVITY	COROZAL	ORANGE WALK	BELIZE	BELMOPAN	CAYO	STANN CREEK	TOLEDO	TOTAL
Resurfacing of Village Roads and Sugar Roads (Miles)	123	256.6	20	28	112	2.1	97.48	639.18
Repairs to Village Roads and Farm Roads: (Miles)	235	215	118	98	492	305	196	1659
Repairs to Village Streets (Miles)	167	104	78	200	156	28.1	178	911.10
Re-gravelling of Highway Shoulders (Miles)	5	5.9	3	0.2	5			19.1
Bushing of Highway Right of Way (Acres)	1918	2360	2840	2012	1850	1408	1868	14,256
Premix Patching of Highways (Cubic Yards)	957	155	221	98	335	105	74	1945
Installation of Culverts in Villages and Farm Roads (Units)	162	169	105	160	203	112	84	995
Drainage Cleaning (Miles)	26	23	21	30	46	38	64	248
Paving of roads/streets (Miles/ Linear Feet)			5.6			2.65		8.25
Repairs to Bridges (No.)			2	1	6	3	16	28

1.04 PROJECT EXECUTION UNITS – MIDH “WORKS” PORTFOLIO

The Works Portfolio of the Ministry also has three Project Execution Units (PEU); with each managing and supervising major road projects funded by different external funding agencies partnering with the Government of Belize (GOB). These Project Execution Units help build capacity within the MIDH to manage and supervise these road projects on behalf of the Ministry and GOB. A brief listing of these on-going projects with basic particulars are provided below:

a) Projects funded by Inter-American Development Bank (IDB) / GOB

- **George Price Rehabilitation Project (GPHR):** Rehabilitation of the George Price Highway from Roaring Creek to Loma Luz Boulevard, Santa Elena, Cayo District has been substantially completed with completion of Section 3 – Blackman Eddy to Loma Luz Boulevard, Santa Elena.

- ***Climate Vulnerability Reduction Project (CVRP)***: This project is located in Belize City and its objective is flood Alleviation in southside Belize along with providing creating an enabling environment to facilitate and build resilience in the tourism sector in both Caye Caulker and Goff Caye. Project is 69% completed with an expected completion date of June 2023.

b) Projects funded by Republic of China on Taiwan (Taiwan)

Upgrading of 27 miles of Corozal – Sarteneja Road: (Bz\$100.0 M)

- The Contract was signed on November 2018 for upgrading of 27 miles of the Corozal Sarteneja Road. This road project also involves construction of two new Bridges which will replace the old, dilapidated ferries at Pueblo Viejo and Laguna Seca.

The Taiwanese Contractor, Overseas Engineering & Construction Company Ltda S.A, (OECC) has already completed the design of the road and two Bridges and construction is now underway. Work has started on a 10 km section of the road and to date 7 km has been completed. Bridge construction has commenced at Laguna Seca Site and progress on Bridge works is 1.6 %

Overall Progress on this Project is approximately 21 %

c) Projects Funded by OPEC Fund for International Development (OFID)

- *Caracol Road Project*

Phase 1 - Lot 1A (Georgeville – Tripartite / Santa Elena – Cristo Rey / San Antonio – Tripartite)

Lot 1 A is 26km in length, 20 km of which is substantially covered with the first of two bituminous and stone chip-seal. The project duration is 30 months, reflecting completion in August 2022 at a contract price of Bz\$37,988,176.55. Progress to the middle of December, 2021 is approximately Bz\$30.6M (approximately 81%).

Phase 1 – Lot B Tripartite Junction to Pinol Line

Progress: Completed

Phase 1 - Lot 1C (Blancaneaux Lodge Line – Pinol Line)

Lot 1C is 7.25km in length,

Progress to the middle of December 2021 is approximately Bz\$2.4M (approximately 21%).

Phase 2 - Caracol Road Upgrade

Due to the effects of the COVID-19 pandemic on the economy of Belize, the Government has postponed all activity on this phase of the project for 1 year, this period closes on 6 April 2022.

It is expected that a decision to award contracts must be done prior to this date.

d) SIXTH Road (COASTAL HIGHWAY) Upgrading Project

Progress to end December 2021: Bz\$ 32.3 M (51.26%)

Lot 1 (La Democracia Village – Soldier Creek Bridge)

Completion in January 2023 at a contract price of Bz\$ 62,971,611.45.

Lot 1 is 28.16 km in length.

Progress to end December 2021: Bz\$ 32.3 M (51.26%)

Lot 2 (Soldier Creek Bridge – Hope Creek Village)

Lot 2 is 29.88 km in length,

Progress to end December 2021: Bz\$ 32.4 M (46.23%)

e) PHILIP GOLDSON HIGHWAY AND REMATE BYPASS UPGRADING PROJECT

The Philip Goldson Highway and Remate Bypass Upgrading Project (PGHRBP) is being funding in part with a grant from the United Kingdom Caribbean Infrastructure Partnership Fund (UKCIF), a loan from the Caribbean Development Bank, and contribution from the Government of Belize.

Table 3. Identification of four works contracts awarded

WORKS PACKAGE	CONTRACTOR	CONTRACT #	VALUE (Bz\$)
Lot 1	Teichroeb & Sons Ltd.	04-2021/22	\$10,530,865.48
Lot 2	Cisco Construction Ltd.	05-2021/22	\$27,079,302.32
Lot 3	Cisco Construction Ltd.	06-2021/22	\$21,931,778.70
Lot 4	Teichroeb & Sons Ltd.	07-2021/22	\$19,791,478.71

• ***TEICHROEB & SON'S – Lots 1 & 4***

Activities reported:

Engineer's offices at the both the Remate and Carmelita campsites have been established. Project signs have been erected at the locations approved by the Engineer and the Project Execution Unit (PEU).

Sources of materials identified, tested and approved for use on the project.

Crooked Tree Roundabout is approximately 40% complete.

Earthworks ongoing at Tumbaito realignment and Libertad Junction.

Widening works ongoing at Carmelita Village in Lot 1 and Concepcion Village in Section E1 of Lot 4.

Progress to date: Pavement of 4.08% in Lot 1 and 1.9 % in Lot 4.

- **CISCO CONSTRUCTION LTD. – Lots 2 & 3**

Activities reported:

Contractor campsite including Engineer's Offices completed.

Project signs have been erected at the locations approved by the Engineer and the PEU.

Mamayal box culvert 75% completed.

Culvert installation at Remate Swamp 45% completed.

Temporary diversion at Remate south constructed.

Embankment construction ongoing at Mamayal and Remate swamp.

Progress to date: Approximately 2.0 %

1.05 ACCOMPLISHMENTS - HOUSING PORTFOLIO

Last year, June 2021, the Government of Belize, through the Ministry of Infrastructure Development and Housing launched the Low-Income housing project. The aim of the project is to provide a sustainable housing program that will ensure easy and affordable access to home ownership for all Belizeans in both urban and rural areas; thereby contributing to the sustainable development of Belize. The ministry established, the newly formed Housing Execution Unit (HEU) to directly oversee and administer the project.

The objective of the low-income housing project; under phase I of the project, is to construct homes for single mothers/fathers and first-time homeowners. These houses were designed in a way that would allow for easy expansion to two- or three-bedroom houses in the future.

The housing approval committee has already approved 132 applications for construction from a wide array of the Belizean population. The recipients of these houses signed an agreement of understanding with the ministry that these houses are being built and handed over to them for a minimal repayment price of Bz\$12,000.00, to be repaid in weekly payments of Bz\$25.00 per week or Bz\$100.00 monthly, over a 10-year period.

TABLE 4. Distribution of Houses by District (JAN – DEC. 2021)

BELIZE	CAYO	COROZAL	ORANGE WALK	STANN CREEK	TOLEDO	TOTAL HOUSES
46	40	9	22	10	5	132

1.06 Financial Update – Works Portfolio

The approved Recurrent Budget for the period under review was Bz\$17,861,901.32; expenditure for that same period was Bz\$15,273,010.18 which represent 85.5% (see annex). These Expenditures encompass all the Line Item such as Personal Emolument, Travel and Subsistence,

Material & Supplies, Operating Costs, Repair and Maintenance Cost, Telephone and Contracts and Consultancy for all Cost Centers under the Ministry's mandate.

The approved Capital II Budget for the period under review was Bz\$57,864,027.54, whilst the Expenditure was Bz\$33,026,963.93. For the period under review approved Capital III Budget was Bz\$87,170,097.14 while the expenditure was Bz\$47,438,413.14. The financial data attached in Annex 1 this report shows for the reporting period in question that all accomplishments highlighted in this report were achieved while spending only 85.3% percent from the approved Budgeted Recurrent funds whilst with Capital II and Capital III we only spent 54.4% and 57.01%, respectively. On the housing sector side, we have utilized Bz\$777,968.05 in recurrent, Bz\$2.496 M in Capital II funds and Bz\$2.467 M under Capital III to cover costs of personal emoluments and filling of Lots, providing road access and construction of starter homes.

2.0 INTRODUCTION

The Ministry of Infrastructure Development and Housing (MIDH) is an amalgamation of the former Ministry of Works with Ministry of Housing including the Belize Infrastructure Limited (BIL) and the Central Building Authority (CBA). This Ministry, under its various portfolios, is primarily involved with construction and maintenance of public roads, oversees the regulatory bodies which controls the design, construction and use of Buildings, particularly public buildings and lastly but most importantly, assist with creating the enabling environment to address the poor and severe lack of affordable housing in Belize. Provision of these services, if properly managed and coordinated, will positively impact the life of every Belizean man, woman and child by creating opportunities for upliftment of families and communities, reduce poverty and by extension fostering the socio-economic development of Belize.

The MIDH primary obligations under the various portfolios are as follows

Works Portfolio

This is the road maintenance arm of the Ministry with a primary responsibility for the construction, maintenance, and upkeep of 2,820 miles of roads, over 300 bridges of varying spans, 20,000 culverts, over 300 miles of inland waterways to clean and maintain along with other road safety appurtenances for safe movement of goods and people. To provide this service the Ministry must work closely with the Ministry of Natural Resources (MNR) to identify public road reserves across the country and the Mining Unit for the sourcing of suitable road materials for construction and maintenance of public roads.

We also provide technical assistance to our sister line ministries and a few statutory bodies with building design services, estimating proposed works, procurement services and construction supervision.

Housing Portfolio

The primary role of the Housing portfolio is to coordinate activities afflicting the provision of housing in Belize. The task is complex and multidisciplinary in nature since provision of housing is not just providing a structure to a recipient but rather providing a well-designed structure having access to all basic amenities including a clean and safe living environment for families to live. The MIDH is playing a critical role in addressing the severe lack of housing for the needy in Belize.

Central Building Authority (CBA)

This is a quasi /statutory body under the technical and administrative oversight of the MIDH. It is legally responsible for the control of buildings in Belize. In this regard, with the establishment of a CBA and team of Inspectors, it reviews building design applications, oversees and conducts

inspections of buildings approved and under construction. The Central Building Unit (CBU) assist the CBA with enforcement of the provisions of the Building Control Act in villages/rural areas of the country while Local Building Units (LBU) in municipalities assist in towns /cities. The CBA is currently, assisting in revising /improving the Building Control Act and coordinating with various interested stakeholders establishing a National Building Code in Belize. In this regard it is aggressively discussing and negotiating with the International Code Council (ICC) adopting the International Building Code (IBC) for residential building in Belize as a first step in the process of establishing a national code.

Belize Infrastructure Limited (BIL)

The BIL was established years ago to assist the Ministry of Works with expediting the procurement and implementation phases of government buildings which consisted primarily of sporting establishments in each municipality including the new Belize City Centre and the new Ministry of Finance building in Belize City. Now the BIL staff comprises of two persons who are coordinating basic maintenance activities in respect to the Belize City Centre and new Ministry of Finance building in Belize City.

A breakdown of the staff complement of the Ministry various portfolios is depicted in Table 1 below:

<u>TABLE 5 – Staff Complement and Distribution in MIDH MIDH PORTFOLIO</u>	PERMANENT ESTABLISHMENT STAFF	OPEN VOTE	CONTRACT OFFICERS	TOTAL
ROAD INFRASTRUCTURE DEPARTMENT:	78	260	30	368
PROJECT EXECUTION UNITS		1	30	31
HOUSING PORTFOLIO:	20			20
CENTRAL BUILDING AUTHORITY (CBA)			12	12
BELIZE INFRASTRUCTURE LIMITED (BIL)	2			2
TOTAL				433

3.0 MISSION STATEMENT AND PRIORITIES

Mission

We WILL provide high quality safe public infrastructure that promotes sustainable economic development while providing opportunities for our people. We WILL provide structurally sound, affordable housing to the needy and establish a national code and set standards for residential buildings to enhance resilience in our housing stock. We WILL render technical assistance with construction, supervision, and maintenance of government buildings to ensure cost-effective and prudent use of public resources. We WILL provide a high-quality service delivery and maintain a competent, dedicated and performance-oriented team committed to the betterment of Belize and its people, as envisaged in #planBelize.

Vision

To create and maintain public Infrastructure that meets the highest international standards and to build safe, structurally sound, and affordable houses that enhance community resilience while fostering the self-sustainability of our people and the stability and proper development of our communities.

Ministry Responsibilities

The Ministry's commitment is to serve the people with HARD WORK, INTEGRITY and EFFICIENCY.

The Ministry is commissioned to maintain all public assets comprising the built environment—such as roadways, bridges, drainage channels and government buildings to a level compliant with international standards with a view to providing high quality, user-safe, structurally sound national assets. The housing component of the Ministry seeks to establish an effective housing policy which provides housing support and establishes national standards and building control for safe, affordable housing to foster a decent living environment and quality of life. The Ministry is also dedicated to providing adequate housing options for the most needy to better embrace opportunities for self-sufficiency, enhance community resilience, economic independence, and fiscal integrity of our citizens.

4.0 THE “WORKS” PORTFOLIO OF THE MIDH

4.1 Composition of the works portfolio

Under this portfolio there exist the following Cost Centers and Sections:

Central Administration	Architecture / Building Maintenance Section
Engineering Administration	Soils Laboratory /Survey Section
Mechanical Administration	

Additionally, there are seven (7) Road Maintenance Units (RMU) representing the Ministry in each district and in Belmopan.

4.2 Road Maintenance Methodology

The Country is divided into three (3) Zones: the North, Central and South Zones with each zone being manned by a zone engineer. Each zone engineer, for the reporting period, is responsible for two district Road Maintenance Units (RMU) each headed by a District Technical Supervisor (DTS). Each district RMU has approximately 40 officers in its structure headed by a DTS. The structure comprises of an office support staff, technical supervisors, equipment operators and mechanics/welders. The RMUs are the main arm of the MIDH in implementing one of the primary obligations of the Ministry that of road maintenance.

A National Road Maintenance Program is prepared monthly with the involvement of the DTS - RMU, Zone Engineer, Maintenance Coordinator, Chief Engineer and Chief Executive Officer (CEO). The Work Program incorporates the technical concerns with inputs from stakeholders such as farmers, village chairmen and area representatives in each district. This program is given final approval by the CEO a week before the month in question and is implemented principally by the RMUs under the guidance /supervision of the respective Zone Engineer and Maintenance Coordinator. Feedback on work progress and anticipated challenges are discussed in a technical staff meeting convened by the CEO on a weekly basis.

4.3 Ministry Road Maintenance Mandate

The MIDH has a total of 2,820 miles of roads and streets, over 300 bridges of various spans, 330 miles of inland waterways amongst other infrastructure related appurtenances such as culverts and roads signs. Since January 1, 2021, the MIDH has shifted focus on our maintenance efforts to rural roads countrywide which were severely neglected and indeed denied the rural population the enabling environment needed to facilitate opportunities for their sustainable development and growth.

Table 6. Distribution of roads by quality and by district – 2021

TYPE	COROZAL	O-WALK	BELIZE	CAYO	S-CREEK	TOLEDO	TOTAL MILES
Paved	42.1	67.1	122.8	95	118.9	81	526.9
Gravel	487.7	484.3	164.9	436.6	311.2	286.6	2171.3
Earth	15.3	22.2	2.4	22.4	48.5	11.7	122.5
TOTAL MILES	545.1	573.6	290.1	554	478.6	379.3	2,820.7

Fig 1. Road Network Classification – 2021

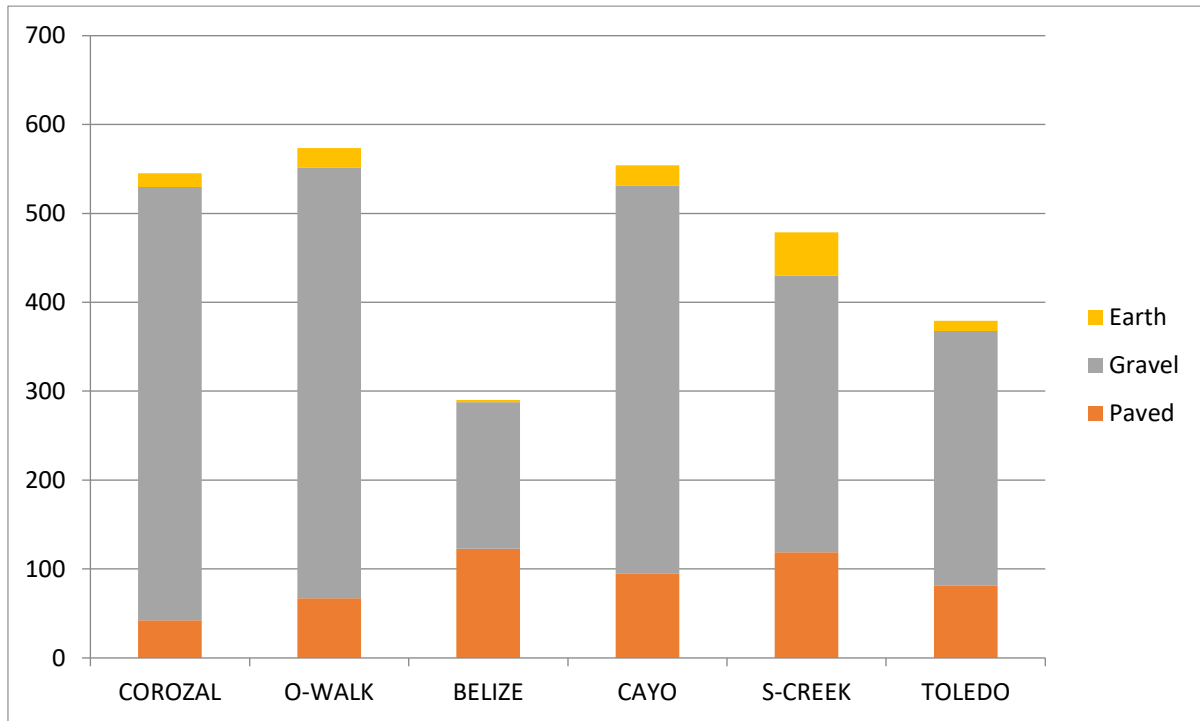


Fig 2 ROAD NETWORK CLASSIFICATION – 2021

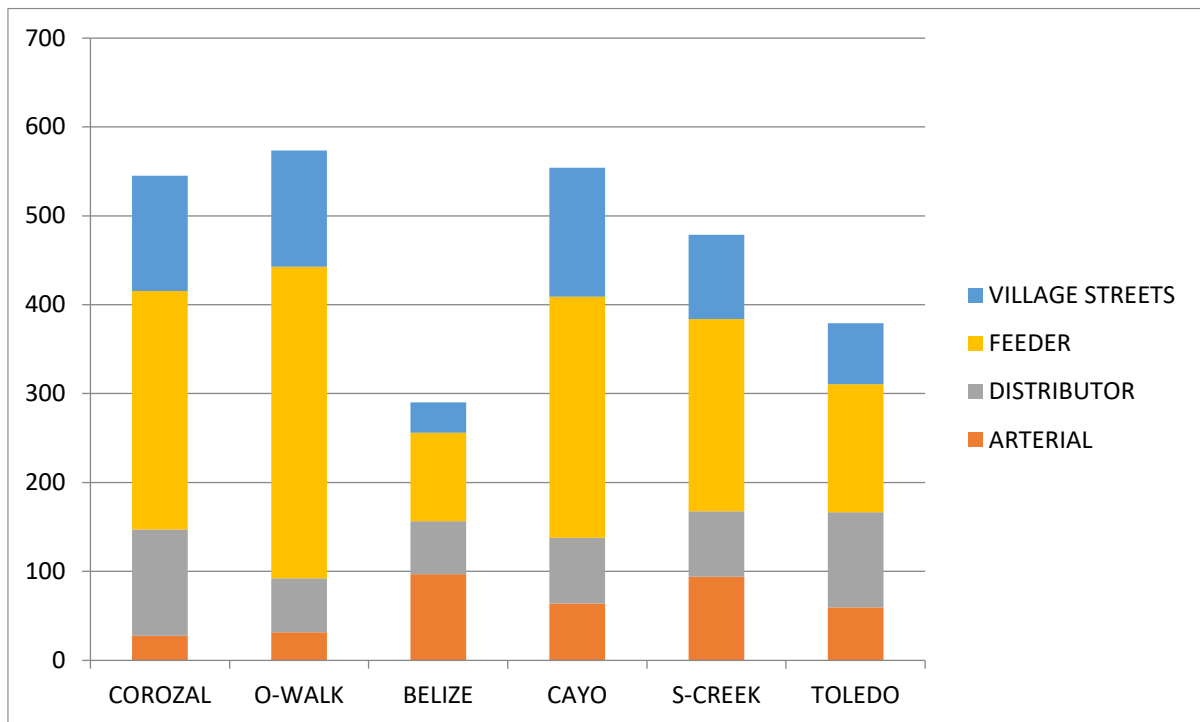


Table 7. Distribution of roads by type and by district - miles

TYPE	COROZAL	O-WALK	BELIZE	CAYO	S-CREEK	TOLEDO	TOTAL MILES
ARTERIAL	27.4	31.4	96.9	63.7	94.1	59.4	372.9
DISTRIBUT	119.9	60.9	59.6	74.2	73.5	107.2	495.3
FEEDER	268.3	350.3	99.6	271.1	216.3	144.1	1349.7
VILLAGE S	129.5	131	34	145	94.7	68.6	602.8
TOTAL MI	545.1	573.6	290.1	554	478.6	379.3	2820.7
ROAD NETWORK BY SURFACE TYPE							

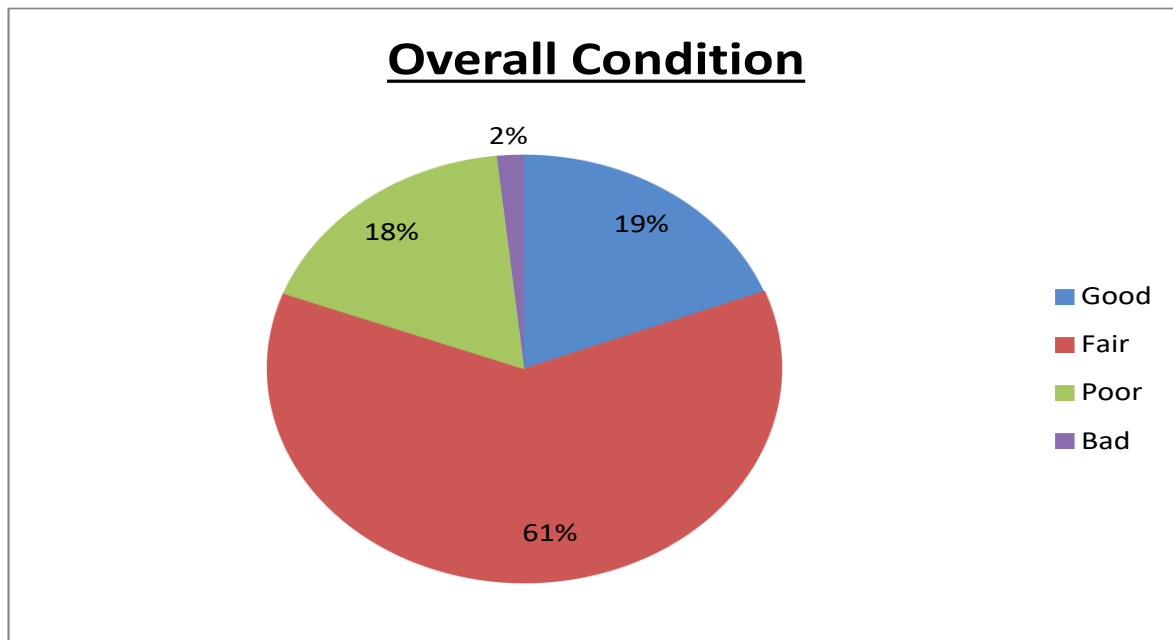


Table 8. Distribution of overall road network by condition

Overall Network	Condition	Miles	%			
	Good	539.3	19.11937			
	Fair	1737.8	61.60882			
	Poor	496.9	17.61619			
	Bad	46.7	1.655617			
		2820.7				

Below, we briefly summarize the salient accomplishments achieved by the MIDH for the respective period

4.4 Salient Accomplishments - Works Portfolio

The period January 2021 – December 2021 has been another arduous year where the Ministry aggressively pursued its road maintenance strategy despite the challenges of budgetary constraints and impact of Covid -19.

The more notable accomplishments of this past year are:

- Completion of newly rehabilitated 15 km section of the George Price Highway between Blackman Eddy and Loma Luz Boulevard in Santa Elena, Cayo District. This last section will close the project since the entire 31 km between Roaring Creek and Loma Luz Boulevard in Santa Elena has been rehabilitated.
- Lot 1B (Tripartite Intersection - Blancaneaux Lodge Line) is 8.8 km in length, was completed at the end of November 2021. The final contract value was Bz\$14,898,164.44.
- The MIDH successfully re-designed the new Haulover Bridge and re-negotiated to substantially reduce cost of the new Bridge from Bz\$59 million (M) to Bz\$30.99 M– a reduction of Bz\$28.01 M making the commencement of construction of the bridge possible.
- The MIDH successfully re-designed the remaining sections, namely, 1c, 2a, 2b and 2c of the Caracol Road Upgrade Project generating savings of Bz\$28 M from existing loan financing (OPEC) which will be diverted to other beneficial projects across the country.
- Rebuilding the MIDH equipment capacity with the purchase of much needed heavy equipment, both used and new equipment.
- Transforming roads in rural and remote areas of the country by improving road access to create an enabling environment and build resilience in communities.

- Re-building the Ministry's human resources by filling vacancies with suitably qualified and experienced individuals.
- Enhancing transparency and accountability by involving more technical officers in the procurement and implementation phases of Ministry's portfolio activities.

5.0 DISTRICT MAINTENANCE SUMMARY

The MIDH's road maintenance policy is geared to preserving the huge investments of Bz\$3.0 B (billion) made to date in construction of roads, bridges, culverts, and related safety appurtenances. The road maintenance policy provides for focusing on improving and upgrading rural roads and building resilience in our road network.

For the reporting period, the Ministry had shifted its focus from roads/ streets in urban areas to transforming the neglected road network in rural roads to improve access for villagers and farmers and at the same time support the productive sectors such as Agriculture and Tourism. Providing adequate road access impacts the common man and woman and is key for poverty reduction and uplifting families and communities.

Therefore, during the respective period from January 2021 to December 2021, the Ministry invested heavily on improving the quality and standard of village roads, village streets and farms roads countrywide. This road maintenance strategy was put in place as per GOB's commitments in its #planBelize to support rural communities who have potential to contribute significantly to the productive sector and by extension to the socio-economic development of Belize.

Below we note the accomplishments with our road maintenance units in all six districts for the period January 2021 – December 2021:

Table 9.

ROAD MAINTENANCE SUMMARY - ALL DISTRICTS
PERIOD JANUARY 2021 – DECEMBER 2021

MAINTENANCE ACTIVITY	COROZAL	ORANGE WALK	BELIZE	BELMOPAN	CAYO	STANN CREEK	TOLEDO	TOTAL
Resurfacing of Village Roads and Sugar Roads (Miles)	123	256.6	20	28	112	2.1	97.48	639.18
Repairs to Village Roads and Farm Roads: (Miles)	235	215	118	98	492	305	196	1659
Repairs to Village Streets (Miles)	167	104	78	200	156	28.1	178	911.10
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Bushing of Highway Right of Way (Acres)	1918	2360	2840	2012	1850	1408	1868	14,256
Premix Patching of Highways (Cubic Yards)	957	155	221	98	335	105	74	1945
Installation of Culverts in Villages and Farm Roads (Units)	162	169	105	160	203	112	84	995
Drainage Cleaning (Miles)	26	23	21	30	46	38	64	248
Paving of roads/streets (Miles/ Linear Feet)			5.6			2.65		8.25
Repairs to Bridges (No.)			2	1	6	3	16	28

5.1 COROZAL DISTRICT- ACCOMPLISHMENT

ROAD MAINTENANCE ACCOMPLISHMENTS

COROZAL NORTH CONSTITUENCY

Village Streets

Length of construction of new village streets- 2 miles

Length of Village Streets spot patched- 15 miles

Grading-15 miles

Bushing -25 acres

Farm Roads

Length of construction of new farm roads -0

Length of farm roads resurfaced/ spot patched- 17.1 miles

Grading-24 miles

Bushing - NONE

COROZAL BAY CONSTITUENCY

Grading of streets - 16 miles

COROZAL SOUTH EAST CONSTITUENCY

Village Streets

Length of construction of new village streets- 3 miles

Length of Village Streets spot patched- 32 miles

Grading of streets - 45 miles

Bushing of streets - 4 acres

Farm / Sugar Roads

Length of farm roads resurfaced/ spot patched- 18 miles

Grading- 25 miles

COROZAL SOUTH WEST CONSTITUENCY

Village Streets

Length of construction of new village street – 4 miles

Length of Village Streets spot patched - 24 miles

Grading of streets- 30 miles

-Installation of 2 No. 36 inch diameter concrete culverts in Libertad Village

Farm Roads

Length of farm roads resurfaced/ spot patched- 36 miles

Grading- 48 miles

MAINTENANCE OF HIGHWAYS

PHILLIP GOLDSON HIGHWAY

Length of Highway recently Paved/ Rehabilitated - major works ongoing.

Volume of Premix Patching- 35 C.Y

Area Bushed – 750 acres

Drainage Improvement: Cleaning of 15 culverts on highway (including inlets / outlets)

COROZAL PATCHAKAN MAIN ROAD

Volume of Premix Patching - 24 C.Y

Area Bushed - 85 acres

NOGUERA XAIBE MAIN ROAD

Area bushed -15 acres

SAN NARCISO SAN VICTOR MAIN ROAD

Area bushed -24 acres

Table 10. Total Length of Roads in the Corozal District- 545.1 miles

COROZAL UNIT'S EQUIPMENT			COROZAL UNIT'S PERSONNEL		
	EQUIPMENT	# OF EQUIPMENT		POST	# OF PERSONNEL
1	Grader	2	1	DTS	1
2	Roller	1	2	ADTS	1
3	Loader	1	3	Heavy duty operator	5
4	Backhoe	0	4	Driver mechanic	4
5	Tipper trucks	1	5	Foreman/subforeman	4
6	Mack utility truck	1	6	Storekeeper	1
7	Bulldozer	1	7	Mechanics thru invoice	1
8	Excavator	0	8	Welder	1
9	Low boy	0	9	Office personnel	2
10	Tractor/ bushog	2	10	Workmen including ferry men	11
11	Small pickups	3	11	Watchman acting	2
			12	Janitor	1
			13	Workmen thru invoice	2
			14	RMU workmen hired thru invoice	4

5.2 ORANGE WALK DISTRICT- ACCOMPLISHMENT

ROAD MAINTENANCE

ORANGE WALK CENTRAL CONSTITUENCY

Village Streets

Length of construction of new village streets- 2500 feet

Length of Village Streets spot patched- 10 miles

Grading:- 10 miles

Bushing: - 05 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 15 No. plastic 18 inches diameter culverts -San Estevan Village.

Farm Roads

Length of construction of new farm roads: - 0

Length of farm roads resurfaced/ spot patched: - 48 miles

Grading of Road: - 75 miles
Bushing - None

ORANGE WALK NORTH CONSTITUENCY

Village Streets

Length of Village/town Streets spot patched: - 13 miles

Grading: 10 miles

Bushing: 20 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains –

- 48 linear feet of double concrete culvert 60 inches diameter San Pablo Village.
- 60 linear feet of concrete culverts 18 inches diameter

Farm Roads

Length of construction of new farm roads – None

Length of farm roads resurfaced/ spot patched- 50 miles

Grading- 50 miles

Bushing – None

Drainage improvement whether culvert installation, new drain construction or cleaning of drains- NONE

ORANGE WALK EAST CONSTITUENCY

Village Streets

Length of village streets recently paved- None.

Length of construction of new village streets- 3700 feet

Length of Village Streets spot patched- 12 miles

Grading: - 8 miles

Bushing: -10 acres

Farm Roads

Length of construction of new farm roads -0

Length of farm roads resurfaced/ spot patched- 45 miles

Grading: -60 miles

Bushing: - None

Drainage improvement whether culvert installation, new drain construction or cleaning of drains- None

ORANGE WALK SOUTH CONSTITUENCY

Village Streets

Length of village/town streets recently paved- None

Length of construction of new village streets: - 1500 feet

Length of village/town streets spot patched:- 15 miles

Grading: 18 miles

Bushing: None

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains:

Culverts- 184 linear feet (LF) concrete culvert 36 inches diameter acquired.

72 LF concrete culverts 24 inches diameter acquired.

48 LF concrete culvert 48 inches diameter acquired.

All acquired culverts are pending installation but transported on site already.

Farm Roads

Length of construction of new farm roads – None

Length of farm roads resurfaced/ spot patched- 50 miles

Grading- 60 miles

Bushing – None

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 24 inches concrete culvert install on Cal Brothers sugar road.

MAINTENANCE OF HIGHWAYS

PHILLIP GOLDSON HIGHWAY

Length of highway recently paved/ rehabilitated: - major works ongoing.

Volume of premix patching:- 60 cubic yards (C.Y)

Area Bushed – 490 acres

Drainage Improvement or cleaning of drains: - 3 miles

Safety appurtenances: - 0

YO CREEK TO SAN ANTONIO TO SAN FELIPE MAIN ROAD

Volume of Premix Patching- 10 C.Y

Area Bushed -152 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 6 miles

Table 11. Inventory and Personnel in the Orange Walk District- 573.6 miles

ORANGE WALK UNIT'S EQUIPMENT			ORANGE WALK UNIT'S PERSONNEL		
	EQUIPMENT	# of Equipment		POST	# of Personnel
1	Grader	2	1	DTS	1
2	Roller	1	2	ATDS	1
3	Loader	1	3	Heavy duty operator	5
4	Backhoe	2	4	Driver mechanic	6

5	Tipper trucks	1	5	Foreman/subforeman	2
6	550 utility truck	1	6	Acting storekeeper	1
7	Bulldozer	1	7	Mechanics	1
8	Excavator	1	8	Welder	1
9	Low boy	1	9	Office personnel	2
10	Tractor/Bush hog	1	10	Workmen	3
11	Small pickup	3			

5.3 **BELIZE DISTRICT- ACCOMPLISHMENT**

ROAD MAINTENANCE

Village Street: Lord's Bank Main Road

Length of village streets recently paved: 6,000 feet of hot mix asphalt

Bushing: 5 acres

Cleaning of drains: 15,600 ft. along the Lord's Bank main road.

Culvert Installation: 420 linear feet including headwall structures.

Village Street: Crooked Tree Village Streets

Grading: 6 miles of streets

Village Street: Crooked Tree Village Road

Grading: 3 miles of the main road which were the most affected by flooding waters.

Village Street: Bermudan Landing Road

Length of village streets recently paved: 381 linear feet at mile 4, Sebastian Bridge area.

Cleaning of drains:

- Culvert Installation: 30 ft – 2ft diameter culvert

Farm Road: Texas Road

Length of farm roads resurfaced/ spot patched 1.9 miles

Grading 1.9 miles

Drainage improvement whether culvert installation: 1 unit of 36"x 30', 1 unit of 24"x 20'

Farm Road: Rancho Dolores Road

Length of farm roads resurfaced/ spot patched: 6.1 miles

Grading 6.1 miles

Farm Road: Willow's /St. Paul's Bank Road

Length of farm roads resurfaced/ spot patched: 3.1 miles

Grading: 3.1 miles

Farm Road: Isabella Road

Length of farm roads resurfaced/ spot patched: 2.9 miles

Grading: 2.9 miles

Farm Road: Flower's Bank Road

Length of farm roads resurfaced/ spot patched: 3.9 miles

Grading: 3.9 miles

Farm Road: Double Head Cabbage Road

Length of farm roads resurfaced/ spot patched: 1.0 mile

Grading: 1.0 mile

Farm Road: Bamboo Patch Road

Length of farm roads resurfaced/ spot patched: 1.0 mile

Grading: 1.0 mile

Farm Road: Maypen – Isabella Farm Road

Length of farm road cleared: 4.0 miles

Shaping: 4.0 miles

Grading: 4.0 miles

Bushing: 10 acres

Maintenance of Highways: PHILIP GOLDSOHN HIGHWAY

PHILIP GOLDSOHN HIGHWAY

Length of highway recently paved/ rehabilitated: 5 miles with hot mix asphalt

Length of re-gravelling of road shoulders: 5 miles-3,500 cubic yards (C.Y) (all in material)

Area bushed: 86 acres

Cleaning of drains: 6,067 ft cleaning of drain from junction at army camp road to Lows supermarket area on both sides.

Safety appurtenances: 5 miles of line marking (white edge lines, double yellow lines at the center, cat eyes)

Maintenance of Highways: GEORGE PRICE HIGHWAY

Length of highway recently paved/ rehabilitated: 2,615 ft. of double bituminous surface treatment between miles 1-8.

Area Bushed: 667 acres

Cleaning of drains: 10,810 linear feet of drain cleaned

Safety appurtenances: 2,615 linear feet of line marking (white edge lines, double yellow lines at the enter, cat eyes)

Bridges

Bridge 1 along Crooked Tree Main Road

300 C.Y Boulders placed to protect approach that was damaged by flooding waters

How many composite or timber bridges repaired: 2

BUILDINGS SECTION - BELMOPAN

How many buildings renovated / refurbished or repaired: 5 No.

Construction of any new building: None

Any assessment of buildings / technical assistance: Assessment done on 7 buildings countrywide for MIDH and other Ministries

Supervision of any building works: *3 buildings*

5.4 CAYO DISTRICT- ACCOMPLISHMENT

ROAD MAINTENANCE PERSONNEL

Villages

Bullet Tree Village Streets

- i. Cutting, cleaning & disposal of spoil – 17,770 S.Y
- ii. Culvert cleaning – 78 units
- iii. Vegetation control -hand – 3 acres
- iv. Vegetation control – mechanical – 2.0 acres
- v. Grading and reshaping of carriageway – 8,790 S.Y
- vi. Cleaning and reshaping of side drains – 9,500 L.F
- vii. Cleaning and reshaping of ditches – 2,333 S.Y

Bullet Tree Village Road

- i. Pothole patching (premix) – 53 C.Y
- ii. New road construction – 578 S.Y
- iii. Light grading of roadway – 2,022 S.Y
- iv. Culvert Construction -2 units
- v. Major patching – 20 C.Y
- vi. Vegetation Control (hand) – 1,844 S.Y
- vii. Spot patching unpaved road – 120 C.Y
- viii. Vegetation control (mechanical) – 3.0 miles
- ix. Culvert construction – 30 C.Y

Billy White Village

- i. Accumulating of gravel – 1,300 C.Y
- ii. Accumulating of material – 5,850 C.Y
- iii. Cleaning & reshaping of ditches – mechanical – 1,400 LF
- iv. Culvert construction – 8 units
- v. Vegetation control – hand – 5,600 S.Y

Santa Familia Village –

- i. Cleaning of longitudinal drains
- ii. Surfacing of carriageway – 400 S.Y
- iii. Resurfacing of roadway – 2,430 S.Y
- iv. Vegetation control(hand) – 22.1 acres
- v. Culvert Clearing – 15 units
- vi. Cleaning of drainage structures – 200 L.F.
- vii. Lining of streets for maintenance repairs – 14,080 S.Y
- viii. Clean and reshaping of ditches (mechanical) – 100 S.Y
- ix. Pothole patching premix – 1 C.Y

- x. Resurfacing of carriageway – 1,440 C.Y
- xi. Culvert construction – 5 units (1-18’’x24’, 3 – 18’’ x 6’, 1 – 10’ x 18’’)
- xii. Grading and reshaping of carriageway – 1 mile
- xiii. Cut, clean and disposal of spoil – 55,560 S.Y
- xiv. Reshaping of ditches – 1.6 mile

La Gracia Village

- i. Spot patching of carriageway – 150 C.Y
- ii. Grading and reshaping of carriageway – 3.0 miles
- iii. Accumulating of material – 300 C.Y

Esperanza Village

- i. Vegetation control – mechanical – 8.0 acres
- ii. Cleaning of garbage site – 4.0 acres
- iii. Accumulating of gravel – 900 C.Y
- iv. Vegetation control – mechanical – 4.0 acres
- v. Light grading of roadway – 38,000 S.Y
- vi. Resurfacing of roadway – 600 C.Y
- vii. New road construction – 0.25 mile

Unitedville Village

- i. Mechanical bushing – 40 hours
- ii. Vegetation control- mechanical- 8.0 acres
- iii. Heavy grading – 700 S.Y
- iv. Resurfacing of roadway – 18,125 C.Y
- v. Light grading of roadway – 29,218 S.Y
- vi. New Road construction - 12,330 S.Y
- vii. Grading of road shoulders – 48, 200 S.Y
- viii. Accumulating of material – 3,000 C.Y

Buena Vista Village Road

- i. Spot patching of carriageway – 210 C.Y
- ii. Surface grading of carriageway – 3.5 miles
- iii. Vegetation Control (hand) – 3.5 acres
- iv. Culvert cleaning – 3.0 units

Los Tambos main Road

- i. Heavy grading – 2.2 miles
- ii. Vegetation control (hand) – 3,005 ft
- iii. Accumulating of material – 6,035 C.Y
- iv. Resurfacing of streets – 1,755 C.Y
- v. Clearing and reshaping of ditches – 1 mile
- vi. Restore of drainage – 1 unit

Duck Run II to III Village

- i. Vegetation Control (hand) – 4 acres

San Antonio Village

- i. Heavy grading and compacting – 5,240 S.Y
- ii. Pothole patching of main road – 10 C.Y
- iii. Cleaning of garbage site – 2.0 acres
- iv. Mechanical Bushing 25.23 acres

San Antonio Village Road D9005

- i. Bushing of guard rails – 3,500 L.F.
- ii. Pothole patching - premix of main road
- iii. Heavy grading and compacting -5,240 S.Y

Cristo Rey Road D903

- i. Pothole patching – premix – 2.5 C.Y

Buena Vista/Yalbac Road

- i. Spot patching of carriageway -630 C.Y
- ii. Vegetation control (hand) – 3.25 acres
- iii. Surface grading of carriageway – 2 miles
- iv. Accumulating of material – 1,100 C.Y
- v. Grading of reshaping of carriageway – 2 miles

Duck Run I Village

- i. Culvert Cleaning – 2 units
- ii. Vegetation control (hand) – 11.7 acres
- iii. Remove existing culvert – 1 unit
- iv. Reinstall culvert and place boulders for erosion control – 1 unit
- v. Erosion control – 5 acres
- vi. Spot patching of carriageway – 60 C.Y

Ontario Village

- i. New Road construction – 750 C.Y

Succotz Village

- i. Vegetation control (Mechanical) – 4.0 acres

Cristo Rey-San Antonio Road D905

- i. Vegetation Control (mechanical) - 2.7 miles
- ii. Vegetation Control (hand) – 100,400.00 S.Y

Bullet Tree Road 2 D901

- i. Routine Maintenance – 3.1 miles

Baking Pot Ferry Road F9013

- i. Vegetation control – hand- 2.39 acres
- ii. Spot patching of carriageway – 390 C.Y
- iii. Grading, shaping, and compacting of carriageway 18,773.00 S.Y
- iv. Culvert cleaning – 1 unit
- v. Surface grading of carriageway – 1.6 miles

Farm Roads

Duck Run II Farm Road – F9072

- i. Light grading of streets – 1.5 miles
- ii. Culvert construction – 10 units
- iii. Heavy grading – 1.4 mile
- iv. Manual bushing of ROW – 2.6 acres
- v. Resurfacing of roadway – 630 C.Y
- vi. Clean and reshape ditches – 0.25 mile

Medina Farm Road F9004

- i. Emergency Repairs – erosion control works, placing of boulders at culvert – 120 C.Y

Bradley Farm Road F9042

- i. Light grading of roadway – 2.0 miles

- ii. Spot patching of unpaved road – 390 C.Y

El Pilar Road F9011

- i. Light grading of roadway – 1.5 miles
- ii. Spot patching of unpaved road – 1,155 C.Y

Roy Aldana Farm Road F 9034

- i. Heavy grading of farm road – 48,667 S.Y
- ii. Resurfacing of roadway – 1,350 C.Y
- iii. Alignment of farm road – 5,000 S.Y
- iv. Culvert construction – 10 units
- v. Vegetation control (hand) – 1.7 miles
- vi. Vegetation Control (mechanical) – 2.4 miles

Cadena Creek Farm Road F9028

- i. Vertical alignment of marl hill – 2,635 C.Y
- ii. Spot patching of carriageway – 1,250 C.Y
- iii. Vegetation control (hand) – 2,533 S.Y
- iv. Light grading – 1 mile

Branch Mouth Road F9007

- i. Vegetation control (hand) – 9.0 acres

Santa Familia Farm Road F9024

- i. Resurfacing of roadway – 270 C.Y

Negroman-Blackrock farm Road

- i. Grading and reshaping of carriageway – 5.75 miles

Chaa Creek/Duplooy's Farm Road

- i. Grading and repairing of carriageway – 4.5 miles

Teakettle Farm Road F8004

- i. New Road construction – 3.0 miles

Duck Run III Farm Road F9073

- i. Heavy grading – 4.0 miles

Selena Farm Road F9040

- i. Vegetation control – 6,667 S.Y

Bullet Tree-Spanish Lookout Road D902

- i. Heavy grading (sec 4) – 4.1miles, (sec 2) – 2.0 miles

San Antonio Farm Road

- i. Cutting and clearing of carriageway – 6,280 S.Y
- ii. Spot patching of carriageway – 60 C.Y
- iii. Accumulating of garbage at dumpsite – 1.5 acres

Maintenance of Highways

George Price Highway AR1

- i. Pothole patching premix -90 C.Y
- ii. Vegetation control (Mechanical) – 47.8 miles
- iii. Vegetation control (hand) – 12.10 acres
- iv. Repair to damaged guard rails – 20 L.F.

Hummingbird Highway

- i. Pothole patching premix – 2.0 C.Y
- ii. 160 cubic yards of premix patching

Bridges**Bullet Tree Falls Village D901**

- i. Minor bridge maintenance – 1 unit

Other works**Maintenance of Peter August Race Track**

- i. Mechanical bushing – 8 acres
- ii. Vegetation control (hand) – 3,600 S.Y
- iii. Repairing stables and fence

Belmopan City

- i. Pothole patching premix – 9 C.Y

Sanitary Landfill (Clearing of Site)

- i. Accumulating of material – 2,900 C.Y

Baking Pot Ferry

- i. Repairs to flooring
- ii. Replaced damaged roofs
- iii. Welding and painting of ferry
- iv. Replacing of cables and rollers

Street to San Ignacio Hospital

- i. Reshaping of side drains (mechanical) – 700 S.Y
- ii. Reshaping of carriageway – 1,635 S.Y
- iii. Resurfacing of carriageway – 450 S.Y
- iv. Spot patching and compacting of carriageway – 870 C.Y

MIDH Compound

- i. Painting of MIDH building
- ii. Installing of MIDH sign
- iii. Vegetation control (hand) – 3.7 acres

Total Length of road Network in Cayo District: 554 miles

5.5 STANN CREEK DISTRICT- ACCOMPLISHMENT**Village Streets**

Length of village streets recently paved-1.2 miles

Length of construction of new village streets- 4000 feet

Length of Village Streets spot patched- 30 miles

Grading-119 miles

Bushing -175 acres

Drainage Improvement whether culvert installation or cleaning of drains: - 44,810 ft of drains

Excavation and culvert installation: -28 sites

Farm Roads

Length of farm roads resurfaced/ spot patched- 5 miles

Grading-43.15 miles

Bushing -80 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 1.20 miles (Drain Cleaning)

Bridges

How many composite or timber bridges repaired – 6 timber bridges

DANGRIGA CONSTITUENCY

Village Streets

Length of village/town streets recently paved- 0.5 mile

Length of Village/town Streets spot patched- 2 mile

Grading- 12 miles

Bushing – 20 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains 7224 ft of drains excavation and culvert installation: -12 sites

Farm Roads

Length of farm roads resurfaced/ spot patched- 2 miles

Grading- 4 miles

Bushing - 32 acres

Maintenance of Highways

SOUTHERN HIGHWAY

Length of Highway recently Paved/ Rehabilitated- 0.7 mile

Volume of Premix Patching: 140 C.Y

Area Bushed – 751 acres

HUMMINGBIRD HIGHWAY

Volume of Premix Patching- 22 C.Y

Area bushed:-532 acres

Table 12. Total Length of Roads and Personnel in Stann Creek District- 478.6 miles

STANN CREEK UNIT'S EQUIPMENT			STANN CREEK UNIT'S PERSONNEL		
	EQUIPMENT	# OF EQUIPMENT		POST	# OF PERSONNEL
1	Grader	1	1	Heavy duty operator	4
2	Roller	1	2	Driver mechanic	5

3	Loader	1	4	Foreman/subforeman	3
4	Backhoe	1	5	Storekeeper	1
5	Tipper trucks	3	6	Mechanics	3
6	550 utility truck	1	7	Welder	1
7	Bulldozer	1	8	Office personnel	4
8	Pickup trucks	3	9	Workmen	5
9	Tractor	2	10	Watchman	4
			11	Janitress	1
			12	Carpenter 1	1
			13	RMU workmen hired thru invoice	8

5.6 TOLEDO DISTRICT- ACCOMPLISHMENT

ROAD MAINTENANCE

TOLEDO WEST CONSTITUENCY

Village Streets

Length of Village Streets spot patched- 4.2 miles

Grading: - 3.25 miles

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 20.25 miles of drains cleaning, excavation and culvert installation- 2 sites

Farm Roads

Length of farm roads resurfaced/ spot patched- 24 miles

Grading- 42.6 miles

Bushing -60 acres

Drainage Improvement whether culvert installation or cleaning of drains- 20.25 miles (Drain Cleaning) and culvert installation- 10 sites

Bridges

How many Composite or Timber Bridges Repaired – 4 Timber Bridges

TOLEDO EAST CONSTITUENCY

Village Streets

Length of construction of new village streets- 2.5 miles

Length of Village/town Streets spot patched- 15 miles

Grading- 58.5 miles (include town streets)

Bushing – 76 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains 7 miles of Drains Cleaning/Reshaping and Culvert Installation- 7 sites

Farm Roads

Length of farm roads resurfaced/ spot patched- 3 miles

Grading- 4 miles

Bushing - 32 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 13.5 miles (drain cleaning/reshaping)

Bridges

How many Composite or Timber Bridges Repaired – 4 bridges

Maintenance of Highways

SOUTHERN HIGHWAY-

Volume of Premix Patching- 38.5 C.Y

Area Bushed – 367 acres

Drainage Improvement whether culvert installation, new drain construction or cleaning of drains- 2.35 miles

Safety Appurtenances-

Painted Speed Bumps: 10

Replacement/Repairs of Highway Guardrails: 120 feet

Installation of Traffic signs: 6 signs (Complete)

Table 13. Total Length of Roads and Personnel in Stann Creek District - 379.3 miles

TOLEDO UNIT'S EQUIPMENT			Toledo Unit's Personnel		
	EQUIPMENT	# of equipment		POST	# of personnel
1	Graders	2	1	Heavy duty operator	11
2	Roller	1	2	Driver mechanic	1
3	Loader	1	4	Foreman/subforeman	3
4	Backhoe	1	5	Storekeeper	1
5	Tipper trucks	6	6	Mechanics	3
6	550 utility truck	1	7	Welder	1
7	Bulldozers	2	8	Office personnel	4
8	Pickup trucks	3	9	Workmen	4

9	Tractors	2	10	Watchman	2
10	Excavator	1	11	Janitress	1
11	Towhead truck w/ trailer	1	12	Mason	1
			12	RMU workmen hired	14
			13	Gateman	2
			14	Tireman	1
			15	Driver	3

6.0 PROGRESS UPDATE ON ROAD PROJECTS

The Ministry has three Project Execution Units (PEUs) established to administrate and supervise road projects that are funded jointly between the GoB and external financial institutions.

The units are:

Project Management Unit (PMU) No. 1. - this unit was managing four projects jointly funded by the GOB and IDB. Two were Grant Agreement from IDB having to do with feasibility studies and environmental and Social Impact Assessment for both the George Price Highway between Roaring Creek and Santa Elena Cayo District and the second being the Climate Vulnerability Project situated in Belize City that has to do with flood alleviation measures. The studies have already been completed.

The remaining two projects are rehabilitation of the George Price Highway (GPHR) between Roaring Creek and Santa Elena, Cayo District which is substantially completed since October 30, 2021 and the Climate Vulnerability Reduction Project (CVRP) which is approximately 59% completed.

Project Management Unit No. 2 – This Unit manages and supervise four major road construction projects that are jointly funded between the GOB and OPEC Fund for International Development (OFID), Kuwaiti Fund and United Kingdom Caribbean Infrastructure Fund (UKCIF) and Caribbean Development Bank (CDB).

Project Execution Unit No. 3 – This Unit manages and supervises the upgrading of 27 miles of the Corozal - Sarteneja Road which is funded through a bilateral arrangement with the Republic of China on Taiwan (Taiwan).

Update on the seven (7) major Projects supervised by these three Project Units are briefly summarized below.

- Rehabilitation of the George Price Road – GPHR -(Between Roaring Creek Bridge and Loma Luz Blvd, Santa Elena, Cayo District

- Climate Vulnerability Reduction Project (CVRP)
- Upgrading of 27 miles of the Corozal Sarteneja Road
- Haulover Bridge Replacement Project
- Caracol Road Upgrading Project
- 6th Road (Coastal Highway Upgrading) Project
- 7th Road (Philip Goldson Highway and Remate Bypass Upgrading) Project

6.01 PROJECTS FUNDED BY INTER-AMERICAN DEVELOPMENT BANK (IDB) / GOB

- ***George Price Rehabilitation Project (GPHR):*** Rehabilitation of the George Price Highway from Roaring Creek to Loma Luz Boulevard, Santa Elena, Cayo District has been substantially completed with completion of Section 3– Blackman Eddy to Loma Luz Boulevard, Santa Elena. This project significantly increased hydraulic capacity of the Garbutt Creek Bridge in Central Farm, near Galen University, Bridge at Lower Barton Creek in United Ville Village and of course the construction a new Roaring Creek Bridge.
- ***Climate Vulnerability Reduction Project (CVRP):*** This project is located in Belize City and its objective is flood alleviation in southside Belize along with providing creating an enabling environment to facilitate and build resilience in the tourism sector in both Caye Caulker and Goff Caye. This project includes the construction of concrete line walls along sections of East / West Collet Canals drainage improvement and construction of a pumping station which will alleviate the incidence and duration of flood events in the southside area of Belize City. Project is 69% completed with an expected completion date of June 2023.

6.02 PROJECTS FUNDED BY REPUBLIC OF CHINA ON TAIWAN (TAIWAN) / GOB Upgrading of 27 miles of Corozal – Sarteneja Road: (Bz\$100 M)

- The Contract was signed on November 2018 for upgrading of 27 miles of the Corozal Sarteneja Road. This road project also involves construction of two new Bridges which will replace the old, dilapidated ferries at Pueblo Viejo and Laguna Seca. The Taiwanese Contractor, OECC, has already completed the design of the road and two Bridges and construction is now underway. Work has started on a 10 km section of the road and to date 7 km has been completed. Bridge construction has commenced at Laguna Seca Site and progress on Bridge works is 1.6 %
Overall Progress on this Project is approximately 21 %

6.03 PROJECTS FUNDED BY OFID/GOB

Haulover Bridge Replacement Project

The Haulover Bridge Replacement Project is funded by the GoB and the OPEC Fund for International Development, through a Bz\$24 M loan.

In 2020 the Government decided to re-design the bridge structure using a local firm and locally available materials to be a multiple span reinforced concrete pre-cast / pre-stressed structure. Following a detailed review of the project, the MIDH commissioned a professional peer review of the detailed designed and commenced the procurement of a construction contractor in March 2021.

The GoB signed a contract for the Haulover Bridge Replacement Project with M&M Engineering Consultants Ltd., in the amount of Bz\$30,990,991.49 on 23 August 2021.

(i) Progress

Politecnica Ingegneria ed Architettura S.C, bridge specialist consultants of Italy, provides technical and administrative supervision and were present in country as of October 2021. The project start date and possession of the site was set for 1st October 2021 with a contract period for completion in 24 months.

The contractor has since provided all required guarantees and insurances required at project start and has received the advance payment. Project site offices, residences and transportation was established for the consultant and the M&M has submitted various construction plans for review, such as: the Quality Control plan, the Traffic Management Plan, the Health & Safety Plan and the construction program. Both approach alignments were cleared and temporary gravel working platforms have been provided at locations of piers. Materials for the construction of in-river cofferdams have been procured and are being shipped to site. The contractor has received approval for and commenced the construction of precast reinforced concrete piles. Approximately 8% of the contract period has elapsed.

(ii) Technical Details:

The Haulover Bridge Replacement Project will install a new multiple-span reinforced concrete structure designed to AASHTO Standards, immediately downstream of the existing Haulover Bridge. The new structure has two approach spans of 43.025meters and a center span of 42.5meters, totaling 128.55meters. Seven Florida Type 72 Bulb Tee girders support each span providing an overall bridge deck width of 14.9meters. The new structure accommodates two lanes of traffic including 1.5m wide shoulders and dedicated pedestrian sidewalks on both sides. A rigid AASHTO Type 732 concrete barrier separates vehicular and pedestrian traffic. The reinforced concrete deck with precast and prestressed elements is founded on reinforced concrete center piers and abutments and driven piles.

Two elevated reinforced concrete approaches of five 30 meters spans, comprising of seven precast pre-stressed AASHTO Type 4 beams on each span will create a gradual approach from ground level to the bridge deck, which is 6.5meters above mean sea level, providing 4.5meters of freeboard and making the entire bridge a climate resilient structure. Additional improvements include the addition of modern safety features including high visibility signs, lighting, painted lane markings, and safety rails as needed.

6.04 Caracol Road Upgrading Project

(i) Phase 1

The Caracol Road Upgrading Project is funded by the Government of Belize and the OPEC Fund for International Development, through a US \$40 million loan.

Procurement of construction contractors commenced the 2nd quarter of 2019, bids were submitted on 2 September 2019 and contracts were signed on 2 December 2019. Works commenced in February 2020.

The Caracol Road Upgrading Project – Phase 1 is approximately 34.7km (21.5miles) and divided into three lots. The project includes the construction of earthen embankments, crushed gravel pavements, and two (3.65m) lanes with (1 m) shoulders that have a double bituminous chip-seal wearing course. The road drainage scheme is also upgraded through the replacement of undersized culverts and the upgrading in some cases to reinforced concrete box structures. The road segment will be completed with modern ancillary road safety features, including high visibility road signs, edge markers, lane markings, and safety rails.

(ii) Lot 1A (Georgeville – Tripartite / Santa Elena – Cristo Rey / San Antonio – Tripartite)

Lot 1A is 26 km in length, 20 km of which is substantially covered with the first of two bituminous and stone chip-seal, is from George Price Highway / Georgeville intersection to the Tripartite Intersection and from the intersection with George Price Highway in Santa Elena to the Tripartite Intersection. The project duration is 30 months, reflecting completion in August 2022 at a contract price of Bz\$37,988,176.55. There are no extensions to time as yet. Works are on program. Progress to the middle of December 2021 is approximately Bz\$30.6M (approximately 81%).

The majority of the remaining works is within the villages of Cristo Rey and San Antonio where reinforced concrete sidewalk box drains are being constructed and works are confined by the narrow existing reserve.

Progress to end November 2021: Bz\$30.624M (80.6%)

(iii) Lot 1B (Tripartite Intersection - Blancaneaux Lodge Line)

Lot 1B is 8.8 km in length, was completed as of the end of November 2021. The final interim payment certificate was received in the first week of December 2021. The road segment is fully covered with two bituminous stone chip-seals, it commences at the Tripartite intersection and follows the existing road alignment, to where the Blancaneaux Lodge line intersects the Caracol Road. The project duration was 21 months, reflecting completion in November 2021. A variation order was approved, which provided an extension of time as well as overruns on the unforeseen extent of excavation in rock, record amounts of rain due to the passage of tropical systems Eta and Iota in 2020 also affected works in the clayey and waterlogged soils of the mountain pine ridge for a period.

The final contract value was Bz\$14,898,164.44. Progress to the end November 2021 is 100% completion, all road furniture and safety features are installed. The Contractor has applied for taking-over of the works and a snag-list of tagged issues have been prepared as this road segment of the project enters the 1-year long Defects Liability Period.

(iv) Lot 1C (Blancaneaux Lodge Line – Pinol Line)

Lot 1C is 7.25 km in length, through the Mountain Pine Ridge Forest Reserve. The road section was modified slightly to 3.35m lanes and 0.5m shoulders; this was done prior to contract award to Belize Roadway Construction Ltd., on 21 May 2021, as a cost savings exercise. Three new bridges will be constructed within the road segment at Privassion Creek (24m), Oak Burn Creek (35m) and Pinol Creek (90.65m).

The project commenced on 2 August 2021 with a contract period of 18 months. The contractor has mobilized, cleared the entire site, and re-established all surveying benchmarks and design alignment. Earthworks has commenced (33.5% accomplished) as well as the foundations for all three bridges (19% accomplished). Thus far, works are only marginally behind program, a matter of days.

Progress to the middle of December 2021 is approximately Bz\$2.4M (approximately 21%).

6.05 Phase 2- Caracol Road Project

The Caracol Road Upgrading Project – Phase 2 covers the distance from Pinol Line to the Caracol Archaeological Site, a distance of 42.9 km (26.2 miles), which passes through Douglas da Silva camp. Phase 2 is divided into three lots. Lot 2A (23.7 km) from Pinol Line to Guacamallo Bridge. Lot 2B the construction of Guacamallo Bridge and Lot 2C (18.7 km) from Guacamallo Bridge to Caracol Archaeological Site.

Because of the COVID-19 pandemic on the economy of Belize, the Government has postponed all activity on this phase of the project for 1 year, this period closes on 6 April 2022.

It is expected that a decision to award contracts must be done prior to this date.

6.06 PROJECTS FUNDED BY THE UNITED KINGDOM CARIBBEAN INFRASTRUCTURE PARTNERSHIP FUND/ CDB/GOB

(i) SIXTH Road (COASTAL HIGHWAY) Upgrading Project

Civil Works

The Sixth Road (Coastal Highway) Upgrading Project is funded by the Government of Belize, UKCIF and CDB, through a GBP\$25,050,000 grant and Bz\$73,152,000 loan.

Procurement of construction contractors commenced the 2nd quarter of 2019, bids were submitted on 24 October 2019 and contracts were signed on 2 December 2019. Works commenced in January 2020.

The Coastal Highway Upgrading Project – Lot 1 is approximately 28.16 km (17.6 miles) including the upgrading of its intersection (La Democracia) with the George Price Highway. The rehabilitation of Sibun, Cornhouse and Soldier Creek Bridges and the new construction of Manatee Bridge. Lot 2 is approximately 29.88 km (18.7 miles) including the construction of a new roundabout at its intersection with the Hummingbird Highway. The rehabilitation of Nelly bridge as well as the new construction of Jenkins, Quamina, Deadman, Mangrove and Big Creek bridges. The project includes the construction of earthen embankments, crushed gravel pavements, and two (3.6m) lanes with (1.5m) shoulders that have a double bituminous chip-seal wearing course. The road drainage scheme is also upgraded through the replacement of undersized culverts and the upgrading to reinforced concrete box structures or pipe culverts. The road segment will be completed with modern ancillary road safety features, including high visibility road signs, edge markers, lane markings, safety rails, bus laybys and lighting.

(ii) Lot 1 (La Democracia Village – Solider Creek Bridge)

Lot 1 is 28.16 km in length, all box culverts have been completed and approximately 7 km of roadway is substantially covered with the first layer of double surface bituminous dressing (0+800 to 8+500). Sibun Bridge, Cornhouse Bridge and Soldier Creek Bridge rehabilitation is 90% complete. Manatee Bridge is approximately 85% completed. Two of three floodways have been completed and the third floodway is under construction. The project duration is 36 months, reflecting completion in January 2023 at a contract price of Bz\$62,971,611.45. There are no extensions of time issued to date; however, it is anticipated that extension of time will be required due to storms and COVID-19. Progress to the middle of December 2021 is approximately Bz\$32.3M (approximately 51.26%).

The contractor has completed majority of fill works, drainage and will be focusing on implementing sub-base, base course and paving. La Democracia Intersection is expected to commence in the month of January.

Progress to end December 2021: **Bz\$32.3M (51.26%)**

(iii) Lot 2 (Soldier Creek Bridge – Hope Creek Village)

Lot 2 is 29.88 km in length, only two box culverts remain to be completed and approximately 9 km of roadway is substantially covered with the first layer of DBST (28+500 to 31+700, 33+000 to 37+000, 38+800 to 40+600). Jenkins, Quamina, Deadmans, Mangrove and Big Creek Bridge are all in various completion phases. Mangrove Bridge is anticipated to be the first completed bridge. Nelly Bridge was demolished and replaced by a double box culvert. Gales Point Junction has been substantially completed and the contractor has commenced working on Mullins River Junction. The project duration is 36 months, reflecting completion in January 2023 at a contract price of Bz\$70,111,146.19. There are no extensions of time issued to date; however, it is anticipated that extension of time will be required due to storms and COVID-19.

Progress to the middle of December 2021 is approximately Bz\$32.4M (approximately 46.23%).

The contractor has completed majority of fill works, drainage and will be focusing on implementing sub-base and base course material to continue paving. Hope Creek Roundabout Intersection will also commence in the month of January.

Progress to end December 2021: **Bz\$32.4M (46.23%)**

(iv) Consultancy Services

The Sixth Road (Coastal Highway) Upgrading Project has two soft components and are categorized as capacity building.

Community Capacity Building for Livelihood Enhancement Projects

The procurement for this consultancy experienced some initial delays due to the procurement method of engagement i.e. Quality and Cost Based Selection. Due to the limited amount of consultancy firms with the particular experience being requested for this consultancy, the consultancy was relaunched using the Quality Based Selection Method. On December, 2021 the QBS procurement process was completed and BRAC consultants was awarded the consultancy contract. The contract is expected to be signed in January 2022 and has a duration of one year. This contract will be overseen by the Belize Social Investment Fund.

Coastal Highway Corridor Structure Plan

The procurement for this consultancy experienced major delays (1 year) due to the Ministry of Natural Resources (MNR) not being able to provide the required personnel to be a part of this consultancy. In August of 2021 MNR provided the required personnel to commence the procurement process of this consultancy. The Expression of Interest was advertised locally and regionally and the deadline for submission was set for 30 November 2021. Based on interests submitted, the evaluation committee shortlisted three (3) firms and has submitted the EOI evaluation report to CDB for their review and no-objection.

It is anticipated that this consultancy will commence by March 2022 and will have a duration of 4 months.

6.06 PHILIP GOLDSON HIGHWAY AND REMATE BYPASS UPGRADING PROJECT

Background

The Philip Goldson Highway and Remate Bypass Upgrading Project (PGHRBP) is being funded in part with a grant from the United Kingdom Caribbean Infrastructure Partnership Fund (UKCIF), a loan from the Caribbean Development Bank and contribution from the Government of Belize.

Organization	Bz\$ Funding (M)
UKCIF	37.2
CDB	68.8
GOB	13.8
Total	119.8

(i) Project Scope

The Philip Goldson Highway and Remate Bypass Upgrading Project will include the installation of additional and new drainage structures for the highway as well as side roads and driveways to improve climate resilience; road safety features including line marking, road studs, traffic signs, bus lay-bys and traffic calming measures in all villages along the entire route. Additional road safety features in village locations only, includes pedestrian/ bicycle paths, pedestrian crossings, and rumble strips. Shoulder widening and pavement strengthening utilizing a Double Bituminous Surface Treatment (DBST) pavement will be executed from Biscayne Village at mile 24.5 to the Santa Elena Border at mile 92, which is approximately 109 km of existing paved road. Also included is the upgrading of the Remate Road Bypass; approximately 18 km of existing gravel road.

The PGH project is also divided into 4 Lots:

Lot 1 includes two sections of the PGH; Section A and Section D. Section A commences at the existing culvert at approximately Mile 24.5 and terminates at the existing roundabout at the beginning of the Orange Walk Bypass and Section D commences from the Northern intersection of the Remate Road Bypass and terminates at the Border Post in Santa Elena.

Lot 2 commences from the existing roundabout at the beginning of the Orange Walk Bypass and terminates just before the proposed new roundabout forming the southern end of the Remate Bypass.

Lot 3 comprises the construction of the entire Remate Road Bypass.

Lot 4 includes two sections of the PGH: Sections E1 and E2. Section E1 commences at the southern end of the Remate Bypass and terminates at the existing roundabout at the southern

end of the existing dual carriageway boulevard in Corozal Town. Section E2 commences from the Northern end of the Remate Bypass and terminates at the start of the existing dual carriageway boulevard in Corozal Town.

Contract for civil works was signed for all Lots on the 21 May 2021 as follows:

Table 14. Contracts signed for Philip Goldson Highway & Remate Bypass Upgrading Project

WORKS PACKAGE	CONTRACTOR	CONTRACT #	VALUE (Bz\$)
Lot 1	Teichroeb & Sons Ltd.	04-2021/22	\$10,530,865.48
Lot 2	Cisco Construction Ltd.	05-2021/22	\$27,079,302.32
Lot 3	Cisco Construction Ltd.	06-2021/22	\$21,931,778.70
Lot 4	Teichroeb & Sons Ltd.	07-2021/22	\$19,791,478.71

PROGRESS OF THE ROAD WORKS

6.06 TEICHROEB & SON'S – Lots 1 & 4

(i) Activities reported:

Engineers' offices at the both the Remate and Carmelita campsites have been established. Project signs have been erected at the locations approved by the Engineer and the PEU. Sources of materials identified, tested and approved for use on the project.

Crooked Tree Roundabout is approximately 40% complete.

Earthworks ongoing at Tumbaito realignment and Libertad Junction.

Widening works ongoing at Carmelita Village in Lot 1 and Concepcion Village in Section E1 of Lot 4.

Pavement of 4.08% in Lot 1 and 1.9 % in Lot 4.

Notices:

Archaeological interests were identified at Libertad Junction. The Archaeology department was contacted and have excavated the findings.

A variation is proposed to concrete the intersection of the Sugar Factory approaching Orange Walk Town. The contractor has submitted the drawings and proposal for review. Rates as highlighted in the contractors bid to be applied.

Overall, works are behind schedule and plans to increase assigned resources to complete outstanding works within contractual deadline. Progress was affected in part by adverse weather conditions and the above-mentioned archaeological excavations.

6.07 CISCO CONSTRUCTION LTD. – Lots 2 & 3

Activities reported:

Contractor campsite including Engineer's Offices completed.

Project signs have been erected at the locations approved by the Engineer and the PEU.

Mamayal box culvert 75% complete.

Culvert installation at Remate Swamp 45% complete.

Temporary diversion at Remate south constructed.

Embankment construction ongoing at Mamayal and Remate swamp.

Notices:

Overall, works are behind schedule. Contractor to increase assigned resources to complete outstanding works within contractual deadline. Progress was affected in part by adverse weather conditions and the delay in utility relocation.

Utility relocation still pending in Remate South and North Roundabout.

Contractor submitted Notice of Force Majeure for both Contracts due to the effects of the COVID-19 Pandemic on prices of certain materials; however, has not made a claim.

6.08 MINOR WORKS FOR SAFE SCHOOL ZONES

No advancement to this component has been made this year. The current target start date for this component is February 2023.

6.09 ENGINEERING SERVICES

CONSTRUCTION SUPERVISION

Politecnica is a consulting firm from Italy that has been contracted to provide construction supervision services. The team is now complete and have fully assumed their role as Engineer.

6.10 SAFE SCHOOL ZONES DESIGN & CONSTRUCTION SUPERVISION

No advancement to this component has been made during this year. The current target start date for this component is September 2022.

6.11 PROJECT MANAGEMENT

The second attempt at hiring an Environmental Specialist was unsuccessful. In an attempt to avoid a third relaunch, a market analysis was conducted and with the approval of the Bank, a firm was invited to submit a technical and financial proposal to provide services on a part-time basis. A contract was successfully negotiated and is currently awaiting approval from the Ministry of Finance and the Contractor General. It is anticipated that the consultant can be engaged by the end of January 2022, and this would complete the PEU team.

Contractors submitted their updated Environmental and Social Management Plan on 08 December 2021. Feedback pending.

Stakeholder engagement series planned for January 2022.

Monitoring and Evaluation Framework updated and submitted for approval. Evaluation Strategy pending.

PROJECT SUPPORT SERVICES

6.12 DEVELOPMENT AND IMPLEMENTATION OF A HUMAN TRAFFICKING/ SMUGGLING, GBV AND HIV/AIDS AWARENESS CAMPAIGN.

Technical and Financial Proposals were received on 01 November 2021 from two shortlisted firms. Technical proposals were evaluated, and the evaluation report and recommendations were shared with the Bank for No Objection. Financial Proposals are anticipated to be opened and evaluated in January 2022.

6.13 DEVELOPMENT AND IMPLEMENTATION OF A LIVELIHOODS ENHANCEMENT STRATEGY AND ACTION PLAN.

No advancement to this component has been made during the period of this report. It is projected that Expressions of interest will be published in the 1st quarter of 2022.

6.14 LAND ACQUISITION

Preliminary surveys had identified twenty (20) parcels that would be affected by the Project however, setting out survey confirmed only thirteen (13); (twelve landowners).

To date: 9 successfully negotiated offers.

One sales agreement signed December 31, 2021: payment processing.

Eight (8) sales agreement pending approval from legal department and confirmation of MNR signatory.

A second valuation was conducted on the three properties where landowners rejected initial compensation. The offer was revised and presented to the landowners. Should landowners reject second offer, compulsory acquisition process will be launched.

7.0 HOUSING PORTFOLIO

7.01 Project Description

Last year, June 2021, the Government of Belize, through the Ministry of Infrastructure Development and Housing (MIDH) launched the Low-Income housing project. The aim of the project is to provide a sustainable housing program that will ensure easy and affordable access to home ownership for all Belizeans in both urban and rural areas; thereby contributing to the sustainable development of Belize. The ministry established, the newly formed Housing Execution Unit (HEU) to directly oversee and administer the project.

The objective of the low-income housing project; under Phase I of the project, is to construct homes for single mothers/fathers and first-time homeowners. These are the modular studio houses the ministry is currently engaged in constructing. These houses were designed in a way that would allow to easy expansion to two- or three-bedroom houses in the future. The plans are to progressively move on to phase II, of the project, which aims to begin the construction of the 2-bedroom houses. The focus in this phase will include public officers and the wider public within the scope of the project.

Under the project many houses have been completed of the 150 houses that were approved for the fiscal year 2021/2022, while many more are in the pipeline or underway to being completed and handed over. The housing approval committee has already approved 132 applications for construction from a wide array of the Belizean population. The recipients of these houses sign an agreement of understanding with the ministry that these houses are being built and handed over to them for a minimal repayment price of \$12,000.00, to be repaid in weekly payments of \$25.00 per week or \$100.00 monthly, over a 10-year period.

7.02 Project Management

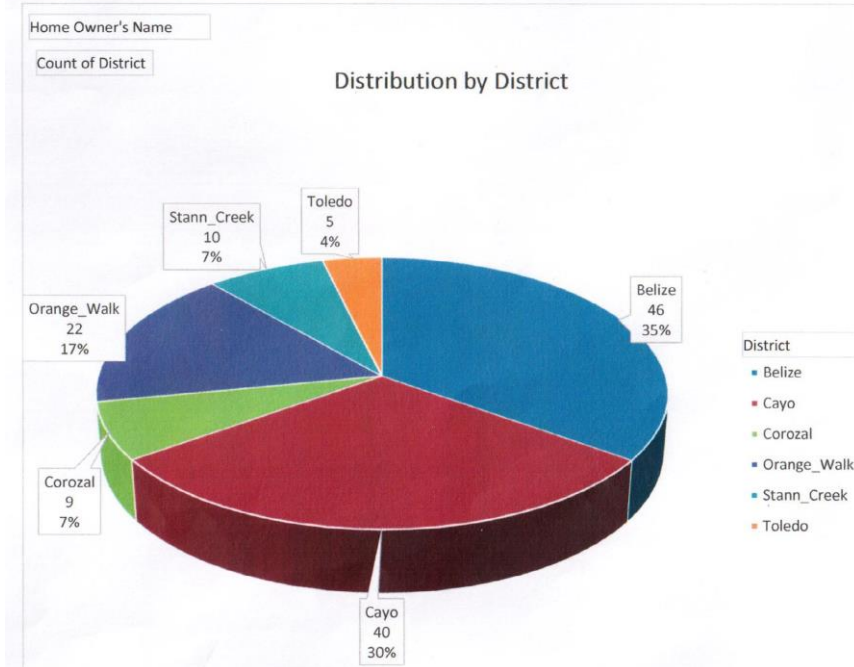
The Ministry established, the newly formed Housing Execution Unit (HEU) to directly oversee and administer the objectives of the low-income housing project. The unit is currently staffed with 17 employees. Twelve officers at the technical level and five clerical support staff. However, there are vacant positions for technical officers currently. The unit is also tasked with the responsibility of engaging contractors and suppliers to obtain the necessary skilled personnel and materials for the construction of the modular houses

The Unit is equipped with a dynamic team that are willing, capable and very much responsible in meeting the demands and objectives of the project. Our team encompass a great level of professionals that are hardworking and excited to deliver daily. However, like in an organization, we are faced with some challenges. Some of the officers are in experienced, fresh out of school, and the workload are seemingly too much. The unit is very busy due to the nature of its work and

requires additional technical support and experienced. Training and workshop are also necessary for the newly employed officers.

The graphs below show the distribution of the approval recipients by the Housing Approval Committee for fiscal year 2021/2022.

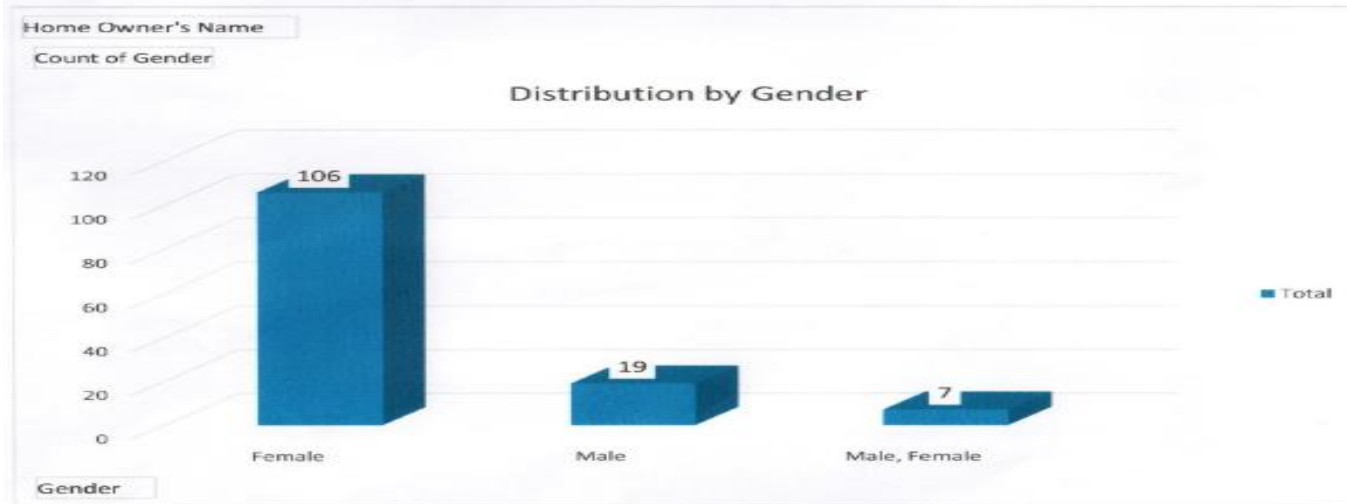
Home Owner's Name (Multiple Items)	
Row Labels	Count of District
Belize	46
Cayo	40
Corozal	9
Orange_Walk	22
Stann_Creek	10
Toledo	5
Grand Total	132



Home Owner's Name (Multiple Items)	
Ethnicity	Count of Ethnicity
Creole	55
East_Indian	3
Garifuna	7
Maya	9
Mestizo	58
Grand Total	132



Home Owner's Name (Multiple Items)	
Gender	Count of Gender
Female	106
Male	19
Male, Female	7
Grand Total	132



During phase 1, of the project leading up to December 31, 2021, the ministry was able to handover the first few houses that were completed while many more were still under construction in several Districts. With the houses being completed and handed over a new family took over ownership and use of the house.

By receiving and owning a house under this housing project, it positively affected the lives of many families in a variety of ways. As a result of owning a house the lives of many families improved since they now have a safe house to call home and to enjoy with family members and friends. An added benefit to each family is that considering the value of the house the families can now access financial assistance from the Banks to further develop their house. The Real Estate value of the property automatically increased providing additional borrowing ability to the family for greater improvements to the house and the family's wellbeing. A house also positively impacts the children since their friends will treat them with greater respect compared to before. A good quality house also improves the overall value of the housing stock of the community and the country.

Some of the houses being handed over to their respective recipients



This pilot housing program is the starting point towards providing affordable housing to needy families in Belize. It builds self-esteem and most importantly provides opportunities for greater economic stability for families and the community and the wider Belize by adding value to the existing infrastructure currently available.

Streamlining this pilot project was not easy since the Ministry had to set up a Housing Execution Unit (HEU) within a very short period. Finding all the necessary suitably experienced personnel to execute the project was a challenging task, however the HEU Unit has been improving as the days go by. The HEU Unit is very dynamic and ready to positively impact the lives of as much families as possible within the shortest time through the handing over of these one-bedroom modular houses that were designed to facilitate expansion as the families become financially able to do so.

Finding all the necessary contractors was also a challenge since all the houses are being built by registered contractors. The Ministry had embarked on registration of contractors prior to the rolling out of this project. To do so the Ministry published advertisement in Newspapers, Media outlets including the social media inviting all suitable contractors to become registered, the

process has provided positive results as there are now numerous registered contractors that are able to successfully build these houses.

The current pilot project is being funded by the Government of Belize through a Bz\$5,000,000.00 fund allocated under Capital II and Capital III funds for the fiscal year 2021/2022. It is expected that this program will expand in the near future to include a wider range of recipients as well as include two- and three-bedroom houses as well.

8.0 LESSONS LEARNT

8.01 Works Portfolio

The Ministry has had time to conduct an assessment of its affairs in an effort to improve its overall effectiveness and efficiency in delivery of services to the Belizean people. In the recent past, a poor perception of the Ministry had developed within our Society amidst the allegations of corruption of officials in the Belize Public Service. This, in the case of the MIDH, had to do with poor accountability of funds, the use and abuse of the Ministry's assets, and the unaccounted pieces of equipment from the Ministry's inventory. In essence there was the perception of lack of proper controls and adherence to the financial and stores regulations. This assessment has resulted in the following measures being implemented and adopted as a policy throughout the Ministry:

- The procurement process for operational matters involving works, goods and services now requires at the minimum four officers to review and support the requests before CEO's approval is granted.
- A policy decision has been made in respect to procurement methods utilized within the Ministry. An annual Procurement Plan is to be prepared by a team comprising of technical staff, administrative officer and finance officer and with expressed Approval of the CEO and Minister the works/goods/services are to be advertised and Open Tender Method is to be employed as much as possible. Limited/Selective tendering procedures, in accordance with the Finance and Audit Reform Act, should be used sparingly and only to support the MIDH's force account activities or in emergency situations.
- To reduce cost of operations and improve coordination between the International Funding Institutions, the Executing Agency and the three Project Execution Units, the Ministry has now established one Central Project Management Unit. This will involve sharing of support staff among the three PEUs such as finance officers, administrative assistants, office assistants and drivers to reduce cost without compromising quality of supervision or timely completion of these major road projects.

- To obtain more value for money and optimise the use of its limited resources, the Ministry has been rebuilding its equipment fleet to undertake more maintenance activities with its own work force (Equipment and Manpower). This will enable improve response to emergency and data collection and management
- The Ministry is engaged with other line ministries in rebuilding its technical staff complement to improve its effectiveness and efficiency. This will address understaffing in the MIDH and enable an improved response to emergencies and data collection and management. As a spin-off benefit increase staff will allow flexibility with deployment of staff to ease the strain on the officers and allow them to enjoy their full leave entitlement which has been a challenge.

8.02 Housing Portfolio

At the beginning of the housing project, the Ministry was involved in procuring and delivering all construction materials for the construction of low-cost houses to all the construction sites. This endeavour proved to be unsustainable as it required resources which were not readily available in country because of Covid-19, causing unnecessary delays to contractors and by extension delays with the completion and delivery of the houses.

Another drawback which affected cost and delivery of low-cost homes were the locations of proposed sites which were situated far from each other requiring long travelling time not to mention challenges with road access. Longer travelling time and delivery of material had setbacks causing delays in construction and timely completion of the low-cost homes.

To reduce the need for additional resources, the procurement and delivery method was modified, where the Ministry entered into contract with suppliers to provide and deliver majority of the materials for the contractors, while the Ministry was limited to delivery of only specific items to the contractors. The materials provided by the Ministry were procured by bulk which reduced the unit price for these materials, thus generating savings and reducing the overall cost of the houses.

Another significant drawback is the fact that the HEU had to put in place significant infrastructure input prior to being able to construct the house. As part of the project, the HEU has had to build new roads

or improve existing roads and streets, placed culverts, fill lots, clear house lots with equipment, demolish and move existing buildings as well in preparation for construction.

9.0 FUTURE PRIORITIES AND PLANS

Based on the achievements and lessons learnt over the last year the Ministry is considering having the private sector construct prefabricated buildings to reduce cost per house. This

additional option will require that the Ministry hires additional technical staff to be able to provide the necessary construction supervision for a greater number of houses within a short period of time.

In rolling out of the next phase of the Housing Program, public officers and the wider public will be able to qualify for two- and three-bedroom houses to be constructed by the Ministry with co-financing through the National Bank of Belize or the Development Finance Cooperation. The implementation of this new modality will increase the number of houses being built over the next fiscal year.

9.01 Staffing and Financial considerations

Human Resources:

The HEU is currently understaffed and many of the personnel that are available have limited experience to effectively operate unsupervised. Coupled with inadequate staffing, there are challenges to fill existing vacancies primarily because remuneration packages offered in the Belize Public Service are below the current market rates / remuneration packages offered in the Private Sector. There already is a shortage of qualified and suitably experienced tradesmen, Architects and Engineers and unless the salary and conditions of services are improved in the Belize Public Service to a level close to or similar with those offered by the Private Sector, the MIDH will continue to experience challenges attracting suitable technical staff that qualified and experienced.

Table 15. Staffing personnel at the Housing Execution Unit

Staff	Number	Employment Type	Vacant Positions
Project Manager (Engineer)	1	Permanent	
Financial Specialist (Finance Officer)	1	Contract	
Engineer	1	Contract	1
Procurement Control Manager	1	Permanent	
Architect II	1	Permanent	1
Building Maintenance Manager	1	Permanent	
Building Maintenance Supervisor	1	Permanent	
Housing Officer	2	Permanent	1
Second Class Clerk	3	Permanent	
Secretary	1	Permanent	
Building Construction Inspector	7	Permanent	3
TOTAL STAFF - HOUSING	20		6

The funding for the project is currently being provided by the Government of Belize. The GOB intends to seek additional funding support from International Funding Institutions to finance this initiative by the Government. Last fiscal year, 2021/2022 when the Government embarked on launching this project two million five hundred thousand (Bz\$2.5m) dollars were budgeted and expended on the project.

The table below provides an insight of the approved budgeted figures and allocation for the project for respective period (January 2021-December 2021) and the current fiscal year.

Table 16. De-reserved and Expenditure Amounts by Recurrent Cost Centre (Bz\$)**a) For Fiscal Year 2021-22**

RECURRENT COST CENTRE	DERESERVED	EXPENDITURE
33017 – 230 (Personal Emoluments)	\$409,907.60	\$127,062.93
33017 – 231 (Travel and Subsistence)	\$ 9,800.20	\$ 2,599.83
33017 – 340 (Material and Supplies)	\$ 28,725.50	\$ 22,106.10
33017 – 341 (Operating Costs)	\$ 33,261.30	\$ 25,214.59
33017 – 342 (Maintenance Costs)	\$ 37,035.70	\$ 24,386.93
33017 – 343 (Training)	\$ 6,668.00	\$ NIL
33017 – 346 (Public Utilities)	\$ 20,988.90	\$ 7,392.03
33017 – 350 (Grants)	\$164,640.00	\$109,200.00

b) For Fiscal Year 2022-23

RECURRENT COST CENTRE	DERESERVED	EXPENDITURE
33051 – 230 (Personal Emoluments)	\$802,934.80	\$316,080.03
33051 – 231 (Travel and Subsistence)	\$ 11,768.90	\$ NIL
33051 – 340 (Material and Supplies)	\$ 26,315.20	\$ 9,281.42
33051 – 341 (Operating Costs)	\$ 28,041.90	\$ 1,554.67
33051 – 342 (Maintenance Costs)	\$ 36,356.50	\$ 14,590.90
33051 – 343 (Training)	\$ 1,908.20	\$ NIL
33051 – 346 (Public Utilities)	\$ 8,383.80	\$ 4,150.52
33051 – 348 (Contracts and Consultancy)	\$217,382.00	\$114,348.10

c) Capital II and III de-reserved and expenditures (Bz\$)

CAPITAL II/III ACCOUNTS	DERESERVED	EXPENDITURE
33017 – 1000 (Furniture & Equipment)	\$ 20,000	\$ 12,074.71

33017 – 679 (Home Improvement Grants & Loans)	\$ 250,000.00	\$ 77,864.53
33017 – 2034 (Low Income Housing Project)	\$2,500,000.00	\$1,373,771.19
33051 – 1968 (Building Sector Reform Project)	\$ 150,000.00	\$ 17,575.22

Account Details:	Financial Year:	Budgeted Allocation:	Total Expenditure
33017/2034 – CAP II	2021/2022	\$2,500,000.00	\$2,496,562.51
33017/2034 – CAP III	2021/2022	\$2,500,000.00	\$2,467,530.46
33017/2034 – CAP II	2022/2023	\$5,000,000.00	N/A

The project is currently expecting additional funding to be allocated for the project under financing from one of the GOB's funding agencies. This should be recorded in the allocations and distribution for this financial year 2022/2023.

The launching of this Low-Income housing project initiative by the Government of Belize, with aim of providing a sustainable housing program that will ensure easy and affordable access to home ownership for all Belizeans in both urban and rural areas; thereby contributing to the sustainable development of Belize, is a momentous and significant approach. The housing execution unit must now ensure that this approach and the objective behind this project is fulfilled in an efficient and effective manner.

The below four (4) phases are basic elements of interest that will enable timely delivery by the project unit of quality and quantity low incomes houses as mandated under the Housing Execution Unit (HEU) office.

ANNEXES

ANNEX 1 FINANCIAL UPDATE ON MIDH (WORKS AND HOUSING PORTFOLIOS)

ANNUAL ACCOMPLISHMENT REPORT FINANCE SECTION

The main function of the Finance/ Accounts Section of the Ministry of Infrastructure Development and Housing (MIDH) is to advise, devise and monitor systems and procedures to safeguard government assets, ensure accountability and to ensure compliance with government financial accounting and stores regulations.

The key expectation of the Finance Section, MIDH is to control the finances allocated to this ministry and to ensure that financial and stores regulations are strictly adhered to while maintaining effective, efficient, and transparent negotiations while receiving value for your money.

This includes regular checks on all district administration and the procurement and payment for all transactions including fuel and wages. This section is in indirect communication with Ministry of Finance to ensure that de-reservations are allocated and are on time.

The MIDH's Finance Section include four First Class Clerks, four Second Class Clerks, one (Acting) Administrative Assistant and one Finance Officer 1 (See below organogram for the Finance Section).

During the period January to December 2021; **6223 invoices** were paid totalling Bz\$**9,916,182.33**. **There was total of 451 contracts awarded** during the period January to December 2021 as follows:

- Three Hundred and Twenty-Four (**324**) **contracts** were awarded under road works,
- Seventeen (17) contracts were awarded for drainage works,
- Nine (9) contracts were awarded for repairs of bridges,
- Four (4) for purchase of heavy equipment,
- Seventy-Seven (77) for construction of low-income housing project country wide and
- Twenty (20) for services and goods.

The Recurrent Approved Budget for the period under review was Bz**\$17,861,901.32**; expenditure for that same period was Bz**\$15,273,010.18** (see annex). These Expenditures encompass all the Line Item such Personal Emolument, Travel and Subsistence, Material & Supplies, Operating Costs, Repair and Maintenance Cost, Telephone and Contracts and Consultancy for all Cost Centers under the Ministry mandate.

The Capital II Approved Budget for the period under review was Bz**\$57,864,027.54** while the Expenditure was Bz**\$33,026,963.93 (see annex)**. For the period under review Capital III Budget was Bz**\$87,170,097.14** while the expenditure was Bz**\$47,438,413.14** (see annex).

Finally, several new initiatives were implemented to improve transparency, accountability, and efficiency in the Finance Section. A new Standard Operating manual was created to improve the processing of the approval of Requestions, Direct and purchase orders, invoices and contracts been awarded. These initiatives implemented were the introduction of new Works Orders for the above to certify, authorized and the approval of all above by the Chief Executive Officer. A new Fuel Orders system was also created were by multiple officers had to signed off on all Fuel payment monthly.

TABLE 1: SHOWING RECURRENT FUNDS AND EXPENDITURES (Bz\$)

Cost Center	APPROVED BUDGET	EXPENSES
29017 - CENTRAL ADMINISTRATION	\$ 2,072,049.40	\$ 1,943,693.00
29028 - BUILDINGS	\$ 984,476.36	\$ 422,444.26
29032 - COROZAL DISTRICT	\$ 964,028.40	\$ 813,700.34
29043 - ORANGE WALK DISTRICT	\$ 1,140,059.40	\$ 820,680.78
29051 - BELIZE DISTRICT	\$ 944,218.46	\$ 803,718.75
29064 - SANTA ELENA	\$ 1,148,037.60	\$ 919,543.78
29075 - STANN CREEK DISTRICT	\$ 982,452.60	\$ 794,382.39
29086 - TOLEDO DISTRICT	\$ 1,086,432.20	\$ 834,480.96
29108 - ENGINEERING ADMINISTRATION	\$ 6,983,413.80	\$ 7,210,704.04
29148 - MECHANICAL ADMINISTRATION	\$ 831,408.30	\$ 516,102.02
29168 - SOILS & SURVEY	\$ 556,499.70	\$ 304,177.21
29178 - MANAGEMENT INFORMATION SYSTEMS	\$ 168,825.10	\$ 88,846.32
29238 - ROAD UNIT	\$ -	\$ (199,463.67)
	\$ 17,861,901.32	\$ 15,273,010.18

TABLE 2: SHOWING CAP II APPROVED FUNDS AND EXPENDITURES (Bz\$)

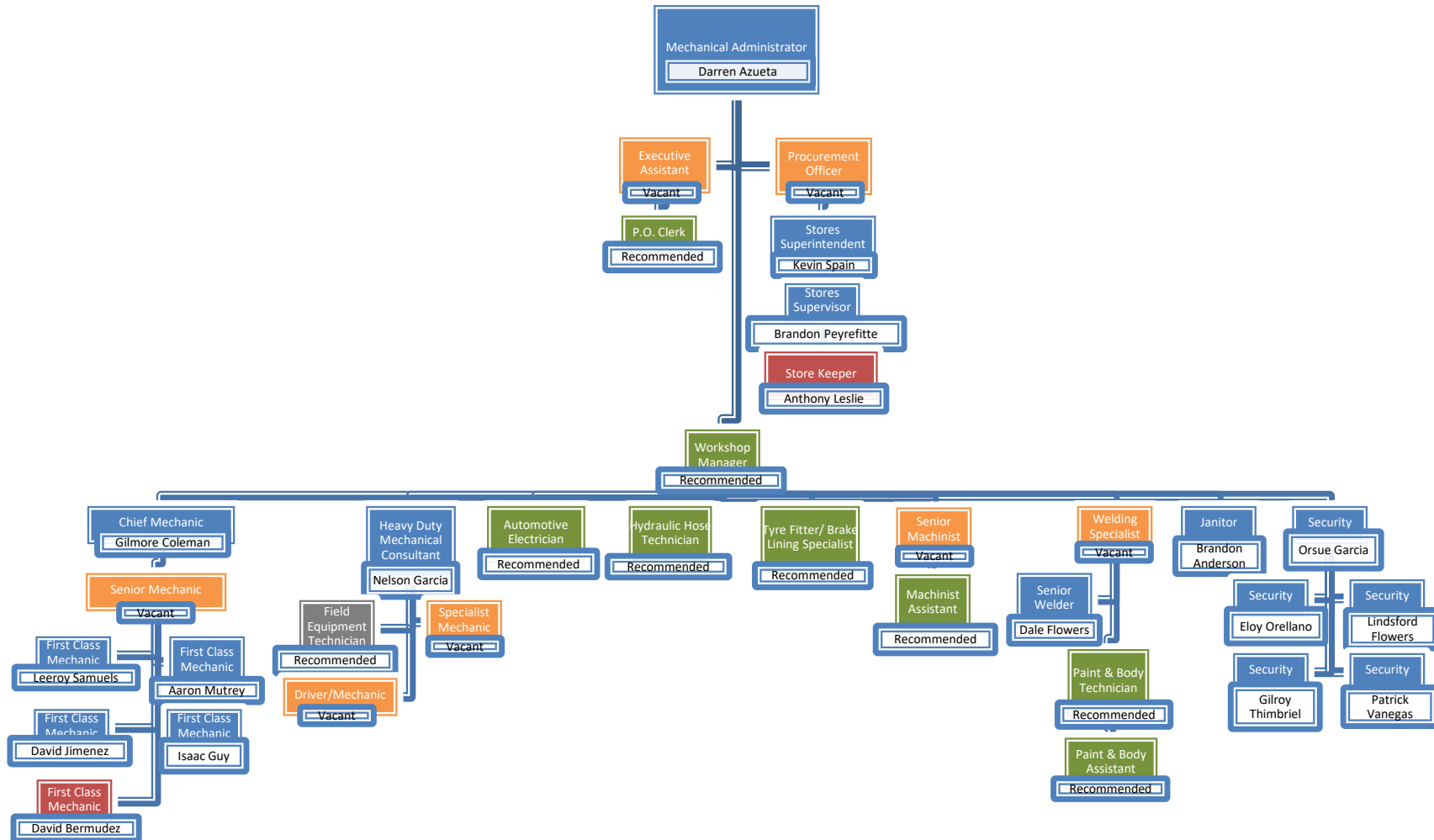
CAPITAL II EXPENDITURE		
ACTIVITY	ADJUSTED BUDGET	TOTAL EXPENDITURES
1000 - Furniture & Equipment	\$ 30,000.00	\$ 41,829.26
1002 - Purchase of Computers	\$ 25,000.00	\$ 24,310.55
1064 - Purchase of Air Conditioner Units	\$ 24,000.00	\$ 25,317.19
1199 - Streets & Drains - Main Towns	\$ 3,500,000.00	\$ 2,441,517.02
1200 - Streets & Drains - Villages	\$ 3,000,000.00	\$ 938,288.08
1216 - Purchase of Heavy Duty Equipment	\$ 4,200,000.00	\$ 1,865,240.78
1363 - Western Highway/Airport Link	\$ 1,651,475.00	\$ 1,743,770.68
1435 - Rehab. Of Sugar Feeder Roads - CZL/OW	\$ 1,300,000.00	\$ 931,663.90
1475 - Philip Goldson Highway and Eremate Bypass Upgrading Project (Seventh Road Philip Goldson Highway Upgrading Project)	\$ 1,200,000.00	\$ 25,833.34
1610 - Maintenance of Streets & Drains	\$ 2,000,000.00	\$ 442,231.00
1697 -Western Highway Junction Improvement	\$ 50,000.00	\$ 8,256.25
1773 - Rehabilitation Western Highway - Belmopan to Benque	\$ 250,000.00	\$ -
1892 - Rehabilitation of Hummingbird Highway	\$ 516,774.00	\$ 719,845.59
1936 - Haulover Bridge	\$ 5,780,000.00	\$ 2,629,975.79
1937 - Caracol Road Upgrade	\$ 14,141,614.73	\$ 5,829,907.81
1942 - Sixth Road Coastal Highway Upgrading Project	\$ 2,219,474.00	\$ 980,178.02
1968 - Building Sector Reform Project	\$ 300,000.00	\$ -
1986 - San Estevan - Progreso Road Project	\$ 400,000.00	\$ -
2013 -Hurricane Iota	\$ 9,133,973.81	\$ 11,044,890.14
2021 - Corozal Project Execution Unit	\$ 906,966.00	\$ -
2022 - Rehabilitation of Agriculture Road	\$ 1,500,000.00	\$ 442,951.08
2023 - Rehabilitation of Major Highway and Road	\$ 3,500,000.00	\$ 942,422.36
2024 - Resurfacing of street in Lord Bank/ Ladyville Village	\$ 1,200,000.00	\$ 1,194,084.98
377 - Poverty Alleviation	\$ 105,000.00	\$ 95,992.16
676 - Southern Highway TA (ESTAP)	\$ 350,000.00	\$ 306,693.06
680 - Renovation of GOB Building	\$ 379,750.00	\$ 153,848.53
689 - Equipment & Spares	\$ 200,000.00	\$ 197,916.36
	\$ 57,864,027.54	\$ 33,026,963.93

TABLE 3: SHOWING APPROVED CAPITAL III FUNDS (LOANS/GRANTS) AND EXPENDITURES (Bz\$)

CAPITAL III EXPENDITURE		
ACTIVITY	APPROVED BUDGET	TOTAL EXPENDITURES
1475 - Philip Goldson Highway and Eremate Bypass Upgrading Project (Seventh Road Philip Goldson Highway Upgrading Project)	\$ 18,000,000.00	\$ 3,966,070.50
1571 - Corozal Sarteneja Upgrading	\$ 6,000,000.00	\$ 4,000,000.00
1936 - Haulover Bridge	\$ 1,000,000.00	\$ 4,119,912.40
1937 - Caracol Road Upgrade	\$ 27,292,043.00	\$ 19,623,226.22
1942 - Sixth Road Coastal Highway Upgrading Project	\$ 34,000,000.00	\$ 14,992,800.32
377 - Poverty Alleviation	\$ 420,000.00	\$ 278,349.79
1363 - Western Highway/Airport Link	\$ 92,296.00	\$ 92,295.77
1892 - Rehabilitation of Hummingbird Highway	\$ 365,758.14	\$ 365,758.14
TOTAL	\$ 87,170,097.14	\$ 47,438,413.14

ANNEX 2 ACCOMPLISHMENT REPORTS - MECHANICAL WORKSHOP SECTION AND SOILS/SURVEY SECTIONS

MECHANICAL WORKSHOP BELMOPAN



Staffing, Challenges and Recommendations

Figure 1 represent the filled and vacant post as illustrated in Table 1. In addition to these posts, Figure 1 highlights the recommended posts that will uplift and raise the standards of the Ministry's Workshop making it the central hub and go to Stop Shop for the other district's Mechanical Workshop and inclusive, the other Ministries' go to service center.

To improve the effectiveness and efficiency of the Ministry's Mechanical Workshop, there are (3) challenges that need to be addressed:

1. Human resources
2. Salary
3. Specialized areas in automotive and heavy-duty repair

The Mechanical Workshop has already acquired a hydraulic hose crimping machine which will reduce cost of repairs and downtime of equipment. The hiring of a specialized technician is highly recommended since hydraulic hoses are common to wear and tear throughout the Ministry's fleet.

Other recommended specialized areas and hiring of technicians are as follows:

- Electrical
- Tyre and brake lining
- Machining (lathe and milling machine)
- Body works area (integrated with welding section)

All of these technicians will be of great value to the Ministry under the supervision of a Workshop Manager, while a Field Technician's main focus would be assisting with servicing and repairs of equipment in the field.

These vacancies are difficult to fill with suitably qualified and experience persons since the salaries are low compared to those offered in the private sector. Sourcing qualified technicians is challenging for the Ministry and a review of salary is a must to attract suitable candidate to fill these posts which are needed to improve the Workshop productivity. An increase in salary for existing officers would motivate staff to have a greater commitment to their job duties.

EQUIPMENT FLEET INVENTORY

Table 2. The Current Fleet of the Ministry

<i>Equipment</i>	<i>Corozal</i>	<i>Orange Walk</i>	<i>Belize</i>	<i>Belmopan</i>	<i>Cayo</i>	<i>Stann Creek</i>	<i>Toledo</i>	<i>Total</i>
<i>Bulldozer</i>	1	1	1	2	1	1	2	9
<i>Vibe Roller</i>	1	1	0	2	1	1	1	7
<i>Front Loader</i>	1	1	1	1	2	1	1	8
<i>Bitumen Truck</i>	0	0	0	2	0	0	0	2
<i>Water Truck</i>	1	1	1	1	0	0	0	4
<i>Mini Excavator</i>	0	0	1	0	0	0	0	1
<i>Excavator</i>	0	1	0	1	0	0	1	3
<i>0 Turn Mower</i>	0	0	0	1	1	1	0	3
<i>Towhead</i>	0	1	0	1	0	1	1	4
<i>Tractor</i>	2	1	2	2	1	2	2	12
<i>Motor Grader</i>	2	2	2	2	2	1	2	13
<i>Backhoe</i>	0	1	2	1	2	1	1	8
<i>Utility Truck</i>	1	1	0	5	2	1	1	11
<i>Tippers</i>	2	2	3	3	3	3	4	20
<i>Light Duty Vehicles</i>	4	4	6	45	4	3	3	69
<i>Boat</i>	0	0	1	0	0	0	0	1

Table 3. Procured equipment of the Ministry in 2021

<i>Equipment</i>	<i>Tipper</i>	<i>Backhoe</i>	<i>Bulldozer</i>	<i>Excavator</i>	<i>Motor Grader</i>	<i>Vibrol Compactor</i>	<i>Van</i>	<i>Pneumatic Roller</i>	<i>Mechanical Broom</i>
<i>Quantity</i>	12	2	2	1	1	1	1	1	1

Table 2 illustrates the Ministry's current fleet countrywide and the expenditure on service and maintenance. As numerous as it may seem, the workload and projects the Ministry is committing itself to puts a greater demand on the upkeep and use of these equipment.

To keep up with the workload, the Ministry is in process of procuring the listed equipment shown in *Table 3*. Equipment such as the excavator will be specifically used at a quarry site. The pneumatic roller and mechanical broom will allow the Ministry to do in-house road paving along with one of our modified tippers that is used to do chip spreading.

Table 4. ACCOMPLISHMENTS – REPAIRS

<i>District</i>	<i>Type</i>	<i>No. of Vehicles/Equipment Repaired</i>	<i>Value of Repairs (Bz\$)</i>
<i>Corozal</i>	Vehicles	2	\$5,174.72
	Heavy-Duty Equipment	11	\$42,411.35
<i>Orange Walk</i>	Vehicles	4	\$6,791.33
	Heavy-Duty Equipment	13	\$152,996.50
<i>Belize</i>	Vehicles	5	\$8,269.00
	Heavy-Duty Equipment	11	\$48,442.06
<i>Belmopan</i>	Vehicles	43	\$112,541.21
	Heavy-Duty Equipment	24	\$170,852.38
<i>Cayo</i>	Vehicles	2	\$2,735.63
	Heavy-Duty Equipment	10	\$15,426.35
<i>Stann Creek</i>	Vehicles	3	\$14,972.04
	Heavy-Duty Equipment	11	\$36,144.87
<i>Toledo</i>	Vehicles	3	\$8,588.73
	Heavy-Duty Equipment	9	\$28,056.19
<i>Sub Total</i>	Vehicles	63	\$159,072.66
	Heavy-Duty Equipment	91	\$494,329.70
<i>TOTAL</i>		154	\$653,402.36

Table 4 reflect the total amount of vehicles and heavy-duty equipment serviced and repaired per district, cost and total cost for the Ministry for the period of January 2021 to December 2021.

ASSISTANCE TO OTHER MINISTRIES

Ministry of Health and Wellness

Ministry of Finance (Vehicle Care), Labor, Local Government, Rural Development, Public Service, Energy and Public Utilities, Rural Community Development and Public Service, Elections and Boundaries

Ministry of Human Development, Social Transformation and Poverty Alleviation

Ministry of National Security (Police)

Ministry of Transport and National Emergency Management (National Fire Service)

Ministry of Economic Development, Petroleum, Investment, Trade and Commerce:
(Bureau of Standards)

Ministry of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development

The Belize Press Office

ACCOMPLISHMENTS

SOILS & SURVEY SECTION

1.0 INTRODUCTION

The Soils Laboratory's primary function is to assist the Maintenance and Engineering Services Division in the assurance of quality control of all types of construction, namely: roads, bridges and buildings. Its services are also extended to the private sector. Its objective in both instances is the same, that is, the achievement of a high-quality product.

The section is involved from the time a project is conceived up until the end. Before the design stage of any construction, sub soil investigation is required to find out where the construction will be laid down and to determine the appropriate foundation type.

During the construction phase, monitoring and testing of materials is the focus to ensure compliance with specifications. It can be deduced therefore, that value for money will not be achieved without the presence and services of a soil and materials laboratory.

As it stands today, the laboratory is well equipped but is lacking with a competent technician. If the section is to function properly and efficiently, the technician will have to undergo relevant training at the earliest.

Soils Laboratory staff consist of 4 officers which are 1 Soils Technician II, 2 Soils Technician III, and 1 Driver.

Equipment – Soils X Acker Drill Rig

2.0 ASSISTANCE RENDERED BY SOILS LABORATORY STAFF

2.01 PROJECTS:

Climate Vulnerability Reduction Project (CVRP) - PMU

George Price Highway Rehabilitation Project – GPHR - Lot 2

Coastal Road Highway Project

MIDH – village streets upgrading – various pits

2.02 PITS:

Santa Familia Pit 1

This Pit was identified for use for rehabilitation of Bullet Tree Road to Billy White

Santa Familia Pit 2

Bullet Tree Pit used for upgrading of Bullet Tree Road to Calla Creek.

Santa Elena Pit used for rehabilitation of Bullet Tree Streets (New Area)

2.03 MIDH – VILLAGE STREETS UPGRADING – VARIOUS PITS

Camalote Pit (MIDH)

Camalote Farm Pit (Private Pit) used for upgrading of Camalote streets

Valley of Peace Community Pit used for upgrading of Valley of Peace streets

Valley of Peace Private Pit was tested for use on Valley of Peace Road, Cayo District

Hector Pit - used for Upgrading of Los Tambos Road, Cayo District

2.04 MIDH – VILLAGE STREETS UPGRADING – VARIOUS PITS

Ricardo Pit used for Upgrading of Los Tambos Road, Cayo District

David Pit used for Upgrading of Los Tambos Road

Los Tambos Pit for upgrading of Billy White Streets

Roaring Creek Pit upgrading of streets in Roaring Creek Village

St. Mathew's Village

2.05 MIDH – VILLAGE STREETS UPGRADING – VARIOUS PITS

Ontario Pit used at MIDH parking lot Infront of Soils Building.

Arizona Pit used for upgrading of streets in Teakettle Village

Caves Branch – A & N for Young Bank Road for Young Bank Road Upgrading

Canada Hill, Stann Creek District – All-in used for village streets upgrading in Stann Creek District.

Bermudian Landing road upgrading – material from National Aggregates

2.06 MIDH/BTB – HOPKINS ROAD UPGRADING FROM GARA MAYA TO BEACHES AND DREAMS

MLS 24.5 – 92 PHILLIP GOLDSOHN HIGHWAY REHABILITATION/REIMATE BYPASS PROJECT (PEU)

Remate Pit – Fill

Buena Vista Pit – Fill

Mamayal Pit – Fill

Patchakan Pit – Fill

Material was collected by Teichroeb & Sons

San Antonio Quarry – base course

Remate – Fill

San Antonio Pit – Fill

Mateo Pit – Fill

Bitumen Testing – 2 samples brought in 1 from Cisco and 1 from Badi Limited.

ASSISTING CIVIL AVIATION WITH SOILS TESTING AT THE AIRSTRIPS IN CAYO & BELIZE DISTRICTS
FOR UPGRADING OF RUNWAYS

Conducting DCP tests

Airstrip	Number of DCP
Mathew Spain Airstrip, Central Farm, Cayo District	11
Sir Barry Bowen Municipal Airstrip	8
John Greif Airstrip, San Pedro	12
Caye Caulker Airstrip	6

MINISTRY OF AGRICULTURE – Central Farm Barn Project

4.) Nuclear Densometer Testing – 15 probes

Haulover Bridge Replacement Project (PEU)

LOW-COST HOUSING PROJECT – HOUSING UNIT

- 1.) Field Testing – Mackintosh Test – 1 probe in Seine Bight
- 2.) Compression Strength Test – testing of cement blocks (samples were 30+ days)
 - (i) 4" Blocks – 4 samples
 - (ii) 6" Blocks – 8 samples

MIDH – BRIDGES & CULVERTS

- 1.) San Jose Bridge, Toledo
- 2.) Calla Creek Hammack Bridge, Cayo
- 3.) Collin Boulevard, Santiago Juan Layout, Cayo – Culvert Headwall
- 4.) MIDH – Culvert Yard

COROZAL FREE ZONE ROAD UPGRADING – CABEI

- 1.) Field Test – Conducting Dynamic Cone Penetrometer Testing – 10 probes from the Bridge to the main entrance into Free Zone in areas that were extremely deteriorated.

COMPRESSION TESTING – PRIVATE SECTOR

- 1.) Crushing of Concrete cylinders – 43 samples brought in by private sector for testing.

PREPARATION OF CONTRACTS AND DISTRIBUTION OF MC-3000 FOR DISTRICTS.

ANNEX 3 MIDH ORGANOGRAM

