

# Network Planning, Design and Standards Structure Review Wing Report

## 1. Purpose of the Wing

The main purpose of the Wing through the **Office of the Executive Director, Network Planning, Design & Standards** contributes to the implementation of the **National Road Network Strategy (NRNS)**, **Connect PNG**, the **DOWH Corporate Plan**, and other key Government reform initiatives in the road sector by providing strategic leadership to the Department's network planning, design and technical standard-setting functions; provide strategic leadership and oversight for the development and **performance monitoring** of the Department's network planning, design and standards activities; and by providing strategic and policy leadership for the development and implementation of a strong governance culture in the Department.

## 2. Current impact factors

The current impact factors driving and impacting on the work of the Wing and its Divisions/Branches are in two folds; namely the Legislative Impact and the Government Policy impact.

**The Legislative Impact comprises of;**

- Road (Fund and Management) Act 2020
- Public Finance Management Act
- Protection of Transport Infrastructure Act 2010
- Appropriations Acts
- National Procurement Act and its Procurement guidelines
- Building Act 1994 + Regulations
- Environmental Act 2000 + Codes
- IEPNG Act 2020 + regulations/Codes
- Land Act 1996
- Physical Planning Act 2016

The **Government Policy Impact** can be categorised as **National Level, Sector Level** and **Departmental Level**;

- o Government policy at National Level
  - Includes PNG Vision 2050, DSP 2020-2030, MTDP III, Key Cabinet decision 128/2018 & 218/2018.
- o Government policy at Sector Level
  - Includes National Transport Strategy (2030), Medium Term Transport Plan 2019-2023.
- o Government policy at Departmental Level

- NRN Strategy 2018-2037, Connect PNG), Sub-National Road Network Strategy, MOA with Provinces/District (in development), DOWH Corporate Plan 2020-2024, DOW Safeguards Policy, Annual Divisional Master Work Plans and Secretary's directions like Circular 41/2021.

The above key factors are driving the Wing's works as clearly demarcated in the DOWH Corporate Plan 2020 - 2024.

At Departmental Level, recent impact factors like the **Connect PNG Implementation & Funding Bill** and the NEC Decision Policy Paper on setting up the **Highways Corporation** forced upon by the Road (Fund and Management) Act, will have valve added impact on the future of the DOWH in terms of corporatisation of Highways Management Division of the Department and delivering on the targets (KPIs) of its Corporate Plan, Connect PNG and NRNS with committed funding over the next twenty (20) years.

With the recent changes at the Wing Level, the financing component of the Road Infrastructure Financing & Procurement (RIF&P) Wing is transferred to the Network Planning, Design & Standards.

### 3. Clients of the Wing

The clients of the Wing both current and new clients are summarised and listed below in Table 1. Clients are both INTERNAL and EXTERNAL.

**Table 1 Current and new clients of the Network Planning, Design & Standards**

Current clients	Services provided	New clients	Services provided
<b>INTERNAL</b> Minister	National level plans	<b>EXTERNAL</b> PNG Road Fund Authority	- Annual Work Plan financing
Secretary	Plans, Budgets	Potential Forestry, Mining and Tourism, Agriculture	- declaration of roads, design standards compliance
Field Services: RWM PWM Design Services Shared Services	- road maintenance plans, - road maintenance plans, budget requests, - surveys - Budgets	Dept of Agriculture & Livestock  National Procurement Commission (NPC)	- management of roads  - Technical and Financial Evaluation Committee (Chairman and members) for evaluation of technical projects mainly architect & building infrastructure.
<b>EXTERNAL</b> State Entities – DPM, PM&NEC, Police, CIS	-Technical Advice on Design, Supervision and Audits -Department's Policies and Strategies	Foreign contractors	- Technical Advice on Design, Standards and Specification, Department's Policies and Strategies
Some Provincial Governments (Technical Division), Some			

Current clients	Services provided	New clients	Services provided
District Authorities (through Field Services)	-Technical Advice on Design, Standards and Specification, Department's Policies and Strategies	NGOs – Church organisations, Media organisations	– social safeguard issues & livelihood training
Department of Transport	-Sector Budget submissions, Road Inventory & Status Reports, gazettals		
Financial Department			
Donors/Development Partners	-Quarterly Reports (PIPS)		
Road Traffic Authority	-Requests /relevant development issues		
MVIL	-Accident Black Spots study		
Climate Change and Development Authority (CCDA)/CEPA	-Vehicle Registration Data		
Lands Department	-Review of standards and codes for resilient infrastructure		
	-Cadastral data		

#### 4. Functions and services of the Wing

The 6 major functions and services of the Wing are listed below;

- a) Advance the achievement of strategic objectives of National Road Network Strategy (NRNS), the Sub-National Strategy, and Connect PNG objectives
- b) Lead and provide strategic oversight for the strategic approach in managing the road network to ensure a robust and resilient road network planning and management environment that will enhance the Department's strategic, tactical and operational planning.
- c) Lead and provide strategic oversight for the establishment and implementation of a contemporary road and bridge design and engineering standards and compliance to approved environmental and social safeguards codes and obligations consistent with the NRNS and Sub-national road strategic objectives.
- d) Lead and provide strategic oversight for the establishment and implementation of contemporary buildings and architecture design standards consistent with building industry legislation, policy and best practice.
- e) Ensure implementation & monitoring the department's governance strategies to ensure highest level of governance practice and culture is maintained throughout the department.
- f) Implement key DOW organizational responsibilities to improve the department's performance.

The Wing will be supported by three (3) Divisions and ten (10) branches in the current proposed restructure. Two (2) Divisions are existing ones whilst the one (1) newly created is the Architecture & Building (A&B) Division being elevated from the Architecture & Building (A&B) Branch.

Below is the list Existing and Proposed Divisions and their respective branches;

##### **OLD**

- i) Network Planning & Programming Division (NP&PD)
  - a. Asset Management Branch (AMB)
  - b. Budget Coordination & Reporting Branch (BCRB)
- ii) Design Services Division (DSD)
  - a. Road Construction Standards & Technology Branch (RCS&TB)
  - b. Environmental & Social Safeguards Branch (E&SSB)
  - c. Roads & Bridges Branch (R&BB)
  - d. Survey & Lands Branch (S&LB)

##### **NEW**

- i) Network Management & Funding Division (NM&FD)
  - a. Asset Management Branch (AMB)

- b. Planning Programming & Funds Management Branch (**PP&FMB**)
- c. Network Monitoring & Evaluation Branch (**NM&EB**)
  
- ii) Engineering & Standards Division (**E&SD**)
  - a. Material Standards & Technology Branch (**MS&TB**)
  - b. Environmental & Social Safeguards Branch (**E&SSB**)
  - c. Highways Engineering Branch (**HEB**)
  - d. Survey & Lands Branch (**S&LB**)
  
- iii) Architecture & Building Division (**A&BD**)
  - a. Architecture, General Engineering, Quantity Survey & Building Services Branch (**AGQBB**)
  - b. Project Management Branch (**PMB**)
  - c. Standards Branch (**SB**)

Three (3) new branches of the NPD&S' Wing are the Architecture & Building Division's two (2) branches namely Project Management Branch (**PMB**) and Standards Branch (**SB**), and Network Management & Funding Division's Network Monitoring & Evaluation Branch (**NM&EB**).

The financing function of the Road Infrastructure Financing and Procurement is amalgamated with the Planning Programming & Budget (PP&B) Branch and the new branch is now named Planning Programming & Funds Management Branch (**PP&FMB**).

Listed below are functions of the respective divisions and their line branches;

#### 4.1 Office of First Assistant Secretary – Architecture & Building

- ✓ Develop, implement, and monitor contemporary buildings and architecture design standards consistent with the building industry legislation, policy, and best practice. (**SB**)
- ✓ Provide project management services for provincial and district authorities (**PMB**) and
- ✓ Provide technical support to Provincial Building Boards (**AGQBB**)

#### 4.2 Office of First Assistant Secretary – Engineering & Standards

- ✓ Develop, review, and monitor best practice contemporary road and bridge design and engineering standards. (**HEB**)
- ✓ Monitor compliance to approved environmental social safeguards codes and obligations consistent with the NRNS, Connect PNG and Sub-national roads strategic objectives. (**E&SSB**)
- ✓ Develop and implement road corridor boundary survey, land acquisition, and land management for the total road network. (**S&LB**)
- ✓ Research and develop new engineering road construction products and best technology for the entire road network. (**MS&TB**)

#### 4.3 Office of First Assistant Secretary – Network Management & Funding

- ✓ Develop and implement high quality road network planning services, including capital budget development, effective RAMs/BAMs systems, project plans, and

- feasibility studies, required to implement the National Road Network Strategy and Connect PNG. **(AMB)**
- ✓ Develop Multi-year Financing Plans for the Department. **(PP&FMB)**
  - ✓ Work closely with other divisions to contribute to the development of Road Maintenance Plans in line with the Government's priorities in the NRNS. **(PP&FMB)**
  - ✓ Work closely with Central Agencies & DOW Field Operations to monitor physical and financial progress of PIP projects and consolidate quarterly report when and as required under the Budget Process. **(M&EB)**

Each of the functions and services of the respective Divisions listed form the core function and service of their respective line branches as demarcated.

Furthermore, details of the current and new functions and services and expected impact on workload by divisions and branches stated above are tabulated below for comparison purpose;

**Table 2. Current and new functions and services and expected impact on workload in Network Planning, Design & Standards Wing by Divisions and respective line branches with their respective qualification by Impact of workload.**

Current functions & services	New or enhanced functions & services	Impact on workload
<p><b>A) NETWORK PLANNING &amp; PROGRAMMING DIVISION (NP&amp;PD)</b></p> <p><b>1. Asset Management Branch (AMB):</b></p> <ul style="list-style-type: none"> <li>• Maintaining RAMs/BAMs (traffic count, data collection, surveys)</li> <li>• Developing thematic maps</li> <li>• Producing and publishing road statistics</li> <li>• Multi-year network planning and annual NP Planning (pipeline)</li> </ul> <p><b>2. Budget Co-ordination &amp; Reporting (BCRB):</b></p> <ul style="list-style-type: none"> <li>• Preparation of:                             <ul style="list-style-type: none"> <li>✓ Capital (PIP) Budget submissions</li> <li>✓ Annual and Five-Year Work Plans</li> <li>✓ Operational Maintenance Plan</li> <li>✓ Development of DOW Procurement Plan</li> </ul> </li> <li>• Administrating warrants                             <ul style="list-style-type: none"> <li>✓ M&amp;E of budget objectives</li> <li>✓ M&amp;E technical reporting</li> <li>✓ Budget allocation</li> </ul> </li> <li>• Prepare Project formulation document for new roads</li> </ul>	<p><b>A) NETWORK MANAGEMENT AND FUNDING DIVISION (NP&amp;PD)</b></p> <p>1. <b>Asset Management Branch (AMB) –</b> Collection of Network Inventory, Condition on Roads &amp; Cross-Drainage Structures – Thematic Maps &amp; Statistics.</p> <ul style="list-style-type: none"> <li>✓ Provide significant improved and expanded nation-wide access to RAMS/BAMS including enhancing RAMs/BAMs capability to cover sub-national roads</li> <li>✓ Develop comprehensive GIS capability including building link with RTA re accident data and vehicle registration data and with Lands Department on cadastral data</li> <li>✓ Develop and manage road hierarchy classification to provide advice on the declaration, classification and de-commissioning of roads to the new <b>Road Advisory Committee</b> (clause 6) of the <b>Road (Management and Fund) Act</b></li> </ul> <p>2. <b>Planning, Programming &amp; Funds Management Branch (PP&amp;FMB) –</b> Creating Tactical/Operational Plan, Economic Analysis, Programming the pipeline works, Capital Budget Submission (PIP) and multi-year financing plan</p> <ul style="list-style-type: none"> <li>✓ Conduct economic analysis of projects to develop business cases to justify expenditure on new roads, esp. re PNG Connect</li> <li>✓ Conduct strategic road planning and ensure with compliance to existing road strategy (NRNS) and operational and maintenance plans.</li> <li>✓ <b>Develop, review, and enforce policy and legislative framework to protect the national road network corridors and sub-national roads</b></li> </ul>	<p><b>AMB: HEAVY.</b></p> <p>(Due to Strategic Objective SO1 and also direct impact on SO2, SO3 &amp; SO5 of the DOWI Corporate Plan for NRNS, Connect PNG and Sub-national Programmes. However, Surveys depends on RAMS Cycle and subject to funding availability. Outputs dependent on surveys for data reliability extending from National to Provincial and District level.)</p> <p><b>PP&amp;FMB: HEAVY.</b></p> <p>(Depends on AM output. Resources to be shared within branches of NP&amp;M for effective and efficient delivery work output of SO1, SO2, SO3 &amp; SO5)</p>

Current functions & services	New or enhanced functions & services	Impact on workload
	<ul style="list-style-type: none"> <li>✓ Develop and implement the required network planning documentation required to implement PNG Connect</li> <li>✓ Develop and conduct feasibility studies in relation to PNG Connect</li> <li>✓ Provide network planning advice and information to the PNG Road Fund</li> <li>✓ Provide advice on and oversight the implementation of the <b>National Road Network Strategy</b></li> <li>✓ <b>Develop One Year and Five-Year Investment &amp; Financing Plans in line with the NRNS as required under the Road (Management and Fund) Act using HDM4 and HIMS</b></li> <li>✓ Prepare Project formulation document for new roads.</li> <li>✓ Create cashflow projection for Warrants</li> <li>✓ Warrants Received</li> <li>✓ CFC against MSW/Maintenance Planner</li> <li>✓ Monthly CFC &amp; Expenditure Issuance</li> <li>✓ Financial Monitoring</li> <li>✓ Capturing Expenditure</li> <li>✓ Budget Analysis</li> <li>✓ Impact on Appropriation Against Budget Bid and Target Deliverables</li> <li>✓ Annual Capital Budget Submission (PIP)</li> </ul> <p>3. <b>Network Monitoring &amp; Evaluation Branch (NM&amp;EB)</b> – Monitor network performance based on plan against the target</p> <ul style="list-style-type: none"> <li>✓ Financial Monitoring - Warrants/CFC/Expenditure</li> <li>✓ Number of Contracts against Appropriation Funding Received</li> </ul>	<p><b>NM&amp;EB: HEAVY</b></p> <p>(Due to Strategic Objective SO1 and also direct impact on SO2, SO3 &amp; SO5 of the DOWI Corporate Plan for NRNS, Connect PNG and Sub-national Programmes. Challenge to submit quarterly network performance report required as part of budget process.)</p>



Current functions & services	New or enhanced functions & services	Impact on workload
	<ul style="list-style-type: none"> <li>✓ Physical Progress Monitoring</li> <li>✓ Procurement List against Program and Budget Appropriation</li> <li>✓ Checking Physical Progress                             <ul style="list-style-type: none"> <li>- Reports from Field Operations</li> <li>- Site Visit Report</li> <li>- MWS/Workplan vs Progress (Physical Progress)</li> </ul> </li> <li>✓ Site Meeting Reports/Completion Reports</li> </ul>	
<p><b>B) DESIGN SERVICES</b></p> <p><b>1. Road Construction Science &amp; Technology Branch (RCS&amp;TB):</b>                      Provides geotechnical advice together with materials testing in order to support design and construction projects undertaken by the Department and others namely;</p> <ul style="list-style-type: none"> <li>✓ DOW Operations Division (internal)</li> <li>✓ Donor agencies</li> <li>✓ Road contractors</li> <li>✓ Building contractors</li> <li>✓ Supplier's and manufacturers of road and building materials</li> <li>✓ National Institute of Standards, Industry and Technology</li> <li>✓ Provincial governments (TS)</li> <li>✓ NAC Engineering Technical Services</li> <li>✓ Statutory bodies (e.g., PNG Power, Water PNG)</li> <li>✓ PNG Unitech, UPNG (geology), Politech Lae</li> <li>✓ Dept of Mineral Policy and Geohazards</li> <li>✓ Mineral Resources Authority</li> </ul> <p><b>2. Environment and Social Safeguards Branch (E&amp;SSB):</b>                      The DOW Safeguards Policy objective is to safeguard the environment and social</p>	<p><b>B) ENGINEERING &amp; STANDARDS</b></p> <p><b>1. Material Science &amp; Standards Branch (MS&amp;SB):</b></p> <p>To maintain and enhance quality control of soil and materials in major improvements/upgrades, construction of missing links and LTPB maintenance.</p> <p>Target is foreign contractors</p> <p><b>2. Environment and Social Safeguards Branch (E&amp;SSB):</b></p>	<p><b>MS&amp;SB: HEAVY</b>                      (Due to strategic objective SO4 of the DOWH Corporate Plan: Establishing and implementing contemporary road and bridge design engineering standards.</p> <p>Also, increased technical support to delivering SO2, SO3 and SO4 i.e., NRNS, Sub-national Programmes and Connect PNG Programme)</p> <p><b>E&amp;SSB: MEDIUM</b>                      (Currently function targets mostly Donors programmes but once NRNS, Sub-national &amp; Connect PNG programmes pick up, impact will be <b>HEAVY</b> which is preferred than current modus operandi.)</p>

Current functions & services	New or enhanced functions & services	Impact on workload
<p><b>responsibility of programs and projects by supporting the integration of these considerations into the entire project lifecycle. This includes design, implementation, maintenance and in-service stage in compliance with PNG legislation by the following;</b></p> <ul style="list-style-type: none"> <li>✓ State entities – CEPA, CCDA,</li> <li>✓ Donor agencies/Development Partners – safeguards policies, EPAs,</li> <li>✓ Provincial governments (TS) + Districts (TS)</li> <li>✓ Statutory bodies (e.g., PNG Power, NAQIA, National Aids Council, Water PNG</li> <li>✓ Building contractors + Road contractors</li> <li>✓ DOW Operations Division (internal)</li> <li>✓ UPNG – School of Natural &amp; Physical Sciences</li> </ul> <p><b>3. Roads and Bridges Branch (R&amp;BB)</b></p> <ul style="list-style-type: none"> <li>- Plan design according to set design standards and specification.</li> <li>- Undertake technical investigations and pre-feasibility studies road projects.</li> <li>- Provide professional and technical advice and assist provincial and local level government in the implementation of capital work projects within respective provinces.</li> </ul> <p><b>Recipients of the services includes;</b></p> <ul style="list-style-type: none"> <li>✓ DOW Field Services Division/Connect PNG (internal)</li> <li>✓ Provincial governments (TS) + Districts (TS), LLGs</li> <li>✓ External State entities – DOT, Forestry, RTA, Education Dept, DPLGA, Gov Organisations that have NIs roads)</li> <li>✓ Road Transport Association (trucking &amp; PMVs)</li> </ul>	<p>Actively involved in the pre-construction activity on GoPNG projects involving both National and Foreign contractors.</p> <p>NGOs – Church organisations, Media organisations – awareness and promotion of social safeguards policy guidelines.</p> <p>A significant number of large-scale projects are coming on board along with new or increased environmental and social safeguards, including climate change, particularly on donor-funded programs.</p> <p><b>3. Highways Engineering Branch (HEB)</b></p> <p>Increased services to Connect PNG Programme especially on the missing links.</p> <p>Increased services to Provincial Government (Technical Services) plus Districts (Technical Services) due to the MOA.</p>	<p><b>HEB: HEAVY</b></p> <p>(Due to strategic objective SO4 of the DOWH Corporate Plan: Establishing and implementing contemporary road and bridge design engineering standards. Also, increased technical support to delivering SO2, SO3 and SO4 i.e., NRNS, Sub-national Programmes and Connect PNG Programme)</p>

Current functions & services	New or enhanced functions & services	Impact on workload
<p>✓ Donor agencies –</p> <p><b>4. Survey and Lands Branch (S&amp;LB)</b></p> <ul style="list-style-type: none"> <li>- Execute engineering surveys for design purpose including aerial photography and topographic mapping</li> <li>- Provides survey data for civil engineering feasibility studies</li> <li>- Execute cadastral surveys and conduct investigation on land required for use</li> <li>- Produce survey plans for design purpose and feasibility studies.</li> <li>- control and maintain Department of Lands’ register for following;                             <ul style="list-style-type: none"> <li>✓ DOW Field Operations Division/Connect PNG (internal)</li> <li>✓ Provincial governments (TS) + Districts (TS), LLGs</li> <li>✓ External State entities – Dept of Lands and Physical Planning (Mapping Bureau)</li> <li>✓ Donor agencies –</li> <li>✓ Building contractors + Road contractors</li> </ul> </li> </ul>	<p><b>4. Survey and Lands Branch (S&amp;LB)</b></p> <p>Increased services to Connect PNG Programme especially on the missing links.</p> <p>Increased services to Provincial Government (Technical Services) plus Districts (Technical Services) due to the MOA.</p>	<p><b>S&amp;LB: HEAVY</b></p> <p>(Due to strategic objective SO4 of the DOWH Corporate Plan: Establishing and implementing contemporary road and bridge design engineering standards. Also, increased technical support to delivering SO2, SO3 and SO4 i.e., NRNS, Sub-national Programmes and Connect PNG Programme)</p>
<p><b>C) ARCHITECTURE &amp; BUILDING BRANCH (A&amp;BB)</b></p> <p><b>1. Architect (A), General Engineering (G), Quantity Surveying (Q) &amp; Building Board Service (B) Branch: (AGQBB)</b></p> <p><b>A&amp;B main function and responsibilities of the Branch is two folds;</b></p> <ul style="list-style-type: none"> <li>- To provide Architectural design, documentation and related advisory services to all National Government Departments, Statutory Organization and others.</li> <li>- Through the Building Inspectors and Provincial Building Boards, to manage, coordinate, implement and monitor the 1994 PNG Building Act &amp; Regulations (Chapter 301) in conjunction with all associated building and construction</li> </ul>	<p><b>C) ARCHITECTURE &amp; BUILDING DIVISION (A&amp;BD)</b></p> <p><b>1. Architect (A), General Engineering (G), Quantity Surveying (Q) &amp; Building Board Service (B) Branch: (AGQBB)</b></p> <p>Increased services to support high impact infrastructure buildings and developments from GoPNG’s development budget and private sector financing using concession loans, grants and tax credit scheme.</p>	<p><b>AGQB: HEAVY</b></p> <p>Staff reorganised internally in the branches to cater for several big projects at the same time.</p>

Current functions & services	New or enhanced functions & services	Impact on workload
<p><b>standards and codes used in the country.</b></p> <p>Clients are;</p> <ul style="list-style-type: none"> <li>✓ State entities – DPM, PMNEC, Police</li> <li>✓ Provincial governments (Technical Service) + Districts (Technical Service)</li> <li>✓ NGOs – (e.g., Daru Hospital)</li> <li>✓ Public structures – (e.g., churches)</li> <li>✓ Statutory bodies (e.g., PNG Power)</li> <li>✓ Building contractors</li> <li>✓ Dept Lands and Physical Planning</li> <li>✓ Provincial Building Boards (21 in provinces)</li> <li>✓ NCD Building Board, Madang Building Board, Lae Building Board</li> <li>✓ Mining companies</li> </ul> <p>(Q &amp; B function is diminishing due subsequent reforms over time. Function to be made absolute after this restructure once Highways Corporation Agency is fully operational likely in the next restructure in the next three (3) years.)</p>	<p><b>2. Project Management Branch (PMB):</b></p> <p>Responsible for Project Management, Supervision and Delivery and related advisory services esp. Foreign Contractors of the High Impact Projects.</p> <p><b>3. Standards Branch (SB):</b></p> <p>Responsible for regulation of standards in housing and building construction esp. Foreign Contractors</p> <p>Increased support to the Provincial Building Inspector and Building Board in regulating PNG Building Act &amp; Regulations (Chapter 301) in conjunction with all associated</p>	<p><b>PMB: HEAVY</b></p> <p>(Strengthens PM in A&amp;B as there are major and high impact infrastructure projects running and more to come in the near future.)</p> <p><b>SB: HEAVY</b></p> <p>(Due to strategic objective SO4 of the DOWH Corporate Plan: Establishing and implementing contemporary architecture and Building Standards and Practice in design to PNG)</p>

Current functions & services	New or enhanced functions & services	Impact on workload
	building and construction standards and codes used in country.	

## 5. Workload Analysis

The current work plan activities are listed below in two folds namely Standard & Compliance Activities and Engineering & Design Activities.

**Based on the scheduled activities highlighted below, the workload is expected to significantly increase.** In particular, Connect PNG designs and plans will all have to be reviewed, stricter road maintenance funding requirements under the NRNS and the Road (Management & Fund) Act will require increased road condition surveys & maintenance planning, and in the building services arena, there is significantly additional projects and increased focus on compliance and regulation of the building industry.

### STANDARD AND COMPLIANCE ACTIVITIES

- ✓ Develop new, review existing, and implement Standards for total road network, building and other infrastructure.
- ✓ Purchase new and update existing road, bridge, and architecture engineering design software and use them.
- ✓ Undertake Road, Bridges and Architectural Design Reviews and Safety and Quality Audits for all projects
- ✓ Develop Road Classification Policy
- ✓ Develop Road Safety Audit Policy
- ✓ Develop the Black Spot Upgrading Program
- ✓ Develop the National Bridge Replacement Program covering the National Road Network.
- ✓ Develop DoW Road Design Policy
- ✓ Develop Land Acquisition and Compensation Database System
- ✓ Develop DoW Drone Survey Policy
- ✓ Develop and implement road corridor boundary survey, land acquisition, and land management for the total road network
- ✓ Develop and implement Minimum Building Design and Construction Standards for provincial and district infrastructure
- ✓ Develop **DoW Building Maintenance Policy**
- ✓ Review and implement **Building Act & Regulation Chapter 301** (1994) to the best engineering practice
- ✓ Establish new and renew all existing Provincial Building Boards to regulate the Building Act & Regulations Chapter 301 (1994) and other codes
- ✓ Re-establish Central Building Tribunal to address building issues in Papua New Guinea
- ✓ Develop DoW Road Construction Audit Policy
- ✓ Establish, upgrade, and accredit all Regional and Provincial Material Testing Laboratories and ensure all construction works are of high-quality standards in compliance to ISO 9001
- ✓ Research and development of new engineering road construction products and best technology covering the entire road network

- ✓ Develop new and update existing Quarry Pit sites in the National Road Network.
- ✓ Develop appropriate environmental codes of practice for road and bridge infrastructure
- ✓ Develop Climate Resilient Infrastructure Policy
- ✓ Develop and implement stakeholder engagement programs.

## ENGINEERING AND DESIGN ACTIVITIES

- ✓ Construction of Wasa Bridge, Kandep District, Enga Province
- ✓ Survey, Investigation and Concept Design of Kumalu Bridge in Bulolo District, Morobe Province
- ✓ Survey, Investigation and Concept Design of Kumbal Bridge, Jiwaka Province
- ✓ Design and Construction of Hawaiian Bridge in Wewak District, East Sepik Province
- ✓ Design and Construction of Finschafen Highway from Bukawa to Pindiu Station in Morobe Province
- ✓ Construction of Wabag Provincial Hospital in Enga Province
- ✓ Design and Construction of Jiwaka Provincial Administration Headquarters in Jiwaka Province
- ✓ Design and Construction of Hela Provincial Administration Buildings in Hela Province
- ✓ Maintenance Planning for National Roads
- ✓ Assessment of Provincial and District Maintenance Plans (new function).
- ✓ Increased support for the expanded National Bridge Replacement Program
- ✓ Increased support for the expanded **Sub-National Bridge Replacement Program**, and upgrading existing support mechanisms.
- ✓ Support for the Central - Milne Bay, Magi Highway Missing Link
- ✓ Providing increased support for the Vanimo - Aitape, Coastal Highway Missing Link under Connect PNG
- ✓ Providing increased support for the Bogia - Angoram - Coastal Highway Missing Link under Connect PNG
- ✓ Providing increased support for the Epo - Bulolo Trans-National Highway Missing Link under Connect PNG
- ✓ Providing increased support for the Telefomin - Tabubil, Missing Link under Connect PNG
- ✓ Providing increased support for the Gulf - SHP Missing Link under Connect PNG
- ✓ Providing increased support for the Kompam - Baiyer Missing Link under Connect PNG
- ✓ Providing increased support for the Baiyer - Madang Missing Link under Connect PNG
- ✓ Providing increased support for the Awar Bridge Design and Construction - Coastal Highway, Madang Province under Connect PNG

- ✓ Providing increased support for the Kimbe - Kokopo, New Britain Highway Missing Link under Connect PNG

**All the expected workload and activities for the 2020-2024 period are as above and are ongoing except for the following which are completed or will be completed by end of 2021.**

### **STANDARD AND COMPLIANCE ACTIVITIES**

- ✓ Develop **DOW Road Design Policy** (2021)

### **ENGINEERING AND DESIGN ACTIVITIES**

- ✓ Construction of Wabag Provincial Hospital in Enga Province (2021)
- ✓ Design and Construction of Hela Provincial Administration Buildings in Hela Province (2021)

The financing functions of the **Road Infrastructure Financing & Procurement Wing** will now be transferred to the Network Planning, Design & Standards Wing.

From discussion with Organisation Review Team (ORT), it was enormously agreed that the financing component will be held under the Planning, Programming and Funds Management Division as a section to the Office of the Assistant Secretary (Planning Programming & Funds Management). This section and the Programming and Budgeting Section will be fully supported by Consultants and Advisors from time to time to build capacity internally and strengthen the Wing to delivering its mandated core functions.

It is envisaged that after the creation of the PNG Highways Corporation, the financing section will be elevated to division or wing based on needs assessment at the end of the 3-years life of this proposed restructure.



## 6. Current structure and staffing and any proposed changes

### i). Network Planning, Design & Standards Wing

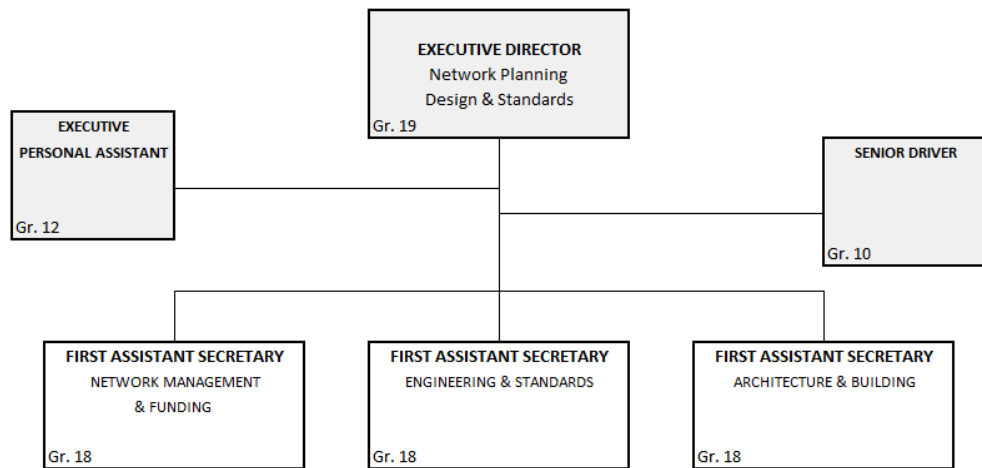
a) Wing’s ECT & Chart – No change to the current structure and staffing

#### OFFICE OF EXECUTIVE DIRECTOR (NETWORK PLANNING, DESIGN & STANDARDS)

	Designation / Classification	Grade	Remuneration (K)	Recommendation
1	ED - NPDS	19	85,000	Re-number, Reclassify, Redesignate and Revise job description.
2	EPA	12	41,225	Re-number, Reclassify, Redesignate and Revise job description.
3	ED Senior Driver	10	33,000	Re-number, Reclassify, Redesignate and Revise job description.
		Total	159,225.0	

### Department of Works

Network Planning, Design & Standards Wing  
Proposed Structure 2021



**ii). Network Management & Funding Division**

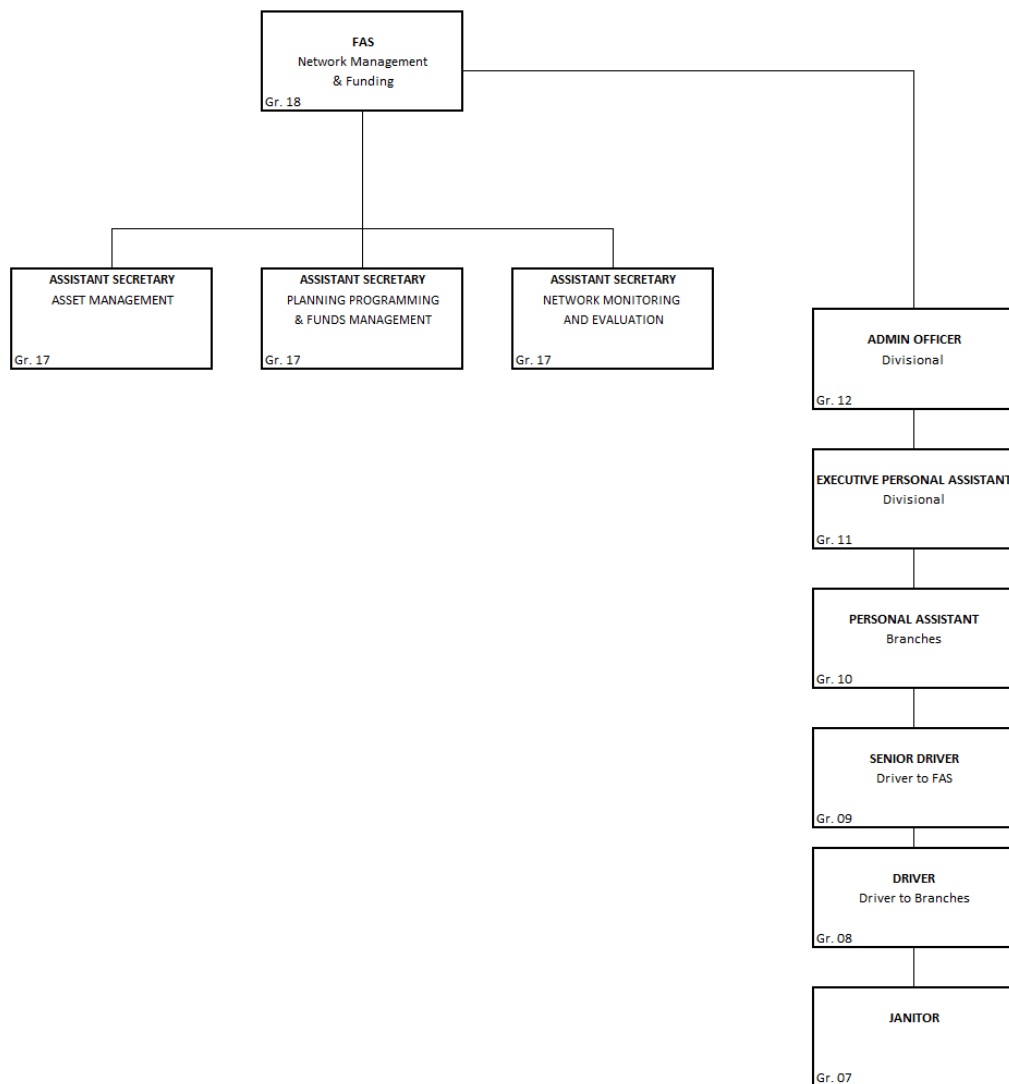
a) Division’s ECT & Chart – there are changes to the current structure and staffing (Refer Table 3 for Details)

**OFFICE OF FAS (NETWORK MANAGEMENT & FUNDING DIVISION)**

	Designation / Classification	Grade	Remuneration (K)	Recommendation
1	FAS(Network Management & Funding)	18	76,092	Renumber, Reclassify, Redesignate and Revise job description.
2	Admin Officer	12	41,225	Renumber, Reclassify, Redesignate and Revise job description.
3	Executive Personal Assistant (Division)	11	37,042	Renumber, Reclassify, Redesignate and Revise job description.
4	Personal Assistant (Branch)	10	32,000	Renumber, Reclassify, Redesignate and Revise job description.
5	FAS Senior Driver	9	29,205	Renumber, Reclassify, Redesignate and Revise job description.
6	AS Driver	8	26,092	Renumber, Reclassify, Redesignate and Revise job description.
7	Janitor	7	23,500	Renumber, Reclassify, Redesignate and Revise job description.
	<b>Total</b>		<b>265,156</b>	

**Department of Works**

Network Management & Funding Division  
Proposed Structure 2021



b) Asset Management Branch – there are changes to the current structure and staffing  
(Refer Table 3 for Details)

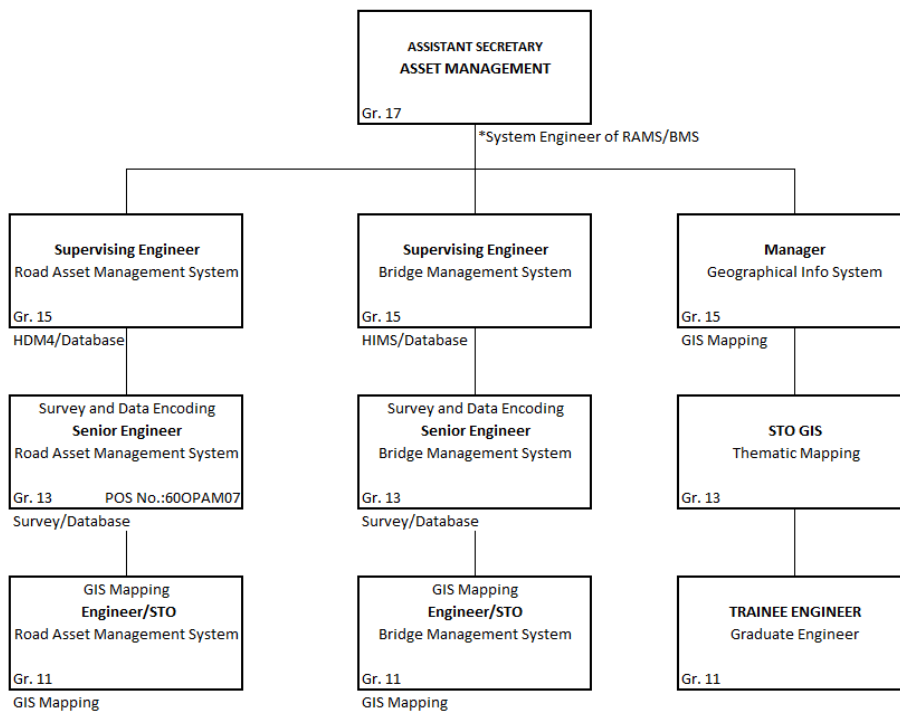
**ASSET MANAGEMENT BRANCH**

	Designation / Classification	Grade	Remuneration (K)	Recommendation
1	Assistant Secretary (Asset Management)	17	66,767	Re-number, Re-classify, Re-designate and Revise job description.
2	Supervising Engineer (Road Asset Management System)	15	52,623	Re-number, Re-classify, Re-designate and Revise job description.
3	Supervising Engineer (Bridge Management System)	15	52,623	Re-number, Re-classify, Re-designate and Revise job description.
4	Manager (Geographical Information System)	15	52,623	Re-number, Re-classify, Re-designate and Revise job description.
5	Senior Engineer (Road Asset Management System)-Data encoding	13	44,377	Re-number, Re-classify, Re-designate and Revise job description.
6	Senior Engineer (Bridge Management System)	13	44,377	Re-number, Re-classify, Re-designate and Revise job description.
7	Senior Technical Officer -Geographical Information System	13	44,377	Re-number, Re-classify, Re-designate and Revise job description.
8	Engineer/STO (Road Asset Management System)	11	37,042	Re-number, Re-classify, Re-designate and Revise job description.
9	Engineer/STO (Bridge Management System)	11	37,042	Re-number, Re-classify, Re-designate and Revise job description.
10	Trainee Engineer / Graduate Engineer	11	37,042	Re-number, Re-classify, Re-designate and Revise job description.
	<b>Total</b>		<b>468,893</b>	

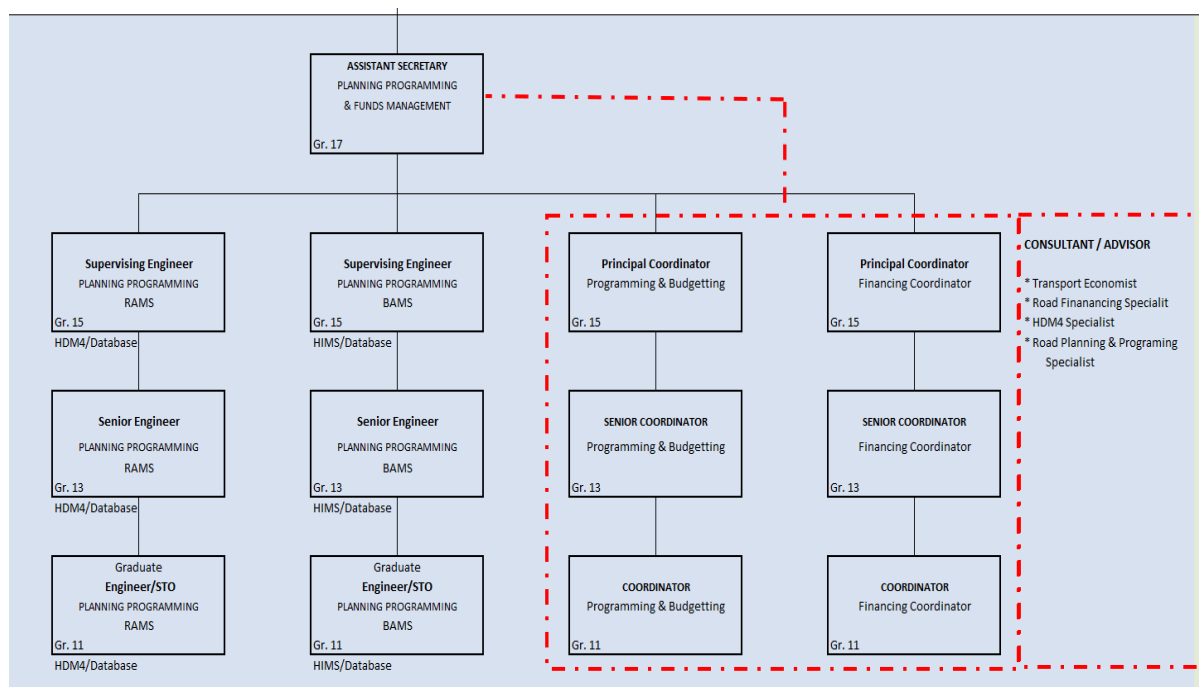
**Department of Works**

Network Management & Funding Division

Proposed Structure 2021 - **Asset Management Branch**



c) Planning, Programming & Funds Management Branch – there are changes to the current structure and staffing (Refer Table 3 for Details)



**PLANNING PROGRAMMING & FUNDS MANAGEMENT**

	Designation / Classification	Grade	Remuneration (K)	Recommendation
1	Assistant Secretary (Planning Programming & Funds Management)	17	66,767	Re-number, Reclassify, Redesignate and Revise job description.
2	Supervising Engineer (Planning Programming -RAMS)	15	52,623	Re-number, Reclassify, Redesignate and Revise job description.
3	Supervising Engineer (Planning Programming -BAMS)	15	52,623	Re-number, Reclassify, Redesignate and Revise job description.
4	Principal Coordinator (Programming & Budget)	15	52,623	Re-number, Reclassify, Redesignate and Revise job description.
5	Principal Coordinator (Financing Coordinator)	15	52,623	Re-number, Reclassify, Redesignate and Revise job description.
6	Senior Engineer (Planning Programming -RAMS)	13	44,377	Re-number, Reclassify, Redesignate and Revise job description.
7	Senior Engineer (Planning Programming -BAMS)	13	44,377	Re-number, Reclassify, Redesignate and Revise job description.
8	Senior Coordinator (Programming & Budget)	13	44,377	Re-number, Reclassify, Redesignate and Revise job description.
9	Senior Coordinator (Financing Coordinator)	13	44,377	Re-number, Reclassify, Redesignate and Revise job description.
10	Engineer/STO (Planning Programming -RAMS)	11	37,042	Re-number, Reclassify, Redesignate and Revise job description.
11	Engineer/STO (Planning Programming -BAMS)	11	37,042	Re-number, Reclassify, Redesignate and Revise job description.
12	Coordinator (Programming & Budget)	11	37,042	Re-number, Reclassify, Redesignate and Revise job description.
13	Coordinator (Financing Coordinator)	11	37,042	Re-number, Reclassify, Redesignate and Revise job description.
	<b>Total</b>		<b>602,935</b>	

d) Network Monitoring & Evaluation Branch – New Branch

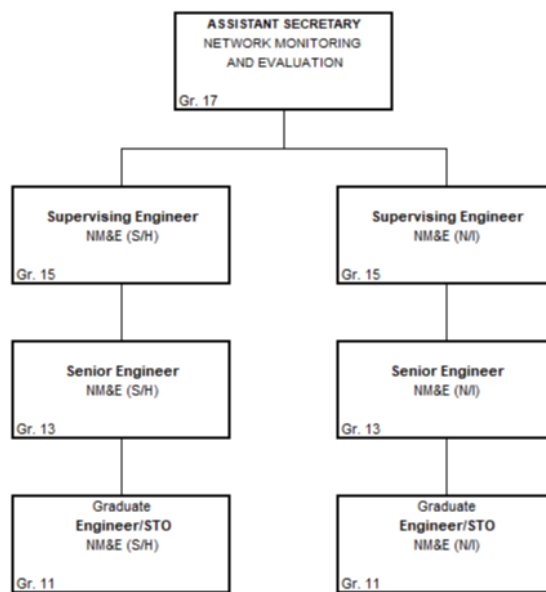
**NETWORK MONITORING & EVALUATION**

	Designation / Classification	Grade	Remuneration	Recommendation
1	Assistant Secretary (Network Monitoring & Evaluation)	17	66,767	Create
2	Supervising Engineer (Network Monitoring & Evaluation) - S/H	15	52,623	Create
3	Supervising Engineer (Network Monitoring & Evaluation) - N/I	15	52,623	Create
4	Senior Engineer (Network Monitoring & Evaluation) - S/H	13	44,377	Create
5	Senior Engineer (Network Monitoring & Evaluation) - N/I	13	44,377	Create
6	STO/Engineer (Network Monitoring & Evaluation) - S/H	11	37,042	Create
7	STO/Engineer (Network Monitoring & Evaluation) - N/I	11	37,042	Create
		Total	<b>334,851.0</b>	

**Department of Works**

Network Management & Funding Division

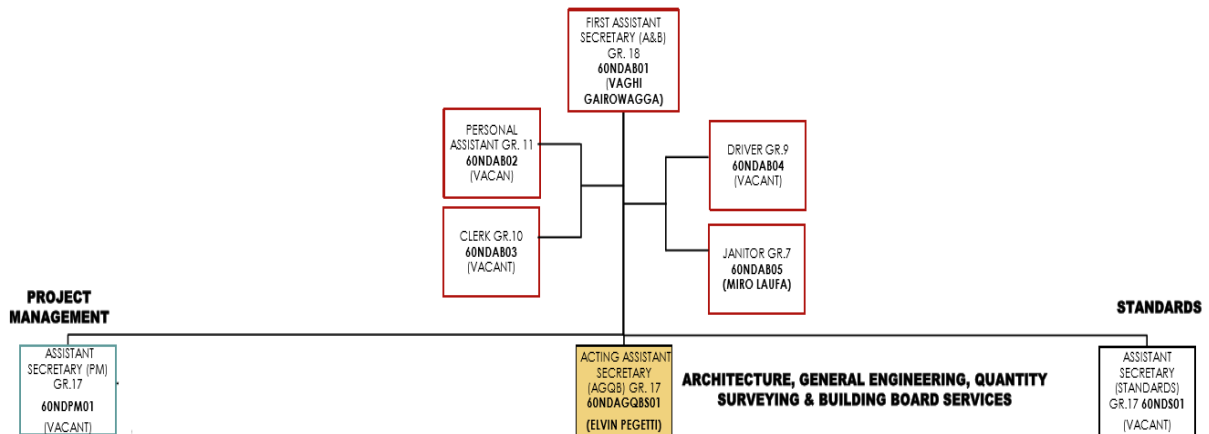
Proposed Structure 2021 - NETWORK MONITORING AND EVALUATION



**iii) Architecture & Building Division**

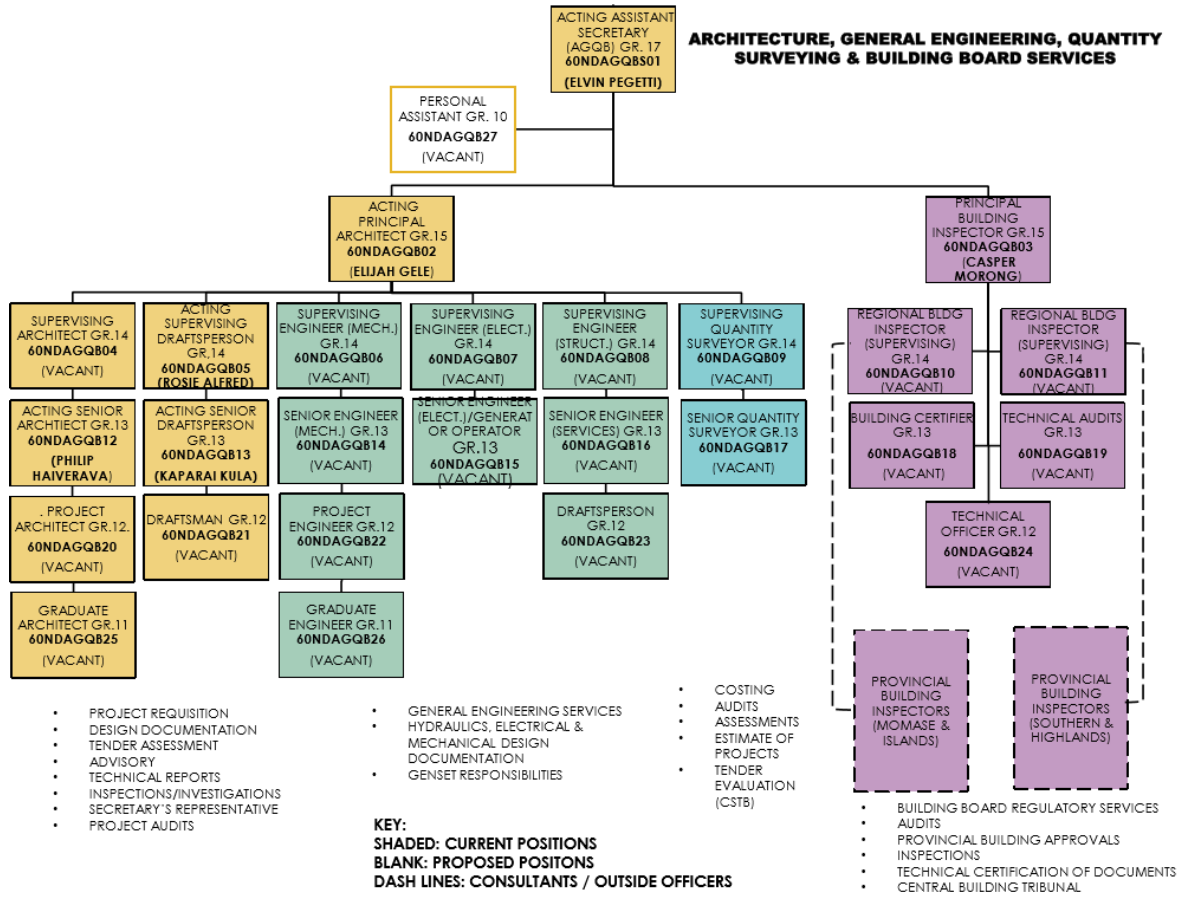
a) Division’s ECT & Chart – New Division

Ref. No.	Designation/Classification	Grade	Award	Recommendation
60NDAB 01	FAS (Arch. & Bldgs)	Grade 18	PubC	Create
60NDAB 02	Personal Assistant	Grade 11	Pub	Create
60NDAB 03	Divisional Clerk	Grade 10	Pub	Create
60NDAB 04	Senior Driver	Grade 09	Pub	Create
60NDAB 05	Janitor	Grade 07	Pub	Abolish/Create

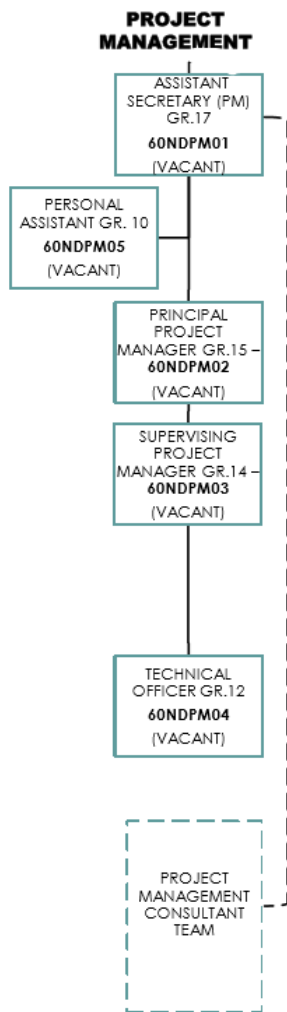


b) Architecture, General Engineering, Quantity Surveying & Building Board Services Branch’s ECT & Chart – there are changes to the current structure and staffing (Refer Table 3 for Details)

Ref. No.	Designation/Classification	Grade	Award	Recommendation
60NDAGQB01	AS (AGQB)	Grade 17	PubC	Abolish/Create
60NDAGQB02	Principal Architect	Grade 15	PubC	Abolish/Create
60NDAGQB03	Principal Building Board Services	Grade 15	PubC	Abolish/Create
60NDAGQB04	Supervising Architect	Grade 14	Pub	Abolish/Create
60NDAGQB05	Supervising Draftsperson	Grade 14	Pub	Abolish/Create
60NDAGQB06	Supervising Engineer (Mechanical)	Grade 14	Pub	Abolish/Create
60NDAGQB07	Supervising Engineer (Electrical)	Grade 14	Pub	Abolish/Create
60NDAGQB08	Supervising Engineer (Structural)	Grade 14	Pub	Abolish/Create
60NDAGQB09	Supervising Quantity Surveyor	Grade 14	Pub	Abolish/Create
60NDAGQB10	Supervising Regional Building Inspector (Northern & Islands)	Grade 14	Pub	Abolish/Create
60NDAGQB11	Supervising Regional Building Inspector (Southern & Highlands)	Grade 14	Pub	Abolish/Create
60NDAGQB12	Senior Architect	Grade 13	Pub	Abolish/Create
60NDAGQB13	Senior Draftsperson (AR)	Grade 13	Pub	Abolish/Create
60NDAGQB14	Senior Engineer (Mech)	Grade 13	Pub	Create
60NDAGQB15	Senior Engineer (Electrical) Generator Operator	Grade 13	Pub	Create
60NDAGQB16	Senior Engineer (Services)	Grade 13	Pub	Abolish/Create
60NDAGQB17	Senior Quantity Surveyor	Grade 13	Pub	Abolish/Create
60NDAGQB18	Building Certifier	Grade 13	Pub	Abolish/Create
60NDAGQB19	Technical Audits	Grade 13	Pub	Create
60NDAGQB20	Project Architect	Grade 12	Pub	Abolish/Create
60NDAGQB21	Draftsman (AR)	Grade 12	Pub	Create
60NDAGQB22	Project Engineer	Grade 12	Pub	Create
60NDAGQB23	Draftsman (GE)	Grade 12	Pub	Abolish/Create
60NDAGQB24	Graduate Architect	Grade 11	Pub	Abolish/Create
60NDAGQB25	Graduate Engineer	Grade 11	Pub	Create
60NDAGQB26	Technical Officer (BBS)	Grade 11	Pub	Create
60NDAGQB27	Personal Assistant	Grade 10	Pub	Abolish/Create



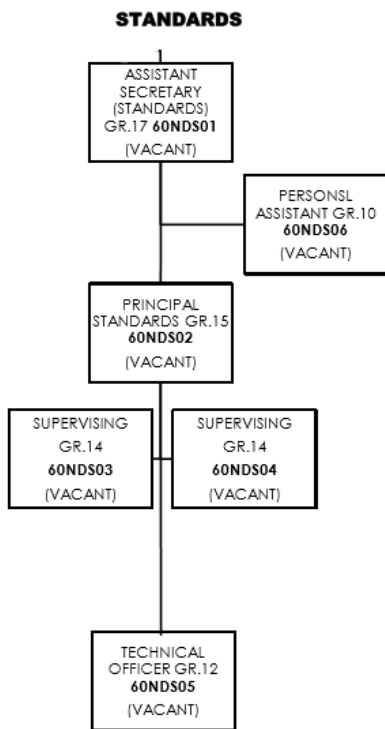
c) Project Management Branch’s ECT & Chart – New Branch



<i>Ref. No.</i>	<i>Designation/Classification</i>	<i>Grade</i>	<i>Award</i>	<i>Recommendation</i>
60NDPM 01	AS (Project Management)	Grade 17	PubC	Create
60NDPM 02	Principal Project Manager	Grade 15	PubC	Create
60NDPM 03	Sup. Project Manager	Grade 14	Pub	Create
60NDPM 04	Technical Officer	Grade 11	Pub	Create
60NDPM 05	Personal Assistant	Grade 10	Pub	Create



d) Standards Branch's ECT & Chart – New Branch



60NDBS 01	AS (Standards)	Grade 17	PubC	Create
60NDBS 02	Principal (Standards)	Grade 15	PubC	Create
60NDBS 03	Supervising (Housing)	Grade 15	Pub	Create
60NDBS 04	Supervising (Buildings)	Grade 15	Pub	Create
60NDBS 05	Technical Officer	Grade 12	Pub	Create
60NDBS 06	Personal Assistant	Grade 10	Pub	Create

**iv) Engineering & Standards Division**

a) Division’s ECT & Chart – there are changes to the current structure and staffing (Refer Table 3 for Details)

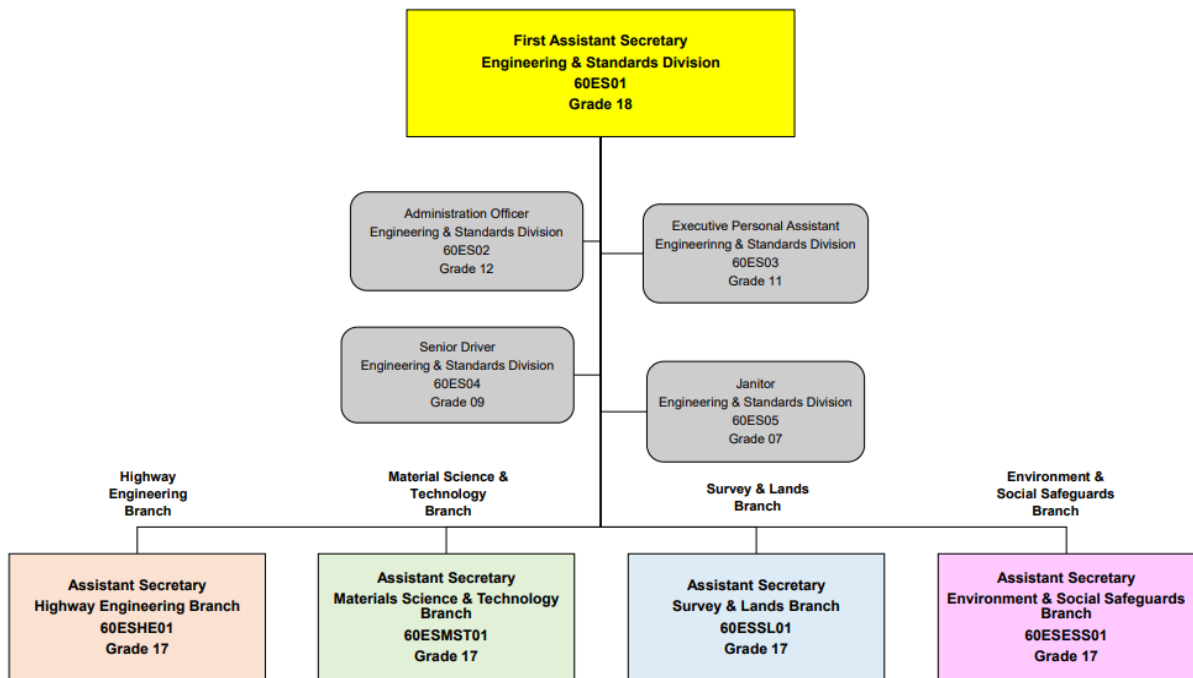
Existing Structure					Proposed Structure					Amendments	
Item	Ref. No.	Designation/Classification	Grade	Salary Estimate (K)	Item	Ref. No.	Designation/Classification	Grade	Salary Estimate (K)	Variance (K)	Recommendation
<b>Office of First Assistant Secretary (Design Services)</b>					<b>Office of First Assistant Secretary (Engineering &amp; Standards Division)</b>						Abolish/Create
1	60DS01	First Assistant Secretary - Design Services	PS18	K76,092.00	1	60ES01	First Assistant Secretary - Engineering & Standards	PS18	K76,092.00		Abolish/Create
2	60DS02	Executive Personal Assistant	PS10	K32,809.00	2	60ES02	Administration Officer	PS12	K41,225.00		Abolish/Create
3	60DS03	Senior Driver	PS09	K29,205.00	3	60ES03	Executive Personal Assistant	PS11	K37,042.00		Abolish/Create
					4	60ES04	Senior Driver	PS09	K29,205.00		Abolish/Create
					5	60ES05	Janitor	PS07	K23,500.00	increase of	Abolish/Create
Total Salary Estimate (K) =				K138,106.00	Total Salary Estimate (K) =				K207,064.00	K68,958.00	



**DEPARTMENT OF WORKS & HIGHWAYS**  
**NETWORK PLANNING, MONITORING & STANDARDS**  
**ENGINEERING AND STANDARDS DIVISION**



**PROPOSED STRUCTURE – 2021**

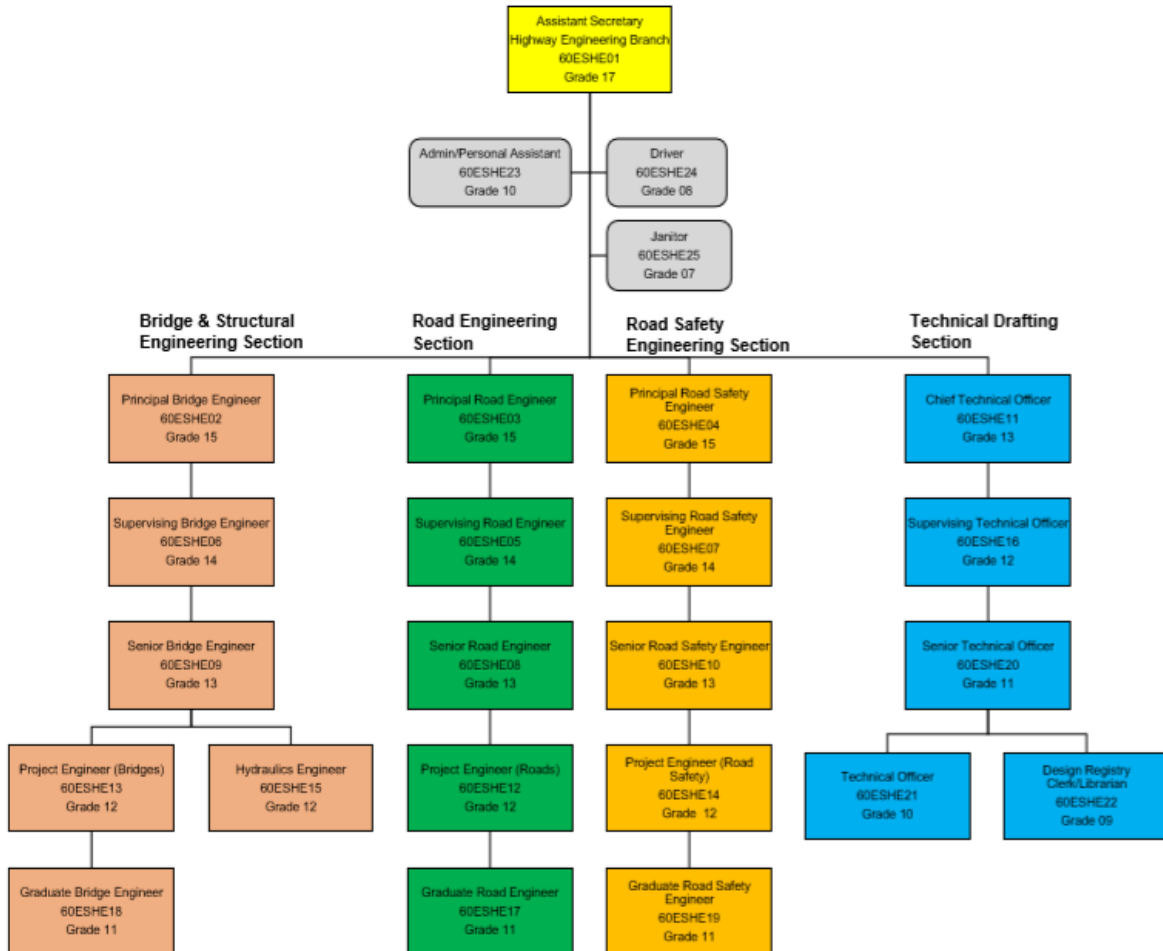


b) Highway Engineering Branch's ECT & Chart -- there are changes to the current structure and staffing (Refer Table 3 for Details)

Roads and Bridges Design Branch				Highway Engineering Branch						
1	60RB01	Assistant Secretary - Roads & Bridges	PS17 K66,767.00	1	60ESHE01	Assistant Secretary - Highway Engineering	PS17 K66,767.00	Abolish/Create		
2	60RB02	Principle Engineer - Roads	PS15 K52,623.00	2	60ESHE02	Principal Road Engineer	PS15 K52,623.00	Abolish/Create		
3	60RB03	Principle Engineer - Roads Safety	PS15 K52,623.00	3	60ESHE03	Principal Road Safety Engineer	PS15 K52,623.00	Abolish/Create		
4	60RB04	Principle Engineer - Bridges	PS15 K52,623.00	4	60ESHE04	Principal Bridge Engineer	PS15 K52,623.00	Abolish/Create		
5	60RB05	Supervising Engineer - Roads	PS14 K47,996.00	5	60ESHE05	Supervising Engineer (Road Design)	PS14 K47,996.00	Abolish/Create		
6	60RB06	Supervising Engineer - Bridges	PS14 K47,996.00	6	60ESHE06	Supervising Engineer (Bridge Design)	PS14 K47,996.00	Abolish/Create		
7	60RB07	Senior Engineer - Roads	PS13 K44,377.00	7	60ESHE07	Supervising Engineer (Road Safety Design)	PS14 K47,996.00	Abolish/Create		
8	60RB08	Chief Technical Officer	PS13 K44,377.00	8	60ESHE08	Senior Engineer (Road Design)	PS13 K44,377.00	Abolish/Create		
9	60RB09	Roads Safety Engineer	PS13 K44,377.00	9	60ESHE09	Senior Engineer (Bridge Design)	PS13 K44,377.00	Abolish/Create		
10	60RB10	Senior Engineer - Bridges	PS13 K44,377.00	10	60ESHE10	Senior Engineer (Road Safety Design)	PS13 K44,377.00	Abolish/Create		
11	60RB11	Project Engineer - Roads	PS12 K41,225.00	11	60ESHE11	Chief Technical Officer	PS13 K44,377.00	Abolish/Create		
12	60RB12	Supervising Technical Officer	PS12 K41,225.00	12	60ESHE12	Project Engineer (Road Design)	PS12 K41,225.00	Abolish/Create		
13	60RB13	Project Engineer - Bridges	PS12 K41,225.00	13	60ESHE13	Project Engineer (Bridge Design)	PS12 K41,225.00	Abolish/Create		
14	60RB14	Graduate Engineer - Roads	PS11 K37,042.00	14	60ESHE14	Project Engineer (Road Safety Design)	PS12 K41,225.00	Abolish/Create		
15	60RB15	Senior Technical Officer	PS11 K37,042.00	15	60ESHE15	Hydraulics Engineer	PS12 K41,225.00	Abolish/Create		
16	60RB16	Graduate Engineer - Bridges	PS11 K37,042.00	16	60ESHE16	Supervising Technical Officer	PS12 K41,225.00	Abolish/Create		
17	60RB17	Technical Officer	PS10 K32,809.00	17	60ESHE17	Graduate Engineer (Road Design)	PS11 K37,042.00	Abolish/Create		
18	60RB18	Personal Assistant	PS09 K29,205.00	18	60ESHE18	Graduate Engineer (Bridge Design)	PS11 K37,042.00	Abolish/Create		
19	60RB19	Driver	PS08 K26,092.00	19	60ESHE19	Graduate Engineer (Road Safety Design)	PS11 K37,042.00	Abolish/Create		
20	60RB20	Janitor	PS06 K21,222.00	20	60ESHE20	Senior Technical Officer	PS11 K37,042.00	Abolish/Create		
				21	60ESHE21	Technical Officer	PS10 K32,809.00	Abolish/Create		
				22	60ESHE22	Design Registry Clerk/Librarian	PS09 K29,205.00	Abolish/Create		
				23	60ESHE23	Admin/Personal Assistant	PS10 K32,809.00	Abolish/Create		
				24	60ESHE24	Driver	PS08 K26,092.00	Abolish/Create		
				25	60ESHE25	Janitor	PS07 23,500.00	Abolish/Create		
Total Salary Estimate (K) =				K842,265.00	Total Salary Estimate (K) =				K1,044,840.00	Increase of K202,575.00

HIGHWAY ENGINEERING BRANCH

PROPOSED STRUCTURE - 2021

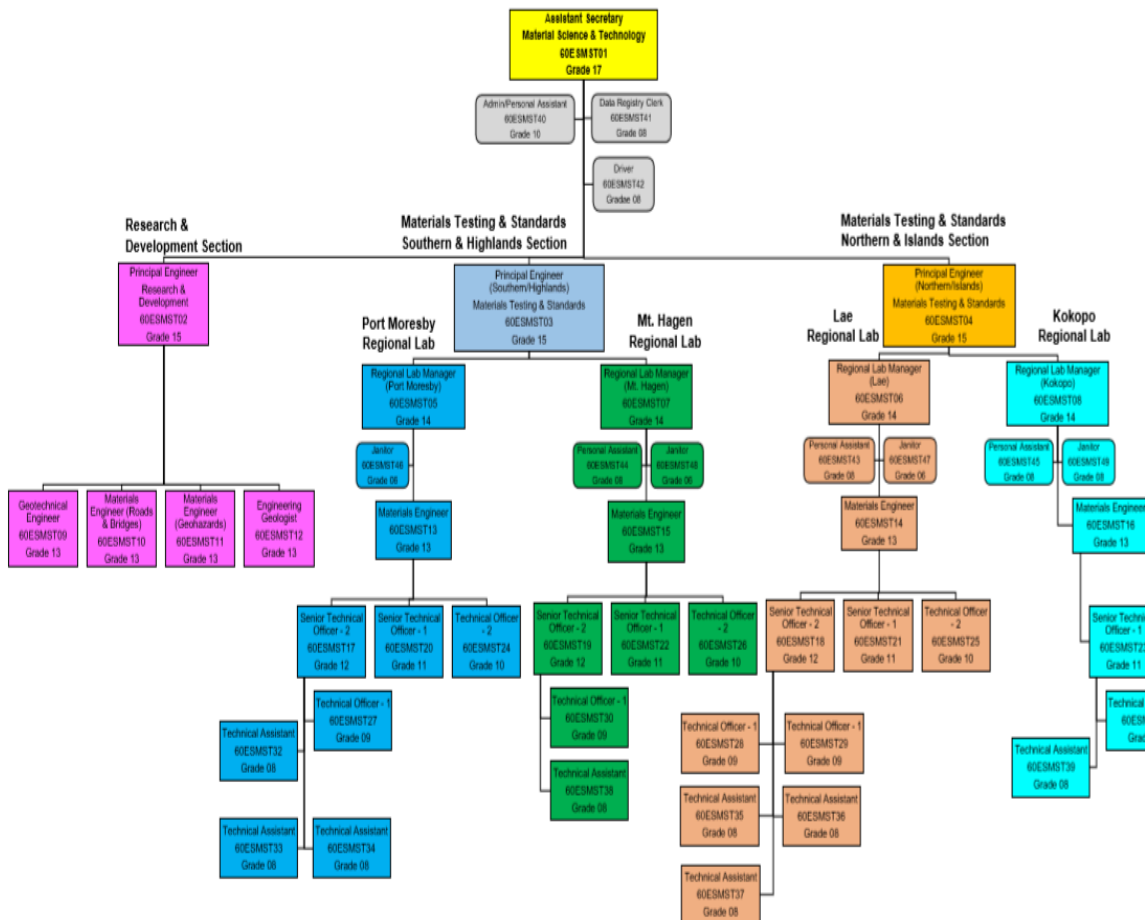


c) Material Science & Technology Branch's ECT & Chart – there are changes to the current structure and staffing (Refer Table 3 for Details)

Road Construction Technology & Standards Branch				Material Science and Technology Branch							
1	6ORCTS01	Assistant Secretary - RCTS	PS17	K66,767.00	1	60ESMST01	Assistant Secretary - Material Science & Technology	PS17	K66,767.00	Abolish/Create	
2	6ORCTS02	Principal Engineer - Research & Dev.	PS15	K52,623.00	2	60ESMST02	Principal Engineer - Research & Development	PS15	K52,623.00	Abolish/Create	
3	6ORCTS03	Principal Engineer - Material Testing Standards	PS15	K52,623.00	3	60ESMST03	Principal Engineer - Material Testing & Standards (Southern/Highlands)	PS15	K52,623.00	Abolish/Create	
4	6ORCTS04	Regional Lab Manager	PS14	K47,996.00	4	60ESMST04	Principal Engineer - Material Testing & Standards (Northern/Islands)	PS15	K52,623.00	Abolish/Create	
5	6ORCTS05	Regional Lab Manager	PS14	K47,996.00	5	60ESMST05	Regional Laboratory Manager (Port Moresby)	PS14	K47,996.00	Abolish/Create	
6	6ORCTS06	Engineer - Bridge Technology	PS14	K47,996.00	6	60ESMST06	Regional Laboratory Manager (Lae)	PS14	K47,996.00	Abolish/Create	
7	6ORCTS07	Engineer - Road Technology	PS14	K47,996.00	7	60ESMST07	Regional Laboratory Manager (Mt. Hagen)	PS14	K47,996.00	Abolish/Create	
8	6ORCTS08	Engineer - Geo-Hazards & Technology	PS14	K47,996.00	8	60ESMST08	Regional Laboratory Manager (Kokopo)	PS14	K47,996.00	Abolish/Create	
9	6ORCTS09	Regional Lab Manager	PS13	K44,377.00	9	60ESMST09	Geotechnical Engineer	PS13	K44,377.00	Abolish/Create	
10	6ORCTS10	Regional Lab Manager	PS13	K44,377.00	10	60ESMST10	Materials Engineer (Roads & Bridges)	PS13	K44,377.00	Abolish/Create	
11	6ORCTS11	Quality Assurance/Standards Officer	PS13	K44,377.00	11	60ESMST11	Materials Engineer (Geohazards)	PS13	K44,377.00	Abolish/Create	
12	6ORCTS12	Senior Technical Officer 2	PS12	K41,225.00	12	60ESMST12	Engineering Geologist	PS13	K44,377.00	Abolish/Create	
13	6ORCTS13	Senior Technical Officer 2	PS12	K41,225.00	13	60ESMST13	Materials Engineer (Port Moresby Lab)	PS13	K44,377.00	Abolish/Create	
14	6ORCTS14	Material Engineer 2	PS12	K41,225.00	14	60ESMST14	Materials Engineer (Lae Lab)	PS13	K44,377.00	Abolish/Create	
15	6ORCTS15	Material Engineer 2	PS12	K41,225.00	15	60ESMST15	Materials Engineer (Mt. Hagen Lab)	PS13	K44,377.00	Abolish/Create	
16	6ORCTS16	Senior Technical Officer 2	PS12	K41,225.00	16	60ESMST16	Materials Engineer (Kokopo Lab)	PS13	K44,377.00	Abolish/Create	
17	6ORCTS17	Senior Technical Officer 1	PS11	K37,042.00	17	60ESMST17	Senior Technical Officer - 2 (Port Moresby Lab)	PS12	K41,225.00	Abolish/Create	
18	6ORCTS18	Senior Technical Officer 1	PS11	K37,042.00	18	60ESMST18	Senior Technical Officer - 2 (Lae Lab)	PS12	K41,225.00	Abolish/Create	
19	6ORCTS19	Senior Technical Officer 1	PS11	K37,042.00	19	60ESMST19	Senior Technical Officer - 2 (Mt. Hagen Lab)	PS12	K41,225.00	Abolish/Create	
20	6ORCTS20	Technical Officer 2	PS10	K32,809.00	20	60ESMST20	Senior Technical Officer - 1 (Port Moresby Lab)	PS11	K37,042.00	Abolish/Create	
21	6ORCTS21	Technical Officer 2	PS10	K32,809.00	21	60ESMST21	Senior Technical Officer - 1 (Lae Lab)	PS11	K37,042.00	Abolish/Create	
22	6ORCTS22	Technical Officer 2	PS10	K32,809.00	22	60ESMST22	Senior Technical Officer - 1 (Mt. Hagen Lab)	PS11	K37,042.00	Abolish/Create	
23	6ORCTS23	Technical Officer	PS09	K29,205.00	23	60ESMST23	Senior Technical Officer - 1 (Kokopo Lab)	PS11	K37,042.00	Abolish/Create	
24	6ORCTS24	Technical Officer	PS09	K29,205.00	24	60ESMST24	Technical Officer - 2 (Port Moresby Lab)	PS10	K32,809.00	Abolish/Create	
25	6ORCTS25	Technical Officer	PS09	K29,205.00	25	60ESMST25	Technical Officer - 2 (Lae Lab)	PS10	K32,809.00	Abolish/Create	
26	6ORCTS26	Technical Assistant	PS08	K26,092.00	26	60ESMST26	Technical Officer - 2 (Mt. Hagen Lab)	PS10	K32,809.00	Abolish/Create	
27	6ORCTS27	Technical Assistant	PS08	K26,092.00	27	60ESMST27	Technical Officer - 1 (Port Moresby Lab)	PS09	K29,205.00	Abolish/Create	
28	6ORCTS28	Admin/Personal Assistant - POM	PS10	K32,809.00	28	60ESMST28	Technical Officer - 1 (Lae Lab)	PS09	K29,205.00	Abolish/Create	
29	6ORCTS29	Personal Assistant - Lae	PS08	K26,092.00	29	60ESMST29	Technical Officer - 1 (Lae Lab)	PS09	K29,205.00	Abolish/Create	
30	6ORCTS30	Personal Assistant - Hagen	PS08	K26,092.00	30	60ESMST30	Technical Officer - 1 (Mt. Hagen Lab)	PS09	K29,205.00	Abolish/Create	
31	6ORCTS31	Driver	PS08	K26,092.00	31	60ESMST31	Technical Officer - 1 (Kokopo Lab)	PS09	K29,205.00	Abolish/Create	
32	6ORCTS32	Janitor	PS06	K21,222.00	32	60ESMST32	Technical Assistant (Port Moresby Lab)	PS08	K26,092.00	Abolish/Create	
33	6ORCTS33	Janitor	PS06	K21,222.00	33	60ESMST33	Technical Assistant (Port Moresby Lab)	PS08	K26,092.00	Abolish/Create	
34	6ORCTS34	Janitor	PS06	K21,222.00	34	60ESMST34	Technical Assistant (Port Moresby Lab)	PS08	K26,092.00	Abolish/Create	
35	6ORCTS35	Janitor	PS06	K21,222.00	35	60ESMST35	Technical Assistant (Lae Lab)	PS08	K26,092.00	Abolish/Create	
					36	60ESMST36	Technical Assistant (Lae Lab)	PS08	K26,092.00	Abolish/Create	
					37	60ESMST37	Technical Assistant (Lae Lab)	PS08	K26,092.00	Abolish/Create	
					38	60ESMST38	Technical Assistant (Mt. Hagen Lab)	PS08	K26,092.00	Abolish/Create	
					39	60ESMST39	Technical Assistant (Kokopo Lab)	PS08	K26,092.00	Abolish/Create	
					40	60ESMST40	Admin/Personal Assistant	PS10	K32,809.00	Abolish/Create	
					41	60ESMST41	Data Registry Clerk	PS08	K26,092.00	Abolish/Create	
					42	60ESMST42	Driver	PS08	K26,092.00	Abolish/Create	
					43	60ESMST43	Personal Assistant (Lae Lab)	PS08	K26,092.00	Abolish/Create	
					44	60ESMST44	Personal Assistant (Mt. Hagen Lab)	PS08	K26,092.00	Abolish/Create	
					45	60ESMST45	Personal Assistant (Kokopo Lab)	PS08	K26,092.00	Abolish/Create	
					46	60ESMST46	Janitor (Port Moresby Lab)	PS06	K21,222.00	Abolish/Create	
					47	60ESMST47	Janitor (Lae Lab)	PS06	K21,222.00	Abolish/Create	
					48	60ESMST48	Janitor (Mt. Hagen Lab)	PS06	K21,222.00	Abolish/Create	
					49	60ESMST49	Janitor (Kokopo Lab)	PS06	K21,222.00	Abolish/Create	
<b>Total Salary Estimate (K) =</b>				<b>K1,296,574.00</b>	<b>Total Salary Estimate (K) =</b>				<b>K1,744,824.00</b>	<b>Increase of</b>	<b>K448,250.00</b>

MATERIAL SCIENCE & TECHNOLOGY BRANCH

PROPOSED STRUCTURE – 2021

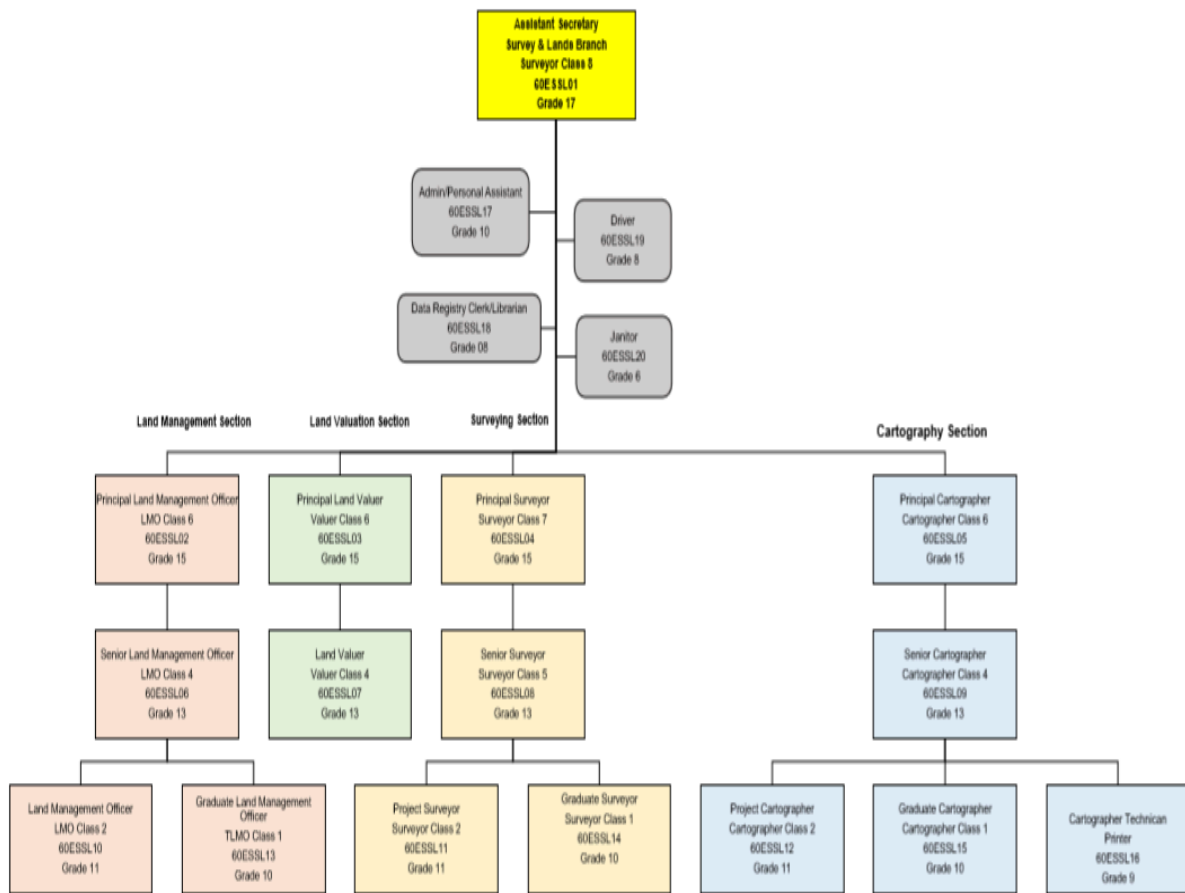


d) Survey and Lands Branch's ECT & Chart -- there is a change to the current structure and staffing (Refer Table 3 for Details)

Survey and Lands Branch				Survey and Lands Branch							
1	60SL01	Assistant Secretary - Survey & Lands	PS17	K66,767.00	1	60ESSL01	Assistant Secretary - Survey & Lands	PS17	K66,767.00	Abolish/Create	
2	60SL02	Principal - Land Management Officer	PS15	K52,623.00	2	60ESSL02	Principal Land Management Officer - LMO Class 6	PS15	K52,623.00	Abolish/Create	
3	60SL03	Principal Land Valuer - LMO	PS15	K52,623.00	3	60ESSL03	Principal Land Valuer - Valuer Class 6	PS15	K52,623.00	Abolish/Create	
4	60SL04	Principal Surveyor	PS15	K52,623.00	4	60ESSL04	Principal Surveyor - Surveyor Class 7	PS15	K52,623.00	Abolish/Create	
5	60SL05	Principal Cartographer	PS15	K52,623.00	5	60ESSL05	Principal Cartographer - Cartographer Class 6	PS15	K52,623.00	Abolish/Create	
6	60SL06	Senior Land Management Officer	PS13	K44,377.00	6	60ESSL06	Senior Land Management Officer - LMO Class 4	PS13	K44,377.00	Abolish/Create	
7	60SL07	Land Valuer	PS13	K44,377.00	7	60ESSL07	Land Valuer - Valuer Class 4	PS13	K44,377.00	Abolish/Create	
8	60SL08	Senior Surveyor	PS13	K44,377.00	8	60ESSL08	Senior Surveyor - Surveyor Class 5	PS13	K44,377.00	Abolish/Create	
9	60SL09	Senior Cartographer	PS13	K44,377.00	9	60ESSL09	Senior Cartographer - Cartographer Class 4	PS13	K44,377.00	Abolish/Create	
10	60SL10	Cartographer Technician	PS12	K41,222.00	10	60ESSL10	Land Management Officer - Class 2	PS11	K37,042.00	Abolish/Create	
11	60SL11	Land Management Officer - Class 2	PS11	K37,042.00	11	60ESSL11	Project Surveyor - Surveyor Class 2	PS11	K37,042.00	Abolish/Create	
12	60SL12	Surveyor - Class 2	PS11	K37,042.00	12	60ESSL12	Project Cartographer - Cartographer Class 2	PS11	K37,042.00	Abolish/Create	
13	60SL13	Cartographer - Class 2	PS11	K37,042.00	13	60ESSL13	Graduate Land Management Officer - TLMO Class 1	PS10	K32,809.00	Abolish/Create	
14	60SL14	Traine Land Management Officer	PS10	K32,809.00	14	60ESSL14	Graduate Surveyor - Surveyor Class 1	PS10	K32,809.00	Abolish/Create	
15	60SL15	Traine Surveyor	PS10	K32,809.00	15	60ESSL15	Graduate Cartographer - Cartographer Class 1	PS10	K32,809.00	Abolish/Create	
16	60SL16	Traine Cartographer	PS10	K32,809.00	16	60ESSL16	Cartographer Technician - Printer	PS09	K29,205.00	Abolish/Create	
17	60SL17	Printer	PS09	K29,205.00	17	60ESSL17	Admin/Personal Assistant	PS10	K32,809.00	Abolish/Create	
18	60SL18	Personal Assistant	PS09	K29,205.00	18	60ESSL18	Data Registry Clerk/Librarian	PS08	K26,092.00	Abolish/Create	
19	60SL19	Janitor	PS06	K21,222.00	19	60ESSL19	Driver	PS08	K26,092.00	Abolish/Create	
					20	60ESSL20	Janitor	PS06	K21,222.00	Abolish/Create	
Total Salary Estimate (K) =				K785,177.00	Total Salary Estimate (K) =				K799,740.00	Increase of	K14,563.00

**SURVEY & LANDS BRANCH**

**PROPOSED STRUCTURE - 2021**

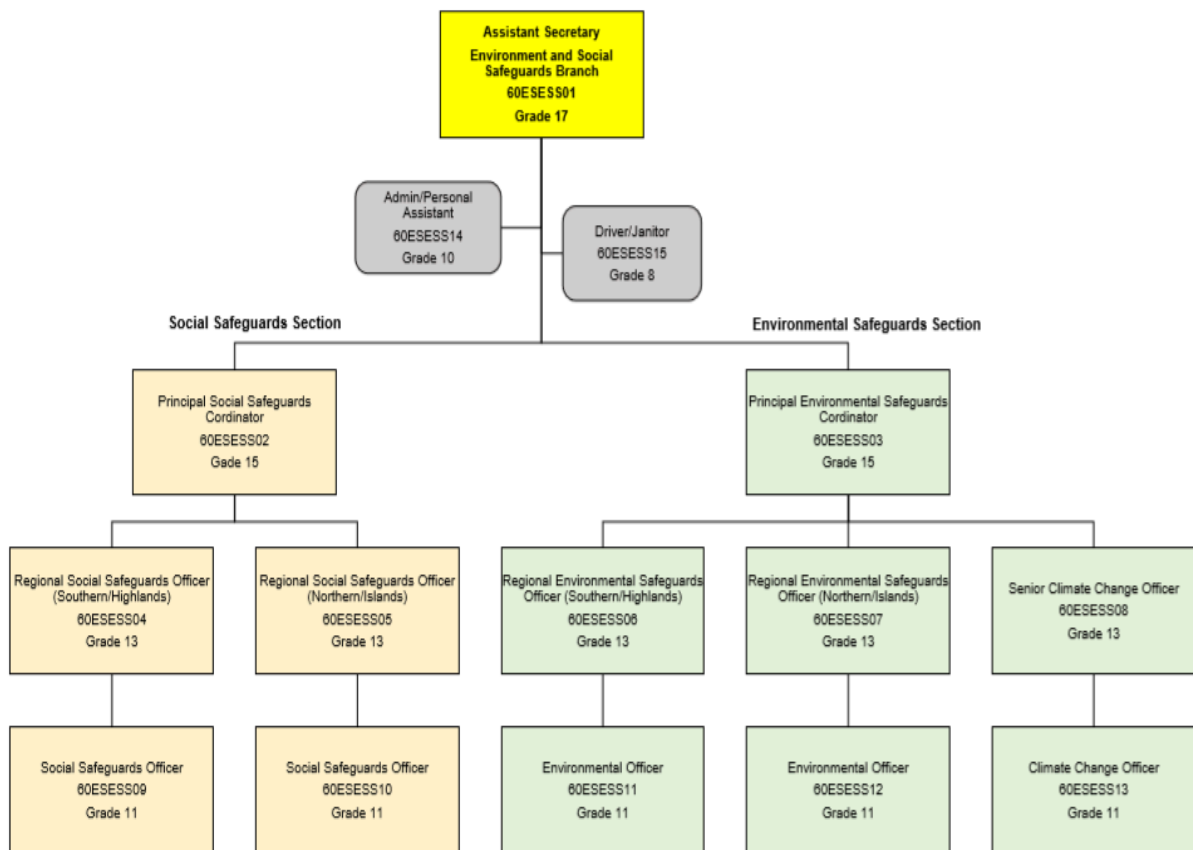


e) Environment & Social Safeguards' ECT & Chart -- there are changes to the current structure and staffing (Refer Table 3 for Details)

Environment & Social Safeguard Branch				Environment & Social Safeguards Branch						
1	60ESS01	Manager - Environment & Social Safe Guard	PS17	K66,767.00	1	60ESES01	Assistant Secretary - Environment & Social Safeguards Branch	PS17	K66,767.00	Abolish/Create
2	60ESS02	Senior Environment Monitoring Officer	PS14	K47,896.00	2	60ESES02	Principal Environmental Safeguards Coordinator	PS15	K52,623.00	Abolish/Create
3	60ESS03	Senior Socio-Economic Monitoring Officer	PS14	K47,896.00	3	60ESES03	Principal Social Safeguards Coordinator	PS15	K52,623.00	Abolish/Create
4	60ESS04	Coordination - Social Safeguard Issues & Investigation	PS14	K47,896.00	4	60ESES04	Regional Environmental Safeguards Officer (Southern/Highlands)	PS13	K44,377.00	Abolish/Create
5	60ESS05	Environment Monitoring Officer	PS12	K41,225.00	5	60ESES05	Regional Environmental Safeguards Officer (Northern/Islands)	PS13	K44,377.00	Abolish/Create
6	60ESS06	Social Safeguard Issue Officer	PS12	K41,225.00	6	60ESES06	Regional Social Safeguards Officer (Southern/Highlands)	PS13	K44,377.00	Abolish/Create
7	60ESS07	Personal Assistant	PS09	K29,205.00	7	60ESES07	Regional Social Safeguards Officer (Northern/Islands)	PS13	K44,377.00	Abolish/Create
					8	60ESES08	Senior Climate Change Officer	PS13	K44,377.00	Abolish/Create
					9	60ESES09	Environmental Safeguards Officer	PS11	K37,042.00	Abolish/Create
					10	60ESES10	Environmental Safeguards Officer	PS11	K37,042.00	Abolish/Create
					11	60ESES11	Social Safeguards Officer	PS11	K37,042.00	Abolish/Create
					12	60ESES12	Social Safeguards Officer	PS11	K37,042.00	Abolish/Create
					13	60ESES13	Climate Change Officer	PS11	K37,042.00	Abolish/Create
					14	60ESES14	Admin/Personal Assistant	PS10	K32,809.00	Abolish/Create
					15	60ESES15	Driver/Janitor	PS08	K26,092.00	Increase of Abolish/Create
Total Salary Estimate (K) =				K322,410.00	Total Salary Estimate (K) =				K638,009.00	K315,599.00

ENVIRONMENT AND SOCIAL SAFEGUARDS BRANCH

PROPOSED STRUCTURE - 2021



Structure is streamlined to deliver on the strategic objectives of the Corporate Plan 2020 – 2024.

**Standards Branch, Project Management Branch and Network Monitoring & Evaluation Branch** are created to strengthen these core functions identified to be weak in the current structure framework and its work flow process.

**Material Science & Standards** is structurally improved with an additional Regional Lab Manager to relieve current strain in work flow by regions like one (1) for Southern/Highlands and one (1) for Momase/Islands.

Subsequently, technical staff are increased reasonably to maximise outputs in work flow demand at the respective regions and also conform ISO 17025 requirement of Accreditation of managing these regional labs after conducting audits and management last year. MS&S is a revenue generating branch and financially will support its overheads efficiently with increase staff in those economical sound regional and provincial offices like Port Moresby and Lae Labs. Only personnel emoluments for wages are required under recurrent Budget.

The financing functions of the Road Infrastructure Financing and Procurement Wing has been moved to the Network Management and Funding Division's **Planning Programming and Funds Management Branch**. The **Financing section** will extensively be supported by Consultants and Advisors as with the Programming & Budgeting section as depicted in its flow chart (page 17).

Listed in Table 3 with descriptions are the required structural changes for our wing and provided are detailed rationale for the proposed changes.

**Table 3 Proposed structure changes in Network Planning Design and Standards**

Structure issue	Proposed structural changes	Reasons for change
<b>1. NETWORK PLANNING &amp; PROGRAMMING DIVISION</b>	One stop shop for divisional and branches' Personal Assistants, Drivers and Janitor to be held under Office of FAS. (Refer Flow Chart page 15)	Directed by ORT to cut on personal and streamline with the Office Allocation Plan for 2021. All Divisional and Branches will operate under 1 building including Office of ED (NPD&S) to save cost and increase efficiency in the administration.
a) Asset Management Branch's <b>Planning &amp; Programming (PP) section</b>	Asset Management Branch's <b>Planning &amp; Programming section</b> to absorb BCR's functions except Budget & M&E section. The former AMB PP section amalgamates with Budget to create new branch as <b>Planning, Programming &amp; Funds Management Branch</b> . AMB core function to remain same.	With increased focus on NRNS and Connect PNG, branch is restructured to strengthen and align with the DOWI Corporate Plan's Strategic Objective 1, 2, 3 & 5 to improve efficiency in the work flow process.
b) Budget Coordination Reporting (BCR)'s <b>M&amp;E section</b>	M&E section of BCR is proposed to be elevated to branch as <b>Network Monitoring &amp; Evaluation Branch</b>	Lack of timely reports and challenge to keep up with reporting due to increased focus on Connect PNG and NRNS Programmes, this change was recommended to address this specific issue and add value to Department's reporting on the PIP projects in coordination with the Field Operations Wing.
c) Realignment of Financing Section from the Road Infrastructure Financing & Procurement (RIF&P) Wing	The Financing section of the RIF&P Wing will be amalgamated with the Planning Programming & Budget section thus creating the <b>Planning, Programming &amp; Funds Management Branch</b> (As directed	Under Secretary directive after final review of the structure by ORT, the road financing function will be transferred to NPD&S.

Structure issue	Proposed structural changes	Reasons for change
	by Secretary in the ORT's final Review of the Restructure).	
<b>2. ARCHITECTURE &amp; BUILDING DIVISION</b>	Elevated from Branch to Division (New)	
a) Standards Branch	Creation of a New Standards Branch under A&B Division (As directed by Secretary in the ORT's final Review of the Restructure)	In line with principal accountability of the Office of the ED (NPDS) Serial 4.4. New Standards Branch is created to establish and implement contemporary building and architecture design standards consistent with building industry legislation, policy and best practice.
b) Project Management Branch	Creation of a New Project Management Branch under A&B Division (As directed by Secretary in the ORT's final Review of the Restructure)	Due to heavy workload, a dedicated branch for Project Management is created to manage projects including contract administration and project supervision. Consultants like structural engineers required for certification and approval of architectural & design plans for construction will be held under this branch on retainer basis to add value to its process.
c) Architect, General Engineering, Quantity Survey & Building Board Service	Positions realigned from old structure to Architect (18) and additional 9 positions added from the other three (3) branches being amalgamated. Hence total 27 positions.	General Engineering (GE), Quantity Survey (QS) & Building Board Service Branches are amalgamated with Architect Branch. <i>(ORT may abolish GE &amp; QS whose function has diminished over time since 1995 reforms thereof, else cut 5 positions (Gr 12) across the sections of the Branch if personnel &amp; cost ceiling are to be met).</i>
<b>3. DESIGN SERVICES / ENGINEERING STANDARDS</b>	Admin Officer (1) and Janitor (1) are held under the division.	Streamlined with the Office Allocation Plan for 2021.
a) Material Science & Standards	Creation of a new Principal Engineer, 2 x Regional Lab Manager, 2 x Materials Engineer, 1 x Geotechnical Engineer, 2 x Snr Tech Officer 2 (Lae & Mt Hagen Labs) 1 x Senior Tech Officer 1 (Kokopo) & 6 x Assistant Technical Officers (2 - POM, 2 - Lae, 1 - Kokopo & 1 - Mt Hgn).	<b>Structure and function realigned to conform to meeting ISO 17025 requirement for Accreditation (NISIT) especially for strengthening the two regional labs namely Mt Hagen and Kokopo whilst also improving Lae and Boroko Labs.</b>  Create efficiency in the managing of the labs of 2 regions per Principal Engineer – Materials Testing i.e., one (1) for S/H and another for M/I.  <b>New Assistant Technical Officer positions are critical and are recommended for QA and QC purpose in light of NRNS, Connect PNG and Sub-national Roads Programme also supporting the Provincial Labs.</b>
b) Highway Engineering		



Structure issue	Proposed structural changes	Reasons for change
c) Environment & Social Safeguards	<p>Increase of 4 personals in demarcated engineers' role for the Road Safety and Engineering section of the branch and graduate engineers' positions to cater for Dept's succession plan.</p> <p>Also critical is the creation of librarian position committed to electronic filing using the document management system of archiving.</p> <p>Creation of 2 Principal Coordinators, 1 for ES &amp; 1 for SS separately, Regional Environmental (2) and Social (2) Safeguards Officers' positions create to manage workflow and load.</p> <p>Also, a position for Climate Change is created (Gr. 11) and a Janitor/Driver position</p>	<p>With increased focus on NRNS and Connect PNG, branches are restructured to strengthen and align with the DOWI Corporate Plan's Strategic Objective 1, 2, 3 &amp; 5. Black Spot Programme with RTA strengthened with increased capacity.</p> <p>Importance of electronic filing using the document management system of archiving to create space in the existing office.</p> <p>With increased focus on NRNS and Connect PNG, branches are restructured to strengthen and align with the DOWI Corporate Plan's Strategic Objective 1, 2, 3 &amp; 5.</p> <p>Climate Change is of increasing concern and this now has to be addressed in the design and construction of the road network.</p>
d) Survey and Lands	<p>Only one (1) proposed is the creation of librarian position committed to electronic filing using the document management system of archiving. Else structure remains unchanged.</p>	<p>Importance of electronic filing using the document management system of archiving to create space in the existing office.</p>

Table 4 below lists the proposed branches and units and their staffing costs.

**Table 4 Proposed branches and units in Network Planning Design and Standards and staffing levels**

Branches and units	Current staffing level	Proposed level	Recommended final	Current Staffing costs (K)	New Staffing costs (K)	Variance (K)
<b>Executive Director (NPDS)</b>	3	0	3	159,225	159,225	-
<b>Sub Total (ED-NPD&amp;S)</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>159,225</b>	<b>159,225</b>	<b>-</b>
<b>FAS NMF Network Management &amp; Funding (NM&amp;F)</b>	3	4	7	193,744	265,156	71,412
NMF Planning, Programming & Funds Management (PP&FM)	21	-8	13	712,366	602,935	- 109,431
NMF Asset Management (AM)	13	-3	10	819,259	468,893	- 350,366
NMF Network Monitoring & Evaluation (NM&E)	0	7	7	-	334,851	334,851
<b>Sub Total (NM&amp;F):</b>	<b>37</b>	<b>0</b>	<b>37</b>	<b>1,725,369</b>	<b>1,671,835</b>	<b>- 53,534</b>
<b>FAS Engineering &amp; Standards</b>	3	2	5	138,106	207,064	68,958
ESS Highways Engineering (HE)	20	5	25	842,265	1,044,840	202,575
ESS Survey & Lands (S&L)	19	1	20	785,177	799,740	14,563
ESS Material Science & Technology (MS&T)	35	14	49	1,296,574	1,744,824	448,250
ESS Environmental & Social Safeguard (E&SS)	7	8	15	322,410	638,009	315,599
<b>Sub Total (E&amp;S):</b>	<b>84</b>	<b>30</b>	<b>114</b>	<b>3,384,532</b>	<b>4,434,477</b>	<b>1,049,945</b>
<b>FAS Architecture &amp; Building (A&amp;B)</b>	0	5	5	-	198,648	198,648
ABB Architect General Eng., Qty Survey, Building Board Services (A,G,Q,B)	18	9	27	1,112,975	1,224,015	111,040
ABB Project Management (PM)	0	5	5	-	237,237	237,237
ABB Standards (S)	0	6	6	-	285,233	285,233
<b>Sub Total (A&amp;B):</b>	<b>18</b>	<b>25</b>	<b>43</b>	<b>1,112,975</b>	<b>1,945,133</b>	<b>832,158</b>
<b>Grand Total (NDP&amp;S):</b>	<b>142</b>	<b>55</b>	<b>197</b>	<b>6,382,101</b>	<b>8,210,670</b>	<b>1,828,569</b>

## 7. Completed DPM documentation

Due to endorsement by Secretary to create the two new branches namely Standards Branch (A&B Division) and Network Monitoring & Evaluation Branch (then NP&M Division) recently after final review session, HR Officer is still working to assist the NPD&S Division to finalise the details of the required DPM forms.

On the same token, Financing section of Road Infrastructure Financing & Procurement (RFI&P) Wing is being transferred to the Planning Programming & Budget Branch. The new name for the branch is Planning Programming and Funds Management Branch.

Hence in this submission like previous, these three (3) forms are not attached to this report as listed below.

- Form OD2.4:           The Organisation Chart for your division and its branches (structure)
- Form OD2.5:           The Establishment Comparison Table
- Form OD2.6:           The Job Descriptions (any new or amended)

HR Officer has advised that they will maintain status quo and consolidate these three (3) forms in the final submission by ORT for approval by Secretary to DPM.

**The DPM Technical Structuring Steps Update released by ORT Chairman on Friday 24<sup>th</sup> September 2021 outlines the tentative program for these forms to be completed by HR Manager.**