

2020

Annual Report for National Roads Authority



For the 2020 Financial Year (Jan 1, 2020 to Dec 31, 2020)



National Roads Authority

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Contents

| Section | 1 – Foreword | 5 |
|------------|---|----------------|
| Mess | age from the Minister | 7 |
| Mess | age from the Chairman | 8 |
| Mess | age from the Managing Director | 9 |
| Section | 2 - Nature and Scope of Activities | 10 |
| 2020 Sig | gnificant Events | 11 |
| Section | 3 - Strategic Goals and Objectives | 12 |
| 3.1 A | Approved Strategic Goals and Objectives | 12 |
| 3.2 (| Compliance with Strategic Goals and Objectives | 12 |
| HUM | IAN RESOURCES | 14 |
| Mana | agement Team Profile | 16 |
| <u>3.3</u> | Transportation Planning Activities: | 17 |
| <u>3.4</u> | Pavement Management: | 21 |
| <u>3.5</u> | Engineering and Operations Activities: | 23 |
| <u>3.6</u> | Executive Assets: Capital Works & Road Surface Upgr | <u>ades</u> 24 |
| Section | 4 - Future Goals and Economic Outlook | 31 |
| Section | 5 - Executive Assets & Output Accounts | 34 |
| Capital I | Maintenance | 37 |
| Risk Ma | nagement: | 37 |
| Section | 6 - Summarised Financial Statements | 35 |
| Other Fi | nancial Information | 36 |
| Andi | ted Financial Statements | 29 |

Section 1 - Foreword

This annual report is for the National Roads Authority of the Cayman Islands ('The NRA'). The report outlines the NRA's performance during the **2020** fiscal year and compares it to the budgeted performance for the corresponding period.

The requirement for an annual report is prescribed under Section 52 of the Public Management and Finance Act (2020 Revision) (PMFA) Section 52 states:

In respect of each financial year, each statutory authority or government company shall within two months after the end of each financial year:

- a) prepare an annual report for the year, and
- b) submit the report to the Auditor General for review.

An annual report shall:

- a) state details of the entity's activities during the year
- summarize the extent to which the ownership performance targets under the relevant ownership agreement were achieved during the year;
- c) include the amount of the following during the year:
 - (i) Cabinet equity investments into the entity,
 - (ii) Cabinet capital withdrawals from the entity,
 - (iii) Cabinet loans to the entity, and
 - (iv) The entity's dividends or profit distributions.
- d) Include details of any Cabinet guarantees relating to entity made during the year;

- e) Include details of any Cabinet guarantees relating to entity made during the year;
- f) Compare the actual performance shown by the financial statements with the performance proposed in the relevant ownership agreement.

Financial statements shall be prepared on a basis consistent with the forecast financial statements in the relevant ownership agreement

This annual report complies with the requirements of the PMFA and covers service delivery, financial performance, and governance.

The service delivery section outlines the contributions made by the NRA in furtherance of the Government's strategic policy goals. It also provides commentary which explains material variances in performance when compared to budget.

The financial performance section shows the financial resources the NRA was afforded in the 2020 budget and the inputs purchased to provide services.

The financial performance is presented in the form of financial statements prepared in accordance with the Public Sector Accounting Standards (IPSAS) and the supporting notes to those financial statements.

The report also includes a section on Governance which outlines the NRA's efforts in the areas of risk management, and compliance with various statutory requirements.



Message from the Minister

The NRA is a key policy instrument of this administration's goal to build modern smart infrastructure. I am therefore pleased to present this 2020 annual report which outlines the Authority's achievements during the year; and provide an account for its use of public funds.

The Government has galvanized its commitment to continued investment in improving Grand Cayman roads by earmarking some \$50M in revenue for the five year period 2015 to 2020.

Infrastructure investments which facilitate trade and interconnectivity are a key component of a thriving economy; indeed, the role of the road network as the backbone of commerce is more evident in the Cayman Islands than in many other countries.

Our roads connect our children to schools; workers to their jobs; and efficiently moves goods and services across the Island. It facilitates our power, water and tele-communication infrastructures while providing hundreds of jobs through its continual maintenance and expansion.

Through road infrastructure investment, opportunities are created for new communities, economic development, a more efficient workforce and a greater sense of well-being among the Islands' population. The road network is the single largest, and



most valuable man-made asset owned by the people of the Cayman Islands.

It therefore gives me great comfort to have a team of highly skilled, committed and capable individuals at the helm managing this important asset and delivering this important work.

Through our policy framework, the Government will continue to support the creation of modern, smart infrastructure as a key to future growth and prosperity.

Yours sincerely,

Hon. Joseph Xavier Hew, JP, MLA
Minister for Commerce, Planning &
Infrastructure

Message from the Chairman

This annual report outlines the NRA's performance in 2020 in relation to the required outputs highlighted in the Ownership Agreement with Cabinet. This report is completed under my first year as Chairman of the Board. The Board's main focus during the period was to ensure stability, focus, and direction as the organization delivered on its legislative mandate while supporting the Government's policy outcome goals.

The Board is pleased to have confirmed Mr Edward Howard as the new Managing Director of the Authority after acting in the role full-time for almost three years. Mr Howard is to be commended for having guided the NRA through all of 2019, and especially through a trying 2020 impacted by the COVID shutdown.

Despite COVID, the Board during 2020 continued to support a capital investment plan aimed at modernizing the NRA's The fleet. machinery, and tools. investment in asset replacements ensures that the NRA will be able to fulfill one of its key goals of enhancing service delivery capabilities and operational efficiency.

We firmly endorse the NRA's proactive strategy for the management of the road network. The development of a long range (25 to 30 year) road corridor map along with an evolving 3-year roads development programme stipulated by the NRA Act ensures that the NRA makes sound strategic planning and investments in projects that will ensure sustainable development in these islands for decades to come. Another area that the Board is intently focused on is the maintenance



programme for the road network. As we build more roads we inevitably have more to maintain. The Board is elated that the NRA already has a fully developed pavement management system that catalogues and forecasts future maintenance requirements both time-wise and budget-wise. The pavement management system is most effective in helping Government to reduce future road maintenance costs by proactively forecasting repair needs and recommending repair strategies or countermeasures for key sections of the network before they reach the point of critical failure.

The Board is grateful to our private sector partners and to the management and staff of the NRA for the excellent work carried out in 2020 which made possible the achievements highlighted in this report. We would also like to recognize the support of the Government in providing the policy framework resources necessary to do our work. The Board remains committed continued development of the NRA, and reaffirm its support for the organization and its efforts to deliver the best transportation infrastructure to the people of the Cayman Islands.

John Edward Ebanks Chairman, NRA Board of Directors

Message from the Managing Director

I am pleased to present the National Roads Authority (NRA) Annual Report 2020. I would also like to thank the Board and Minister for the continued confidence entrusted in me to lead the Authority during this fiscal year.

This report highlights the NRA's accomplishments via the NRA Act (2016 Revision) as well as the goals and priorities set by the Board and Cabinet via the Ownership Agreement.

Roads contribute greatly to the economic stability of the country by mobility and access providing both access and mobility options. In short, roads allow the movement of people, goods and services.

NRA's continued success in this endeavor is largely dependent on the Authority being adequately funded both in the area of new capital development projects (via Cabinet) but also in the area of recurrent revenue (via the Road Fund). In recent times the current recurrent revenue levels received from the Road Fund has proven to be inadequate Authority's to fund the Operations. With the NRA's road fund revenue being capped, the Authority has had to rely more heavily on the Ministry of Infrastructure to fund a large part of its routine maintenance operations. Adequate of the NRA Operations funding paramount to ensuring its continued success.

The pace of land development and the growth in vehicles now has the Island at a critical decision phase; there has never been a more critical time than now for the Government to develop a sustainable long range ground transportation plan that offers multi-pronged solutions to the ground transportation needs of this country for decades to come.



Safer Roads by Design has become a major focus of the NRA. We have taken advantage of our partnership with the International Road Federation (IRF) and increased our involvements with public and private stakeholders in highlighting the Five E's of Road Safety.

Despite the COVID 19 shutdown the NRA in 2020 continued implementation of a 3year capital roads development programme aimed at providing short term and quick win solutions to traffic congestion experienced at peak hour. Upgrades to the Grand Harbour, and Chrissie Tomlinson roundabouts as well as, expansion of travel lanes from 4 lanes to 6 lanes along Hurley Merren Blvd in 2020, were completed as part of the overall efforts of reducing travel times and increasing lane capacity for motorists travelling to and from the eastern districts.

We intend to focus more acutely on customer satisfaction by optimizing the experience of their daily travel on the road network. As we deliver on these commitments, we will keep all vested parties engaged by increasing communication with our stakeholders and providing more information to the motoring public on our plans, and progress towards improvement of the road network.

Edward Howard
Managing Director

Section 2 - Nature and Scope of Activities

The NRA's primary function is the provision of a safe and efficient network of public roads. It has overall responsibility for the planning, construction, and maintenance of public roads. In addition, the NRA has a number of specific functions under the National Roads Authority Act 2004, including:

- Provision of medium to long term plans for road development referred to as a National Roads Plan to be updated every four years.
- Implementation of a management system for planning, organizing, directing and controlling routine and periodic maintenance activities performed by employees of the Authority or through independent contractors.
- Carrying out of construction improvements and maintenance works on national roads.
- Carrying out necessary engineering, traffic, and economic studies that it may consider necessary for the maintenance and improvement of public roads.
- Training, research, or testing activities in relation to any of its functions.
- Additionally, the National Roads Authority provides support services to:
 - Public Works Department to enable that Department to provide an appropriate response to Hurricanes and other national emergencies, and
 - Planning Department for the review of planning applications involving storm water and road related matters and site inspections of constructed projects.

Mission of the National Roads Authority

To provide sustainable transport and promote land development in the Cayman Islands for all stakeholders while having regard to the delivery of the Roads element of the National Development Plan.

Vision of the National Roads Authority

Commitment to our mission will enhance the quality of life, promote economic prosperity, and improve access and mobility for all residents and visitors of the Cayman Islands. We will be a recognized leader in the Caribbean for providing high quality roads and transport related infrastructure.

Customers and Location of Activities

Road users are the primary customers of the National Roads Authority. Income is generated by providing engineering, construction, and maintenance services for fund-holding Government Agencies, approved private sector clients, and any other entity that the Authority agrees to provide services to. Services are provided only in the Cayman Islands.

Compliance during the Year

The NRA operated in general compliance with the Nature scope of activities specified in in the Ownership Agreement for the year.



2020 Significant Events

- COVID 19 Shutdown March
 2020 thru May 2020
- NRA completes major upgrades to Chrissie
 Tomlinson Roundabout, Rex Crighton Blvd, and part of Hurley Merren Blvd
- Major pavement rehabilitation carried out on 20+ segments of the public road network.
- Crews were kept busy as TS
 Delta, Hurricane ETA, and
 other tropical weather events
 grazed the Island bringing
 high winds and major
 flooding.
- Edward Howard confirmed as Managing Director.

Section 3 - Strategic Goals and Objectives

3.1 Approved Strategic Goals and Objectives

The key strategic goals and objectives for The National Roads Authority for the 2020 financial year as stated in the Ownership Agreement were as follows:

- 1. Continue establishment of the Authority, develop and implement effective administrative, financial and information management systems,
- 2. Identify and seek approval for strategies for financing future road development,
- 3. Continue the Traffic Improvement and Roads Development Programmes.

3.2 Compliance with Strategic Goals and Objectives

During the fiscal year 2020 the NRA impacted by the events of the worldwide COVID pandemic, endured a nearly three (3) month suspension of both maintenance and new capital works between March 2020 and May 2020. Despite the shutdown, the NRA complied with the above approved strategic goals and objectives with the completion of upgrades to the Chrissie Tomlinson Roundabout in Prospect, and the start of the phase of the Airport Connector Road that provides connection between ETH and Sparky Drive. In addition to these two projects the NRA carried out hot mix resurfacing to several major road sections across the island of Grand Cayman. Total expenditure for FY2020 budget cycle (Jan 1, 2020 to Dec 1, 2020) was \$22.2M. NRA operating expenses accounted for \$10.1M whilst cost of goods sold was approximately \$12.1M.

Goal 1: Continue establishment of the Authority, develop and implement effective administrative, financial and information management systems.

The NRA Management team supported by the Board continue to strive for betterment in the areas of administrative, financial and management information systems.

Sound administration is important as it functions as a connecting link between the senior management and the employees. To that end the NRA continues to strive to provide adequate administrative staffing levels along with the tools and techniques required to ensure that the administrative arm of the Authority is able to carry out its role in achieving a high level of workplace productivity and efficiency. NRA management began in 2019 to actively seek solutions for automating the current paper-based leave tracking system. NRA also launched a new electronic punch clock and time recording system (TRS).

On the finance side the NRA plans to upgrade or replace the current accounting software package which does not fully serve the needs of the Authority in several key areas. The current system has several shortfalls which result in unnecessary manual time-consuming production of financials and forecasts.

In 2020 the NRA utilised its asset management system (Cartegraph ™) to catalog hundreds of privately built storm drains in both old and recently developed subdivisions across the island. An unusually busy hurricane season highlighted glaring gaps in the Authority's inventory, and maintenance capabilities of a growing number of storm drains that exist in these subdivisions.



NRA crews were kept busy during the hurricane season as several named storms grazed the Cayman Islands bringing high winds and intense rainfall.

HUMAN RESOURCES

The NRA boasts an all Caymanian staff complement of 82 full time employees with between 10 to 20 temporary employees (< 1year) hired as and when needed throughout the year. Fulltime employees average length of service at the NRA is 14 years.

Six percent of staff is educated to a graduate level, a further six percent hold undergraduate degrees, and 87% are educated to a high school diploma level. 93% of all employees have been with the authority for at least 6 years, with 65% having a tenure of 11 years or more. Average annual take home pay for NRA employees is approximately \$42,000, however, the average total annual compensation cost for each employee is approximately \$59,000. This reflects the fact that over 19% of the average employee emoluments go towards healthcare premiums.













Management Team Profile



Name: Edward Howard Title: Managing Director

Qualifications: Bachelors in Civil Engineering - Howard University; Masters in Civil Engineering (Transportation) – University of Illinois Urbana Champaign; MBA (Corporate Finance) – University of Leicester, UK. More than twenty (20) years of educational experience and practical know-how

in urban and regional planning, transportation engineering.



Name: Olsen Bush Title: Chief Financial Officer

Qualifications: Masters in Business Administration-International Collage of the Cayman Islands

More than 30 years of financial experience in the private and public sector.



Name: Shena Ebanks

Title: Chief Human Resources Officer

Qualifications: Masters in Human Resource Management- University College of the Cayman

Islands

Over 10 years of Human Resources experience, Shena holds the dual role of Chief HR and Office

Manager.



Name: Brian Chin Yee

Title: Works Manager, Engineering & Operations

Qualifications: Bachelors in Electrical Engineering B.Sc. - Florida Institute of Technology University

(1993 - 1997)

20 years of engineering experience.



Name: Denis Thibeault

Title: Assistant Director, Transportation & Planning

Qualifications: Bachelor of Environmental Studies in Urban & Regional Planning - University

of Waterloo

Over 20 years' experience in transportation and planning

Goal 2: Identify and seek approval for strategies for financing future road development.

Accomplishments:

The revenue and resources of the Authority comprise of the following:

Monies directed by law to the Roads Fund, as well as services purchased by Cabinet for the purposes of capital roads improvements. Other revenue sources may include:

- Road user charges collected by the Authority;
- Gifts or bequests received by the Authority;
- Other monies paid and property provided to the Authority by way of grants, rent, interest and other income derived from the investment of the Authority's funds.

Appropriation made by the Government for capital road improvement projects is based on service based budgeting. The Minister of Commerce, Planning and Infrastructure (CP&I) will purchase the services of the Authority (called executive assets) as agreed upon in the Purchase Agreements. The service of the Authority is not only measured in terms of input cost but also in quantity, quality, timeliness and location.

Goal 3: Continue the Traffic Improvement and Roads Development Programme

The achievements in this area are highlighted in Section 3.3 which follows:

1.3 Transportation Planning Activities:

3.3.1 Transportation Planning Activities: The NRA employs a small core of transportation engineering and planning professionals who report to the Deputy Managing Director and Managing Director and advise on all matters relating to transportation planning, traffic, and roads development and funding.

One of the main tasks of the NRA's transportation unit is to assist in the development of a long term (20-25 yr) national roads plan. From the long term plan a short term plan is developed; this short term plan consists of roads and roads improvements that are deemed as critical within 3 to 5 years.

- 3.3.2 Recurrent Activities Some of the main activities of the transportation unit for FY2020 (covering the period of January 1, 2020 to December 31, 2020) were as follows:
 - i. In addition to numerous meetings and correspondence with various land developers to advise them on roads and drainage requirements, the transportation unit prepared assessments and provided commentary to the Central Planning Authority on two-hundred and six (206) planning applications during 2020.

ii. The following table provides a breakdown by quarter for the current Fiscal Year:

| Quarter Month | | Plan Reviews | SWM/ Drainage Plan Reviews | Inspections |
|---------------|-----------|-----------------|-------------------------------------|-------------|
| | January | 36 | 6 | 1 |
| 1 | February | 27 | 6 | 1 |
| | March | 14 | 3 | 1 |
| Sub | -Total | 77 | 15 | 3 |
| | April | 8 | 2 | |
| 2 | May | 15 | 5 | |
| | June | 2 | 1 | 3 |
| Sub | -Total | 25 | 8 | 3 |
| | July | 7 | 5 | |
| 3 | August | 12 | 5 | |
| | September | 17 | 5 | 1 |
| Sub | -Total | 36 | 15 | 1 |
| | October | 39 | 6 | 1 |
| 4 | November | 19 | 4 | 8 |
| | December | 10 | 3 | 17 |
| Sub | -Total | 68 | 13 | 26 |
| Total | | 206 | 51 | 33 |



iii. The following table provides a breakdown of the type of developments since July 2020.

| Development Type | Plan Reviews | SWM/ Drainage Plan Reviews | Inspections |
|----------------------------|--------------|----------------------------------|-------------|
| Commercial | 19 | 2 | 2 |
| Government | 4 | 2 | 2 |
| Hotel | 1 | 2 | |
| Industrial | 9 | 5 | 2 |
| Institutional | 6 | 2 | |
| Residential | 67 | 31 | 20 |
| Subdivisions/ Road Base | 51 | 4 | 7 |
| Mixed-Used Development | 3 | 2 | |
| Miscellaneous | 46 | 1 | |
| Running Total | 206 | 51 | 33 |

- iv. Twenty-two (22) due diligence letters were written in response to enquiries from attorneys and real estate agents dealing with land purchases;
- 3.3.3 Road Gazette Plans (Roads Act 2005R) were either started and/or completed for the following:
 - a) Declaration of Serene Drive (Bodden Town) as a public road.
 - b) Development of long-term transportation road corridor plans and conceptual intersection improvements. The team developed intersection design options for the East-West Arterial and Linford Pierson Highway.

3.3.4 Travel Demand Model and Traffic Operation Analysis Model

The National Roads Authority at the beginning of the fiscal year (July 2015) began the process of developing a traffic model for the island of Grand Cayman. Such a model is necessary to:

- Substantiate the NRA's current and long term planning efforts made under the National Roads Plan:
- Assess the merits of future road network proposals, and,
- Assess the traffic impact of future development proposals.

The National Roads Plan (NRP) is a strategic plan consisting of three parts:-

- 1. A 25-year road corridor plan (Section 26, Roads Act (2005)). This should be updated every five years.
- 2. A transportation management strategic document that highlights the NRA's short to long term focus on access management, road safety, mobility, interconnectivity, smart growth, etc.
- 3. NRA funding mechanisms this includes focus on the structure of NRA through a look at business process re-engineering, a road financing plan (for both maintenance and new construction); alternative revenue streams, etc.

The traffic model is a key assessment tool in the development of items 2 & 3 of the NRP. The traffic model is comprised of two distinct computerized models; the first being a travel demand model (macro level) and the second being a traffic operations model/simulation package (micro level).



3.4 Pavement Management:

The aim of the NRA's pavement management programme is to monitor and to prescribe maintenance strategies to pavements of varying classifications in the Grand Cayman road network. Primary Arterials are those main roads which carry the majority of roadway traffic throughout the island and as such are prescribed a higher maintenance protocol.

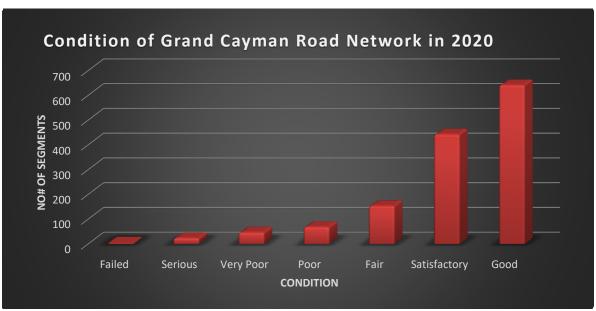


The above chart shows that at the end of FY 2020 all pavement types on Grand Cayman are in an overall 'good' to 'very good' condition. The goal for primary and secondary pavements is that of an average PCI of no less than 80.

Since 2012 the NRA has concentrated on local privately built subdivision roads in an effort to raise the pavement condition index (PCI) from an unsatisfactory level of 65 to above 75 which is representative of 'good' condition. In essence, concentrated efforts on subdivision roads has been effective in raising the average PCI level of these roads from fair to good. The term local private road, however, is a bit misleading as under the Roads Act these roads (with the exception of a few) do not involve restriction of access to the public as a right.

PCI by Surface Type

- 196 lane miles of roads have hot mix asphalt surface.
- 126 lane miles of roads have spray and chip surface.
- < 2 miles of roads are unsurfaced.



Overall condition rating of the Grand Cayman Road Network in 2020

In 2020 a total of 1383 road segments in the network had condition ratings as follows:

| Condition Category | Num Sections |
|--------------------|--------------|
| Failed | 6 |
| Serious | 48 |
| Very Poor | 60 |
| Poor | 100 |
| Fair | 153 |
| Satisfactory | 356 |
| Good | 585 |

The majority of subdivision roads built by private developers in Cayman offer unrestricted public access, however, the official ownership of the developed roadway is often not 'transferred' to the Crown; the NRA prefers to classify these not as private roads but as 'unscheduled public roads'. It is important to add this brief explanation because the distinction between public roads and private roads have been blurred by actions of the Government who over the years has cleaned, repaired, installed streetlights, speed humps, and other street furniture without regard to their status. The challenge going forward is to keep the average PCI of private (unscheduled) roads at satisfactory and good levels.

3.5 Engineering and Operations Activities:

A works manager, two engineers, two superintendents, and a fleet manager make up the management staff of the Engineering and Operations unit. They are responsible for engineering design; project budgeting, resource reporting, project costing, fleet operations, and completion of all road construction projects and maintenance undertaken by the NRA. They utilize an equipment fleet worth over \$2 million. Capabilities include sign making and pavement markings, traffic signal maintenance, survey crews with GPS and total station equipment, and computer aided design and drafting (CADD).

In addition to their road construction and maintenance responsibilities, they regulate the importation, transportation, and use of explosives in the Cayman Islands on behalf of the Managing Director in accordance with the Explosives Act and Regulations.



3.6 Executive Assets: Capital Works & Road Surface Upgrades

New Capital Works and rehabilitation of roads surfaces on major arterials are systematically funded via Cabinet as "Executive Assets". This year's list of major EA's funded via Cabinet includes:

3.6.1 Airport Connector Road (ACR) (\$700K) – Preliminary Works

The ACR project refers to a planned 2.0 mile link road that extends from the Owen Roberts Long Term Carpark to the ETH Roundabout adjacent to the GT Landfill. Preliminary works such as design, geotechnical investigations and tender for construction management services were carried out in 2020.



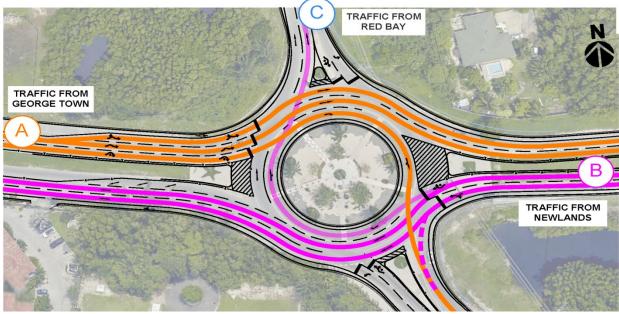
3.6.2 Chrissie Tomlinson Roundabout Upgrades (\$1.1M)

The NRA was able to take some advantage of the mandatory stay at home restrictions by gaining special exemptions from the Government to carry out geometrical upgrades to the intersection of Hurley Merren Blvd, Shamrock Road, and Rex Crighton Blvd (aka The Chrissie Tomlinson Roundabout). Enhancements to this roundabout included a change from a dual lane roundabout to a three-lane roundabout to facilitate proposed lane widening on both Hurley Merren Blvd and Rex Crighton Blvd. The roundabout also underwent a change from the previous adverse camber profile to an inverted camber. New asphalt paving and new road markings and signage were added to complete the overall upgrades to this intersection.



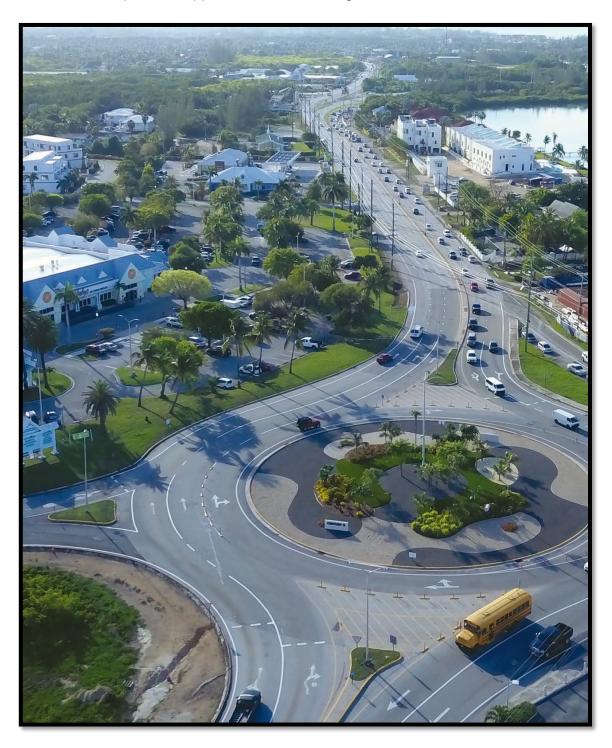






3.6.3 Grand Harbour Roundabout new lane configuration (\$200K)

In early March the NRA introduced a new lane configuration for the Grand Harbour roundabout that included and expansion to three (3) travel lanes eastbound. New signs and road markings were installed along with cross hatchings to assist motorists with better lane discipline on approach to, and through the roundabout.



3.6.4 Hot Mix Asphalt Surface Upgrades (\$2.7M)

NRA completed hot mix surface upgrades to 21 major roadway segments as highlighted below:

Hot Mix Asphalt Resurfacing Projects 2020

| 1 | Shamrock Road - Daniels Drive to Savannah Avenue (westbound lane) | \$65,020 |
|----|---|------------|
| 2 | Manse Road - Bodden Town Road Intersection | \$167,516 |
| 3 | Bodden Town Road - Tarpon Springs to Caribbean Haven | \$497,900 |
| 4 | Bodden Town Road - east bound lane by Cherry Tree Estates | \$199,200 |
| 5 | Dorcy Drive - by Subway and Brand Source | \$63,738 |
| 6 | Shedden Road - Eastern Avenue Intersection | \$65,471 |
| 7 | Crewe Road - east bound merge lane extension by Joses Esso | \$82,401 |
| 8 | Elgin Avenue - Hospital Road intersection to Picadilly Centre | \$41,356 |
| 9 | Elgin Avenue - Hospital Road small roundabout | \$30,495 |
| 10 | Walkers Road - four (4) way stop to Boilers Road | \$136,162 |
| 11 | North Sound Road -(Traffic signal to Portland Road) | \$248,038 |
| 12 | Prospect Point Road | \$226,910 |
| 13 | Rex Crighton Blvd - Poindexter RAB to Tomlinson RAB | \$252,396 |
| 14 | Elmslie CT | \$26,455 |
| 15 | Shedden Road - RBC to Harbour Drive | \$19,464 |
| 16 | Shedden Road - Funky Tangs to Dr Roys Drive | \$98,284 |
| 17 | Shedden Road - small section by old Buttonwood Club | \$13,030 |
| 18 | Shedden Road - Cayman Free Press Bldg to Wagner Bldg | \$130,266 |
| 19 | Harbour Drive - Flagship Bldg to Margaritaville | \$76,420 |
| 20 | South Church St Paradise Restaurant to Margaritaville | \$168,827 |
| 21 | Esterley Tibbetts Highway - Ritz Carlton Culvert Bridge | \$128,421 |
| | T-1-1 | 62 727 770 |



3.6.5 NRA District Roads Rehabilitation Programme

NRA completed spray 'n' chip upgrades on forty-three (43) road segments across all five districts for approximately \$800K.

Spray n Chip is used extensively by road agencies worldwide as:

- 1. A semi-permanent surface for minor roads, and
- 2. A preventative maintenance (surface treatment) for existing paved roads.

Typically roads having low daily traffic volumes (less than 5,000 ADT) will be prime candidates for spray n chip. Some jurisdictions however have experimented with spray n chip (aka Chip Seal) on roads with daily volumes of up to 20,000 ADT.

The most significant benefit of spray n chip is that is between 20% to 25% of the cost of hot mix asphalt so governments are able to get more roads done utilizing spray n chip methods. If done correctly and/or if good quality gravel ('chips') can be sourced then spray n chip roads can last between 5 to 7 years.

The following district roads were reconstructed and/or resurfaced with surface treatments under this programme. The MicroPAVER pavement management database was used to select the roads to be worked on and what type of work would be performed. Explanations of the abbreviations are given below:

Abbreviations: R&R = Rip and Relay (Reconstruct the Road Base)

Reconst = Reconstruction

SC = Spray and Chip (Surface Treatment)

2nd App = Second Application of Spray and Chip

(Surface Treatment)



The NRA's policy is to apply spray n chip surfacing to local access/subdivision roads with low traffic and posted speeds of no more than 25 mph. Spray n Chip application may be applied to primary arterial roads but only as a temporary measure during major construction.

The COVID shutdown impacted this annual programme severely forcing the NRA to forgo nearly half of the planned district road upgrades for 2020. The West Bay constituencies in particular were left out in 2020. District roads carried out during the year breaks down roughly as follows:

East End Roads FY2020

| No. | Suggested Priorities - EAST END | Electoral Boundaries | Road Class | LENGTH | PCI | Type of Work | |
|-----|--|-------------------------|------------|--------|-----|--------------|--------------|
| 1 | Survivors Road | EE | UPR | 690 | 53 | R&R | \$ 11,995 |
| 2 | Austin Conolly Drive | EE | PUB | 300 | 23 | R&R | \$ 16,974 |
| 3 | Shoulders by blow holes and clear 12 x 150ft,(complete) | EE | PUB | 150 | | R&R | \$ 6,485 |

North Side Roads FY2020

| | | Electoral | | | | | |
|-----|-----------------------------------|------------|------------|--------|-----|--------------|---------------|
| No. | Suggested Priorities - NORTH SIDE | Boundaries | Road Class | LENGTH | PCI | Type of Work | |
| | 1 Off The Beaten Path Road | NS | PUB | 452 | | R&C | \$ 22,230 |
| | 2 Sailors Way | NS | UPR | 200 | | R&C | \$ 6,340 |
| | 3 FURTHER ROAD Phase 1 | NS | PUB | 1053 | | R&C | \$ 148,612 |

Bodden Town Roads FY2020

| | | Electoral | | | | Type of Work | |
|-----|------------------------------------|------------|------------|--------|-----|--------------|--------------|
| No. | Suggested Priorities - BODDEN TOWN | Boundaries | Road Class | LENGTH | PCI | | |
| 1 | DEVONSHIRE DRIVE | NWS | UPR | 800 | 37 | R&R | \$ 46,309 |

| | | Electoral | | | | Type of Work | |
|-----|------------------------------------|------------|------------|--------|-----|--------------|--------------|
| No. | Suggested Priorities - BODDEN TOWN | Boundaries | Road Class | LENGTH | PCI | | |
| 1 | PENNSYLVANIA AVE | SAV | PUB | 1791 | 41 | R&R | \$ 48,447 |
| 2 | CHIME ST | SAV | PUB | 1000 | 45 | R&R | \$ 31,110 |

George Town Roads FY2020

| | | Electoral | | | | | |
|-----|------------------------------------|------------|------------|-------------|-----|--------------|--------------|
| No. | Suggested Priorities - GEORGE TOWN | Boundaries | Road Class | LENGTH (ft) | PCI | Type of Work | Cost |
| 1 | LINWOOD ST | GTC | PUB | 598 | 57 | R&R | \$ 9,768 |
| 2 | HARRIS LN | GTC | UPR | 300 | 40 | R&R | \$ 6,721 |
| 3 | DAMASCUS CL | GTC | UPR | 260 | 40 | R&R | \$ 12,805 |
| 4 | SUSSEX DR | GTC | PUB | 380 | 45 | R&R(S&C) | \$ 2,545 |
| 5 | CARNATION LANE | GTC | PUB | 270 | 40 | R&R | \$ 30,363 |
| 6 | NEVARD CI | GTC | PUB | 800 | 10 | R&R | \$ 14,336 |

| No. | Suggested Priorities - GEORGE TOWN | Electoral Boundaries | Road Class | LENGTH (ft) | PCI | Type of Work | Cost |
|-----|------------------------------------|-------------------------|------------|-------------|-----|--------------|--------------|
| 1 | TEMPLETON ST | GTW | PUB | 900 | 70 | R&R | \$ 32,227 |
| 2 | KETURAH ST | GTW | PUB | 2100 | 62 | S&C | \$ 32,293 |
| 3 | PARSONS CIR | GTW | PUB | 1200 | 69 | S&C | \$ 11,303 |
| 4 | HOPE DR | GTW | PUB | 820 | 63 | S&C | \$ 4,804 |
| 5 | LEAFYLN | GTW | PUB | 300 | 59 | S&C | \$ 1,105 |
| 6 | PHELAN CL | GTW | PUB | 1000 | 48 | R&R | \$ 8,380 |
| 7 | TEMPEST WAY | GTW | PUB | 550 | 66 | S&C | \$ 7,877 |

| No. | Suggested Priorities - GEORGE TOWN | Electoral Boundaries | Road Class | LENGTH (ft) | PCI | Type of Work | Cost |
|-----|------------------------------------|-------------------------|------------|-------------|-----|--------------|--------------|
| 1 | ELLA RAY GDNS | GTE | PUB | 700 | 49 | R&R | \$ 3,404 |
| 2 | HARMONYLN | GTE | UPR | 568 | 51 | R&R | \$ 9,056 |
| 3 | DESMOND DR | GTE | PUB | 535 | 57 | S&C | \$ 3,520 |
| 4 | FAIRVIEW RD | GTE | UPR | 1395 | 60 | S&C | \$ 8,202 |
| 5 | HAVEN CL | GTE | PUB | 217 | 67 | R&R | \$ 3,874 |
| 6 | MELODYLN | GTE | PUB | 751 | 70 | S&C | \$ 13,350 |
| 7 | ANNE BONNY CRES | GTE | PUB | 1519 | 58 | S&C | \$ 14,724 |
| 8 | MARIGOLD CL | GTE | PUB | 272 | 61 | S&C | \$ 2,522 |

| | | Electoral | | | | | |
|-----|------------------------------------|------------|------------|-------------|-----|--------------|-----------|
| No. | Suggested Priorities - GEORGE TOWN | Boundaries | Road Class | LENGTH (ft) | PCI | Type of Work | Cost |
| 1 | MAYFAIR CL | GTS | UPR | 187 | 63 | S&C | \$ 12,608 |

| | | Electoral | | | | | |
|-----|------------------------------------|------------|------------|-------------|-----|--------------|---------------|
| No. | Suggested Priorities - GEORGE TOWN | Boundaries | Road Class | LENGTH (ft) | PCI | Type of Work | Cost |
| 1 | SPRUCE LN | GTN | UPR | 722 | 25 | R&R | \$ 24,437 |
| 2 | LUNA LN | GTN | PUB | 148 | 33 | R&R | \$853 |
| 3 | SATURN CL | GTN | UPR | 443 | 40 | R&R | \$ 10,069 |
| 4 | ARTHURS WAY | GTN | PUB | 379 | 42 | R&R | \$827 |
| 5 | PARKSIDE CL | GTN | PUB | 1296 | 44 | R&R | \$ 33,325 |
| 6 | SPRING LN | GTN | PUB | 180 | 45 | R&R (S&C) | \$863 |
| 7 | WHITEHALL GDNS | GTN | PUB | 240 | 48 | R&R | \$ 13,630 |
| 8 | SHERWOOD DR | GTN | UPR | 1158 | 59 | S&C | \$ 23,145 |
| 9 | COURTS RD | GTN | PUB | 1581 | 61 | S&C | \$ 102,520 |
| 10 | EUPHRATES CL | GTN | PUB | 128 | 63 | S&C | \$ 5,320 |
| 11 | SCHOOL RD | GTN | PUB | 1162 | 63 | S&C | \$ 3,840 |

| N | lo. Sugge | sted Priorities - PROSPECT | Electoral Boundaries | Road Class | LENGTH (ft) | PCI | Type of Work | Cost |
|---|-----------|----------------------------|-------------------------|------------|-------------|-----|--------------|-------------|
| | 1 Bird Ho | ouse CL | Prospect | PUB | 300 | | R&R | \$ 7,590 |



Section 4 - Future Goals and Economic Outlook

The future goals of the NRA are not just concerned with continued compliance with the requirements of the PMFA but also with developing strategies for organizational growth going forward.

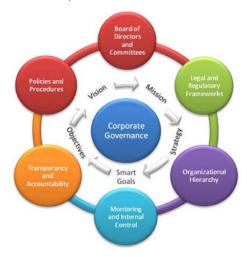
Through the development of a corporate strategic plan, the NRA can be able to identify the roads infrastructure needs that are most important to these islands. A strategic plan would also allow us to look ahead and make provisions for the necessary investments that will ensure adequate and steady source of funding and other resources necessary to achieve a sustainable road network. The local and tourism economy remain vibrant and the nation's roadways play an important part in maintaining safe and efficient movement of people, goods and services.

The NRA Board of Directors remains committed to the continued development of the NRA and to its efforts to deliver the best roads and road related infrastructure to the people of the Cayman Islands.

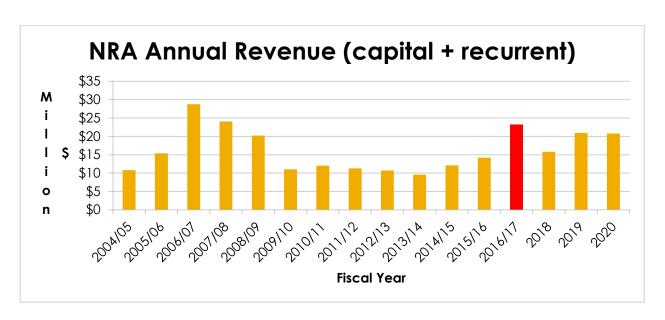
Key strategies for ensuring a stronger and better NRA for the foreseeable future include:

- Necessary amendments to the NRA Act and Roads Act;
- Adaptation of the organizational structure to meet future demands;
- Development of effective administrative, financial and management systems
- Attraction of young professional and technical employees that will

- pursue career development with the NRA;
- Removal of the cap restriction on the NRA's Road Fund Revenue to allow for a measured increase in the Authority's operations budget.
- The Road Fund and other road user fees and/or charges to be further established as the dedicated funding stream for recurrent road maintenance activities;
- Commitment from Cabinet for continued investment in necessary capital road improvements (particularly roads in and around the Central Business District and roads providing mainline access between the CBD and eastern districts).



Through the development of its long range corridors plan and the strategies above NRA will be poised to deliver sustainable, reliable, safe and efficient roads for future generations of Caymanians.



In 2015 an amendment to the NRA Act placed a \$10M cap restriction on the recurrent funding for the NRA. Such restriction;

- 1. Limits the potential of the NRA to address its increasing maintenance budget;
- Results in an increase of unfunded maintenance projects (backlog);
- 3. Prevents the NRA from addressing staffing shortfalls;
- 4. Restricts NRA's ability to adequately address long term liability needs such Post-Retirement Healthcare for its employee.

The NRA as the statutory authority responsible for the maintenance of roads has a mandate to ensure that it delivers to the public on behalf of the Government, roadways that are safe and well maintained.

The cap on the NRA's recurrent revenue has meant that certain key operations and maintenance activities cannot be achieved. The Ministry of Commerce, Planning and Infrastructure has in the interim been able to offset the problem temporarily by funding mostly all of the District Roads rehabilitation projects and the hot mix asphalt programme. The cap however will continue to pose a serious threat to the NRA as personnel, materials and overhead costs continue to rise significantly.

The summary break down of recurrent revenue shortfalls is as follows:

- 1. <u>Executive and mid-level personnel vacancies</u> (~\$1.0M) Seven key high level vacancies total approximately 800K per anum in personnel costs.
- 2. <u>Temporary Hires</u> The NRA has employed over the last three years, an average of twenty temporary employees (i.e. less than 12 months employment) in order to supplement the workforce as and when needed. The goal however going forward is to be able to retain at least 80% of these workers as full-time staff and employ a

much lower rate of employees on <12 month contracts. The added cost of doing so is approximately **\$500K**.

- 3. <u>District Road Maintenance NRA 6 (\$1.5M)</u> The ideal revenue increase for NRA 6 is 2.5M (i.e. a 4.1M annual budget prescribed by Micropaver™ minus current \$1.6M). However, adding \$1.5M to the current \$1.6M yields \$3.1M per anum which would also be very effective in reducing the maintenance backlog. Logical use of the \$3.1M would also involve HMA surfacing of key district roads to prolong service life.
- 4. <u>Post-Retirement Health Liability (\$1.8M)</u> The NRA is required to maintain a fund for safeguarding monies for the provision of health insurance for 50+ employees who were civil servants that were impacted by the transfer from PWD to NRA. An actuarial analysis recommends that the NRA reserve an annual amount of \$1.8M for a fund to meet the health insurance needs of these employees upon retirement.

The total recurrent revenue shortfall for the NRA is around \$4.8M which means that ideally the NRA needs to have its annual recurrent revenue at a minimum of \$14M with revenue sources to the Road Fund also structured in a way that allows the Authority to adjust to future growth needs. It is imagined however that if the Ministry of Infrastructure assumes long term responsibility for some of the core operations expenses such as 1) The District Roads Maintenance, 2) New Drain-wells, and 3) The Government Street Lighting Programme, the Authority could operate effectively on a recurrent budget of approximately \$12M in 2021 with provisions for cost of living adjustments going forward.



National Roads Authority Board of Directors, 2020

Section 5 – Executive Assets & Output Accounts

A summary of the Executive Asset and Output accounts as recorded at the fiscal year ending December 31st, 2020 were as shown below:

NATIONAL ROADS AUTHORITY FUNDS AVAILABLE FOR THE TWELVE MONTHS ENDED 31 DECEMBER 2020 12MONTH BUDGET JAN20-DEC20

| 12MONTH BUDGET JAN20-DEC20 | | | | | Total | |
|---|--------------------------------|-------------------------|---------------------------|----------------------------------|----------------------------|---------------------|
| | Services to be | Current | Amount | Amount | Invoiced | Funds |
| | provided from NRA Road Fund | Budget | Invoiced B/F | Invoiced This Month | To Date C/F | Available |
| | | \$ | \$ | \$ | \$ | \$ |
| Planning & Development of New Public Roads | NRA 5 | 125,000 | 59,484 | 21,489 | 80,972 | 44,028 |
| Grand Cayman District Roads Programme | NRA 6 | - | - | - | - | - |
| Policy Advice on Road Related Matters | NRA 7 | - | - | - | - | - |
| Storm Water Drain Wells | NRA 8 | 700,000 | 716,535 | 19,125 | 735,660 | (35,660) |
| Routine Maintenance of Public Roads | NRA 9 | 6,335,000 | 5,878,830 | 545,830 | 6,424,660 | (89,660) |
| Government Street Lighting Programme | NRA 10 | 1,000,000 | 855,389 | 76,837 | 932,226 | 67,774 |
| Pavement Management & Other Roads Asset Mangt. Programmes | NRA 11 | 25,000 | 16,280 | - | 16,280 | 8,720 |
| Road Safety & Roadside Guard Rail Installation Programme | NRA 12 | - | - | - | - | - |
| Explosive & Blasting Management | NRA 13 | 15,000 | 10,202 | - | 10,202 | 4,798 |
| Arterial Road Surface Rehabilitation | NRA 14 | - | - | - | - | - |
| Provisions for Other Costs | NRA 15 | 1,800,000 10,000,000 | 1,650,000 9,186,720 | 150,000 813,280 | 1,800,000 10,000,000 | - (0) |
| | - | 10,000,000 | 9,180,720 | 813,280 | 10,000,000 | (0) |
| | | Current Budget | Amount Invoiced B/F | Amount Invoiced This Month | Invoiced To Date C/F | Available |
| | EA's | \$ | \$ | \$ | \$ | \$ |
| Miscellaneous Road Surface Upgrades Various District Roads hot mix overlay EA36GUARDRAIL | EA36 | 3,000,000 | - | - | - | |
| EA36CAPITAL DRAINS PROJECT EA36 MISC.EXEC.ASSET ROADWORKS | | | 510,314 2,846,531 | 68,890 298,132 | 579,204 3,144,662 | (723,866) |
| NICE Project | | | | 79,976 | 79,976 | |
| EA150 Assist DVDL proc.poles/mount hardware EVR system | EA150 | 100,000 | 46 204 | 9.627 | - | 44,979 |
| EA148 Major Road Works - expansion Projects | EA148 | 10,000,000 | 46,394 | 8,627 | 55,021 | 44,979 |
| EA148B600 EA148GT01 SHAMROCK/HIRST RD | | | 410,247 | 101,029 | 511,276 | |
| EA148GT01 SHAMROCK/HRST RD EA148GT02 NORTH CHURCH ST | | | | | - | |
| EA148GT05 CNB RAB to Mango Tree connector (EA142GT05 Explor EA148GT04-Linford Pearson Highway widening (EA142GT04 Explore: | | | 85,370 | 5,740 | 91,110 | |
| EA148GT05-Elmord Featson Highway widening (EA142GT04 Explorer | :) | | 65,570 | 3,740 | 91,110 | |
| EA148 VAR DISTRICT PROJECTS EA148GT041 Island Heritage RAB | | | 4,928,944 | 143,647 | 5,072,591 | 3,510,429 |
| EA148GT041 Island Helitage RAB EA148GT25 Airport Connector Road | | | 695,510 | 119,084 | 814,594 | 3,310,723 |
| EA147BT03-Ministry Minor Works (Bodden Town) | _ | 13,100,000 | 17,676 9,540,986 | 825,124 | 17,676 10,366,109 | 17,676 2,849,219 |

Section 6 - Summarised Financial Statements

A full set of audited financial statements for The National Roads Authority is provided in the Appendix to this Annual Report.

A summary of those is as follows.

| Operating Statement | 2020 Actual \$ |
|----------------------|----------------------|
| Revenue | 20,757,037 |
| Operating Expenses | 22,229,639 |
| Net Surplus(Deficit) | (1,472,602) |

| Balance Sheet | 2020 Actual \$ |
|-------------------|----------------------|
| Total Assets | 15,593,583 |
| Total Liabilities | 35,769,616 |
| Total Net Worth | (20,176,033) |

| Statement of Cash Flows | 2020 Actual \$ |
|--|----------------------|
| Net cash flows from operating activities | 3,029,973 |
| Net cash flows from investing activities | (573,917) |
| Net cash flows from financing activities | _ |

Equity Investments

| Transaction | 2020 Actual \$ |
|--|----------------------|
| El 8: Equity Investments into National Roads Authority | Nil |

Capital Withdrawals

| Transaction | 2020 Actual \$ |
|--|----------------------|
| Capital Withdrawals from National Roads Authority. | Nil |

Dividends or Profit Distributions

| Transaction | 2020 Actual \$ |
|--|----------------------|
| Dividend or Profit Distributions to be made by National Roads Authority. | Nil |

Loans

| Transaction | 2020 Actual \$ |
|--|----------------------|
| Government Loans to be made to National Roads Authority. | Nil |

Guarantees

| Transaction | 2020 Actual \$ |
|---|----------------------|
| Government Guarantees to be issued in relation to National Roads Authority. | Nil |

Other Financial Information

Detailed below is information about specific financial transaction required to be included in the Ownership Agreement by the Public Management and Finance Act (2005 Revision).

| Related Party Payments (Non-Remuneration) made to Key Management Personnel | Nil |
|---|--------|
| Remuneration Payments made to Board of Directors and other Key Management Personnel | \$921K |
| No of Key Management Personnel | 7 |
| No of Senior Management | 3 |

Key management includes all of the senior management plus the Board of Directors.

Senior management posts include: Managing Director, Deputy Managing Director, and Chief Financial Officer.

Capital Maintenance

| Human Capital Measures | 2020 Actual \$ |
|--|----------------------|
| Total full time equivalent staff | 82 |
| Staff turnover (%) | - |
| Average length of service (Number) | |
| Senior management | 14.33(3) |
| Professional staff | 14.71(29) |
| Administrative staff | 13.22(50) |
| Significant changes to personnel management system | None |

Note 1: Length of service is calculated based on time of employment with NRA and formerly with PWD.

Risk Management:

| Key risks | Change in status from previous year | Actions to manage risk | Financial value of risk | |
|--|-------------------------------------|--|--|--|
| Work related injuries to persons | No change | Introduction, training and implementation of safety standards for heavy equipment machinery and workforce personnel. | Undefined: depends on extent of injury | |
| Accidents related to the operation of vehicles and heavy equipment | No change | Implement driver-training courses. HOD to exercise appropriate disciplinary action for each offence or repeating offender, such as loss of authority to drive or financial contribution by driver. Appropriate training in operation of vehicle to reduce operational misuse of the vehicle. | Undefined: depends on extent of damage | |



National Roads Authority

Audited Financial Statements

December 31, 2020



Table of Contents

| Statement of Responsibility for the Financial Statements | 1 |
|--|------|
| Auditor General's Report | 2-3 |
| Statement of Financial Position | 4 |
| Statement of Financial Performance | 5 |
| Statement of Changes in Net Worth | 6 |
| Statement of Cash Flows | 7 |
| Notes to the Financial Statements | 8-34 |



National Roads Authority Financial Statements 31 December 2020

STATEMENT OF RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

These financial statements have been prepared by the National Roads Authority in accordance with the provisions of the *Public Management and Finance Act (2020 Revision)* and referenced to Section 26 (1b) of the *National Roads Authority Act (2016 Revision)*.

We accept responsibility for the accuracy and integrity of the financial information in these financial statements and their compliance with the *Public Management and Finance Act (2020 Revision)*.

As Chairman and Managing Director, we are responsible for establishing; and have established and maintained a system of internal controls designed to provide reasonable assurance that the transactions recorded in the financial statements are authorised by law, and properly record the financial transactions of the National Roads Authority.

As Chairman and Acting Managing Director, we are responsible for the preparation of the National Roads Authority financial statements and for the judgements made in them.

The financial statements fairly present the statement of financial position, statement of financial performance, statement of changes in net worth and statement of cash flows for the year ended 31 December 2020.

To the best of our knowledge we represent that these financial statements:

- (a) completely and reliably reflect the financial transactions of National Roads Authority for the year ended 31 December 2020;
- (b) fairly reflect the financial position as at 31 December 2020 and performance for the year ended 31 December 2020; and
- (c) comply with International Public Sector Accounting Standards as set out by the International Public Sector Accounting Standards Board. Where additional guidance is required, International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board are used.

The Office of the Auditor General conducts an independent audit and expresses an opinion on the accompanying financial statements. The Office of the Auditor General has been provided access to all the information necessary to conduct an audit in accordance with International Standards on Auditing.

John Edwards Ebanks

Chairman

National Roads Authority

Edward Howard
Managing Director
National Roads Authority

April 30,2021

April 30, 2021



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AUDITOR GENERAL'S REPORT

To the Board of Directors of the National Roads Authority

Opinion

I have audited the financial statements of the National Roads Authority (the "Authority"), which comprise the statement of financial position as at 31 December 2020 and the statement of financial performance, statement of changes in net worth and statement of cash flows for the year ended 31 December 2020, and notes to the financial statements, including a summary of significant accounting policies as set out on pages 8 to 34.

In my opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Authority as at 31 December 2020 and its financial performance and its cash flows for the year ended 31 December 2020 in accordance with International Public Sector Accounting Standards.

Basis for Opinion

I conducted my audit in accordance with International Standards on Auditing (ISAs). My responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of my report. I am independent of the Authority in accordance with the International Ethics Standards Board for Accountants' *Code of Ethics for Professional Accountants (IESBA Code)*, together with the ethical requirements that are relevant to my audit of the financial statements in the Cayman Islands, and I have fulfilled my other ethical responsibilities in accordance with these requirements and the IESBA Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Emphasis of Matter

As outlined in note 14 of the financial statements, The Public Authorities Act (2020 Revision), Section 47 - Terms and conditions and remuneration of staff came into effect on 1 June 2019 and required all Statutory Authorities and Government Companies to comply with its requirements to standardise salaries and benefits. At the date of this report, the process to complete this standardisation has not been completed. My opinion is not modified in respect of this matter.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation of the financial statements in accordance with International Public Sector Accounting Standards and for such internal control as management determines is necessary to enable the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Authority's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Authority or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Authority's financial reporting process.

AUDITOR GENERAL'S REPORT (continued)

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, I exercise professional judgment and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Authority's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Authority's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Authority to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I have undertaken the audit in accordance with the provisions of Section 60(1)(a) of the Public Management and Finance Act (2020 Revision). I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

Auditor General

30 April 2021 Cayman Islands



Chairman

National Roads Authority Statement of Financial Position As at 31 December 2020 (Stated in Course Polands Pollars

(Stated in Cayman Islands Dollars)

| | Note | 2020 \$ | 2019 \$ |
|---|---------------|----------------------------|--------------|
| ASSETS | | φ | |
| Current Assets | | | |
| Cash and cash equivalents | 3 | 9,433,504 | 6,977,448 |
| Accounts receivable and prepayments | 4 | 3,472,589 | 2,896,147 |
| Inventories | 5 | 37,541 | 53,852 |
| Total Current Assets | | 12,943,634 | 9,927,447 |
| Non-Current Assets | | | |
| Property, plant and equipment | 6 | 2,649,949 | 2,521,025 |
| Total Assets | | 15,593,583 | 12,448,472 |
| LIABILITIES AND EQUITY | | | |
| Current Liabilities | | | |
| Accounts payable and accrued liabilities | 7 | 3,045,780 | 1,645,406 |
| Employee entitlements | 8 | 62,836 | 93,497 |
| Total Current Liabilities | | 3,108,616 | 1,738,903 |
| Non-Current Liability | | | |
| Pension liability | 11 | 2,889,000 | 1,041,000 |
| Post-retirement health liability | 12 | 29,772,000 | 24,884,000 |
| Total Non-Current Liabilities | | 32,661,000 | 25,925,000 |
| Total Liabilities | | 35,769,616 | 27,663,903 |
| Net Assets | | (20,176,033) | (15,215,431) |
| Net Worth | | | |
| Contributed capital | 9 | 4,653,535 | 4,653,535 |
| Accumulated Deficits | | (24,829,568) | (19,868,966) |
| Total Net Worth | | (20,176,033) | (15,215,431) |
| The accompanying notes on pages 8 - 34 form | an integral ¡ | oart of these financial st | atements. |
| Approved on behalf of the Board on the $3c$ | o f | ARIL | 2021. |
| Elbantes | | (ild | |
| John Edwards Ebanks | | Edward Howard | |
| Chairman | | Managing Director | |

Managing Director

4



National Roads Authority Statement of Financial Performance For the year ended 31 December 2020 (Stated in Cayman Islands Dollars)

| | Note | 2020 \$ | 2019 \$ |
|--|------|-------------|------------|
| REVENUE | 13 | 20,757,037 | 20,953,909 |
| COST OF GOODS SOLD | | | |
| Subcontractors | | 7,225,695 | 6,384,831 |
| Materials | | 2,035,663 | 1,970,681 |
| Labour | | 2,826,774 | 2,603,843 |
| Hired equipment | | 39,514 | 5,487 |
| Total Cost of Goods Sold | | 12,127,646 | 10,964,842 |
| NET REVENUE | | 8,629,391 | 9,989,067 |
| OPERATING EXPENSES | | | |
| Personnel costs | 10 | 4,095,928 | 3,869,709 |
| Post- retirement health liability | 12 | 2,666,000 | 1,679,000 |
| Utilities | | 985,640 | 1,148,044 |
| Motor vehicle expenses (including insurance) | | 658,377 | 726,737 |
| Depreciation | 6 | 463,293 | 498,984 |
| Past service pension | 11 | 582,000 | 205,829 |
| Computer maintenance and fees | | 163,289 | 167,407 |
| Professional fees | | 130,971 | 101,490 |
| Building maintenance | | 84,735 | 142,110 |
| Telephone | | 45,387 | 47,670 |
| Supplies and consumables | | 77,876 | 34,885 |
| Advertising and promotion | | 40,556 | 16,900 |
| Bank charges | | 8,656 | 8,186 |
| Doubtful debt expense | 4 | 73,523 | - |
| Insurance | | 10,527 | 5,933 |
| Office rental | | 15,235 | 1,432 |
| Total Operating Expenses | | 10,101,993 | 8,654,316 |
| (DEFICIT)/ SURPLUS | | (1,472,602) | 1,334,751 |

The accompanying notes on pages 8 - 34 form an integral part of these financial statements.



National Roads Authority Statement of Changes in Net Worth For the year ended 31 December 2020 (Stated in Cayman Islands Dollars)

| | Note | Accumulated Surplus/ (Deficit) | Contributed Capital \$ | Total \$ |
|--|------|--------------------------------------|------------------------------|--------------|
| Balance at 31 December 2018 | _ | \$ (13,561,717) | ې 4,653,535 | (8,908,182) |
| 2019 surplus | | 1,334,751 | - | 1,334,751 |
| Remeasurement of employment benefit obligation | 11 | 18,000 | - | 18,000 |
| Remeasurement of post-retirement health obligation | 12 | (7,660,000) | - | (7,660,000) |
| Balance at 31 December 2019 | | (19,868,966) | 4,653,535 | (15,215,431) |
| 2020 deficit | | (1,472,602) | - | (1,472,602) |
| Remeasurement of employment benefit obligation | 11 | (1,266,000) | - | (1,266,000) |
| Remeasurement of post-retirement health obligation | 12 | (2,222,000) | - | (2,222,000) |
| Balance at 31 December 2020 | | (24,829,568) | 4,653,535 | (20,176,033) |

The accompanying notes on pages 8 - 34 form an integral part of these financial statements.

National Roads Authority Statement of Cash Flows For the year ended 31 December 2020 (Stated in Cayman Islands Dollars)

| | Note | 2020 \$ | 2019 \$ |
|---|------|-------------|------------|
| CASH FLOWS USED IN OPERATING ACTIVITIES | | | |
| (Deficit)/ Surplus | | (1,472,602) | 1,334,751 |
| Adjustment for non-cash transactions: | | | |
| Depreciation | 6 | 463,293 | 498,984 |
| Post-retirement health liability – Defined benefit cost | | 2,823,000 | 1,795,000 |
| Past service pension – Defined benefit cost | | 348,000 | 288,000 |
| Past service pension – Net transfer in(business combination/divestitures) | | 324,000 | - |
| Doubtful debt expense | 4 | 73,523 | - |
| Gain on disposal of property, plant and equipment | | (18,300) | (25,000) |
| Total | | 2,540,914 | 3,891,735 |
| Net change in working capital | | | |
| Increase in accounts receivable and prepayments | | (649,965) | (696,093) |
| Decrease in inventories | | 16,311 | 41,309 |
| Increase in accounts payable and accrued liabilities | | 1,369,713 | 421,690 |
| Post-retirement health liability – Employer contributions | | (157,000) | (116,000) |
| Past service pension – Employer contributions | | (90,000) | (141,000) |
| Net cash flows from operating activities | | 3,029,973 | 3,401,641 |
| CASH FLOWS USED IN INVESTING ACTIVITIES | | | |
| Purchase of property, plant and equipment | 6 | (592,217) | (361,790) |
| Proceeds on sale of property, plant and equipment | | 18,300 | 25,000 |
| Net cash flows used in investing activities | | (573,917) | (336,790) |
| CASH FLOWS FROM FINANCING ACTIVITIES | | | |
| Equity investment | | - | - |
| Net cash flows from financing activities | | - | |
| Net increase in cash and cash equivalents during the year | | 2,456,056 | 3,064,851 |
| Cash and cash equivalents at the beginning of the year | | 6,977,448 | 3,912,597 |
| CASH AND CASH EQUIVALENTS AT END OF YEAR | 3 | 9,433,504 | 6,977,448 |

The accompanying notes on pages 8 - 34 form an integral part of these financial statements.



1. Establishment and Principal Activity

The National Roads Authority ("NRA" or "Authority") is an independent Statutory Authority which was created on 1 July 2004 by the National Roads Authority Act, 2004. The Authority reports on its operations to the Ministry of Commerce, Planning & Infrastructure ("MCPI") of the Cayman Islands Government.

The NRA was created to administer, manage, control, develop and maintain the Cayman Island's public roads and related facilities, such as signals, storm water facilities, roadway lighting, and roadway directional signage. The scope of activities of the NRA include providing policy advice, publication of a National Roads Plan, provision of project and construction management services for the delivery of new road-works and the maintenance and management of the existing road infrastructure.

Section 19 of the *National Roads Authority Act (2006 Revision)* was repealed effective on 1 July 2014 to make provision for the Authority to be funded from the Roads Fund. The substitution to the section of the Act makes way for the Cabinet to authorize the transfer of revenue, not exceeding ten million dollars, to the Authority, via the Road Fund, for the purpose of funding the Authority's annual operating costs, in particular, the construction, upgrading, rehabilitation and maintenance of public roads.

As at 31 December 2020, the NRA had 82 employees (31 December 2019: 90 employees). The NRA is located at 342B Dorcy Drive, P.O. Box 10426, Grand Cayman KY1-1004, Cayman Islands.

2. Significant Accounting Policies

(a) Basis of preparation

These financial statements have been prepared in accordance with International Public Sector Accounting Standards (IPSAS) issued by the International Federation of Accountants and its International Accounting Standards Board using the accrual basis of accounting. Where additional guidance is required, International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board are used.

Certain new accounting standards have been published that are not mandatory for the 31 December 2020 reporting period and have not been early adopted by the Authorty. The Authority's assessment of the impact of these new standards is set out below:

IPSAS 41, Financial Instruments was issued in August 2018 and shall be applied for financial statements covering periods beginning on or after 1 January 2023. IPSAS 41 establishes new requirements for classifying, recognizing and measuring financial instruments to replace those in IPSAS 29, Financial Instruments: Recognition and Measurement. It is anticipated that IPSAS 41 will not have a significant impact on the Authority's financial statements. This will be assessed more fully closer to the effective date of adoption.

The financial statements have been prepared on a going concern basis and the accounting policies set out below have been applied consistently to all periods presented. The financial statements of the Authority are presented in Cayman Island dollars and are prepared on the accrual basis under the historical cost convention.



2. Significant Accounting Policies (continued)

(a) Basis of preparation (continued)

Corresponding amounts

The corresponding amounts are the audited amounts for the year ended 31 December 2019. When presentation or classification of items in the financial statements is amended or accounting policies are changed, comparative figures are restated to ensure consistency with the current year unless it is impracticable to do so.

The significant accounting policies adopted by the NRA in these financial statements are as follows:

(b) Cash and cash equivalents

This comprises cash at bank and short term investments with maturity at inception of three months or less.

(c) Foreign currency translation

All assets and liabilities denominated in foreign currency are translated to Cayman Islands Dollars at exchange rates in effect at the financial position date. Revenue and expense transactions denominated in foreign currency are translated to Cayman Islands Dollars at exchange rates ruling at the date of those transactions. Gains and losses arising on translation are included in the statement of financial performance.

(d) Property, plant and equipment/depreciation

Property, plant and equipment include motor vehicles, heavy equipment, dump trucks, furniture and fixtures and computer hardware and software are stated at cost less accumulated depreciation and impairment losses. Depreciation is calculated on a straight-line basis at annual rates estimated to write off the carrying value of each asset over the period of its expected useful life.

Annual rates are as follows:

Vehicles and Heavy Equipment 4 - 12 Years
Furniture and Fixtures 3 - 15 Years
Computer Hardware and Software 3 - 6 Years
Other Plant and Equipment 3 - 20 Years

(e) Accounts receivables

Receivables are stated at original invoice amounts less provision for doubtful debts.

(f) Allowance for bad debts

The allowance for bad debts is established through a provision for bad debts charged to expenses. Accounts receivable are written off against the allowance when management believes that the collectability of the amount is unlikely. The allowance is an amount that management believes will be adequate to cover any bad debts, based on an evaluation of collectability and prior bad debts experience.

2. Significant Accounting Policies (continued)

(g) Accounts payable and accrued liabilities

Accounts payable are recorded at the amount owing after allowing for credit notes and other adjustments.

(h) Employee entitlements

Pension Plans

The Authority makes pension contributions for its eligible employees to the Public Service Pensions Fund, which is administered by the Public Service Pensions Board. The Fund has both a defined benefit and a defined contribution element.

Under defined contribution plans, the Authority pays fixed contributions and has no obligation to pay further contributions if the fund does not have sufficient assets to pay employee benefits relating to employee service in the current and prior periods. The Authority recognises contributions to a defined contribution plan when an employee has rendered services in exchange for those contributions.

A defined benefit plan is one that defines an amount of benefit to be provided, usually as a function of one or more factors such as age, years of service or compensation. The asset or liability in respect of defined benefit plans is the difference between the present value of the defined benefit obligation at the financial position date and the fair value of plan assets, adjusted for unrecognised actuarial gains/losses and past service cost. Where a pension asset arises, the amount recognised is limited to the net total of any cumulative unrecognised net actuarial losses and past service cost and the present value of any economic benefits available in the form of refunds from the plan or reduction in future contributions to the plan. The pension costs are assessed using the Projected Unit Credit Method. Under this method the cost of providing pensions is charged in the statement of financial performance so as to spread the regular cost over the service lives of employees in accordance with advice of the actuary, (who is due to carry out a full valuation of the plans every year). The pension obligation is measured at the present value of the estimated future cash outflows using discount estimated rates based on market yields on high quality corporate bonds at the time of the accounting date which have terms to maturity approximating the terms of the related liability.

Obligations for contributions to defined contribution and defined benefits pension plans are recognized as an expense in the statement of financial performance as incurred. (See also Note 11).

Amounts incurred but not paid at the end of the reporting period are accrued. Annual leave due, but not taken, is recognized as a liability.

2. Significant Accounting Policies (continued)

(i) Revenue recognition

Revenue from sale of services to other government agencies is recognised when it is earned. Unearned revenue comprises amounts paid to the Authority in advance of work performed and amounts which the Authority has invoiced for in advance of work performed. These unearned amounts are recognized as revenue in the statement of financial performance as work is performed related to the amounts received or billed in advance. Investment revenue is recognised in the period in which it is earned. Donations are recognised at fair value at the time of receipt.

(j) Expense and costs of goods sold recognition Expenses and costs of gods sold are recognised when incurred.

(k) Financial Instruments

(i) Classification

A financial asset is classified as any asset that is cash, a contractual right to receive cash or another financial asset, exchange financial instruments under conditions that are potentially favourable or an equity instrument of another enterprise. Financial assets comprise of cash and cash equivalents and accounts receivable.

A financial liability is any liability that is a contractual obligation to deliver cash or another financial instrument or to exchange financial instruments with another enterprise under conditions that are potentially unfavourable. Financial liabilities comprise of accounts payable, unearned revenue and employee entitlements.

(ii) Recognition

The Authority recognises financial assets and financial liabilities on the date it becomes party to the contractual provisions of the instrument. From this date, any gains and losses arising from changes in fair value of the assets or liabilities are recognised in the statement of financial performance.

(iii) Measurement

Financial instruments are measured initially at cost which is the fair value of the consideration given or received. Subsequent to initial recognition all financial assets are recorded at historical cost, which is considered to approximate fair value due to the short-term or immediate nature of these instruments.

(iv) Derecognition

A financial asset is derecognised when the Authority realises the rights to the benefits specified in the contract or loses control over any right that comprise that asset. A financial liability is derecognised when it is extinguished, that is when the obligation is discharged, cancelled, or expired.

(v) Credit Risk

Cash and short term investments are held with substantial financial institutions. Receivables are short term and settled after the year-end.

2. Significant Accounting Policies (continued)

(k) Financial Instruments (continued)

(vi) Interest Rate Risk

The Authority's income and operating cash flows are substantially independent of changes in market interest rates.

3. Cash and Cash Equivalents

| | 2020 | 2019 |
|---------------------------------|-----------|-----------|
| | \$ | \$ |
| Bank account | 3,949,383 | 3,298,474 |
| Short term deposits | 5,484,121 | 3,678,974 |
| Total Cash and Cash Equivalents | 9,433,504 | 6,977,448 |

The Board of Directors resolved to fund the post-retirement health liability with annual contributions as advised during 2016 by the Actuaries with an annual minimal amount of \$1,500,000. During 2020, Management approved additional contributions of \$1,800,000. NRA holds the funds approved by the Board in a term deposit account held with RBC Royal Bank (Cayman Islands). The funds held in the term deposit account do not qualify as a "Plan Asset" as defined by IPSAS 39, Employee Benefits, and therefore have not been offset against the year-end post-retirement health liability of \$29,772,000. Ongoing steps are being pursued by the NRA to place these funds in a qualifying financial vehicle to allow the funds to meet the requirements of IPSAS 39, Employee Benefits.

4. Accounts Receivable and Prepayments

| | 2020 | 2019 |
|--|-----------|-----------|
| | \$ | \$ |
| Receivables from Core Government | 3,174,798 | 2,516,981 |
| Receivables from other government agencies | 6,577 | 6,893 |
| Other accounts receivable and prepayments | 290,764 | 370,142 |
| Staff loans | 450 | 2,131 |
| Total Accounts Receivable | 3,472,589 | 2,896,147 |

Receivables from core government are net of provisions for doubtful debts of \$73,523 (2019: nil) relating to street lighting costs from June 2014 not recovered from MCPI.

5. Inventories

| | 2020 \$ | 2019 \$ |
|-----------------------------------|------------|-------------------|
| Finished Goods - Cayman Rock | - | 2,801 |
| Finished Goods - AE60 | 14,929 | 10,086 |
| Finished Goods - Crusher Run | 12,420 | 24,280 |
| Finished Goods - 3/8 Washed Chips | 2,761 | 5,070 |
| Finished Goods – Sand | 1,292 | 1,219 |
| Finished Goods – Concrete Stone | 6,139 | 10,396 |
| Total Inventories | 37,541 | 53,852 |

6. Property, Plant and Equipment

| | Vehicles & Heavy Equipment | Furniture & Fixtures & Office Equipment | IT Equipment | Other Plant & Equipment | Leasehold Improvement | Total |
|----------------------------------|----------------------------------|---|-----------------|-------------------------------|--------------------------|-----------|
| Cost | \$ | \$ | \$ | \$ | \$ | \$ |
| Opening 2019 | 3,703,862 | 180,971 | 314,604 | 2,805,167 | 273,837 | 7,278,441 |
| Additions 2019 | 157,776 | 86,223 | 38,669 | 79,121 | - | 361,789 |
| Asset write-backs | - | - | - | 13,858 | - | 13,858 |
| Asset write-offs | (192,982) | - | (72,742) | - | - | (265,724) |
| Disposals 2019 | (37,760) | - | - | - | - | (37,760) |
| As at 2019 | 3,630,896 | 267,194 | 280,531 | 2,898,146 | 273,837 | 7,350,604 |
| Additions 2020 | 351,741 | 1,542 | 9,029 | 229,905 | - | 592,217 |
| Disposals 2020 | (182,004) | - | - | (34,560) | - | (216,564) |
| As at 2020 | 3,800,633 | 268,736 | 289,560 | 3,093,491 | 273,837 | 7,726,257 |
| Accumulated Depreciation | | | | | | |
| Opening 2019 | 2,559,002 | 156,894 | 250,941 | 1,379,547 | 273,837 | 4,620,221 |
| Depreciation 2019 | 230,592 | 5,202 | 18,154 | 245,036 | - | 498,984 |
| Write-backs | - | - | - | 13,858 | - | 13,858 |
| Write-offs | (192,982) | - | (72,742) | - | - | (265,724) |
| Depreciation on Disposal 2019 | (37,760) | - | - | - | - | (37,760) |
| As at 2019 | 2,558,852 | 162,096 | 196,353 | 1,638,441 | 273,837 | 4,829,579 |
| Depreciation 2020 | 167,300 | 17,969 | 23,524 | 254,500 | - | 463,293 |
| Depreciation on Disposal 2020 | (182,004) | - | - | (34,560) | - | (216,564) |
| As at 2020 | 2,544,148 | 180,065 | 219,877 | 1,858,381 | 273,837 | 5,076,308 |
| Net Book Value - 2019 | 1,072,044 | 105,098 | 84,178 | 1,259,705 | _ | 2,521,025 |
| | | · · · · · · · · · · · · · · · · · · · | | | | |
| Net Book Value - 2020 | 1,256,485 | 88,671 | 69,683 | 1,235,110 | - | 2,649,949 |

During 2019, management performed a reconciliation between the asset register maintained by the Finance Department and that maintained by the Fleet Manager. The reconciliation resulted in the asset write-backs and write-offs reflected in the movement schedule. The net book value of the assets written off and the assets written back is \$0 (Nil).

7. Accounts Payable and Accrued Liabilities

| | 2020 \$ | 2019 \$ |
|--|------------|------------|
| Trade creditors | 2,843,253 | 1,584,924 |
| Accruals | 139,325 | 10,634 |
| Wages payable | 63,202 | 49,848 |
| Total Accounts Payable and Accrued Liabilities | 3,045,780 | 1,645,406 |

Trade creditors include \$75,814 (2019: \$168,935) relating to retentions on road construction contracts. The retentions are generally payable to sub-contractors 6 months after road construction works are completed to the Authority's satisfaction and defects in materials and workmanship, if any, have been corrected.

8. Employee Entitlements

The leave entitlements are calculated based on current salary paid to those employees who are eligible for this benefit. During the year, accrued vacation leave amounted to \$62,836 (2019: \$93,497).

9. Contributed Capital

During the year, the Authority received no equity injections (2019: Nil).

10. Personnel Costs

| | 2020 | 2019 |
|--|-----------|-----------|
| | \$ | \$ |
| Salaries and wages | 2,081,370 | 2,001,223 |
| Health insurance | 1,607,309 | 1,454,889 |
| Employer and employee pension expenses | 288,195 | 218,809 |
| Vacation due | (30,660) | 28,893 |
| Other personnel costs | 149,714 | 165,895 |
| Total Personnel Costs | 4,095,928 | 3,869,709 |
| | | |

11. Pensions

Pension contributions for eligible employees of the Authority are paid to the Public Service Pensions Fund (the "Fund"). The Fund is administered by the Public Service Pensions Board ("the Pensions Board") and is operated as a multi-employer plan. Prior to 1 January 2000 the scheme underlying the Fund was a defined benefit scheme. With effect from 1 January 2000, the Fund had both a defined benefit and a defined contribution element, with participants joining after 1 January 2000 becoming members of the defined contribution element only.

Benefit obligations are estimated using the Projected Unit Credit method. Under this method, each participant's benefits under the plan are attributed to years of service, taking into consideration future salary increases and the plan's benefit allocation formula. Thus, the estimated total pension to which each participant is expected to become entitled at retirement is broken down into units, each associated with a year of past or future credited service.

11. Pensions (continued)

The Fund has been valued by the Actuary (Mercer) to the Pensions Board. The defined contribution part of the Fund is not subject to the special actuarial valuations due to the nature of the benefits provided therein.

The Authority paid both the employee and employers contributions. The actual amount of pension expense relating to the defined benefits for staff also includes the effect of the changes in the actuarial determined liability.

In March 2005, the Financial Secretary of the Cayman Islands Government informed the Authority that the decision to keep the unfunded past service liability a central liability of the Government had been reversed and the Authority recognizes the unfunded past service liability as a liability in its financial statements.

The amounts recognized in the statement of financial position is as follows:

| | 2020 | 2019 |
|---|-------|-------|
| | \$000 | \$000 |
| Defined benefit obligation | 8,313 | 5,903 |
| Fair value of plan assets | 5,424 | 4,862 |
| Funded status | 2,889 | 1,041 |
| Net liability | 2,889 | 1,041 |
| The change in defined benefit obligation is as follows: | | |
| | 2020 | 2019 |
| | \$000 | \$000 |
| Defined benefit obligation at end of prior year | 5,903 | 4,759 |
| Service Cost | 318 | 253 |
| Interest expense | 186 | 200 |
| Cash flows | 75 | (144) |
| Remeasurements | 1,831 | 835 |
| Defined benefit obligation at end of year | 8,313 | 5,903 |
| The change in fair value of plan assets is as follows: | | |
| | 2020 | 2019 |
| | \$000 | \$000 |
| Fair value of plan assets at end of prior year | 4,862 | 3,847 |
| Interest Income | 156 | 165 |
| Cash flows – employer and participant contributions | 165 | (3) |
| Other Significant events - Business | (324) | - |
| combinations/divestitures/transfers | | |
| Remeasurements | 565 | 853 |
| Fair value of plan assets at end of year | 5,424 | 4,862 |

National Roads Authority Notes to the financial statements (continued) For the year ended 31 December 2020

| (Stated in Cayman Islands Dollars) | | |
|--|------------|----------|
| Pensions (continued) | | |
| The net defined benefit liability (asset) reconciliation: | | |
| The need defined benefit habitly (asset) recontained in | 2020 | 20: |
| | \$000 | \$00 |
| Net defined benefit liability as of beginning of year | 1,041 | 9: |
| Defined benefit cost included in the Profit & Loss | 348 | 2 |
| Total remeasurements included in the Statement of Changes in Net | 4.000 | |
| Worth (SCNW) | 1,266 | (1 |
| Other Significant events - Business | 324 | |
| combinations/divestitures/transfers | 324 | |
| Cash flows | (90) | (14 |
| Net defined benefit liability as of end of year | 2,889 | 1,0 |
| The components of defined benefit cost are as follows: | | |
| | 2020 | 201 |
| | \$000 | \$00 |
| Service Cost | 318 | 25 |
| Net interest cost | | |
| Interest expense on DBO | 186 | 20 |
| Interest (income) on plan assets | (156) | (16 |
| Total net interest cost | 30 | |
| Defined benefit cost included in Profit & Loss (P&L) | 348 | 28 |
| Effect of changes in demographic assumptions | (234) | (2 |
| Effect of changes in financial assumptions | 1,562 | 1,2 |
| Effect of experience adjustments | 503 | (41 |
| (Return) on plan assets (excluding interest income) | (565) | (85 |
| (Return) on reimbursement rights (excluding interest income) | - | |
| Changes in asset ceiling/onerous liability (excluding interest income) | - | |
| Total remeasurements included in the SCNW | 1,266 | (1 |
| Total defined benefit cost recognized in the P&L and SCNW | 1,614 | 27 |
| The sensitivity analysis on defined benefit obligation is shown belo | <u>ow:</u> | |
| | 2020 | 2019 |
| | \$000 | \$000 |
| Present value of defined benefit obligation | | |
| Effective discount rate – 25 basis points | 8,830 | 6,252 |
| Effective discount rate + 25 basis points | 7,835 | 5,579 |
| Price inflation rate – 25 basis points | 7,849 | 5,589 |
| Price inflation rate + 25 basis points | 8,812 | 6,240 |
| Mortality assumption - 10% | 8,554 | 6,053 |
| Mortality assumption + 10% | 8,095 | 5,765 |
| Weighted average duration of defined benefit obligation (in years) | | |
| Effective discount rates – 25 basis points | 24.13 | 22.98 |
| Effective discount rates + 25 basis points | 23.69 | 22.58 |
| The expected cash flow for the following year is as follows: | A | + (¢000) |

Expected employer contributions

Amount (\$000)

92

132

11. Pensions (continued)

The significant actuarial assumptions are presented below:

Weighted-average assumptions to determine defined benefit obligations

| | | 2020 | 2019 |
|----|--|----------------|-----------------|
| 1. | Effective discount rate for defined benefit obligation | 2.60% | 3.50% |
| 2. | Rate of salary increase | 2.50% | 2.50% |
| 3. | Rate of price inflation | 2.00% | 2.00% |
| 4. | Rate of pension increases | 2.00% | 2.00% |
| 5. | Post-retirement mortality table | RP-2014 | RP-2014 scaled |
| | | scaled back | back to 2006 |
| | | to 2006 using | using Scale MP- |
| | | Scale MP- | 2014 then |
| | | 2014 then | generationally |
| | | generationally | Projected using |
| | | Projected | Scale MP-2019 |
| | | using Scale | |
| | | MP-2020 | |
| 6. | Cost Method | Projected | Projected |
| | | Unit Credit | Unit Credit |
| 7. | Asset valuation method | Market | Market |
| | | Value | Value |
| | | | |

Weighted-average assumptions to determine defined benefit cost

| | | 2020 | 2019 |
|----|---|----------------|--------------|
| 1. | Effective rate for net interest cost | 3.15% | 4.20% |
| 2. | Effective discount rate for service cost | 3.60% | 4.55% |
| 3. | Effective rate for interest on service cost | 3.40% | 4.40% |
| 4. | Rate of salary increase | 2.50% | 2.50% |
| 5. | Rate of price inflation | 2.00% | 2.00% |
| 6. | Rate of pension increases | 2.00% | 2.00% |
| 7. | Post-retirement mortality table | RP-2014 | RP-2014 |
| | | scaled back to | scaled back |
| | | 2006 using | to 2006 |
| | | scale MP- | using scale |
| | | 2014 then | MP-2014 |
| | | generational | then |
| | | projected | generational |
| | | from 2006 | projected |
| | | using Scale | from 2006 |
| | | MP-2019 | using Scale |
| | | | MP-2018 |

11. Pensions (continued)

Plan Assets

The Defined Benefit assets as well as Defined Contribution assets of the Plan are held as part of the Public Service Pensions Fund ("the Fund") and managed by the PSPB. The assets of two other pension plans are pooled together to constitute the Fund.

The assets are notionally allocated to each of the three participating pension plans through an internal accounting mechanism that tracks, for each accounting period, actual cash flows and allocates investment income based on the rate of return earned by the Fund. Based on the data provided, the gross rate of return earned by the Fund over the 12-month period, 1 January 2020 to 31 December 2020, was 15.61% per annum (2019: 26.66%). Similar internal accounting is used for developing each participating entity's share of the asset portfolio of the Fund.

The valuations are based on the asset values as at 31 December 2020 as well as asset value as at 31 December 2019 provided by PSPB, along with cash flow and other supplemental asset information. The assets are held in trust by CIBC Mellon.

The Fund currently has investment policy with a target asset mix of 80% equities and 20% bonds. As at 31 December 2020 and 31 December 2019, the Fund was invested as follows:

| | 2020 | | 2 | 019 |
|-------------------------------|---------|------------|---------|------------|
| Plan Assets by Asset Category | (\$000) | Percentage | (\$000) | Percentage |
| Global equities securities | 816,513 | 82% | 680,288 | 79% |
| Debt securities | 177,719 | 18% | 167,692 | 20% |
| Cash | 3,398 | 0% | 10,444 | 1% |
| Total | 997,630 | 100% | 858,424 | 100% |

For fiscal 2020, the Defined Contribution portion of the Fund totaled to \$423,060,600 and \$400,941,600 as at 31 December 2019 as provided by PSPB.

The share of the Fund that has been notionally allocated to NRA with regards to its participation in the Defined Benefit Part of the Plan is \$5,424,000 as at 31 December 2020 (2019: \$4,862,000).

The Actuarial Assumptions

The actuarial assumptions have been approved by the Financial Secretary, the main sponsor of the Plan. Consideration has been given to the impact of COVID-19 on the actuarial assumptions, however at this time, there remains a great deal of uncertainty and as a result, Mercer did not feel it necessary to make any changes to the assumptions as a direct result of the pandemic. The principal financial and demographic assumptions used at 31 December 2020 and 31 December 2019 are shown in the table below. The assumptions as at the reporting date are used to determine the present value of the benefit obligation at that date and the pension expense for the period.

11. Pensions (continued)

Turnover Rates at sample ages:

| Age | Males | Females |
|-----|-------|---------|
| 20 | 7.5% | 12.5% |
| 25 | 5.0% | 12.5% |
| 30 | 3.5% | 7.5% |
| 35 | 2.5% | 4.5% |
| 40 | 1.5% | 2.5% |
| 45 | 0.5% | 5.0% |
| 50 | 0.0% | 0.0% |

Retirement Rates:

| Age | % |
|----------|------|
| Below 55 | 0% |
| 55-59 | 8% |
| 60-64 | 15% |
| 65 | 100% |

| Measurement Date Discount rate | 2020 | 2019 |
|---|---------|---------|
| | 2 = 20/ | . = 00/ |
| BOY benefit obligation disclosure | 3.50% | 4.50% |
| - BOY benefit obligation disclosure | 2.60% | 3.50% |
| - Following year current service cost | 2.70% | 3.60% |
| - Rate used to determine interest on defined | 2.20% | 3.15% |
| benefit obligation and plan assets for following | | |
| year expenses | | |
| - Rate used to determine interest on current | 2.50% | 3.40% |
| service cost for following year expenses | | |
| Increases in pensionable earnings | 2.50% | 2.50% |
| Rate of Pension Increases | 2.00% | 2.00% |

11. Pensions (continued)

| Mortality | 2020 | 2019 |
|---|--|---|
| Mortality BOY disclosure and current year expense | RP-2014 scaled back to 2006 using Scale MP- 2014, then generationally projected from 2006 using Scale MP-2019. | RP-2014 scaled back to 2006 using Scale MP-2014, then generationally projected using Scale MP-2018. |
| EOY disclosure and following year expense | RP-2014 scaled back to 2006 using Scale MP- 2014, then generationally projected from 2006 using Scale MP-2020 | RP-2014 scaled back to 2006 using Scale MP- 2014, then generationally projected using Scale MP-2019 |
| Disability | None | None |
| Turnover Rates | See turnover rates in table above | See turnover rates in table above |
| Retirement | See retirement rates in table above | See retirement rates in table above |
| Assumed life expectations on retirement | Retiring today (member age 57) 28.45 Retiring in 25 years (at age 57): 30.61 | Retiring today (member age 57) 28.66 Retiring in 25 years (at age 57): 30.93 |
| Liability Cost Method | Projected unit credit method | Projected unit credit method |
| Measurement Date | 2020 | 2019 |
| Asset Value Method | Market Value of Assets | Market Value of Assets |
| Commutation of pension | All members commute 25% at retirement | All members commute 25% at retirement |

There have been no changes in actuarial assumptions since the prior valuation other than the changes to the principal assumptions shown in the table above.

12. Defined benefit liability: Post-retirement health liability

The National Roads Authority provides health care benefits to staff members that transferred from Public Works Department in accordance to the National Roads Authority Act, 2004. The benefit is in the form of continuation of their health insurance coverage on the medical plan in force for active employees. The premiums for this health insurance coverage are paid for by the National Roads Authority for all eligible retirees until the end of their lives. This coverage falls within the definition of a defined benefit by the International Public Sector Accounting Standards and as such represents a future liability of the National Roads Authority. The National Roads Authority is required to use the actuarial valuation method to determine the present value of its health insurance benefit obligations for its former workers as well as future retirees and the related current service costs. International Public Sector Accounting Standards IPSAS 39 directs that funded or unfunded post-employment benefits must be recognized in the statement of financial position (in the case of net defined liability or asset) and the statement of financial performance (for the annual expense).

These actuarial valuations use several financial and demographic assumptions to determine the liability and current expense of the benefits which will be honoured on behalf of the retirees. Financial assumptions include, the discount rate, estimated future costs of the medical premiums, and the claims rate for the medical plans. Demographic assumptions include estimated mortality and benefits levels.

The Authority commissioned Mercer actuaries of Canada to provide this service and the results of their assessment are included hereunder. The National Roads Authority has a present value net defined benefit obligation of \$29,772,000 at the end of the financial year 31 December 2020 (2019: \$24,884,000). The details of the valuation and the assumptions used are reproduced hereunder in accordance with IPSAS 39.

The Board of Directors resolved to fund the post-retirement health liability with annual contributions as advised during 2016 by the Actuaries with an annual minimal amount of \$1,500,000. NRA holds the funds approved by the Board in a term deposit account held with RBC Royal Bank (Cayman Islands). The funds held in the term deposit account do not qualify as a "Plan Asset" as defined by IPSAS 39, Employee Benefits, and therefore have not been offset against the year-end post-retirement health liability of \$29,772,000. Ongoing steps are being pursued by the NRA to place these funds in a qualifying financial vehicle to allow the funds to meet the requirements of IPSAS 39, Employee Benefits.

12. Defined benefit liability: Post-retirement health liability (continued)

| Fina | | n Name I year ending on: | National Roads 31 Dec 2020 \$ | Authority 31 Dec 2019 \$ |
|------|----------|---|-------------------------------------|--------------------------------|
| A. | Cha | ange in defined benefit obligation | • | * |
| | 1. | Defined benefit obligation at end of prior year | 24,884,000 | 15,545,000 |
| | 2. | Service cost | 24,004,000 | 13,343,000 |
| | ۷. | a. Current service cost | 1,993,000 | 1,121,000 |
| | | b. Past service cost | 1,555,000 | 1,121,000 |
| | | c. (Gain) / loss on settlements | _ | _ |
| | 3. | Interest expense | 830,000 | 674,000 |
| | 4. | Cash flows | 630,666 | 074,000 |
| | ٦. | a. Benefit payments from plan assets | _ | _ |
| | | d. Benefit payments from employer | (157,000) | (116,000) |
| | 5. | Other significant events | (137,000) | (110,000) |
| | 5. 6. | Remeasurements | | |
| | 0. | a. Effect of changes in demographic assumptions | (4,817,000) | 1,597,000 |
| | | b. Effect of changes in financial assumptions | 5,892,000 | 5,030,000 |
| | | | | |
| | 7 | c. Effect of experience adjustments | 1,147,000 | 1,033,000 |
| | 7. | Effect of changes in Foreign exchange rates | 20 772 000 | 24 004 000 |
| | 8. | Defined benefit obligation at the end of year | 29,772,000 | 24,884,000 |
| В. | | ange in fair value of plan assets | | |
| | 1. | Fair value of plan assets at end of prior year | - | - |
| | 2. | Interest income | - | - |
| | 3. | Cash flows | | |
| | | a. Total employer contributions | | |
| | | i. Employer contributions | - | - |
| | | ii. Employer direct benefit payments | 157,000 | 116,000 |
| | | iii. Employer direct settlement payments | - | - |
| | | b. Participant contributions | - | - |
| | | c. Benefit payments from plan assets | - | - |
| | | d. Benefit payments from employers | (157,000) | (116,000) |
| | | e. Settlement payments from plan assets | - | - |
| | | | - | - |
| | | f. Settlement payments from employer | - | - |
| | | g. Administrative expenses paid from plan assets | - | - |
| | | h. Taxes paid from plan assets | - | - |
| | _ | i. Insurance premiums for risk benefits | | |
| | 4. | Other significant events | - | - |
| | | a. Increase / (decrease) due to effect of any | | |
| | | business combinations/ divestures or transfers | - | - |
| | | b. Increase / (decrease) due to plan combinations | | |
| | 5. | Remeasurements | - | - |
| | | a. Return on plan assets (excluding interest income) | - | - |
| | 6. | Effect of change in foreign exchange rates | - | |
| | 7. | Fair Value of plan assets at end of year | - | - |
| C. | Am | ounts recognized in the statement of financial position | | |
| | 1. | Defined benefit obligation | 29,772,000 | 24,884,000 |
| | 2. | Fair value of plan assets | <u> </u> | |
| | 3. | Funded status | 29,772,000 | 24,884,000 |
| | 4. | Effect of asset ceiling/onerous liability | <u> </u> | |
| | 5. | Net defined benefit liability/(asset) | 29,772,000 | 24,884,000 |

12. Defined benefit liability: Post-retirement health liability (continued)

| Fina | ancia | l year ending on: | 31 Dec 2020 \$ | 31 Dec 2019 \$ |
|------|-------|--|--------------------------|--------------------------|
| D. | Cor | mponents of defined benefit cost | Ţ | Ą |
| ٠. | 1. | Service cost | 1,993,000 | 1,121,000 |
| | | a. Current service cost | - | - |
| | | b. Reimbursement service cost | _ | _ |
| | | c. Past service cost | _ | _ |
| | | d. (Gain) / loss on settlements | | |
| | | e. Total service cost | 1,993,000 | 1,121,000 |
| | 2. | Net interest cost | 2,333,000 | 1,121,000 |
| | ۲. | a. Interest expense on Defined Benefit Obligation | 830,000 | 674,000 |
| | | (DBO) | <u>-</u> | |
| | | b. Interest /(income) on plan assets | 830,000 | 674,000 |
| | | c. Total net interest cost | | |
| | 3. | Remeasurements of Other Long Term Benefits | - | - |
| | 4. | Administrative expenses and/or taxes (not reserved within DBO) | - | - |
| | 5. | Defined benefit cost included in Profit and Loss (P&L) | 2,823,000 | 1,795,000 |
| | 6. | Remeasurements (recognized in the Statement of Changes in Net Worth) | | |
| | | a. Effect of changes in demographic assumptions | (4,817,000) | 1,597,000 |
| | | b. Effect of changes in financial assumptions | 5,892,000 | 5,030,000 |
| | | c. Effect of experience adjustments | 1,147,000 | 1,033,000 |
| | | d. Total remeasurement included in the Statement of | 2,222,000 | 7,660,000 |
| | | Changes in Net Worth | 2,222,000 | 7,000,000 |
| | 7. | Total defined benefit cost recognized in the P&L and SCNW | 5,045,000 | 9,455,000 |
| E. | Ne | t defined benefit liability/(asset) reconciliation | | |
| | 1. | Net defined benefit liability/(asset) | 24,884,000 | 15,545,000 |
| | 2. | Defined benefit cost included in P&L | 2,823,000 | 1,795,000 |
| | 3. | Total remeasurement included in OCI | 2,222,000 | 7,660,000 |
| | 4. | Other significant events | | |
| | | a. Net transfer in/(out) (including the effect of any | | |
| | | business combinations/divestitures) | - | - |
| | | b. Amounts recognized due to plan combinations | - | - |
| | 5. | Cash Flows | | |
| | | a. Employer contributions | - | - |
| | | b. Employer direct benefit payments | (157,000) | (116,000) |
| | | c. Employer direct settlements payments | - | = |
| | 6. | Credit to reimbursements | - | - |
| | 7. | Effect of changes in Foreign exchange rates | - | - |
| | 8. | Net defined benefit liability/(asset) as of end of year | 29,772,000 | 24,884,000 |
| F. | Def | fine benefit obligation | | |
| • | 1. | Defined benefit obligation by participant status | | |
| | | a. Actives | 22,279,000 | 19,045,000 |
| | | b. Vested deferred | ,-, 5,000 | -5,0 15,000 |
| | | c. Retirees | 7,493,000 | 5,839,000 |
| | | d. Total | 29,772,000 | 24,884,000 |
| | | a | 23,7,2,000 | £ 1,00-1,000 |

12. Defined benefit liability: Post-retirement health liability (continued)

| Fina | ancial year ending on | 31 Dec 2020 | 31 Dec 2019 |
|------|--|----------------|----------------|
| G. | Significant actuarial assumptions | | |
| | Weighted-average assumptions to determine defined | | |
| | benefit obligations | 2.700/ | 3.60% |
| | Discount rate Health care cost trend rates | 2.70% | 3.60% |
| | Immediate trend rate | 5.00% | 5.00% |
| | Ultimate trend rate | 5.00% | 5.00% |
| | Year rate reaches ultimate trend rate | N/A | N/A |
| | Post- retirement mortality assumption | RP-2014 | RP-2014 |
| | 1 Ost Tetirement mortality assumption | Projected | Projected |
| | | w/MP-2020 | w/MP-2019 |
| | Weighted-average assumptions to determine defined benefit cost | | |
| | Effective discount rate for defined benefit obligation | | |
| | Effective rate for net interest cost | 3.60% | 4.55% |
| | Effective discount rate for service cost | 3.35% | 4.35% |
| | Effective rate for interest on service cost | 3.70% | 4.60% |
| | Health care cost trend rates | 3.65% | 4.60% |
| | Immediate trend rate | 5.00% | 5.00% |
| | Ultimate trend rate | 5.00% | 5.00% |
| | Year rate reaches ultimate trend rate | N/A | N/A |
| | Post- retirement mortality assumption | RP-2014 | RP-2014 |
| | | Projected w/MP | Projected w/MP |
| | Constitution and but | 2019 | 2018 |
| н. | Sensitivity analysis | | |
| | Present value of defined benefit obligations | | |
| | Effective Discount rate - 25 basis points | 2,022,000 | 1,593,000 |
| | Effective Discount rate + 25 basis points | (1,863,000) | (1,471,000) |
| | Health care cost trend rates – 100 basis points | (6,450,000) | (5,145,000) |
| | Health care cost trend rates + 100 basis points | 8,694,000 | 6,886,000 |
| | Mortality assumption + 1 year life expectancy | (1,468,000) | (1,141,000) |
| I. | Expected cash flows for following year | | |
| | a. Expected employer contributions | 197,000 | 185,000 |
| | b. Expected contributions to reimbursement rights | - | - |
| | c. Expected total benefit payments | | |
| | Year 1 | 197,000 | 185,000 |
| | Year 2 | 2223,000 | 236,000 |
| | Year 3 | 250,000 | 279,000 |
| | Year 4 | 279,000 | 306,000 |
| | Year 5 | 313,000 | 334,000 |
| | Next 5 years | 2,329,000 | 2,504,000 |

12. Defined benefit liability: Post-retirement health liability (continued)

The Actuarial Assumptions

The actuarial assumptions as at the reporting date are used to determine the present value of the defined benefit obligation (DBO) at that date and the defined benefit cost for the following year. We have used actuarial assumptions selected by NRA, which are consistent with the assumptions used to determine the results for the Cayman Islands Government's ("CIG") Post Retirement Healthcare Program. The principal financial and demographic assumptions used at 31 December 2020 and 31 December 2019 are shown in the table below:

| Economic Assumptions | Postretirement Healthcare | Basis of Development – Accounting Specific Assumptions |
|---------------------------------|---------------------------|---|
| Discount rate benefit | | IAS 19 para. 83 determined by reference to market yields on |
| obligation(p.a) | | high quality corporate bonds (consistent with the term of the |
| - 31 December 2019 | 3.60% per annum | benefit obligations) at the fiscal year end date. Mercer US |
| - 31 December 2020 | 2.70% per annum | Above Mean Yield Curve (referencing US corporate bond |
| Discount rate next year service | | yields) used to determine discount rates due to strong |
| costs(p.a) | | economic and currency links between the US and Cayman |
| - 31 December 2019 | 3.70% per annum | Islands. |
| - 31 December 2020 | 2.75% per annum | |
| Administrative expenses | Included in projected | |
| | premiums | |
| Rate of Medical Inflation (p.a) | 5.00% | Based on an analysis of historical claims information and long- |
| | | term medical inflation expectations. |

| Demographic | Postretirement Healthcare | Basis of Development – Accounting Specific Assumptions |
|---|---|--|
| Assumptions | | |
| Current mortality rates | RP-2014 Mortality Table scaled back to 2006 using MP-2014 | Recent mortality studies in the U.S. and Canada shows that people are living longer. New mortality tables have been issued by U.S. and Canada. The mortality table has been updated to better reflect actual mortality improvement rates experienced in the US over the last 20 years. |
| Mortality improvements | | Broad consensus amongst longevity experts that mortality |
| 31 December 2019 31 December 2020 | Scale MP-2019 Scale MP-2020 | improvement will continue in the future. Scale MP-2014 was released October 2014. In the U.S., the latest future mortality improvement scale issued by the Society of Actuaries is Scale MP-2020. The prior valuation used scale MP-2019. |
| Turnover rates | Age & gender based rates — see below | |
| Disability rates | None assumed | |
| Retirement Age as per Public Service Pension Plan | Age & gender based rates – see below | |
| Material assumption | 80% married, wife 3 years younger | |
| 2019 healthcare claims cost assumption | Health \$12,675 per participant Dental \$1,480 per participant | Based on 1 July 2016 and 2020 age-banded premium rates. Note that the 2016 assumption was that dental costs were 10\$ of combined medical and dental costs. |
| 2020 healthcare claims cost assumption | Health \$12,530 per participant Dental \$205 per participant | Based on actual CIG Pensioner claims experience from 1 January 2018 to 31 December 2019, in 2021 dollars. Medical and dental claims were analysed separately. |
| Healthcare coverage – future pensioners | Male 27% single, 73% family Female 50% single, 50% family | Based on CIG experience |
| Healthcare utilization changes due to age | Mercer standard healthcare aging assumptions for medical and dental | Based on analysis of healthcare utilization for Mercer clients in Canada and US and by reference to Society of Actuaries studies. |

12. Defined benefit liability: Post-retirement health liability (continued)

| Turnover Rates | | | | |
|----------------|-------|---------|--|--|
| Age | Males | Females | | |
| 20-24 | 7.5% | 12.5% | | |
| 25-29 | 5.0% | 12.5% | | |
| 30-34 | 3.5% | 7.5% | | |
| 35-39 | 2.5% | 4.5% | | |
| 40-44 | 1.5% | 2.5% | | |
| 45-49 | 0.5% | 0.5% | | |
| 50 + | 0.0% | 0.0% | | |

Retirement Rates:

| Age | % |
|----------|------|
| Below 55 | 0% |
| 55-59 | 8% |
| 60 - 64 | 15% |
| 65 | 100% |

The actuarial valuation results showed that a liability of \$24,884,000 existed at 31 December 2019, represented by accumulated liability of \$24,884,000 as at 31 December 2019 and service costs and adjustments totaling \$4,888,000 for the year ended 31 December 2020, resulting in a closing liability of \$29,772,000 at 31 December 2020.

13. Related Party Transactions

The Authority provided Services to Road Users on behalf of the Government relating to the development and maintenance of the public roads within the Cayman Islands funded through the Roads Fund which amounts to \$10 million under the Ownership Agreement (2019: \$10 million). During this year, the Authority also delivered Capital Expenditure Projects of \$10.5 million (2019: \$10.6 million) to the Government for the construction of roads under the Ownership Agreement. The Authority also engages the services of other government departments of the Cayman Islands Government.

Sales to unrelated third parties of \$41,374 (2019: \$88,496) include services for drain wells and curbs, installation of signs, paving and trench reinstatement services.

| 2020 | 2019 |
|------------|---|
| \$ | \$ |
| 10,512,419 | 10,583,525 |
| 203,244 | 281,888 |
| 10,041,374 | 10,088,496 |
| 20,757,037 | 20,953,909 |
| | \$ 10,512,419 203,244 10,041,374 |

Upon creation of the Authority on 1 July 2004, no movable properties were vested to the Authority. Henceforth, the Public Works Department (PWD) allowed the Authority to use its

13. Related Party Transactions (continued)

vehicles and heavy equipment for road construction and maintenance free of charge. As at 31 December 2020, the Authority owes PWD the amount of \$69k (2019: \$28k) for support services extended by the latter such as office and workshop accommodation, tenant's requirements, utilities, accounting services, service parking and compound security.

During the year, the Authority purchases goods and services worth \$8k (2019: \$53k) from companies partially owned or controlled by one of its Board members.

The remuneration of directors and other members of key management personnel during the year was \$921k (2018: \$806k). There were 16 personnel categorized in 2020 broken down as 7 key management personnel and 9 Directors (2019: 6 key management personnel and 9 Directors).

14. Contingencies

i) Section 47 of The Public Authorities Act, (2020 Revision), (the "PAL"):

Section 47 of the PAL came into effect on 1 June 2019. The section requires public authorities to use the same salary scale as determined by the Cayman Islands' Cabinet and requires the remuneration of employees of a public authority to be adjusted to reduce any differences between the public authorities' and public service's pay grades.

The Cayman Islands Government's Portfolio of the Civil Service had not completed its evaluation of NRA's salary grade versus that of the public service. As such, management could not adjust for the impact of section 47 of the PAL in these financial statements. Management is also unable to derive an estimate of the potential impact of the evaluation on its financial statements and as such, no resultant provisions have been made in these financial statements.

ii) Sections 39(2) and 39(3) of the PAL:

The Authority is required to comply with The Public Authorities Act, (2020 Revision), (the "PAL"). Amongst other matters, the PAL requires that where a public authority has surplus cash reserves for a period of more than ninety days, the surplus shall be paid to core government unless otherwise directed by Cabinet, after written consultation with the Board. The PAL also requires that a public authority pay dividends in accordance with the formulae established by the Minister of Finance and Economic Development (the "Ministry") after written consultation with the Board, unless otherwise directed by Cabinet.

For the 2020 financial year, NRA's total liabilities exceeded its total assets and as such it has been exempted from the requirement to pay dividends based on section 19(e) of the "Policy for the payment of annual dividends by statutory authorities and government companies (SAGCs)" approved by Cabinet on 8 January 2019.

NRA is also exempted from the requirement to pay surplus cash reserves to core government for the 2020 financial year based on an exemption granted by the Cayman Islands' Cabinet of Ministers in a meeting held on 8 December 2020.

14. Contingencies (continued)

iii) Section 28(1) of the National Roads Authority Act (2016 Revision):

Under section 28(1) of the National Roads Authority Act (2016 Revision), an annual payment to the core government may be due. At the date of these financial statements there has been no request made.

iv) <u>Litigations, claims and assessments</u>

At the date of the audit opinion, the Authority was involved in pending/ threatened litigations, claims and assessments relating to a dispute with an ex-employee who is seeking damages for an injury sustained at work arising from alleged negligence by the Authority and 2 separate disputes with ex-employees alleging a breach of contract/ unfair dismissal. The potential contingent liabilities arising from these litigations have not been disclosed in these financial statements so as not to prejudice the position of the Authority in the disputes but will be disclosed in the financial statements of the Cayman Islands Government's Entire Public Sector.

15. Financial Risk Management

The Authority is exposed to a variety of financial risks including interest rate risk, credit risk and liquidity risk. The Authority's risk management policies are designed to identify and manage these risks, to set appropriate risk limits and controls, and to monitor the risks and adhere to limits by means of up to date and reliable information systems. These risks are managed within the parameters established by the Financial Regulations.

Interest Rate Risk

The Authority is subject to interest rate risk on the cash placed with a local bank which attracts interest. No interest payments are charged to customers on late payments on accounts receivable. The Authority is exposed to interest rate risk on its short term. The total interest earned during the year ended 31 December 2020 was \$5,147 (2019: \$3,001).

Credit Risk

Credit risk refers to the risk that a counterparty will default on its contractual obligations resulting in financial loss to the Authority. Financial assets which potentially expose the Authority to credit risk comprise cash and cash equivalents and accounts receivable.

The Authority is exposed to potential loss that would be incurred if the counterparty to the bank balances fails to discharge its obligation to repay. All bank balances are held with one financial institution (RBC Royal Bank (Cayman Islands)) located in the Cayman Islands which management considers to be financially secure and well managed.

The Authority is also exposed to a significant concentration of credit risk in relation to accounts receivables, majority of which are due from other Government entities. No credit limits have been established and no collateral is required from the Authority's debtors. None of these assets are impaired and management considers these debts to be recoverable in full.

15. Financial Risk Management (continued)

The carrying amount of financial assets recorded in the financial statements represents the Authority's maximum exposure to credit risk.

Liquidity Risk

Liquidity risk is the risk that the Authority is unable to meet its payment obligations associated with its financial liabilities when they fall due. The ability of the Authority to meet its debts and obligations is dependent upon its ability to collect the debts outstanding to the Authority in a timely basis. As at 31 December 2020 and 31 Dec 2019, all of the financial liabilities were due within one month of the financial position dates.

16. Financial Instruments- fair values

As at 31 December 2020 and 31 December 2019, the carrying amount of cash deposits, accounts receivable, accounts payables and employee entitlements approximate their fair value due to their short-term maturities. Fair values are made at specific points in time, based on market conditions and information about the financial instrument. These estimates are subjective in nature and involve uncertainties and matters of significant judgement and therefore cannot be determined with precision. Changes in assumptions, economic conditions and other factors could cause significant changes in fair value estimates.

17. Commitments

There are no commitments as at 31 December 2020 (2019: Nil).

18. COVID-19 pandemic and subsequent events

i) COVID-19 pandemic

In December 2019, a novel strain of coronavirus was reported to have surfaced in China. The global efforts to contain the spread of the coronavirus began to cause significant disruption in the global and local economies from January 2020 to date. While the disruption is currently expected to be temporary, there is considerable uncertainty around the duration. Therefore, while NRA expects this matter to negatively impact its operating results, the related financial impact and duration cannot be reasonably estimated at this time. At 31 December 2020, \$4k in accounts receivable was outstanding from entities not related to the Cayman Islands Government.

NRA did not incur any COVID-19 specific expenditure in 2020.

On the basis of continued funding from the Cayman Islands Government, management believes that the risk that NRA would not be able to meet its obligations as they become due is low and that NRA will continue as going concern for the foreseeable future.

ii) Subsequent events

Management is not aware of any events after the reporting date which will have an impact on the financial statements at 31st December 2020.

19. Explanations of major variances against budget

Statement of Financial Position

| | 2020 Actual | 2020 Original Budget | 2020 Final Budget | Variance Original vs Actual |
|--|----------------|-------------------------|----------------------|-----------------------------------|
| ASSETS | \$ | \$ | \$ | \$ |
| Current Assets | | | | |
| Cash and cash equivalents | 9,433,504 | 3,175,202 | 3,175,202 | (6,258,302) |
| Accounts receivable and prepayments | 3,472,589 | 866,170 | 866,170 | (2,606,419) |
| Inventories | 37,541 | 95,293 | 95,293 | 57,752 |
| Total Current Assets | 12,943,634 | 4,136,665 | 4,136,665 | (8,806,969) |
| Non-Current Assets | | | | |
| Property, plant and equipment | 2,614,436 | 1,893,469 | 1,893,469 | (720,967) |
| Intangible Assets | 35,513 | 33,425 | 33,425 | (2,088) |
| Total Assets | 15,593,583 | 6,063,559 | 6,063,559 | (9,530,024) |
| LIABILITIES AND EQUITY Current Liabilities | | | | |
| Accounts payable and accrued | | | | |
| liabilities | 3,045,780 | 854,000 | 854,000 | (2,191,780) |
| Employee entitlements | 62,836 | 64,604 | 64,604 | 1,768 |
| Total Current Liabilities | 3,108,616 | 918,604 | 918,604 | (2,190,012) |
| Non-Current Liability | | | | |
| Pension liability | 2,889,000 | 1,488,000 | 1,488,000 | (1,401,000) |
| Post-retirement health liability | 29,772,000 | 14,257,000 | 14,257,000 | (15,515,000) |
| Total Non Current Liabilities | 32,661,000 | 15,745,000 | 15,745,000 | (16,916,000) |
| Total Liabilities | 35,769,616 | 16,663,604 | 16,663,604 | (19,106,012) |
| Net Assets | (20,176,033) | (10,600,045) | (10,600,045) | 9,575,988 |
| Net Worth | | | | |
| Contributed capital | 4,653,535 | 4,653,535 | 4,653,535 | _ |
| Accumulated Deficits | (24,829,568) | (15,253,580) | (15,253,580) | 9,575,988 |
| Total Net Worth | (20,176,033) | (10,600,045) | (10,600,045) | 9,575,988 |

19. Explanations of major variances against budget (continued)

Statement of Financial Position

Cash and cash equivalents

Cash was \$6.3m over budget. The variance is attributed to \$5.5m held in a term deposit account with RBC Royal Bank (Cayman Islands). The term deposit was budgeted as an offsetting asset for the post-retirement healthcare liability. A further \$0.8m was earned from additional capital works performed at MCPI's directive.

Accounts receivable and prepayments

The \$2.6m variance in the actual accounts receivable and prepayments when compared to the budget directly relates to non-budgeted billings to the MCPI as a result of MCPI's directives to complete Executive Assets (EA) beyond the scope of NRA's 12 month fiscal budget. The related invoices were settled in full prior to the issuance of these financial statements.

Property, plant and equipment

Property, plant and equipment was \$721k over budget resulting from \$356k in 2020 acquisitions initially anticipated to be acquird during 2019, along with additional asset purchases approved by Manangement/ the Board of Directors during 2020.

Accounts payable and accrued liabilities

Accounts payable were \$2.2m over budget primarily due to unpaid balances on goods and services delivered near year end resulting from late works performed on behalf of MCPI. The balances were not anticipated in the budget. Payments against these balances have been made in unison with payment receipts from CPI subsequent to period end.

Pension liability

Pension liability experienced a negative shift based on changes in actuarial report assumptions resulting in an increase of \$1.4m compared to budget. This movement relates to OCI activity which deviated from previous trends.

Post-retirement health liability

Post-retirement health liability experienced a significant negative shift of \$15.5m during 2020 based on changes in the actuarial valuation. In addition, the intended \$5.5m to be placed as an offsetting asset against the libility was still classified as cash and cash equivalents at year end. The funds are held in a term deposit account but do not qualify as a "Plan Asset" as defined by IPSAS 39, Employee Benefits, and therefore have not been offset against the year-end post-retirement health liability.

19. Explanations of major variances against budget (continued)

Statement of Financial Performance

| | 2020 | 2020 Original Budget | 2020 Final Budget | Variance Original vs Actual |
|--|-------------|----------------------------|----------------------|-----------------------------------|
| | \$ | \$ | \$ | \$ |
| REVENUE | 20,757,037 | 10,355,184 | 10,355,184 | (10,401,853) |
| COST OF GOODS SOLD | | | | |
| Subcontractors | 7,225,695 | 520,327 | 520,327 | (6,705,368) |
| Materials | 2,035,663 | 570,543 | 570,543 | (1,465,120) |
| Labour | 2,826,774 | 2,765,151 | 2,765,151 | (61,623) |
| Hired equipment | 39,514 | 6,050 | 6,050 | (33,464) |
| Total Cost of Goods Sold | 12,127,646 | 3,862,071 | 3,862,071 | (8,265,575) |
| NET REVENUE | 8,629,391 | 6,493,113 | 6,493,113 | (2,136,278) |
| OPERATING EXPENSES | | | | |
| Personnel costs | 4,095,928 | 3,759,785 | 3,759,785 | (336,143) |
| Post- retirement health liability | 2,666,000 | - | - | (2,666,000) |
| Utilities | 985,640 | 1,100,000 | 1,100,000 | 114,360 |
| Motor vehicle expenses (including insurance) | 658,377 | 493,471 | 493,471 | (164,906) |
| Depreciation | 463,293 | 353,133 | 353,133 | (110,160) |
| Past service pension | 582,000 | 332,000 | 332,000 | (250,000) |
| Computer maintenance and fees | 163,289 | 125,000 | 125,000 | (38,289) |
| Professional fees | 130,971 | 105,000 | 105,000 | (25,971) |
| Building maintenance | 84,735 | 59,500 | 59,500 | (25,235) |
| Telephone | 45,387 | 38,000 | 38,000 | (7,387) |
| Supplies and consumables | 77,876 | 64,800 | 64,800 | (13,076) |
| Advertising and promotion | 40,556 | 27,500 | 27,500 | (13,056) |
| Bank charges | 8,656 | 8,400 | 8,400 | (256) |
| Doubtful debt expense | 73,523 | - | - | (73,523) |
| Insurance | 10,527 | 6,524 | 6,524 | (4,003) |
| Office rental | 15,235 | 20,000 | 20,000 | 4,765 |
| Total Operating Expenses | 10,101,993 | 6,493,113 | 6,493,113 | (3,608,880) |
| Surplus/ (Deficit) | (1,472,602) | | | 1,472,602 |
| | | | | |

19. Explanations of major variances against budget (continued)

Several categories were presented in summary within the Ownership Agreement whilst being presented in detailed form by NRA in their Financial Statements and throughout the course of the year. The ownership agreement figures shown below represent the budget actually approved by the Legislative Assembly, compared with the detailed Financial Statement figures. Note however that the total Revenue and Expenses remained the same in both formats.

Reconciliation of Ownership Agreement and the Statement of Financial Performance

| | 2020 Approved Budget \$ | Financial Statements 2020 \$ |
|--|----------------------------|---------------------------------|
| REVENUE | 10,355,184 | 10,355,184 |
| COST OF GOODS SOLD | | |
| Labour | _ | 2,765,151 |
| Materials | _ | 570,543 |
| Subcontractors | - | 520,327 |
| Hired equipment | - | 6,050 |
| Total Cost of Goods Sold | | 3,862,071 |
| NET REVENUE | 10,355,184 | 6,493,113 |
| | | |
| OPERATING EXPENSES | | |
| Personnel costs | 6,524,936 | 3,759,785 |
| Post- retirement health liability | - | - |
| Utilities | - | 1,100,000 |
| Motor vehicle expenses (including insurance) | - | 493,471 |
| Depreciation | 353,133 | 353,133 |
| Past service pension | 332,000 | 332,000 |
| Computer maintenance and fees | - | 125,000 |
| Professional fees | - | 105,000 |
| Building maintenance | - | 59,500 |
| Telephone | - | 38,000 |
| Advertising and promotion | - | 27,500 |
| Bank charges | - | 8,400 |
| Insurance | - | 6,524 |
| Office rental | - | 20,000 |
| Supplies and consumables | 3,145,115 | 64,800 |
| Total Operating Expenses | 10,355,184 | 6,493,113 |
| SURPLUS/ (DEFICIT) | - | |

19. Explanations of major variances against budget (continued)

Statement of Financial Performance

Revenue

Revenue saw a positive variance of \$10.4m when compared to budget, resulting from executive asset works which were completed on the directive of MCPI. These projects were not included in initial budgeted works.

Cost of Sales

The \$8.3m budget variance in cost of goods sold is primarily driven by costs incurred in completing the additional works as detailed in the revenue note above.

Personnel costs

The \$336k budget variance in personnel costs reflects a 5% cost of living adjustment (\$106k) to employee salaries awarded to all employees effective 1 January 2020, along with increased health insurance cost resulting from increased healthcare premiums.

Budgeted post-retirement healthcare costs and past service defined benefit pension costs were based on estimated of cost to be charged to the statement of financial performance. The estimates were different from the actual balances reflected in the actuarial valuation report.

Utilities were \$114k under budget, mainly because more street lights were converted to energy-efficient LED lights during 2020.

Motor vehicles expenses were \$165k over budget due to additional fuel and maintenance expenses related to additional works performed over and above the budget (as highlighted in the revenue section above).

Depreciation was \$110k over budget mainly due to additional asset acquisitions approved by management and the Board of Directors. These asset acquisitions were not budgeted for, but were deemed essential given the additional capital works required by MCPI. In addition, assets were acquired to replace fully depreciated assets that were still in use.

The doubtful debt expense (\$73k) was recognized in relation to an outstanding amount owed to NRA by MCPI from June 2014. This amount represents a pass through street lighting cost incurred by MCPI on behalf of MCPI. The receivable has not yet been settled by MCPI.