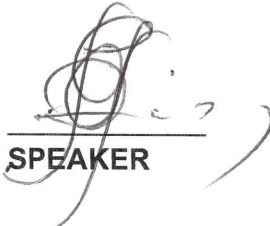




ROAD ASSET MANAGEMENT SYSTEM POLICY
JOHN TAOLO GAETSEWE DISTRICT MUNICIPALITY

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SPEAKER

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EXECUTIVE SUMMARY

The road network is one of the largest public assets and is predominantly government-owned.

Road authorities must maintain, operate, improve, replace and preserve these assets.

The government is placing greater pressure on road authorities to improve efficiency and accountability in managing the road network.

Road authorities face challenges regarding accountability and reporting requirements for asset management.

It is for these reasons that the government has put plans on how it can introduce the concept of asset management within the roads sector by implementing the **ROAD ASSET MANAGEMENT SYSTEM**

“Asset management” as applied to the roads sector can be considered to be “a systematic process of maintaining, upgrading and operating assets, combining engineering principles and economic basis, and providing tools to facilitate a more organized and flexible approach to making the decisions necessary to achieve the public’s expectations”

In practice, an **Asset Management system (AMS)** includes all the processes, tools, data and policies necessary for the effective management of all the assets for which the road authority is responsible, including infrastructure such as pavements, bridges and road inventory.

In general, the sequence of asset management begins with the identification of goals and policies of a road administration. From this starting position, the sequence proceeds through data collection, performance monitoring, analysis of maintenance options and programme optimization, through to project selection and implementation. Finally, monitoring and review procedures provide feedback that influences goals, policies, and the available budget.

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1. BACKGROUND

Rural district roads have been facing challenges of deterioration due to lack of maintenance. In 2011 the government embarked on a plan to assist district municipality to maintain their rural roads and infrastructure by establishing the **RURAL ROADS ASSET MANAGEMENT SYSTEMS GRANT** administered by **DEPARTMENT OF NATIONAL TRANSPORT (NDOT)**. The grant contributes to road asset management by providing local government with financial needs and technical support through data collection and inventory, condition assessment, capacity building, Maintenance Planning and Prioritization.

The John Taolo Gaetsewe District Municipality recognized the need to support road asset maintenance by participating in the RRAMS program. The program shall support the objectives of the JTGDM Asset Management System, specifically by enhancing the condition, safety, and resilience of rural road infrastructure.

1.2 Introduction

This document presents the road infrastructure asset management system framework for the John Taolo Gaetsewe District Municipality. This framework will govern asset management system implementation within the road sector.

This policy is established as per the requirement of the **DORA** to assist the district to have a set of systematic asset management approach to support local municipalities into maintenance and upgrade decision making.

1.3 Policy Objectives

- a) Govern the activities, process and procedures undertaken for asset management and ensure that they are in line with IOS55001 regulations and TMH22 guidelines.
- b) Ensure that the district provides local municipalities with fare information.
- c) Ensure that all the processes required to achieve the objectives of the asset management system are understood by all personnel, management and recognizing the key stakeholders and how they benefit.
- d) Outlines roles and responsibilities of all stewardship contributing to the asset management.
- e) Enable the District to assess risk and opportunities to wards the JTGDM asset management in the concept of road infrastructure.
- f) Enable the district to successfully administrate the Rural Road asset management System grant.

2. Legislation and Reference Document

- S'hamba, Sonke Projects Implementation guidelines
- Road Infrastructure Strategic Framework of South Africa

- Expanded public works programme (EPWP) Project implementation guidelines
- AASHTO- Transportation Assets Management guide
- TRH 26 – South African Road Classification and Access Management (RCAM) Manual
- **International Standards**
 - **IOS 5500:2024** - Asset Management- Standards -Overview principle and terminology
 - **IOS 55001:2024** -Asset Management-Management System-Requirements
 - **ISO 55002**- Asset Management -Management -Guidelines of the application of IOS 55001
- **The Technical Methods of Highway**
 - **TMH22** - Requirements for Road Asset Management of South African Network guidelines
 - **TMH3**-Specifications for the Provision of Traffic and WIM monitoring services
 - **TMH 8**-Traffic counting Procedures for Rural roads.
 - **TMH 13 – Pavement Manual system: Standard visual assessment manual**
- Pavement deflection and, skid resistance and texture for network level imaging and technologies
 - **TMH 19** – Manual for visual assessment of road structures.
 - **TMH18**- COTO Data exchange format guidelines
 - **Tmh20**- Standard road network data
 - **TMH21** – Road infrastructure Asset Management policy
- Legislative ,policy and directive documents.
 - Government immovable asset Management Act,No 19 of 2007(GIAMA)
 - Division of Revenue ACT
 - Municipal Finance Management Act
- District Policies
 - Risk assessment policy
- Accounting Recognized Practice
 - GRAP – 11
 - Grap -12
 - GRAP – 13
 - GRAP – 16
 - Grap -17
 - GRAP – 21
 - Grap 26
 - Grap 100
 - Grap 101
 - Grap 102

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3. TERMS AND DEFINITIONS

For purposes of this policy statement, unless otherwise stated, the following terms and definitions shall apply:

"RRAMS"- Rural Roads Asset Management System

"RAMS" - Roads Asset Management System

"JTGDM" – John Taolo Gaetsewe District Municipality

"LM"- Local Municipality

"Asset" - something that has potential or actual value to an organization

"Asset life" - period from conception to end-of-life

"Asset life cycle" - all of the stages that an asset experiences over the asset life

"Asset life cycle stage" - identifiable segment of an asset life cycle

"Asset management" - coordinated activities of an organization to realize value from assets

"Asset portfolio" - assets that are within the scope of the asset management system

"Asset system" - set of assets that interact or are interrelated

"Asset type" - a grouping of assets having common characteristics that distinguish those assets as a group or class

"Audit" – a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which the audit criteria are fulfilled

"Capability" - measure of the ability of the organization to achieve its objectives **"Competence"** - ability to apply knowledge and skills to achieve intended results **"Conformity"** - fulfilment of a requirement

“Continual improvement” - recurring activity to enhance performance
“Correction” - action to eliminate a detected nonconformity

“Corrective action” - action to eliminate the cause of a nonconformity and to prevent recurrence

“Critical asset” - asset having significant potential to impact on the achievement of the organization’s objectives

“Documented information” - information required to be controlled and maintained by an organization and the medium on which it is contained.

“DORA” - Division of revenue Act

“Effectiveness” - extent to which planned activities are realized and planned results achieved

“Level of service” - parameters or combination of parameters that reflect social, environmental and economic outcomes that the organization has agreed to deliver

“Life cycle costs” - total cost of an asset over its asset life cycle

“Management system” - set of interrelated or interacting elements of an organization to establish policies and objectives and processes to achieve those objectives

“Monitoring” - determining the status of a system, a process or an activity

“Measurement” - process to determine a value

“Nonconformity” - non-fulfilment of a requirement

“National department of transport;-NDOT - government department responsible for transport policy, planning, and regulation across the country.

“Organization” - person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives

“Organizational strategic plan” - organization’s goals and objectives and means for achieving them

“Outsource” - make an arrangement where an external organization performs part of an organization’s function or process

“Performance” - measurable result

“Plan” - detailed formulation of a programme to achieve an objective

“Policy” - intentions and direction of an organization as formally expressed by its top management

“Predictive action” - action to monitor the condition of an asset and predict the need for preventive action or corrective actions

“Preventive action” - action to eliminate the cause of a potential nonconformity or other undesirable potential situation

“Process” - set of interrelated or interacting activities which transforms inputs into outputs

“Requirement” - need or expectation that is stated, generally implied or obligatory **“Risk”** - effect of uncertainty on objectives

Road Asset Management Grant “- Grant admin stored by the district

“RAMP” - Road Asset Management Plan

“Stakeholder” - person or organization that can affect, be affected by, or perceive themselves to be affected by a decision or activity

“AMS”- Asset Management Plan

“Top management” - person or group of people who directs and controls an organization at the highest.

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4. Context of the organization

Management will ensure that the scope, objective, design and implementation of the JTGDM road asset management system are consistent by ensuring that it aligns with the external and internal context of the JTGDM by addressing the following issues that could hinder the district from running a successful asset management system.

4.1 Organizational context

Internal Issue

- a) **Resource Constraints:** Limited resources to address the growing demand of the road network.
- b) **Data Gaps:** Incomplete or outdated road asset inventories and condition data.
- c) **Capacity Development:** Need for continuous training and upskilling of technical and managerial staff.
- d) **System Integration:** Fragmented data systems and processes that need alignment guidelines and regulations
- e) Support from Management by providing reliable report
- f) Inability to recognize key stakeholders and their expectations.
- g) Capacity building

External issues

- h) **Geographic and Environmental Challenges:** Large rural areas, poor terrain, and seasonal weather disruptions affect infrastructure performance and maintenance planning.
- i) **Legislative Requirements:** Compliance with national laws (e.g., DORA, Municipal Finance Management Act) and technical standards (e.g., TRH and COTO).
- j) **Stakeholder Expectations:** Communities, local councilors, and municipalities expect transparent and reliable road service delivery.
- k) **Socioeconomic Pressures:** High unemployment and poverty levels increase pressure for job creation through infrastructure projects.
- l) **Professional services:** Changes of service providers causes changes in performance

Aligning the organizational context with the road asset management system

- a. Provide support to road authorities on lifecycle-based maintenance planning
- b. Comply with standards and regulations
- c. Fulfillment of national outcomes such as rural development, job creation, and infrastructure sustainability

4.2 Stakeholder Needs and expectations.

- a) Key stakeholders and their expectations shall be identified by those leading the programme.
- b) Engagement and strengthening stakeholder relations will be held on a quarterly or monthly basis depending on the stakeholder role.
- c) Stakeholder expectations will be determined from recorded discussions and documented.
- d) Excess information will be made available and accessible to all stakeholders depending on the needs and expectations. For Local Municipalities, asset condition data, a priority list with costs and asset locations will be available on a technical spatial viewing system.
- e) Stakeholder information and roles will be documented.
- f) Reporting and communication will be in line with each role of the stakeholder. Regularity requirements for specific stakeholders will be adhered to.
- g) Reporting to stakeholders should be shared as prescribed on the DORA

4.3 Scope of the JTGDM Roads Asset Management System

- a) The scope of the road asset management system is defined as follows,

- A central road network management system
- A pavement Management System
- A bridge Management system
- An inventory Management system
- An inventory management system, for road furniture and drainage systems
- Traffic information system (TIS)

- b) The scope of the roads asset management system shall include the following:

Assets for management which shall cover:

- All municipal roads (gravel, surfaced, paved)
- Road furniture (signs, culverts, guardrails)
- Bridges and storm water drainage related to road

- c) The scope of the asset management systems shall be reviewed and updated annually to reflect changes within the organization and its assets.
- d) During the development of the RRAMS objective the following are considered
 - Review risk and opportunities
 - Stakeholder needs

- Output of the RAMS

4.4 Asset management system

The goal of asset management is to achieve the required service level in the most cost-effective manner by managing the asset's life cycle.

To be effective, the asset management system must include the following:

- An asset management decision map to improve the Asset Management Policy and Strategic Asset Management Plan (SAMP).
- Gap analysis regarding ISO 55001 and TMH22 requirements
- Define roles, responsibilities of all parties
- Assurance of the alignment with the municipality's strategic plan and IDP.
- Asset register that's include field surveys and using GIS/mapping tools to document assets by type, location, condition, and usage.
- Software-based that stores, analyze asset data and manage the data.
- Priority list based on maintenance action needs.
- Set Level of Service (LOS) that's targets each asset class based on the needs and resources.
- Establish risk management criteria by Identifying critical assets and failure impacts.
- Define maintenance, rehabilitation, upgrade strategies
- Capacity building for RRAMS processes, tools, and reporting.
- Compliance with COTO standards, TRH, TMH manuals, and DORA reporting.
- Stakeholder engagement plans.
- Reporting to the grant administrator is
- Ensuring that the reporting is done as per the prescribed condition of the grant funder.
- Audits and performance reviews to ensure that the system complies with regulations.

4.5 Asset management decision making

4.5.1 Asset management Framework

The municipality shall establish a framework for asset management decision making to select roads needing maintenance or upgrades.

- **Asset Register Setup**
 - Ensure complete and verified inventory using GIS and RAMS tools
 - Include attributes like location, condition, traffic, last intervention
- **Data Collection & Assessment**
 - Conduct annual condition assessments

- Traffic counts
- Community consultation (public IDP meetings, ward submissions)
- **Prioritization Model**
 - Apply the decision criteria by using the visual condition percentile scoring
 - Rank roads based on total scoring.
- **Budget Alignment**
 - Encourage road authorities to match priorities with available funding
 - Encourage road authorities to package projects realistically based on multi-year budget forecast
 - Align asset management activities with available funds
- **Risk and Opportunity Management**
 - Identify risks: Expenditure, management of the grant, compliance, deliverables of the RRAMS programme, management of data collections
 - Identify opportunities:
 - Mitigate with contingency plans
- **Implementation and Monitoring**
 - Develop an annual asset management plan
 - Report against KPIs: % roads improved, % compliance with planned interventions
 - Use audit and community feedback to refine the model yearly
- Parameters of the JTGDM information and decision support systems are explained as follows:
 - A central road network register, with spatial display in a related Geographic Information System.
 - A pavement management system;
 - An unpaved road management system;
 - A bridge management system with bridge inventory
 - An inventory management system for road furniture, including drainage assets; and
 - Asset life cycle
 - A traffic information system.

4.5.2 Criteria of asset priority

The asset management system shall use the following criteria to decide whether the road is in a critical condition for maintenance or upgrade.

Criteria	Description	Weight (Example)
Road Function	Primary access, regional connector, or low-volume local road	20%
Condition Rating (VCI)	Measured physical state of the road	15%

Traffic Volume	Average daily traffic	15%
Access to Services	Links to clinics, schools, emergency services	20%
Safety Risks	Areas with accidents, poor geometry, flooding history	10%
Economic Value	Roads enabling farming, mining, or small business access	10%
Community Priority	Ward-based input, IDP engagements, councillors' submissions	10%

4.5.3 Methods, processes and tools

The asset management system shall employ the following processes, tools and methods to determine maintenance needs, prioritizing decisions.

a) Processes

- **Lifecycle Planning** – Evaluate cost-effective interventions (e.g., maintain vs. replace) over time
- **Prioritization**-Rank assets and projects based on need, condition, usage, and social impact
- **Risk Management**-Identify, assess, and respond to operational, financial, and safety risks. Compile a risk register.
- **Data Collection & Validation**-Collect traffic, condition, and asset inventory data regularly
- **Performance Monitoring**-Track asset service levels, condition, and financial performance
- **Continuous Review**-Periodically evaluate the effectiveness of decisions and methods used

b) Methods

- Use basic cost-benefit analysis or lifecycle cost analysis tools to assess alternatives
- Use a **Risk Matrix** to identify critical roads
- Periodic updates as conditions, budget
- Use verified sources (field assessments, GIS, historical data)
- Apply TMH22-aligned RAMS data standards
- Community engagement and IDP alignment

c) Tools

- Asset Management Software, TMH22 RAMS tools, Excel RAM models, GIS platforms – To track asset data, condition, and lifecycle costs
- Decision Support Model, Weighted scoring, prioritize interventions, assess investment value

- Risk Analysis Tools, Risk registers, SWOT analysis, traffic risk scoring, Identify and prioritize high-risk assets.
- Community Input Tools IDP forums, digital surveys, ward councilor submissions, Capture social impact and public priorities
- Reporting Tools Dashboards, audit trails, RAMS report to support transparency and internal/external reporting.

5. Leadership

5.1 Leadership and commitment

Top management must offer ongoing support and dedicated leadership to junior managers and personnel at all levels to ensure the asset management system becomes a sustained and evolving practice, not a one-off compliance activity.

Management commits itself through:

- Allocating budget and staff to asset management system roles
- Supporting training and capacity building
- Enforcing adherence to asset management system procedures, updates, and reviews
- Regularly reviewing the performance of the asset management system
- Ensuring integration of asset data into planning, procurement, and budgeting.

5.1.1 Structure of Asset management systems

1. Asset Management System Steering Committee

Top management shall establish a steering committee in ensuring that the:

- Asset management systems satisfy stakeholders' needs,
- complies with regulations,
- Reporting to relevant stakeholders is done timely as required,
- Budget allocated is spent accordingly and abides to the conditions,
- Information is well managed and backed up on software systems,
- The information is reliable and correct,
- personnel and every employee involved understand their roles and responsibilities
- Activities leading successful asset management systems are carried out as per plans

The composition of the Asset Management System Steering Committee for the John Taolo Gaetsewe District Municipality will be as follows:

- The Director: Basic Services and Infrastructure

- The grants administrator
- Roads Planning Officer
- Road Asset Management personnel
- Local Municipalities
- Professional service provider
- Software system administrator

2. Roads Asset System Management Project team

The project team is a dedicated group assigned to lead planning and execution. This team develops and implements asset lifecycle strategies, oversees compliance with legal, regulatory, and contractual requirements and ensures technical standards and practices are followed.

The Asset Management Project Team is responsible for performing the following functions:

- Coordinate Asset Management System activities.
- Prepare Financial Forecasts; and
- Preparation of Asset Management System Plan
- Coordinates between the municipal and other departments
- Manages stakeholder communication
- Develop training for staff involved with the System
- Handles data migration, system configuration, and analytics
- supports the integration of Asset Management System software
- Monitoring and Reporting
- Providing technical support

3. Roads Asset System Management task team

This is a cross-functional group responsible for the hands-on tasks required to implement and improve an organization's Roads Asset Management System.

The Task team is responsible for the following tasks

- Asset Data Collection & Verification
- Gathering feedback and adjusting system settings or workflows as needed
- Attending stakeholder engagement meetings
- Attend training relating to RAMS

5.2 POLICY STATEMENT CONTENT

- a) The objective of the RAMS shall be documented on the RAMP and communicated to the stakeholders to foster commitment.
- b) This policy statement was developed by the John Taolo District Municipality and covers the full road asset management system, dealing with:
 - The organizational context.
 - The assets.
 - Key stakeholders
 - The asset management objective as defined on the SAMP
- c) It enables to the road asset management system, i.e. organization, people and information; and
- d) Capabilities to the road asset management system, i.e. management of risk, performance evaluation and improvement.

By considering the above broad aspects of asset management, the policy statement:

- Is appropriate to the purpose of the JTGDM,
- Provides a framework for setting asset management objectives,
- Includes the commitment to satisfy applicable requirements, and
- Includes the commitment to continual improvement of the asset management process and road asset management system.

5.3 Roles and responsibilities

5.3.1 The Municipal Manager

Provides leadership to promote a culture of accountability by ensuring that activities forming a systematic system for managing the road asset are diligently followed.

The Accounting officer must ensure:

- a) The development of an organogram and define roles and job descriptions relating to the RAMS.
- b) That the municipality has and maintains a system of internal control of assets including an asset register; and
- c) That senior managers and their teams comply with this policy.

- d) That Professional services have the capacity to offer technical support to the RAMS leading team
- e) That good relations between the district and the local municipalities are maintained.
- f) That Professional service providers are within Civil Engineering services.
- g) That software system services are in place.
- h) That the RRAMS Technical staff and Technical Management personnel are within the Civil Engineering field of study
- i) accountability, meeting reporting obligations, and ensuring the grant contributes to sustainable rural road infrastructure management.

5.3.2 The Chief Financial Officer

- a) is responsible for ensuring that funds for the integration of RAMS are managed responsibly, used efficiently, and reported transparently in line with both national requirements and municipal goals.
- b) must ensure the financial integrity, compliance, and strategic integration of the RRAMS grant into municipal financial systems.

The Chief Finance Officer must:

- a) Oversee the budgeting, allocation, and expenditure of RRAMS grant funds in accordance with the Division of Revenue Act (DoRA) and Municipal Finance Management Act (MFMA)
- b) Ensure that funds are spent strictly on eligible activities, such as asset data collection, road condition assessments, systems development, and training.
- c) Ensure timely submission of financial reports and grant performance reports to the National Treasury and Department of Transport.
- d) Ensure adherence to DoRA conditions, including expenditure tracking, and record keeping.
- e) Maintain a transparent audit trail for expenditures.
- f) Ensure that procurement and payment processes related to RRAMS follow the Supply Chain Management (SCM) regulations and internal controls.
- g) Integrate RRAMS into the broader municipal asset management system, where applicable, and financial planning tools.
- h) Ensure the RRAMS is reflected in the MTREF, IDP, and asset lifecycle costing.
- i) Assisting with financial planning for future maintenance and upgrades based on RRAMS outputs.
- j) Supports training and capacity building for municipal staff involved in financial aspects RAMS.
- k) Provides financial governance support to RAMS steering committees or working groups.

5.3.3 Senior Management

Senior managers must play a leadership role in the successful implementation and sustainability of an Asset Management System (RAMS). Their responsibilities bridge strategic directives from top management and day-to-day execution of activities

Senior Managers must:

- a) Ensure the implementation of asset management policies, strategies, and plans within the department or directorates.
- b) Identify and request budget, staff, and technical resources necessary for asset management system tasks in their area.
- c) Ensure funding is used efficiently to support asset-related objectives.
- d) Ensure asset data (condition, location, usage, maintenance action) within their department is accurate, complete, and up to date.
- e) Oversee regular asset verifications and support the updating of the Asset Register.
- f) Identify and manage risks related to asset failure, under-performance, or legal non-compliance.
- g) Ensure asset activities comply with relevant legislation, including the MFMA, GRAP, and internal policies.
- h) Provide regular progress reports on asset-related initiatives to the Municipal Manager, CFO, or Council.
- i) Communicate asset management roles, responsibilities, and expectations to their teams.
- j) Ensure departmental staff involved in asset management receive appropriate training and support.

5.3.4 Junior Managers

- a) supervising the collection of accurate asset data (e.g., condition surveys, maintenance logs).
- b) Ensure timely entry of data into asset management systems (e.g., GIS system).
- c) Report performance indicators and anomalies to senior management.
- d) Oversee technical and data collectors' teams carrying out asset-related activities.
- e) Allocate daily tasks based on priorities set by the asset management plan.
- f) Ensure that all work adheres to safety regulations, technical standards, and asset management policies.
- g) Support internal audits and inspections as part of RAMS compliance.
- h) Participate in RAMS reviews and workshops to share front-line2 insights.
- i) Serve as a communication link between field teams and senior managers and stakeholders
- j) Guide and mentor junior staff or technicians on asset procedures and system tools.
- k) Support the integration of new technologies or processes.

5.3.5 RRAMS PERSONEL-

- a) Data is collected on a day to day
- b) Comply with health and safety precautions during the collection of dates.
- c) Required skills and competencies of the appointment of personnel must be stickily National Diploma in Civil Engineering

6. Planning

6.1 Actions to address risk and opportunities

When planning for the road asset management system, issues referred to in 4.1 and the requirements referred to in 4.2 will be considered and the risks and opportunities that need to be addressed.

The following are a structure of addressing risks and opportunities that District has put in place.

- a) First establish a structured risk assessment process using methods such as SWOT analyses and the risk registers.
- b) Align risk and opportunity management with the organization's road asset management plan (RAMP).
- c) Integrate risk and opportunity assessments at each activity contributing to the RAMS.
- d) Integrate risk and opportunity assessments at each stage of the asset life-cycle of an asset from after the construction to its life span performance.
- e) Develop procedures for implementing controls to mitigate risks and enhance opportunities such as conducting quality control on all activities contributing to the asset management system and managing the assets.
- f) Regularly monitor risk indicators, conduct internal audits, and review performance data to ensure risks and opportunities are being managed effectively and changes are adapted accordingly
- g) Regular stakeholder engagement to gain diverse insights and ensure accountability and transparency.
- h) Provide training in risk management and asset reliability practices for all those participating within the RAMS.
- i) Documentation of risks, opportunities, and response strategies in the RAMS

6.2 Asset management objectives and planning

The district shall make use of the **Strategic Roads Asset Management Plan (RAMP)** that will be a guiding tool of setting the asset management objective in the local municipalities and its roles.

In defining the asset management objectives, the objectives will be defined to:

- be consistent with the Road Infrastructure Asset Management Policy,
- be consistent with the organizational objectives,
- be developed as part of the strategic plan for asset management,
- be developed using asset management decision making criteria,
- be measurable (if practicable),
- take into account applicable requirements,
- integrate the asset management planning with other organizational planning activities, including financial and human resource planning,
- be monitored,
- be communicated to relevant stakeholders, and
- Retain documented information on the asset management objectives.

6.2.1 Planning for Asset Management

As major output of the planning for asset management the road asset management plans to achieve the asset management objectives will be established, document and maintain road asset management plans to achieve the asset management objectives. These plans will be in accordance with the road infrastructure asset management policy to achieve the organizational objectives.

The method for decision making and prioritizing of the activities will be documented and resources to achieve the road asset management plans and objectives.

In planning how to achieve the asset management objectives, the following will be adhered to:

- a) Provision of the road authority with sufficient and effective information.
- b) The risks that the asset management system will not deliver the organization's objectives, including the changes on provisional Serveries, backing up information, costs and benefits that can arise from changes in the external context and how the risks can change with time,
- c) Update information with regard to conditions of roads
- d) Conform to the standards regulations of the TMH22.
- e) Give LM's support

- f) Review period for the road asset management plans (see 9.1 and 10).
- g) The asset management system related risks will be considered in the District Municipality's risk management approach

6.2.3 Strategic Asset Management Plan

The principle that the district will apply is set out in the policy. The approach to implementing this principle is defined on the RAMP as a documented document. The document will outline the following in line with the RAMS objective.

- a) Summary of road network: length, type (paved/unpaved), condition.
- b) Strategic alignment with national transport goals or local development.
- c) Road condition data. Good/fair/poor /very good/very poor/moderate)
- d) Tools/systems used (e.g., RRAMS database, GIS, Road Asset Survey apps).
- e) Defined desired service levels
- f) Traffic volume
- g) Maintenance strategies:
 - Routine (grading, patching).
 - Periodic (retravelling, resealing).
 - Rehabilitation and reconstruction.
 - 3–5-year forecast of maintenance and capital investment needs.
- IDP plans
- Key projects and initiatives over the next planning period.
- Prioritization criteria (e.g., traffic volume, access to social amenities)
- Integration with broader infrastructure plans.
- Roles Responsibilities
 - Asset management roles (e.g., engineers, planners, finance).
 - Decision-making structure and accountability.
 - Reporting and compliance mechanisms.

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6.2.4 Asset management objectives

The requirements of relevant stakeholders will be , and other financial, technical, legal, RRAMS funder regulatory and organizational requirements in the asset management planning process to establish the asset management objectives.

The map for setting the JTGDM asset management objectives is as follows:

The municipality is set to develop and sustain a roads asset management committee that engages physically including representatives from all municipalities in the district within the:

- Budget and Treasury Office
 - Local municipality Road Maintenance team
 - Local municipality Roads and Storm water department that forms the core team of people responsible for carrying out roads infrastructure management and include asset management responsibilities. The role players and responsibilities in respect of the Road Asset Management System are contained in **Appendix A**.
-
- a) The Appointment of a Provisional Service provider to give technical support and quality assurance were needed.
 - b) Assign responsibilities for the various elements of road infrastructure asset management as set out below to obtain and update details of
 - c) Inventory of roads, bridges and other significant assets and related functional classes,
 - d) Road and asset usage,
 - e) Road and asset conditions and performance,
 - f) Asset values and remaining useful life, and
 - g) Current unit replacement costs of road components to update asset registers on a basis as documented in TMH documents and store these details on a systematic basis as part of the road asset management system and publish and communicate outputs as documented in TMH documents and in a format suitable for audit purposes.
 - h) Assess asset values and road infrastructure conditions and performance trends over time.
 - i) Assess these parameters against guidelines and limits set for each class of road in TMH documents.
 - j) Identify shortcomings in conditions and performance through both a technical analysis of condition parameters against criteria set by COTO and an evaluation of stakeholder complaints and stakeholder evaluations that are carried out in respect of specific issues from time to time.

- k) Hold discussions with road authorities as well as individuals to discuss road network ownership and transfers of assets that are more suited to ownership by others.
- l) Set objectives in the format of key performance indicators (KPI's) for individuals and personnel leading the RRAMS programme to ensure compliance.

6.2.5 Planning to achieve asset management objectives

The road asset management plans will be established, documented and maintained to achieve the asset management objectives.

These plans will be in accordance with the JTGDM road infrastructure asset management policy to achieve the JTGDM organizational objectives.

The district shall document the method for decision making and prioritizing of the activities and resources to achieve the road asset management plans and objectives.

In planning how to achieve the asset management objectives, the JTGDM will:

- a) Provide road authority with sufficient and effective information.
- b) Minimise the risks that the asset management system will not deliver the organization's objectives, including the changes in provisional severities, backing up information, costs and benefits that can arise from changes in the external context and how the risks can change with time,
- c) Update information regarding conditions of roads
- d) Conform to the standards regulations of the TMH22.
- e) Provide LM's with support
- f) Review period for the road asset management plans (see 9.1 and 10).
- g) Ensure that the asset management system related risks are considered in the risk management approach

6.3 Road asset management plans

The outputs of the above studies will be incorporated into road asset management plans for each class and type of asset. This will be achieved through:

- a) Using appropriate systems and tools that are available in the road infrastructure asset management industry to determine how best to address the shortcomings and issues subject to budget constraints and to minimize risks.
- b) Setting objectives in respect of asset values, condition and performance parameters and their trends.

- c) Holding strategy discussions to assess how to tackle objectives in the most efficient and effective manner and develop strategies and tactics to achieve the objectives.
- d) Developing asset maintenance, rehabilitation, upgrading and new infrastructure plans to address objectives and publish and communicate these on a basis as agreed by DORA.
- e) Initiating studies and projects and prepare business plans for funding
- f) Initiating studies to improve design criteria and standards where poor performance is identified.
- g) Initiating discussions and assess areas for improvement of road infrastructure asset management in respect of data collection, storage and analysis procedures and make improvements, where considered appropriate, by the asset management committee.

7. Support

7.1 Recourses

The development and implementation of the RAMS shall redetermine the resources required by considering the following:

- a) Road Authorities Asset Registers
 - Asset preservation activities as identified in its asset management
 - Data and Information Resources
 - Existing asset registers and inventories.
 - Baseline condition data and performance metrics.
 - GIS maps and spatial data.
 - Maintenance and cost history records.
 - Policies, regulations, and service level expectations.
- b) Asset Management System
 - Communication system
 - Document management system
 - Human resource management system
 - Trained asset management professionals (e.g., engineers, planners, technicians).
 - Support staff for data collection, maintenance, and documentation.
 - External consultants or advisors for system setup and training
 - Initial setup costs (software, training, audits).
 - Ongoing operational costs (data updates, maintenance planning, reporting).
 - Budget for maintenance, rehabilitation, and lifecycle interventions.
 - Co-financing or grant integration (e.g., RRAMS funding).
 - Information technology system

- Asset management software or platforms (GIS database).
- Condition assessment tools (mobile data collection devices in accordance to TMH standards).
- Computers, GPS units, and communication equipment

C) Asset management

Delivery of asset management system

Established asset management framework, policies, and procedures.

Organizational structure to support RAMS roles and responsibilities.

Coordination units or committees (asset management steering group).

Communication and reporting mechanisms.

Personnel competence

Control of asset management activities.

7.2 Competence

John Taolo Gaetsewe District Municipality senior management shall:

- a) Determine the necessary competencies of persons doing work under the control of JTGDM that affects the asset management system performance,
- b) Ensure that these people are competent on the basis of appropriate education, training and / experience,
- c) where applicable, take actions to acquire the necessary competence, and evaluate the effectiveness of the actions taken,
- d) Retain appropriate documented information as evidence of competence and annually review current and future competency needs and requirements.
- e) Make sure that a Professional Service provider has relevant experience and provides necessary technical support.

Applicable actions may include, the provision of training, the mentoring of, or the re-assignment of currently employed persons; or the hiring or contracting of competent people and organizations.

When outsourcing any aspect of the road asset management system, It will be ensured that the external resource providers can demonstrate competence against the required activities.

7.3 Awareness

The people whose works have an impact on the achievement of the asset management objectives must be aware of:

- a) The road infrastructure asset management policy,



- b) Their contribution to the effectiveness of the roads asset management system, including the benefits of improved asset management performance, and
- c) The implications of not conforming to the road asset management system requirements.
- d) Their core role in the asset management system
- e) The current state and performance required, the future state and risk and opportunities will be considered when the awareness needs of stakeholders is developed.

The level of the organization awareness will be improved through available means of internal communication and the inclusion of an asset management system as a topic in roads staff and management meetings.

7.4 Communication

The District Shall:

- a) Determine the need for internal and external communications relevant to asset management system and asset management.
- b) Develop a communication plan for all stakeholders, defining
 - i. what it will communicate: including the benefits of the RAMS, changes in resources and the asset register
 - ii. When to communicate: When a significant change occurs and during personnel performance and development meetings
 - iii. With whom to communicate: Targeted audience including stakeholders impacted by asset management and any changes and stakeholders who can compact asset management and create changes.
 - iv. How to communicate: Commutation shall be made through commutation policy and language inclusivity of common terminology.

8.Documented information

8.1 Information requirements

The district value the availability and quality information the fore the district shall determine its information requirements and put it in place systems and processes for collection, collation, storage, maintenance and transfer of asset information to enable the district to achieve its RAMS.

The following will be determined:

- a) The attribute requirements of identified information needs,

- b) The quality requirements of identified information needs, and
- c) The methods for the collection of information (including the frequency of collection), its analysis and evaluation
 - i. There will be compliance with the legal requirements for the collection of information on the attribute, quality and methods mentioned above.
 - ii. Processes for managing information will specific in implementation and will be maintained.

The following will be considered:

- a) The identified risks, and the need to align its information requirements
- b) The roles and responsibilities for asset management,
- c) Asset management processes, procedures and activities,
- d) The exchange of information with the stakeholders, including service providers, and roads authorities.
- e) The required structure and format of data tom enable data sharing and exchange
- f) Identification and description (asset id, location, type, design parameters, condition and maintenance actions.
- g) Financial information (maintenance cost, life cycle cost, asset value, expected service life)
- h) Compliance with the regulatory requirements.

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8.2 Documented information

Requirements for both paper, electronic information and software-based information (GIS data base) shall ensure that:

- a) Information is documented and presented as required by the ISO 55000 International Standard, and TMH 22 requirements
- b) Documentations of information presented according to required standards of reporting information as required by DORA
- c) Documented information is clear legible by making sure that it is inerasable, produced in a neat and easily readable script and protected from any damage.
- d) Information stored on Software systems should be in accordance of TMH22. The system must be able to integrate with other GIS systems.

8.2.1 Creating and updating

When creating and updating documented information and data collection the following will be made:

- a) Identification and description (e.g type, length),
- b) Format (e.g. standards, software)
- c) Review and approval for suitability and adequacy.
- d) Storage (e.g. cloud, software)
- e) Methods of creating and updating (e.g. software, storage)

8.2.2 Control of documented information

Documented information required by the road asset management system and by the ISO 55000 International Standard will be controlled to ensure:

- a) it is available and suitable for use, where and when it is needed, and
- b) it is adequately protected (e.g. from loss of confidentiality, improper use, or loss of integrity).

For the control of documented information, the following activities will be addressed:

- a) distribution, access, retrieval and use,
- b) storage and preservation, including preservation of legibility,
- c) control of changes (e.g. version control), and
- d) retention and disposition.

Documented information of external origin determined by us to be necessary for the planning and operation of the road asset management system shall be identified as appropriate and controlled. 'Access' will imply a decision regarding the permission to view the documented information only, or the permission and authority to view and change the documented information.



8.2.3 Data and information

The district shall.

- a) Determine data and information needed to support RAMS
- b) Establish data and information specifications that include attributes, units of measurements and the source
- c) Develop a plan of collecting data, integration, sharing of data and information.
- d) Develop systematic software based for storing of data

9. OPERATION

9.1 Operational planning and control

implement and control the processes needed to meet requirements, and implement the actions determined in 6.1 and the road asset management plan(s) determined in 6.3, by

- a) Establishing criteria for the processes,
- b) Implementing the processes, actions and road asset management plan(s),
- c) implementing the control of the processes in accordance with the criteria, and
- d) keeping documented information to the extent necessary to have confidence and evidence that the processes have been carried out as planned.

Planned changes will be supervised and the consequences of unintended changes reviewed, taking action to mitigate any adverse effects, as necessary (see 8.2).
Outsourced processes will be controlled (see 8.3).

9.2 Management of change

When any change is identified that can have an impact on achieving the asset management objectives, the associated risks will be assessed before the change is implemented.

Risks will be managed within the District Municipality's risk management processes.

9.3 Outsourcing

When outsourcing any activities that have or can have an impact on the achievement of the asset management system's objectives, control over such activities will be ensured.

The control and integration into the Roads Asset Management System the activities will be determined and documented.

- a) The processes and activities that are to be outsourced (including the scope and boundaries of the outsourced processes and activities and their interfaces with the JTGDM's processes and activities).
- b) The processes and scope for the sharing of knowledge and information between the JTGDM and its contracted service provider(s), and

- c) The responsibilities and authorities within the JTGDM for managing the outsourced processes and activities.

10. PERFORMANCE EVALUATION

10.1 Monitoring, measurement, analysis and evaluation

There will be evaluation and reporting on the road asset management system including financial and non-financial performance, and its effectiveness.

The monitoring and measurement will enable to meet the requirements of 4.2.

10.2 Internal audit

Internal audits will be conducted at planned intervals to provide information to assist in the determination on whether the road asset management system:

conforms to

- a) The requirements for JTGDM road asset management system Policy
- b) Requirements of the ISO 55001 International Standard, is effectively implemented and maintained.
- c) Plan, establish, implement and maintain an audit programme(s), including the frequency, methods, responsibilities, planning requirements and reporting.
The audit programme(s) shall take into consideration the importance of the processes concerned and the results of previous audits;
- d) Define the audit criteria and scope for each audit;
- e) Select auditors and conduct audits to ensure objectivity and the impartiality of the audit process;
- f) Ensure that the results of the audits are reported to relevant management;
and
- g) Retain documented information as evidence of the results of the implementation of the audit programme and the audit results.
- h)

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10.3 Management review

The Municipality's Road asset management system will be reviewed, at planned intervals, to ensure its continuing suitability, adequacy and effectiveness.

The JTGDM management review will include consideration of:

- a) The status of actions from previous management reviews.
- b) Changes in external and internal issues that are relevant to the JTGDM's road asset management system;
- c) Information on the asset management performance, including trends in:
- d) Monitoring and measurement results, and
- e) audit results;
 - i. Asset management activities;
 - ii. Opportunities for continual improvement;
 - iii. Changes in the profile of risks and opportunities;
 - iv. Asset performance and condition.

The outputs of the management review will include decisions related to continual improvement opportunities and any need for changes (see 8.2) to the road asset management system.

Documented information as evidence of the results of management reviews will be kept.

Similarly, on a wider asset management system basis, there will be, on a regular basis:

- a) Determination and reviewal of the external and internal contexts relevant to the purpose of the road asset management system;
- b) Investigation and understanding the needs and expectations of the stakeholders, and assess the criteria for asset management decision making;
- c) Re-evaluate and clearly define which assets are within the scope of the road asset management system;
- d) Ensure that the road asset management system supports the development of road asset management plans that have specific and measurable outcomes, and provide the interface for the JTGDM strategic plan and unit-level business plans and operating plans;
- e) Review the scope of the road asset management system in terms of the above, and its interfaces with other management systems;
- f) Conduct reviews of the current asset management processes and the road asset management system and compare these against the requirements of ISO 55001, to determine the extent to which the ISO 55001 requirements are being met or whether improvements are required;
- g) Develop a plan for the continued improvement, implementation, maintenance and funding of the road asset management system, describing and providing the structures, roles and responsibilities necessary to establish and improve the road asset management system and operate it effectively.

- h) Establish appropriate and effective processes for managing the competence of persons undertaking asset management activities, including operating and maintaining the road asset management system.
- i) Determine the actions that are necessary for addressing risks and implement preventative and corrective actions for the continued improvement and operation of the road asset management system.

11. IMPROVEMENT

11.1 Nonconformity and corrective action

When a nonconformity or incident occurs, there will be:

Reaction to the nonconformity or incident, and as applicable

- a) Take action to control and correct it, and
- b) Deal with the consequences.
- c) Evaluate the need for action to eliminate the causes of the nonconformity or incident, in order that it does not occur or recur elsewhere, by
 - i. Reviewing the nonconformity or incident,
 - ii. Determining the causes of nonconformity or incident, and
 - iii. Determining if similar nonconformities exist or could potentially occur.
 - Implement any action needed.
 - Review the effectiveness of any corrective action taken; and
 - Make changes (see 6.2) to the road asset management system.

Corrective actions shall be appropriate to the effects of the nonconformity or incident encountered.

Documented information will be retained as evidence of

- a) The nature of the nonconformity or incidents and any subsequent actions
- b) taken, and the results of any corrective action.

11.2 Preventive action

Top management will have processes to identify potential nonconformities and evaluate the need for preventive action to prevent their occurrence. When a potential nonconformity is identified there will be an application of the requirements of 11.1.

11.3 Continual improvement

The suitability, adequacy and effectiveness of the road asset management system and the asset management will be improved by

- a) identifying areas of improvement
- b) Tracking outcomes and review
- c) Assess risk and manage changes

The continual improvement will be on:

- a) Continual improvement on asset portfolio
- b) Continual improvement on asset system
- c) Continual improvement on asset management



Knowledge about new asset management related and practices such as new tools and technologies technology will be acquired. This knowledge should benefit the district and be incorporated into the RAMS such as;

- a) Active participation in professional bodies and industry associations
- b) Conferences, seminars, online forums and publications
- c) Benchmarking and technology transfer initiatives.

12. Benefits

The benefits of a Road Asset Management System (RAMS) include:

- **Improved Decision-Making**
 - Enables data-driven planning, prioritization, and investment in road maintenance and rehabilitation based on condition, usage, and risk.
- **Optimized Use of Resources**
 - Helps allocate budgets more efficiently by identifying the most cost-effective maintenance strategies over the asset lifecycle.
 - **Extended Asset Life**
 - Supports preventive maintenance and timely interventions, reducing premature deterioration and extending the lifespan of roads.
 - **Enhanced Service Delivery**
 - Improves road safety, accessibility, and reliability for users, especially in rural or underserved areas.
- **Transparent and Accountable Governance**
 - Provides clear documentation and justification for infrastructure decisions, promoting trust among stakeholders and funders.
- **Compliance with Standards and Funding Requirements**
 - Aligns with national infrastructure guidelines and meets conditions for grants (e.g., RRAMS), ensuring eligibility for financial support.
- **Risk Reduction**
 - Identifies critical road segments vulnerable to failure, enabling proactive risk mitigation strategies.
- **Better Stakeholder Communication**
 - Facilitates clear reporting and engagement with stakeholders and grant funders by presenting reliable asset data.
- **Support for Sustainable Development**
 - Contributes to economic growth, social inclusion, and environmental protection by maintaining reliable transport infrastructure.
- **Continuous Improvement**
 - Enables regular performance monitoring and system updates, fostering a culture of learning and operational excellence.



13. POLICY

Asset Management System in line with the framework as set out above will deliver significant benefits to stakeholders and ensure that the institution achieves its vision, meet its objectives and is committed to ensuring that it is implemented in a sustainable manner.

The John Taolo Gaetsewe District Municipality hereby establish a **Road Asset Management System Policy** in line with its organizational strategic objectives, and hereby endorse commitment to the following:

- a) Managing the road infrastructure assets to best practice according to international standards as embodied in **ISO 55001**, and continuous compliance with the requirements of this standard.
- b) Implementing, operating, maintaining and continuously improving a suitable road asset management system that will provide relevant decision support information to guide road authorities within the jurisdiction of John Taolo Gaetsewe District Municipality.

For this purpose, it follows the requirements of the **TMH 22** standard in achieving an effective, efficient and suitable road asset management system and ensure that the system meets all legal requirements by ensuring that:

- a) The policy is documented in suitable media.
- b) **Signed by the accounting officer and approved by the council.**

14. POLICY REVIEW

This policy shall will be reviewed in the annually.

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Annexure

Appendix A- The role players and stakeholders and responsibilities in respect of the road asset management systems

Role Player	Organisation
Basic Services and Infrastructure Director	JTGDM
RRAMS Quality controller	JTGDM
Road and Planning Office	JTGDM
Professional Services	Professional Support
Roads Infrastructure Assessors	JTGDM
Software administrator	System Software
Road Authority representative	Gasegonyana LM
Road Authority representative	Ga-Magara LM
Road Authority representative	Joe Morolong LM

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