EMALAHLENI LOCAL MUNICIPALITY

ROAD MAINTENANCE POLICY

Date Adopted :

Date Revised :

Date of Implementation :

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1. ROAD MAINTENANCE POLICY

1.1 LEGISLATIVE REQUIREMENTS

The Road Management Act 2004 requires the Council in this case Emalahleni Local Municipality (the Road Authority as per section 37 (1), ii - IV) to inspect, repair and maintain Public Roads (section 40) for which it is the Road Authority.

This applies to any part of a public road which is:

- a roadway,
- a pathway,
- a road shoulder, or
- Road infrastructure, for which municipality is the Road Authority.

The municipality as the Road Authority may in terms of:

- Section 41 (1) determine the standard to which it will construct, inspect, maintain and repair its road infrastructure. In relation to inspections, it may also determine the inspection intervals.
- Section 41 (2) (c) in relation to maintenance determine the maintenance programs, the maintenance work to be performed in the course of regular maintenance and the standard to which the maintenance is to be performed;
- Section 41 (2) (d) determine in relation to the repair of defects reported or found on inspection:

(i) the matters which are to be treated as defects which require repair or a warning;

(ii) the circumstances in which intervention action is to be taken with respect to repair needs for defects;

(iii) the type of intervention action to be taken;

(iv) the period of time within which the intervention action is to be taken;

(v) the priority to be given to the intervention action.

(vi) Section 41 (3) may during the undertaking of the above actions conduct repairs, erect warning signs or reduce or remove risk

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1.2 OPERATIONAL DESCRIPTION

The Routine Road Maintenance Plan establishes key routine road maintenance practices for Council managed roads including:

- Inspections
- Defect target levels of service
- Maintenance target levels of service

1.2.1 Inspections

The municipality has to develop a systematic inspection process, including unscheduled inspections in response to the community's advice. The inspections will identify defects and key maintenance items. Defects requiring attention which will be treated in accordance with the defect table timeframes, following a risk assessment.

The maintenance items identified will be assessed, prioritised and added to maintenance works programs, to ensure that the highest risk maintenance items are attended to in order of priority, taking into account road hierarchy and traffic volume.

The municipal road section staff will report any risk or maintenance issues they may observe as they move around the municipality in the course of their work.

Municipality's inspectors will respond to urgent works generally within 48 hours of a report depending on the availability of recourses.

1.2.2 Defect & Routine Maintenance Target Levels of Service

The Service Levels have been developed taking into account the *current work, available resources and the service delivery requirements* in conjunction with the predetermined deliverables as per the municipal Service Delivery and Budget Implementation Plans (SDBIP) and the objectives of the Integrated Development Plans (IDP).

1.2.3 Emergency Works

Emergency works will among other include traffic incident management, responses to floods, storms and spillages.

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The response to emergency work shall take precedence over some of the activities planned on the Road Maintenance Programme including inspections and, may to some extent affect the timeframes set on the approved Roads Maintenance Programme. The level of response to the identified hazards shall be in accordance to the severity of the emergency and the availability of the municipality resources.

1.2.4 Two weeks Road Maintenance Programme

The municipality will through its proactive maintenance system ensure that the target levels of service are achieved, within the constraints of available resources as planned on the attached Roads Maintenance Programme which specifies that, the duration of machinery should be Two Weeks **(Annexure 3)**

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ANNUXURE 1 – ROADS SCHEDULE OF INSPECTION ACTIVITY	INSPECTION TYPE	URBAN ACCESS ROADS	RURAL ACCESS ROADS	BRIDGES	FOOTPATHS & OTHER
<u>Inspections</u> Regular inspections of the road asset to be undertaken by a suitably qualified and experienced staff to determine condition, compliance with maintenance standards and risk	(a) **Condition Assessment Inspections** are undertaken to determine the condition of an asset, its relative life and where relevant, asset renewal requirements including asset register maintenance.	Tri-annually (To be guided by Asset Register)/Asset Management Policy	Tri-annually	Twice yearly	On complaint
	(b) **Condition & Risk inspections** are undertaken to identify defects against set standards. Defects are rectified in accordance with the Table 2 -Defect Table in this document. Significant maintenance issues are also identified as part of this inspection process.	Twice yearly	Twice yearly	Twice yearly	Annually

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ANNUXURE 1 – ROADS SCHEDULE OF INSPECTION ACTIVITY	INSPECTION TYPE	URBAN ACCESS ROADS	RURAL ACCESS ROADS	BRIDGES	FOOTPATHS & OTHER
	(c) **Routine Maintenance Inspections** are undertaken in conjunction with routine maintenance patrols to determine compliance with maintenance target intervention standards set out in, and programmed in accordance with the Maintenance Program.	As per the Maintenance Program			
	(d) **Responsive inspections** are undertaken in response to community complaints/reports, office or municipal staff reports. Identified defect works are rectified in accordance with the Defect Table. Identified maintenance works are programmed in accordance with the Maintenance Programme.	When necessary			

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ANNUXURE 2 - DEFECTS TABLE

DEFECT TYPE	DESCRITION	CRITICAL LIMIT - EMEGENCY	TIMELINE OF RESPONSE
SEALED ROADS			
Potholes	These are defined as small breaks and depressions in the sealed surface where loss of pavement wearing surface has occurred.	D001 When pothole >75mm in depth and >300mm in width or rapid deterioration is likely.	
Surface Defects	Defined as rough surface caused by rutting, depressions or failed areas of pavement.	Rectify when the failed area reaches the following intervention levels a) D002 Rutting & depressions >5m2 b) D003 Broken out pavement >5m2 c) D004 Loose stones (>10mm stone) >10m2 at **intersections.**	
Edge Breaks	These are defined as fretting along the seal edge resulting reduced seal width. Usually associated with	D007. When edge break exceeds 150mm laterally, **for a 20m length.**	

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DEFECT TYPE	DESCRITION	CRITICAL LIMIT - EMEGENCY	TIMELINE OF RESPONSE
	eroded or weak shoulders in the vicinity of the bitumen edge.		
Shoulder "Drop-off"	These are defined as the result of erosion of the unsealed road shoulder adjacent to the seal edge resulting to a "drop-off" at the seal edge.	D008. When the drop off from pavement exceeds **100mm (Vert.) for a 20m length.**	
Regulatory Signs.	Covers the replacement of damaged or missing regulatory signs.	D009. Missing or illegible regulatory signs.	Community Services takes full responsibility the service.

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ANNEXURE 3 – TWO WEEKS ROADS MAINTENANCE PROGRAMME

Table 8 below presents a Maintenance Programme for the blading of un-surface roads within and under the ownership of Emalahleni Local Municipality.

TABLE 8 – DRAFT ROADS MAINTENANCE PROGRAMME – UN-SURFACE ROADS

Ward	Area (Street Name)	Distance & Comments	Type of Repairs	Resources required	Estimat.Duration (Days)	Priority Schedule	Projected start date Dates	Projected end date Dates	Actual start date Dates	Actual end date Dates	Comment on progress
	STAGE 1				STAGE 2		STAGE 3		STAGE 4		

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Ward & Township	Area (Village,Street Name)	Distance (Km)	Comments	Type of repairs	Duration (Days)	Priority Scheduling	Projected Dates	Weekday	Actual dates of completion	Comments on progress
STAGE 1						STAGE 2	STAGE 3			
				Pothole Patching/ wet blading						
				Slurry sealing						
				Blading						
				Regravelling						

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Ward & Township	Area (Village,Street Name)	Distance (Km)	Comments	Type of repairs	Duration (Days)	Priority Scheduling	Projected Dates	Weekday	Actual dates of completion	Comments on progress
Other	Eskom/Telkom orders		Every Friday		1					
	Cutting for speed humps		Every Monday		1					
	Speedhumps construction		Every Tuesday		1					

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2 STORMWATER MAINTENANCE PLAN

Technical Services Division of Emalahleni Local Municipality undertakes the function of inspecting and maintaining all the municipal owned access roads and storm-water systems within the municipal area.

Emalahleni Local Municipality Technical Services has the:

- Right of entry on any property within the jurisdictional area of Emalahleni Municipality to perform inspections (Refer to relevant existing bylaws).
- Right to question and take steps to prevent illegal activities by citizens that may lead to storm-water control and management being jeopardised and as a result causing flooding to municipal and private owned properties.

The Roads Superintendent, Supervisor or any person authorised by the Roads Superintendent of Infrastructure Development and Human Settlements Directorate of Emalahleni Local Municipality takes responsibility and management of inspections and maintenance of the components that make up the drainage system. This process also includes the removal of manmade obstructions that prohibits smooth flow of storm-water runoff.

The system is comprised of two basic categories:

- Subsurface System – Inlets or catch basins, Manholes, and Pipes
- Surface System – Drainage-ways (kerbs & gutters) and Detention Ponds

2.1 OPERATIONAL DESCRIPTION

2.1.1 Subsurface System

- Inspection of subsurface system will determine what repair or maintenance is needed.
- Inspection and cleaning will typically be performed at the same time.
- The condition of associated structures will be evaluated and the information will be reported to the Technical Manager.

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- Repairs or replacement will be scheduled and performed as required through the Municipal Technical Services.
- Removal of miscellaneous debris and sediment will be performed at the time of the inspection or will be scheduled for completion in a timely manner.

2.1.2 Surface System

- Inspection of the surface system will include functional and aesthetic needs.
- Functional maintenance is important for performance and safety reasons and aesthetic is important primarily for public acceptance of storm-water facilities.
- The removal of debris, sediment, overgrown or weedy vegetation and erosion conditions will be evaluated and corrected.
- Conditions of structures such as inlets/outlets, boxes, pipes, grate racks and spillways will be evaluated and reported to the Technical Manager if corrective action is required.
- Community services department also to assist in removal of litter on the stormwater channels.

2.2 Emergency Works

Emergency requests for assistance with drainage problems, such as flooding, on municipal and private properties will be responded to immediately.

2.3 Routine Request

In cases of a Routine Request launched by a citizen, the area shall be inspected, evaluated, and approved or denied on a case by case basis by the Technical Manager or the person duly authorised or delegated to undertake such responsibility.

2.4 Routine Maintenance Programme

Routine maintenance (inspection & maintenance) of storm-water systems will be undertaken as per the scheduled timeframes in Annexure 4 except when responding to flooding or potential areas identified to be flooded due to recent construction work or development that may lead to an increase in runoff.

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Detention ponds are fed by surface or subsurface systems and are a vital part of our flood control and water quality. These ponds are designed to include an overflow system of a box, outlet or spillway that carries water downstream in the event of excessive runoff conditions.

Inspection of the detention ponds shall be conducted annually by the Supervisor of Technical Services to determine the operational depth and the extent of silt deposition. Any de-silting or alternative activity based on the inspection results shall be undertaken within a reasonable period or before summer rainfall to prevent flooding of downstream areas. This process will also depend on the available resources and financial status of the municipality during the period.

The following activities will when necessary form part of the detention ponds maintenance:

- Check the outlets regularly for clogging and clean when necessary.
- If necessary based on surroundings, mow grass side of slopes, maximum height of 8".
- Inspect entire system including inlet/outlet pipes, animal grates and filters.
- Check banks and bottom for erosion and correct.
- Remove sediment when accumulation reaches six inches or if re-suspension is observed
- Re-seed banks with grass near inlet/outlet and stabilize eroded banks as necessary.
- Remove dead vegetation that obstructs flow.

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ANNEXURE 4 – STORMWATER SCHEDULE OF INSPECTION & MAINTENANCE

SYSTEM CATEGORIES	DESCRIPTION	INSPECTION & MAINTENANCE TYPE	FREQUENCY
Manholes (Catch-pits)	A manhole is a structure that allows access into a closed conduit. Manholes can be located in the road-way and greenbelts areas of a development.	• Inspect for damage or missing block and mortar • Inspect for debris within the structure • Typical cleaning • Problem areas as determined by the municipality shall be cleaned	Annually/after heavy rains
Closed Conduit	A closed conveyance designed to carry storm water runoff, which includes culvert, closed drains and pipes.	• Typical cleaning closed drains and pipes • Culvert cleaning • Video inspections (Future plans)	Annually & in response to blockages/ after heavy rains

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		• Problem areas as determined by the municipality shall be cleaned	
Basin Outlet Structures	Outlet structures are used to regulate storm water discharge from detention basins into receiving waterways or an offsite storm sewer system.	• Check inlets and outlets for clogging • Clean inlets and outlets as necessary. • Remove sediment if accumulation reaches 6 inches or if re-suspension is observed. • Inspect pipes to verify that the outlet is not damaged.	Annually & when necessary/after heavy rains
Catch Basins (inlets)	A below ground structure designed to collect and convey water into the storm sewer system. Catch basins can be located in roadways and greenbelt areas of a development.	Surfaces of all catch basins shall be checked for debris. • Typical cleaning. *The municipality will monitor completed developments for one year to determine how often the catch basin will need cleaning.* • Inspect for damaged or missing block and mortar.	Monthly 3 to 5 years Annually

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Gutters	Are located in paved roadways to convey storm-water in manholes, catch basins & associated inlets.	• Inspections for debris, sand, leaves and any other sediment types. • Street and kerbing sweeping • Replacement of damaged sections and kerbing.	In conjunction with Roads Maintenance Programme When required

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3 IDEAL ORGANOGRAM/PROPOSED

4 PROPOSED RESOURCE VS AVAILABLE

5 CAPITAL COSTS REQUIREMENTS

6 ENVISAGED COSTS OF ROADS & STORMWATER MAINTENANCE

EFFECTIVE DATE

This Policy shall be effective on the date of approval by Council.

Signed by Municipal Manager and Speaker.

DR SW VATALA
MUNICIPAL MANAGER

30/06/2017
Date

CLLR DS KALOLO
HON. SPEAKER