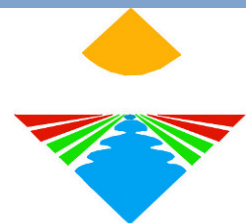


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# **Road Inspection Guidance Manual**



**Mildura Rural City Council**

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# Mildura Rural City Council Inspections Guidance Manual

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## 1.0 Introduction

The **Mildura Rural City Municipal Road Management Plan (RMP)** is the statutory plan under the Road Management Act 2004 that sets out the maintenance regime for management of the municipal road network for the Rural City of Mildura. It establishes the management system for Council to inspect, maintain and repair its public roads based on policy and operational objectives having regard to available resources.

The **Road Asset Management Plan (R-AMP)** covers the road network asset group that includes road pavements, footpaths, kerb & channel, bridges, laneways and car parks. It sets out how the road asset group will be managed in by Mildura Rural City Council and includes life-cycle costing forecasts into the future. The R-AMP complements the RMP by providing the background information for it. These two Plans are key elements of Council's strategic road management planning.

The RMP also sets the relevant standard in relation to discharge of duties in the performance of those road maintenance management functions.

The key elements of the Road Management Plan include:

- Register of Public Roads for which Council is responsible;
- Asset Management System that Council uses to manage maintenance and renewals of its public road network;
- Road Inspection Guidance Manual <sup>(this document)</sup> that details maintenance standards and practices used by Council.

## 2.0 Inspection Regime

For footpaths, the maintenance assessment is determined by size of tripping hazards, slipperiness, unevenness and the location of the defect in terms of its asset hierarchy classification. Hierarchy itself will be determined by function, types of users and user numbers.

For roads, the risk assessment is determined by the size of various modes of failure and hierarchy classification of the location.

To facilitate this, the field inspection recording process will involve the use of GPS enabled Notebook Computers running Amis PRO software which utilise the risk assessment process to determine level of a defect's safety risk as it recorded.

Once the data has been recorded at the end of each week's round of inspections, the priority works are reviewed, remedial works program developed and incorporated into the weekly maintenance program via "Works Orders" to relevant works team.

Any major works identified are listed for inclusion on future capital works programs.

Any urgent maintenance works are detailed on a "Works Order" to make temporary repairs and/or erect warning signs and/or barricading on the same day and then referred to works crews for action on the following and subsequent workdays

## 3.0 System Procedure and Security

3.1  
The Asset Inspection Team of the MRCC is to carry out the Inspection Service for Council Assets under its control. The service will adhere and conduct inspections in accordance with The Municipal Road Management Plan.

3.2  
Each member of staff required to carry out inspections and/or to administer the inspection system and the issuing and managing of work, must be defined within the 'AMIS PRO' system. Security shall be maintained by allocating each Inspector/Team Leader/Manager, a Username login based upon their initials, together with an appropriate and unique password.  
The combination of name and log-in details is also used to determine which Inspector carried out an inspection and how the results were entered into the system, either manually or electronically.

## 4.0 Inspection Arrangements

4.1  
Where a location/section/inspection type requires two members of staff, then the responsibility for the inspection is to be taken by one person defined as 'The Inspector' and the second acting as the Assistant or '2nd Inspector'. On occasions where only one person is involved, then that person shall be deemed 'The Inspector'.

4.2  
Any inspections carried out by observations from a car may require two members of staff, with the passenger/observer defined as 'The Inspector' and the driver as the Assistant. Inspections carried out on foot may generally only require one person, designated as 'The Inspector'. However, any road section where there is a combination of car travel and walking and/or where there are walked inspections with footpaths on either side of the carriageway, an 'Assistant' may be required.

4.3  
The footpath inspections may be carried out on Foot or via "Gopher" motorised cart.

4.4  
Rural shared pathways adjacent to roadways may: -  
a) Be inspected at the same time as the adjacent roadway inspection  
(Thus sometimes receiving an increased frequency of inspection)

And;

b) Have the same safety defect standards as those defined for the unsealed or crusherdust footways.

4.5  
Unsealed or crusherdust bike paths inspections are carried out from a car during the same inspection as the adjacent carriageway, by foot, gopher or bicycle pending location.  
During inspections, there shall inevitably be occasions when parked vehicles obstruct the view of the footway. If, in the opinion of the Inspector, the hidden footway is prone to damage or has other relevant importance ie. elderly persons' home, a school etc. in close proximity, then the inspection of that area of footway shall be undertaken on foot.

#### 4.6

Night inspections are to be carried out in accordance to the inspection roster and are to be recorded as a "Night Inspection".

#### 4.7

All inspections (Day or Night) are to be carried out at a speed so as to be able to see all defects or hazards.

#### 4.8

Public Inquiry's are to be actioned by the appropriate Team Leader within 48 hours of the inquiry being reported.

## 5.0 Required Actions

### 5.1

When a defect or condition is recorded, it is categorised according to the urgency with which repair works shall be carried out. The action to be taken is categorised as follows: -

#### a) Category 1 (Safety)

This category is reserved for defects that are likely to represent imminent danger to road users. Defects recorded as a Category 1 require some form of action to be taken within 48 hours; either permanent and/or temporary. This could include the erection of warning signs for example. If a Temporary action is recorded, there must also be a Permanent action to accompany it. Defect Intervention Levels are as stated in Maintenance Service Level Agreement;

#### b) Category 2 (Routine Maintenance)

This category is used for less urgent repairs. Defects recorded as a Category 2 are to be recorded as Normal Routine Maintenance (Normal) Inspection. It is intended primarily for use when creating a planned routine maintenance program of work over a greater period of time. Defect Intervention Levels are as stated in Maintenance Service Level Agreement;

### 5.2

Having categorised the defectiveness, a course of action shall be proposed by the Inspector. Three possible courses are available although, in practice, a combination of options could be used: -

#### i) Immediate Action

Only used for 'Category 1' Safety defects/hazards.

It is an action taken which takes place at the time of the inspection and may not necessarily be a repair. For example, the marking of a defect;

#### ii) Temporary Action

This is also only used for 'Category 1' Safety defects/hazards. It is an action that can be used to temporarily make safe a defect or warn users of a potential hazard i.e. the erection of suitable signing. Once recorded, the inspection software notes the date and time and the Management System shall allocate a repair time of 48 hours. NB - a Temporary action must always have a Permanent action to accompany it;

#### iii) Permanent Action

This is used to make a full repair ie. a 'permanent' repair. It is available for use with either '1' or '2' categories. The 'repair due for completion' period shall be dependent upon whether a

Temporary action has also been recorded against a defect. If it has, then the completion timescale shall be as stated in the 'Service Level Agreement'.

### 5.3

On finding 'Category 1' and '2' defect conditions, the Inspector shall mark them if they relate to the surface of the carriageway or footway. Paint must be used for marking, unless the area concerned is of special quality paving, and in these circumstances, crayon or similar is to be used.

### 5.4

All 'Category 1' defects shall be notified to the relevant Team Leader as soon as is practicable. This notification is recorded as an 'Immediate' action. Extremely hazardous defects e.g. a missing manhole cover, shall not be left by the Inspector who must notify the relevant Team Leader and either wait until emergency help arrives, or where appropriate, sign and barricade the defect to make safe.

### 5.5

Any request for IMS Staff to attend Road Traffic Incidents, either within during Normal Routine Maintenance Inspections or Out Of Hours, all details of the incident shall be recorded in the inspection software (Amis PRO).

### 5.6

In certain circumstances, it is unlikely or impracticable for a Safety hazard to be permanently repaired within 48 hours of it being found. In such cases a 'Temporary' action is to be recorded to temporarily make safe the defect (EM- Emergency Callout). This is to be followed, where appropriate, by a 'Permanent' action. This approach permits a full repair of the defect to be deferred for up to the maximum intervention time as stated in the 'Service Level Agreement'.

### 5.7

When carrying out an inspection(s), the Inspector / Team Leader shall highlight and advise of matters which, while not requiring attention under Routine maintenance works, will nevertheless need some form of additional investigation eg. a structural visual inspection. Matters of this type shall be recorded under the appropriate activity and be forwarded to the Manager Works and Infrastructure Services for review, giving as much additional information as possible.

## 6.0 Inspectorate

### 6.1

Inspectors shall be suitably experienced and competent to carry out the tasks of roadway and footpath inspections as described in this manual. They shall have a good working knowledge of relevant inspection procedures; safety requirements; highway materials and construction, together with knowledge for the use of appropriate inspection equipment and software.

They shall also be conversant with the-

- Australian Standard 1742 Part 3 – 2009 Traffic Control Devices for Works on Roads
- VicRoads OPS NOTE 005.92 Document: Permitted Variation 91/2 to AS1742.3. section 4 Multi Message Signs
- Occupational Health & Safety Act 2004
- First Aid Level 2
- Traffic Management Certificate

### 6.2

Inspectors shall carry out inspections in a uniform manner and to a uniform standard across the municipality. This is particularly important when deciding on a suitable category and treatment of repair for the defect or observation. If the parties responsible for the issue and/or repair of the works consider that the selection of



any item or treatment code is incorrect, then full details of the correct information shall be passed to the Inspecting teams for future reference eg: signage changes.

## 7.0 Defect & Condition Definitions and Treatments

### 7.1

An Inspector shall provide a good description of the location for every item recorded, in such detail so as to ensure all other parties involved can locate its position. Due to the limited size of the 'Location Description' field, any abbreviations used must be readily understood.

### 7.2

Treatments identified shall be those as specified in the Municipal Road Management Plan'.

### 7.3

Ad-hoc patching in small quantities (Category 2's) shall have Defect Code, EG: RM02-Pothole <300mm recorded for minor carriageway repairs and code F07-Footpath depression for minor footway repairs.

### 7.4

Every effort is to be made to assign the appropriate treatments to the recorded defects and conditions.

### 7.5

If Safety defects (Category 1's) are found the day before any weekend or Public holiday, an emergency code (EM-immediate action) should be recorded. The inspector shall notify the relevant Team Leader to ensure that the defect is made safe/repared and not left until after the holiday period (as per item 5.4).

## 8.0 Inspection Data

### 8.1

All Roadway and Footpath inspection data files shall be validated to ensure that links/sections and describing codes ('Activities/Defects/Treatments') are correct before being transmitted to the designated network server. The files shall be synchronised into the AMIS PRO database on a daily basis.

### 8.2

From the inspection data filename, it should be possible to ascertain the identity of the Inspector, date and type of inspection and the Area inspected.

### 8.3

Normal Routine Maintenance (NRM) inspection data files shall be sent to the designated network server before 10.00 a.m. for each working day following the inspection (where practicable). From this location, the files are loaded into AMIS. Any un-scheduled inspection files (eg. 'Team Leader's Random Inspections') received on a daily basis shall also be treated and loaded in the same way.

### 8.4

Data files for all inspection types are the responsibility of the organisation carrying out the inspection and shall be suitably stored, unaltered for a period of six years and, if required, made available for authorised use as and when required.



## 9.0 Site Risk Analysis

Attention to the safe and efficient movement of traffic around or through a work site will enhance employee safety. It should be noted that failure to correctly apply the principals of Traffic Management could result in death or serious injury to **YOU**, the employee, and/or other staff and road users.

In addition to recording a defect, the inspector shall also identify the Site Risk Rating by including the following information:

- The traffic volume or Road Classification at the location of the Defect
- The distance between the works and passing traffic
- The posted speed limit of the site.

The Site Risk Rating can then be established from the matrix shown below.

The inspector may nominate a generic traffic management plan from the MRCC Work Site Traffic Management booklet to assist the planning of the works.

**SITE RISK RATING FOR SHORT / LONG TERM WORKS**

MRCC Hierarchy Category	Clearance between Traffic and Workers				
	<1.2m	1.2m -3.0m	3.0m - 6.0m	6.0m - 9.0m	> 9.0m
<b>40 km/h</b>					
MRCC Local – Unmade & Unsealed	L	L	L	L	L
MRCC Local – Sealed	L	L	L	L	L
MRCC Collector – Sealed & Unsealed	L	L	L	L	L
MRCC Link Road – Sealed	H	L	L	L	L
<b>50 km/h</b>					
MRCC Local – Unmade & Unsealed	L	L	L	L	L
MRCC Local – Sealed	L	L	L	L	L
MRCC Collector – Sealed & Unsealed	H	L	L	L	L
MRCC Link Road – Sealed	H	L	L	L	L
<b>60 km/h or 70 km/h</b>					
MRCC Local – Unmade & Unsealed	H	L	L	L	L
MRCC Local – Sealed	H	L	L	L	L
MRCC Collector – Sealed & Unsealed	H	L	L	L	L
MRCC Link Road – Sealed	H	H	L	L	L
Vic Roads Arterial Road	H	H	H	L	L
<b>80 km/h or 90 km/h</b>					
MRCC Local – Unmade & Unsealed	H	H	H	L	L
MRCC Local – Sealed	H	H	H	L	L
MRCC Collector – Sealed & Unsealed	H	H	H	L	L
MRCC Link Road – Sealed	H	H	H	H	L
Vic Roads Arterial Road	H	H	H	H	L
<b>100 km/h or 110 km/h</b>					
MRCC Local – Unmade & Unsealed	H	H	H	H	L
MRCC Low Worksite Hazard Rating	H	H	H	H	L
MRCC Collector – Sealed & Unsealed	H	H	H	H	L
MRCC Link Road – Sealed	H	H	H	H	L
Vic Roads Arterial Road	H	H	H	H	L
L	Low Worksite Hazard Rating				
H	High Worksite Hazard Rating				

### Notes:

For very short-term works, a lookout person may be required  
 Local Road Sealed & Unsealed- (Single Multi Message Only)  
 Collector Road Unsealed - ((Single Multi Message Only)  
 Sealed Collector & Link Roads - (Double Multi Message Signage required)  
 VicRoads Arterial Road (Double Multi Message Signage required)

## 10.0 General Guidance for 'Category 1' Safety Defects

The following types of defects shall be reported if observed: -

### CARRIAGEWAY DEFECTS

- Potholes, stripping and other defects in the traffic lane of a sealed pavement greater than 100 mm deep and greater than 300mm in diameter or in the traffic lane of an unsealed pavement greater than 150mm deep and 500mm diameter;
- Deformations greater than 100mm under a 3m straight edge;
- Local Edge Deterioration where the difference in level is 100mm or greater over a 20m length;
- Collapsed manholes, missing covers, grates and broken side entry pit lids where there is a danger to the passing traffic or pedestrians;
- Regulation of wheel ruts and depressions where the difference in level is >100mm deep measured with a 1.2m straightedge;
- Where standing water covers more than half the carriageway;
- Mud, debris and any slippery fluid/substance of significant amounts on the carriageway which create a danger;
- Fallen trees or other wind blown debris creating a dangerous obstruction;
- Unmanned collapsed or inadequately guarded excavations which are a danger to the highway user (vehicles, cyclists and/or pedestrians);

### FOOTWAY AND KERBING DEFECTS

- Cracked, broken or uneven paving slabs or other defects which result in a trip hazard of 50mm or greater;
- Potholes greater than 50mm;
- Reinstatement's and unfilled gaps between footpath slabs 50mm or greater;
- Mis-aligned, broken or missing kerbs causing a trip hazard of 50mm or greater;
- Overgrown and overhanging vegetation or an obstruction causing users to deviate into the carriageway;
- Fallen trees and wind blown debris creating a dangerous obstruction/slippery surface;
- Standing water more than 10mm deep which restricts the footway width to less than 0.5m or is likely to cause pedestrians to use the adjacent carriageway.

### MISCELLANEOUS DEFECTS

- Signs which have fallen into the roadway or are in an unsafe condition;
- Dirty, obscured or missing regulatory and hazard signs;
- Road markings worn by 75% or more at junctions;
- Damage to highway structures (bridges, culverts, retaining walls) and other furniture (safety fences, bus shelters, pedestrian guardrail, bollards) which results in either an obstruction of the highway or a danger to the public (eg. missing parapets, damaged projecting parts etc);
- Missing RPM's and road side delineators at a critical location on Sealed Link and Collector Roads;
- Visibility (sight vision) obstructed due to overgrown vegetation;

In addition, the following items shall be reported if observed and considered a safety hazard: -

- Completely or nearly (75% or greater) blocked pits, pipes and obstructed channels and "V" drains;
- Drift Sand encroaching on roadway;

## 11.0 General Guidance for 'Category 2' (General Maintenance) Conditions

11.1  
Condition items recorded under this category are to be used for the purposes of Routine Maintenance rather than to establish the overall structural condition.

11.2  
The following areas of 'Category 2' conditions shall be reported where observed: -

### CARRIAGEWAY

- Potholes, stripping and other defects in the traffic lane of a sealed pavement less than 100 mm deep and 300mm in diameter or in the traffic lane of an unsealed pavement less than 150mm deep and 500mm diameter;
- Deformations greater than 40mm and less than 100mm under a 3m straight edge;
- Localised Edge Deterioration where the differences in level are greater than 50mm but less than 100mm over a 20m length;
- Regulation of wheel ruts and depressions where the difference in level is >25mm and <100mm deep measured with a 1.2m straightedge;
- Major cracking (patch before potholes form);
- Slurry or mud other than that stated as a safety issue;

### FOOTWAY AND KERBING

- Cracked, broken or uneven paving slabs or other defects which result in a trip hazard of >10mm and <50mm
- Potholes greater than 10mm and less than 50mm;
- Reinstatement's and unfilled gaps between footpath slabs >10 and <50mm
- Mis-aligned, broken or missing kerbs causing a trip hazard of >20mm and <50mm
- Extensive local cracking affecting the major part of the surface;
- Loss of material (fretting) from an existing area of patching;
- Rocking footpath slabs;
- Kerb/channel vertical projection greater than 50mm;
- Overgrown vegetation causing severe damage to paved surface;
- Overhanging vegetation causing pedestrians to divert from their path;

### MISCELLANEOUS ITEMS

- Dirty, obscured or missing traffic signs other than the types identified for Safety defects;
- Poor/non-existent reflectivity of mandatory and directional signs;
- Damage to sign post;
- Blocked pits & pipes of between 50% and 75%, blocked and obstructed channels and "V" drains;
- Cracked/broken covers in heavily trafficked areas that are deemed safe;
- Visibility restricted due to overgrown vegetation;
- Dead/dying branch – report for specialist tree inspection;
- Missing RPM's and road side delineators on Sealed Link and Collector Roads;
- Offensive Graffiti;
- Road markings worn by 75% or more.

# APPENDICES

## Appendix '1' – Maintenance Intervention Levels

Routine Maintenance Criteria				
Defect Description	Hierarchy	Category	Maintenance Criteria	Response Time
<b>SEALED PAVEMENT</b>				
<b>POTHOLE PATCHING</b> Treatment of isolated failed pavement areas <0.25 m <sup>2</sup>	Link & Collector	1	1: Potholes in sealed pavement >300mm in diameter and >100mm deep  2: Repair all potholes	48 Hours
		2		180 Days
	Local	1		48 Hours
		2		180 Days
	Laneways	1		48 Hours
		2		365 Days
	Car Parks	1		48 Hours
		2		365 Days
<b>REGULATION OF WHEEL RUTS AND DEPRESSIONS</b> Depressed or rutted areas of pavement <5 m <sup>2</sup> .	Link & Collector	1	1: All ruts or depressions >100mm depth measured with 1.2 m straightedge transverse, or under a 3 m straightedge longitudinal  2: All ruts or depressions >40 mm and <100mm depth measured with 1.2 m straightedge transverse, or under a 3 m straightedge longitudinal	14 Days
		2		180 Days
	Local	1		14 Days
		2		180 Days
	Laneways	1		14 Days
		2		365 Days
	Car Parks	1		14 Days
		2		365 Days
<b>CRACK SEALING</b> Filling of cracks and joints, excluding "crocodile" cracking,	Link & Collector	All	Any Longitudinal cracking >2m in length and >=5mm in width Any Transverse cracking >2m in length and >=5mm in width	365 Days
	Local			365 Days
	Laneways			365 Days
	Car Parks			365 Days
<b>SURFACE TREATMENT</b> Areas of pavement <25 m <sup>2</sup> with: (a) Loss of aggregate (b) Bleeding or flushing (c) Extensive or "crocodile" cracking	Link & Collector	All	(a) stripping (>50% loss of aggregate for an area >5 m <sup>2</sup> ) (b) bleeding/flushing for an area >50 m <sup>2</sup> (c) all "crocodile" cracking	365 Days
	Local			365 Days
	Laneways			365 Days
	Car Parks			365 Days
<b>PAVEMENT CLEANING</b> Cleaning of pavement including intersections, kerbs and channels to remove debris which is a danger to traffic or pedestrians or prevents the free drainage of the pavement.	Link & Collector	1	1: When fallen debris, slippery substances, accumulation of granular material, ponding of water or any other obstacle becomes a danger to traffic or pedestrians  2: When accumulation of aggregate, dirt or debris prevents the free drainage of the pavement	48 Hours
		2		180 Days
	Local	1		48 Hours
		2		180 Days
	Laneways	1		48 Hours
		2		365 Days
	Car Parks	1		48 Hours
		2		365 Days
<b>EDGE REPAIR</b> Repair of broken edges of seal to line and level to maintain nominal sealed width.	Link & Collector	1	1: When edge break exceeds 150mm laterally over at least a 1 m length from the nominal seal line  2: When edge break >75mm and <150mm laterally over at least a 1 m length from the nominal seal line	48 Hours
		2		180 Days
	Local	1		48 Hours
		2		180 Days
	Laneways	1		48 Hours
		2		365 Days
	Car Parks	1		48 Hours
		2		365 Days
<b>DEFORMATION</b> Treatment of isolated failed pavement areas between 0.25 m <sup>2</sup> and 30 m <sup>2</sup> in area and segment deformation >40mm	Link & Collector	All	All failed areas	180 Days
	Local			180 Days
	Laneways			365 Days
	Car Parks			365 Days



<b>UNSEALED PAVEMENT</b>				
<b>UNSEALED SHOULDER</b> (a) drop off from edge of seal to shoulder; (b) roughness, scouring or potholes; (c) holding of water.	Link & Collector	1	1: Drop off /Build-up >100mm depth measured over a 20 m length. 2: Drop off >50mm and <100mm depth measured over a 20 m length. 2:Potholes, scouring or roughness >75 mm depth measured with a 1.2 m straightedge, or when there is holding of water	48 Hours
		2		180 Days
	Local	1		48 Hours
		2		365 Days
<b>UNSEALED ROAD</b> Spot gravelling, pothole repair, grading or reshaping.	Link & Collector	1	1: Pothole In the traffic lane >500mm diameter and >150mm deep 2: Potholes, scouring or roughness >50 mm in depth and <150mm in depth measured with 1.2 m straightedge 2: Continuous corrugations over 20 m exceeding 40 mm in depth	48 Hours
		2		180 Days
	Local	1		48 Hours
		2		365 Days
	Car Parks	1		48 Hours
		2		365 Days
<b>DRAINAGE</b>				
<b>SURFACE DRAINS AND VERGES</b> Cleaning and reshaping to maintain flow of water and protect road and roadside from scour	Link & Collector	All	When there is, or is likely to be, ponding of water or scouring	180 Days
	Local			
<b>SUBSURFACE DRAINS</b> Cleaning of outlets and pits to maintain flow of water	Link & Collector	All	When debris inhibits free flow	180 Days
	Local			
	Car Parks			
<b>CULVERT AND PIT CLEANING AND STORM WATER DRAINS</b> Cleaning of culverts, pits and stormwater drains to maintain flow of water	Link & Collector	All	When debris inhibits free flow	180 Days
	Local			
	Car Parks			
<b>CULVERT AND PIT REPAIR</b> Repair or replacement of damaged culverts, pits, surrounds, grates, lids or lintels and headwalls	Link & Collector	1	1:Damaged or missing drainage pit lids, surrounds, grates, in pedestrian areas or traffic lanes 2:When culvert or pit becomes non-functional	48 Hours
		2		180 Days
	Local	1		48 Hours
		2		180 Days
	Car Parks	1		48 Hours
		2		365 Days
<b>KERB AND CHANNEL</b> Cleaning to maintain flow of water	Link & Collector	All	When debris inhibits free flow	180 Days
	Local			365 Days
	Laneways			365 Days
	Car Parks			365 Days
<b>DRAINAGE BASINS</b> Minor repairs of scouring on batters, slashing, mowing and weed control. Maintenance of all depth markers and warning signs.	All	All	Any scour depth >300mm Maintain vegetation height to max. 300mm Replace damaged or vandalised signs	180 Days
<b>GROSS POLUTANT TRAPS</b> This activity covers the routine inspection and cleaning of GPT's and litter baskets to ensure the GPT continues to operate as designed	All	All	When debris inhibits free flow	180 Days
<b>VEGETATION</b>				
<b>GRASS MOWING SEALED</b> Mowing of roadside areas, maintain sight distance, reduce fire hazard and maintain a tidy appearance	Link & Collector	All	To maintain sight distance of 30 m in advance of all road approaches and departures. 3 m behind the line of guideposts (If Allowable). Where there are no guideposts mowing shall be to a width of 5m from the edge of pavement, if practicable. Maintain grass length to a maximum 300 mm.	180 Days
	Local			365 Days
<b>GRASS MOWING UNSEALED</b> Mowing of roadside areas, maintain sight distance, reduce fire hazard and maintain a tidy appearance	Link & Collector	All	To maintain sight distance of 30 m in advance of all road approaches and departures. 3 m behind the line of guideposts (If Allowable). Where there are no guideposts mowing shall be to a width of 5m from the edge of pavement, if practicable. Maintain grass length to a maximum 300 mm.	180 Days
	Local			365 Days
<b>EDGE TRIMMING</b> Trimming of grass clear of kerbs or seal to maintain drainage and appearance	Link & Collector	All	All growth 100 mm forward of back of kerb or seal.	180 Days
	Local			365 Days
<b>GRASS AND WEED CONTROL</b> Control of vegetation growth, including around road furniture, on paving over kerb and channel, on traffic islands and on the road pavement.	Link & Collector	All	Grass and weeds that restrict intersection sight distance or obscure safety signs.	180 Days
	Local		Maintain grass length to a maximum 300 mm	365 Days
<b>TREE AND SHRUB MANAGEMENT</b>	Link & Collector	1	1: Tree limbs or trees that are in immediate danger of falling and causing a danger to the public	48 Hours

Maintenance of roadside areas, including brush cutting, foliage trimming and removal of vegetation.	Local	2	1: Trees and shrubs which restrict intersection sight distance or obscure safety signs, or intrude into clearance envelope over trafficable areas of roads and paths 2: Cut and remove new tree and shrub growth within drains, clear zones, the shoulder and verge. 2: Trim trees to maintain: Minimum 1 metre from back edge of shoulder and/or kerb; Minimum 4.9 metre height clearance over shoulders and pavements. Minimum 2.4 metre height clearance over footpaths	180 Days					
		1		48 Hours					
		2		365 Days					
	Car Parks	1		48 Hours					
		2		365 Days					
<b>ROAD FURNITURE</b>									
SIGN REPAIR Repair, re-erection and cleaning of signs, including supports.	Link & Collector	1	1: Any sign or support damage which is a hazard to the public. 1: Regulatory and Warning signs missing or damaged at a critical location 2: Straighten signposts when more than 5 degrees off vertical, or replace when damage renders ineffective. 2: Clean sign and delineator faces when reflectivity is reduced due to accumulation of dirt.	48 Hours					
		2		180 Days					
	Local	1		48 Hours					
		2		180 Days					
	Car Parks	1		48 Hours					
		2		365 Days					
GUARD FENCE AND WIRE ROPE SAFETY BARRIER If defined as MRCC responsibility. Realignment, repair or replacement of isolated guard fence < = 15 m/section, including terminal sections, posts, rails and cleaning of delineators.	Link & Collector	1	1: Missing or damaged at a critical location making them substantially ineffective 2: Defective guardrail, posts and hardware	30 Days					
		2		180 Days					
	Local	1		30 Days					
		2		365 Days					
	Link & Collector	1		1: Guideposts missing or damaged at a critical location 1: Functional requirements not met 1: Not visible from 150 metres at night, on low beam 2: Missing, bent or damaged guidepost, marker post or delineator	30 Days				
		2			180 Days				
Local	1	30 Days							
	2	365 Days							
<b>FOOTPATHS</b>									
SEALED / OTHER PAVED AREAS Replacement, repair or regulation of defective paved areas <2 m <sup>2</sup> .	All	1	1: Defective pedestrian areas on islands, footpaths and bicycle/shared paths with a step >50mm 1: Reinstatement's and unfilled gaps between footpath slabs 50mm or greater 2: Defective pedestrian areas on islands, footpaths and bicycle/shared paths with a step >10mm and <50mm 2: Reinstatement's and unfilled gaps between footpath slabs >10mm and <50mm		180 Days				
		2		365 Days					
		UNSEALED PATHS		1	1: Pothole >150mm in depth 2: Pothole >50mm & <150mm in depth and >300mm in diameter 1: Washout/Scouring >150mm in depth 2: Washout/Scouring >50mm & <150mm in depth and >300mm in width	48 Hours			
				2		365 Days			
				KERB AND CHANNEL Maintenance of all concrete kerb and channel adjacent to the carriageway		Link & Collector	All	>50mm step or misalignment	180 Days
						Local		Depression >100mm over 1200mm length	365 Days
Car Parks	365 Days								
<b>EMERGENCY</b>									
EMERGENCY CALLOUT Repair of any defects presenting a hazard to the public.	All	All	Any defect presenting a hazard to the public.	3 Hours					



## Appendix '2' – Activity, Defect, System and Bill of Quantity Codes

Maintenance Activity	Defect Code & Description	Treatment Code & Description	Bill Of Quantity Item	Unit
EM- Emergency Callout	E01-Flood	EM01-Emergency callout, response & repair	Crew response (normal hours)	HOURS
	E02-Fires		Crew response (out of hours)	HOURS
	E03-Loose surface		Oil absorbent	BAG
	E04-Traffic accident		Single response (normal hours)	HOURS
	E05-Oil spill		Single response (out of hours)	HOURS
	E06-Rain storm		Temp repair	ITEM
	E07-Wind storm		Temp signs	ITEM
	E08-Dust storm		VicRoads request	ITEM
	E09-Grape spill			
	E10-Water over road			
	E11-Other			
	E12-VicRoads Request			

SL-Roadside Slashing	S01-Roadside slashing	SL01-Roadside slashing	Slashing of council land	HOURS
	S03-Slashing of council land	SL04-Temporary repair	Roadside slashing	LIN.M

BS-Bitumen Services	B01-Bitumen services	BS01-Reseal	10mm stone	SQ.M
		BS02-Primer Seal	14mm stone	SQ.M
		BS03-Prime	5mm stone	SQ.M
		BS04-Pin down	7mm stone	SQ.M
		BS05-After care signage	Erect aftercare sign	ITEM
		BS06-Repair of loose surface	Post Sweeping	SQ.M
			Pre sweeping	SQ.M
			Prime	SQ.M
		Removal aftercare sign	ITEM	

MG-Maintenance Grading	G01-Failure "blow out" subgrade >25sqm	MG01-Maintenance grading	MG - Grading of unsealed roads	LIN.M
	G02-Pothole in carriageway	MG04-No action	MG - Resheeting specific	LIN.M
	G03-Wash out erosion >75mm	MG05-Grading – shoulders	MG - Maintenance gravel patching	LIN.M
	G04-Corrugation to surface	MG06-Raise Pavement	MG - Grading of Shoulders	LIN.M
	G05-Drop-off >100mm and <300m	MG07-Cut Spoon Drain	MG - Reconstruction gravel shoulders	LIN.M
	G06-Drop-off >100mm and >300m	MG08-Cut V Drain	MG - Grading of unsealed bike paths	LIN.M
	G07-Scouring on batters >5m long		MG - Sweeping of carriageway	LIN.M
	G08-Pothole on shoulders		MG - Sweeping of intersection	SQ.M
	G09-Property access		MG - Corrugation > 80mm	LIN.M
	G10-Sand drift		MG - Pothole > 80mm	SQ.M
	G11-Unsealed bike track		MG - Skid steer truck crew	HOURS
	G12-Grass/Buildup > 100mm		MG - Grading of Unsealed Roads 2	LIN.M
	G13-Scouring on shoulders > 5 meters		MG - Grading of Unsealed Roads 3	LIN.M
	G14-Water over road		MG - Grading of Unsealed Roads 4	LIN.M
			MG - Grading of Unsealed Roads 5	LIN.M
		MG - Grading of Unsealed Roads 6	LIN.M	
		MG - Grading of Unsealed Roads 7	LIN.M	
		MG - Skidsteer	HOURS	



<b>Maintenance Activity</b>	<b>Defect Code &amp; Description</b>	<b>Treatment Code &amp; Description</b>	<b>Bill Of Quantity Item</b>	<b>Unit</b>
<b>DR-Drainage</b>	D01-Blocked drain council property	DR01-Pit clearing / cleaning	DR - GPT cleaning	ITEM
	D02-Stepping in jointing, scour	DR23-Drainage cleaning	DR - Construct junction pit	ITEM
	D03-GPT - Blocked	DR04-Minor repair - lined drains	DR - Gatic lid	ITEM
	D07-Damaged pits	DR06-GPT - cleaning	DR - Top of pit h/d gatic lid	ITEM
	D08-Damaged surrounds	DR10-Pits - Repair	DR - Const side entry pit	ITEM
	D09-Damaged grates	DR12-Surrounds - Repair	DR - Replace grate	ITEM
	D10-Damaged lids	DR14-Grates - Repair	DR - Side entry pit lid	ITEM
	D11-Damaged lintels	DR16-Lids - Repair	DR - Mtce to pipe, pits& rising mains	HOURS
	D12-Missing grates	DR18-Lintels - Repair	DR - Hire of equip jet / vac	HOURS
	D13-Missing lids	DR01-Pit clearing / cleaning	DR - Reinstate nature strip	SQ.M
	D14-Missing lintels	DR23-Drainage cleaning	DR - Open storm water ch clean out	LIN.M
	D15-Blocked drain private property	DR02-Cyclic mtce pit / drain cleaning	DR - Side entry pit cleaning	HOURS
	D16-Cyclic mtce pit / drain cleaning	DR05-Dr rising main mtce / repair	DR - Replace pit lid	ITEM
	D18-Dr rising main mtce / repair	DR22-Side entry pit cleaning	DR - Replace/Fix pit lid & surround	ITEM
	D19-Side entry pit mtce		DR - Skidsteer	HOURS
	D20-SEP lid damaged			
	D21-SEP & surrounds damaged			
ND99-No Defect				

<b>FP-Footpath Maintenance</b>	<b>Defect Code &amp; Description</b>	<b>Treatment Code &amp; Description</b>	<b>Bill Of Quantity Item</b>	<b>Unit</b>
<b>FP-Footpath Maintenance</b>	F01-Traffic Isl - damaged kerbing	FP01-Footpah repair and maintenance	FP- Grinding	LIN.M
	F02-Traffic Isl - steps / misalignment	FP02-Footpath construction	FP - Reconstr fp (75mm thick) < 10m	SQ.M
	F03-Footpath damaged	FP03-Footpath - vegetation	FP - Recon. fp vehicle xing(150mm thick)	SQ.M
	F04-Footpath concrete 10-40mm step		FP - Reconstr pram xing & links	ITEM
	F05-Footpath sealed 10-40mm step		FP - Reconstr paved fp & areas	SQ.M
	F06-Footpath paved 10-40mm step		FP - Reinstate sprinkler systems	ITEM
	F07-Footpath depression		FP - Resurface rd surf cold mix	SQ.M
	F08-Footpath unsealed		FP - Resurface rd surf asphalt	SQ.M
	F09-Footpath pram xing damaged		FP - Resurface rd surf jetpacher	SQ.M
	F10-Footpath DDA access damaged		FP - Advise other authorities	ITEM
	F11-Footpath vehicle access damaged		FP - Grind pit lid	ITEM
	F12-Footpath - loose surface		FP - Skidsteer	HOURS
	F13-Footpath - tree 4.9m canopy ov traffic			
	F14-Footpath - tree 2.4m canopy ov traffic			
	F15-Footpath cracking			
	F16-Footpath - slipperiness			
	F17-Footpath - tree (private)			
ND99-No Defect				

<b>KC-Kerb &amp; Channel</b>	<b>Defect Code &amp; Description</b>	<b>Treatment Code &amp; Description</b>	<b>Bill Of Quantity Item</b>	<b>Unit</b>
<b>KC-Kerb &amp; Channel</b>	K01-K&C damaged	KC01-K&C repair or replacement	KC- Recon. barrier kerb	LIN.M
	K05-K&C >50mm step		KC - Recon. of semi-mountable kerb	LIN.M
	K09-K&C Depression >100mm over 1200mm		KC - Recon. vehicle crossing	LIN.M
	K10-K&C Spoon drain		KC - Traf island reconstruction	LIN.M
	ND99-No Defect		KC - Traf island repair	LIN.M
			KC - Patch kerb & channel	ITEM
			KC - Recon. driveway layback	ITEM
			KC - Precast barrier kerb	LIN.M
			KC - Precast semi-mount kerb	LIN.M
			KC - Reinstatement of nature strip	SQ.M
		KC - Skidsteer	HOURS	



<b>Maintenance Activity</b>	<b>Defect Code &amp; Description</b>	<b>Treatment Code &amp; Description</b>	<b>Bill Of Quantity Item</b>	<b>Unit</b>
<b>RF-Road Furniture</b>	R01-Linemarking - Faded	RF01-Resintatement of linemarking	RF - Linemarking	LIN.M
	R02-Linemarking - Missing	RF02-Resinstatement of RPM	RF - RPM replacement	ITEM
	R03-Linemarking - Non reflective	RF03-Sign cleaning	RF - Sign cleaning	ITEM
	R04-RPM - Missing	RF04-Sign repair	RF - Sign repair	ITEM
	R05-RPM - Damaged	RF05-Sign replacement	RF - Sign replacement	ITEM
	R06-RPM - Non reflective	RF06-Sign post repair or replacement	RF - Repaint or new centre & lane lines	LIN.M
	R07-Sign (Street) - Damaged		RF - Repaint or new edge lines/bikeways	LIN.M
	R08-Sign (Street) - Missing		RF - Repaint or new STOP lines	ITEM
	R09-Sign (Street) - Dirty		RF - Repaint or new GIVE WAY lines	ITEM
	R10-Sign (Street) - Legend illegible		RF - Repaint or new parking bay lines	ITEM
	R11-Sign (Town) - Damaged		RF - Repaint/new school & pedestrian x-ing	ITEM
	R12-Sign (Town) - Missing		RF - Repaint or new railway crossings	ITEM
	R13-Sign (Town) - Dirty		RF - Repaint or new hazard markings	SQ.M
	R14-Sign (Town) - Legend illegible		RF - Repaint or new lane arrows	ITEM
	R15-Sign (Direction) - Damaged		RF - Repaint or new up to 6 letter words	ITEM
	R16-Sign (Direction) - Missing		RF - Repaint or new disabled logos	ITEM
	R17-Sign (Direction) - Dirty		RF - Repaint or new bike lane logos	ITEM
	R18-Sign (Direction) - Legend illegible		RF - Replace raised pavement markers	ITEM
	R19-Sign (Reg) - Damaged		RF - Supply & install sign & post	ITEM
	R20-Sign (Reg) - Missing		RF - School crossing marker posts	ITEM
	R21-Sign (Reg) - Dirty		RF - Post replacement only	ITEM
	R22-Sign (Reg) - Legend Illegible		RF - Remove Sign	ITEM
	R23-Sign (Warning) - Damaged		RF - Supply & install nameplate 150	ITEM
	R24-Sign (Warning) - Missing		RF - Supply & install nameplate 200	ITEM
	R25-Sign (Warning) - Dirty		RF - Skidsteer	HOURS
	R26-Sign (Warning) - Legend Illegible			
	R27-Sign Post - Damaged			
	R28-Sign Post - Missing			

<b>DB-Drainage Basin</b>	DB01-Scour>300mm	DB01-Drainage Basin Maintenance	DB - Skidsteer	HOURS
	DB02-Vegetation-Growth>300mm	DB02-Advise Building Maintenance	DB - Weed spraying	HOURS
	DB03-Vandalism	DB03-Advise Parks Services	DB - Slashing	HOURS
	DB04-Signs-Missing	ND99-No Treatment Required	DB - Grass mowing	HOURS
	DB05-Headwall-Maintenance		DB - Whipper snip Vegetation	HOURS
	DB06-Headwall-Cleaning		DB - Sign Replacement	ITEM
	DB07-Graffiti		DB - Sign Repair	ITEM
	DB08-Damaged Fence		DB - Sign Cleaning	ITEM
	ND99-No New Defects		DB - Rubbish Removal	HOURS
			DB - Headwall Repair	HOURS
			DB - Damaged Fence	LIN.M

<b>Maintenance Activity</b>	<b>Defect Code &amp; Description</b>	<b>Treatment Code &amp; Description</b>	<b>Bill Of Quantity Item</b>	<b>Unit</b>
<b>RM-Road Maintenance</b>	M01-Pothole >300mm	RM01-Pothole patching	RM - Resurf. of road surface cold mix	SQ.M
	M02-Pothole <300mm	RM02-Edge repair	RM - Resurf. of road surface asphalt	SQ.M
	M03-Edge drop off >100mm & <30m	RM03-Pavement repair	RM - Resurf. of road surface jetpatcher	SQ.M
	M04-Edge drop off >100mm & >30m	RM04-Cracking sealing	RM - Reinstatement of rd pvment on l/s base	SQ.M
	M05-Edge break	RM05-Pavers repair	RM - Tree & vegetation pruning	HOURS
	M06-Deformation	RM06-Sweeping	RM - Tree & vegetation removal	HOURS
	M07-Localised pavt distress >25sqm	RM07-Carpark maintenance	RM - Weed spraying / treatment roadside	HOURS
	M08-Surface bleeding	RM08-Guidepost maintenance	RM - Fence & handrail repair	HOURS
	M09-Longitudinal cracking >=5mm	RM09-Ped fence / handrail maintenance	RM - Sweeping	SQ.M
	M100-Gate - renewal	RM10-Guardfence maintenance	RM - Traffic island - weed control	HOURS
	M101-Gate - cleaning	RM11-Sand drift	RM - Traffic island - litter collection	HOURS
	M10-Transverse cracking >=5mm	RM12-Graffiti maintenance	RM - Traffic island - repair & maintenance	HOURS
	M11-Fine crocodile cracking >=5mm	RM13-Traffic island maintenance	RM - Delineators - replace	ITEM
	M12-Surface stripping	RM14-Tree & vegetation management	RM - Guidepost - replace - easydrive	ITEM
	M13-Pavers deformation defects	RM15-Litter control	RM - Guard fence - removal & replace	HOURS
	M14-Pavers lifting	RM18-Guardrail replacement	RM - Guard fence- tighten or replace	HOURS
	M15-Pavers damaged	RM19-Grid cleaning/welding/renewal	RM - Truck & loader crew	HOURS
	M16-Sweeping of intersection	RM20-Gate cleaning/welding/renewal	RM - Truck & Skidsteer crew	HOURS
	M17-Sweeping of roadway	RM21-Remove Vegetation	RM - Graffiti removal - repaint	HOURS
	M18-Carpark - pothole		RM - Carpark- pothole patching	SQ.M
	M19-Carpark - edge drop off >100mm		RM - Carpark- edge patching	SQ.M
	M20-Carpark - surface bleeding		RM - Carpark- repair bituminous surfacing	SQ.M
	M21-Carpark - damaged barrier		RM - Carpark- repair barrier- timber	ITEM
	M23-Guidepost - missing		RM - Carpark- repair barrier- steel	ITEM
	M24-Guidepost - damaged		RM - Carpark- repair barrier- concrete	ITEM
	M26-Guidepost delineator - missing		RM - Carpark - repair barrier - post	ITEM
	M27-Guidepost delineator - damaged		RM - Reinstate edges/jetpatcher	LIN.M
	M29-Ped fence / handrail - damaged		RM - Guardrail - replace	ITEM
	M34-Guardrail delineator - damaged		RM - Crack Sealing (Emulsion)	LIN.M
	M35-Guardrail delineator - missing		RM - Pothole Patching	ITEM
	M37-Graffiti		RM - Reinstate edges cold mix	LIN.M
	M38-Traffic island - weed control		RM - Whipper Snipper around Post	HOURS
	M39-Traffic island - litter		RM - Weed Spray around Post	HOURS
	M40-Tree - 4.9m canopy ov traffic lane		RM - Skidsteer	HOURS
	M41-Tree & veg - pruning			
	M42-Tree & veg - removal			
	M43-Vegetation growth >600mm			
	M44-Shrubs growth - road & footpath			
	M45-Rubbish & carcass removal			
	M46-Guardrail damaged			
	M47- Vegetation around post			
M833-Guardrail missing				
M96-Grid - welding				
M97-Grid - cleaning				
M98-Grid - renewal				
M99-Gate - welding				

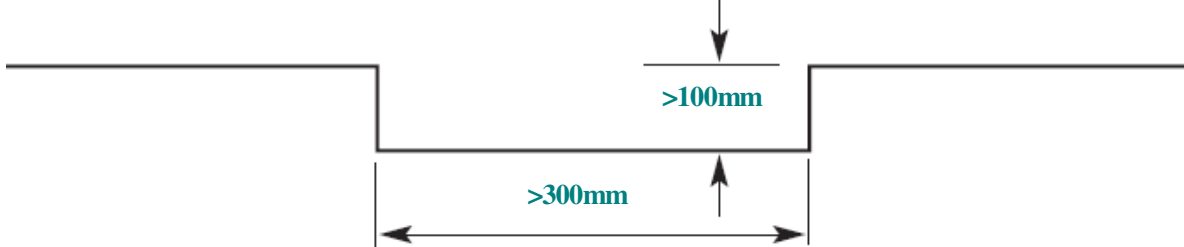


<b>Maintenance Activity</b>	<b>Defect Code &amp; Description</b>	<b>Treatment Code &amp; Description</b>	<b>Bill Of Quantity Item</b>	<b>Unit</b>
VR-VicRoads	V01-VicRoads defects	VR01-VicRoads treatments	VR - RM111 Pothole	SQ.M
	M111-Potholes		VR - RM112 Wheel rutting	SQ.M
	M112-Wheel ruts		VR - RM113 Cracking	LIN.M
	M113-Cracking		VR - RM114 Minor surface treatment	SQ.M
	M114-Minor surface defects		VR - RM116 Pavement cleaning	SQ.M
	M116-Pavement cleaning		VR - RM121 Edge repair	LIN.M
	M121-Edge drop-off		VR - RM131 Patching	SQ.M
	M131-Pathcing		VR - Sealed shoulder maintenance	SQ.M
	M211-Sealed shoulders		VR - Unsealed shoulder maintenance	LIN.M
	M221-Unsealed shoulders		VR - RM311 Unsealed road maintenance	LIN.M
	M311-Unsealed roads		VR - RM411 Surface drain maintenance	LIN.M
	M411-Surface drains		VR - RM412 Subsurface drain maintenance	ITEM
	M412-Subsurface drains		VR - RM413 Culverts & pit cleaning	ITEM
	M413-Culvert & pit cleaning		VR - RM414 Culvert& pit repair	ITEM
	M414-Culverts & pit repair		VR - RM511 Grass mowing	SQ.M
	M511-Grass mowing		VR - RM512 Edge trimming	LIN.M
	M512-Edge trimming		VR - RM513 Weed Control	LIN.M
	M513-Weed control		VR - RM5151 Tree management	HOURS
	M515-Tree management		VR - RM611 Signs	ITEM
	M611-Signs mtce		VR - RM612 Guard fence	LIN.M
	M612-Guardfence mtce		VR - RM613 Guideposts maintenance	ITEM
	M613-Guideposts mtce		VR - RM615 Sign replacement	ITEM
	M615-Sign replacement		VR - RM617 Island / footpaths mntnce	SQ.M
	M617-Traf Isl / Footpath mtce		VR - RM816 Emergency patching	SQ.M
	M816-Emergency repair		VR - RM818 Vandal damage repair	HOURS
	M818-Vandalism repair		VR - RM822 Litter control	ITEM
	M822-Litter control			

## Appendix '3' - 'Category 1' Safety Defect Definitions

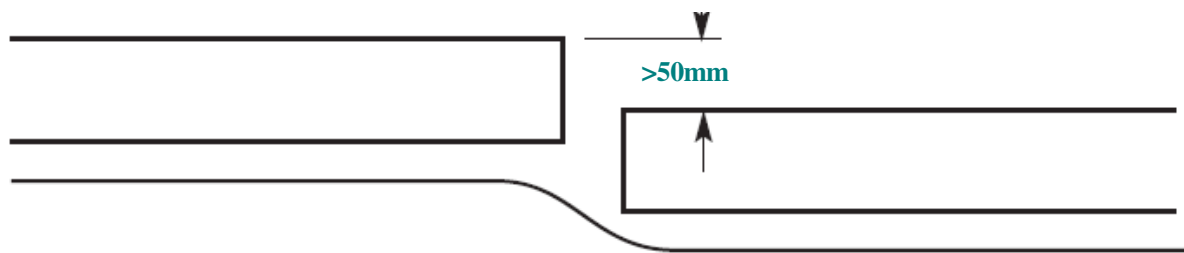
Damage is defined as a defect in the pavement which impairs the value or usefulness of the carriageway and provides a safety hazard for road users.

- i) A sharp edged depression (pothole) of 100mm or greater in depth and extending in any one direction greater than 300mm.



Damage is defined as a defect in the footway which impairs the value or usefulness of the footway and provides a safety hazard for pedestrians. Guidance is as follows: -

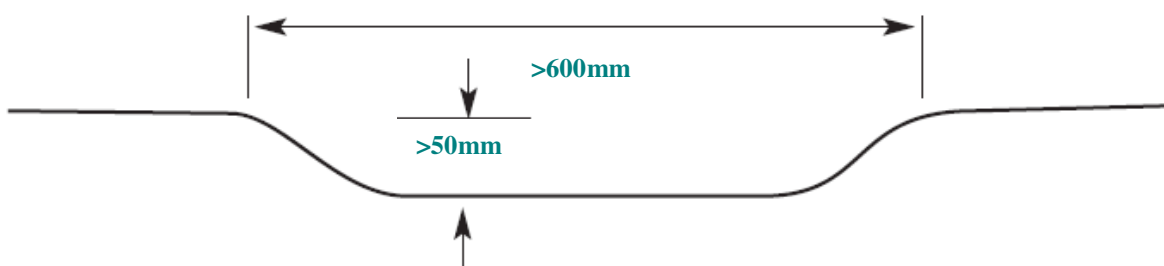
- ii) Trips greater than 50mm i.e. differences in level including manholes, frames, boxes etc.



- iii) Rocking flags greater than 50mm (also includes gaps and steps between flags);



- iv) Rapid change of footway profile greater than 50mm and extending in plan direction less than 600mm.





# Appendix '4' – Examples of Defects and Conditions

**Maintenance Activity:**  
**EM-Emergency Callout**  
**Defect Code & Description:**  
**EO1-Flood**  
**Treatment Code & Description**  
**EM01-Emergency callout, response & repair**  
**BOQ Item**  
**Crew Response Normal Hours**  
**Units**  
**Hours**



**Maintenance Activity:**  
**SL-Roadside Slashing**  
**Defect Code & Description:**  
**S01-Roadside Slashing**  
**Treatment Code & Description**  
**S01-Roadside Slashing**  
**BOQ Item**  
**Roadside Slashing**  
**Units**  
**LIN M**



**Maintenance Activity:**  
**MG-Maintenance Grading**  
**Defect Code & Description:**  
**MG-06-Drop off >100mm and >300m**  
**Treatment Code & Description**  
**MG-05 – Grading Shoulders**  
**BOQ Item**  
**Reconstruction gravel shoulders**  
**Units**  
**LIN M**

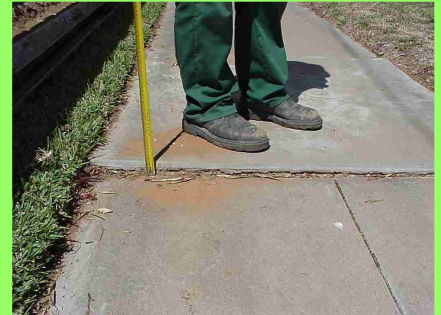


**Maintenance Activity:**  
**DR-Drainage**  
**Defect Code & Description:**  
**DR-08 Damaged Surrounds**  
**Treatment Code & Description**  
**DR 13 Surround - Replace**  
**BOQ Item**  
**S&P SEP Cover H/D**  
**Units**  
**ITEM**



# Appendix '4' – Examples of Defects and Conditions (cont.)

**Maintenance Activity:**  
**FP – Footpath Maintenance**  
**Defect Code & Description:**  
**F04 – Footpath concrete 10-40mm step**  
**Treatment Code & Description**  
**FP01-Footpath Repair & Maintenance**  
**BOQ Item**  
**Grinding**  
**Units**  
**LIN M**



**Maintenance Activity:**  
**KC – Kerb & Channel**  
**Defect Code & Description:**  
**K01 K&C damage**  
**Treatment Code & Description**  
**KC01 – K&C Repair or Replacement**  
**BOQ Item**  
**New barrier kerb B2/B3**  
**Units**  
**LIN M**

**Maintenance Activity:**  
**RF- Road Furniture**  
**Defect Code & Description:**  
**R23-Sign (Warning) - Damaged**  
**Treatment Code & Description**  
**RF-04- Sign replacement**  
**BOQ Item**  
**Supply & install OTHER signs & posts**  
**Units**  
**ITEM**



**Maintenance Activity:**  
**RM- Road Maintenance**  
**Defect Code & Description:**  
**RM01 – Pothole >300mm**  
**Treatment Code & Description**  
**RM01 – Pothole patching**  
**BOQ Item**  
**Pothole Patching**  
**Units**  
**Item**

## Appendix '5' – Mildura Rural City Council - Road Hierarchy

Classification	Type	Definition	PF	Target Standards
<b>Arterial</b>	VicRoads Arterial	VicRoads Declared Main Road or Highway – not a council maintenance responsibility	-	As per VicRoads standards
<b>Link Roads</b>	Sealed Link Road (Urban)	Sealed roads carrying very high traffic volumes including commercial vehicles and providing the principal routes for vehicles in and around the major urban areas.	A	Variable seal width
	Sealed Link Road (Dryland)	Sealed roads carrying moderate volumes of traffic and linking small townships to arterial roads within Council's dryland areas.	C	Variable seal width; 2m shoulders
	Sealed Link Road (Irrigated)	Sealed roads carrying high volumes of traffic and linking urban areas.	C	Variable seal width; 2m shoulders
<b>Collector</b>	Sealed Collector Road (Urban)	Sealed roads carrying moderate volumes of traffic and linking local areas to link and arterial roads in the Council's urban areas.	A	Variable seal width
	Sealed Collector Road (Irrigated)	Sealed roads carrying moderate volumes of traffic and linking local areas to link and arterial roads in the Council's irrigated area.	C	Variable seal width; 2m shoulders
	Sealed Collector Road (Dryland)	Sealed roads carrying moderate volumes of traffic and linking local areas to arterial roads in the Council's dryland areas.	C	Variable seal width; 2m shoulders
	Unsealed Collector Road (Dryland)	Gravel roads in dryland areas identified through consultation with local residents as being high priority roads; also school bus routes.	E	8.0m pavement; 1m shoulders
	Unsealed Collector Road (Irrigated)	Gravel roads within Council's irrigated areas with relatively high traffic volumes and linking sealed collector roads; also school bus routes.	E	8.0m pavement; 1m shoulders
<b>Local</b>	Sealed Laneway	Sealed roads carrying only local traffic, typically providing secondary access to properties with more than one street frontage.	B	7.9m seal
	Sealed Local Road (Urban)	Sealed roads carrying only local traffic. Their primary function is to provide access to private properties within Council's urban areas.	B	7.9m seal
	Sealed Local Road (Irrigated)	Sealed roads carrying only local traffic. Their primary function is to provide access to horticultural properties within Council's irrigated area.	D	6.8m seal width; 2m shoulders
	Sealed Local Road (Dryland)	Sealed roads carrying only traffic local to small rural centres in Council's dryland areas.	D	6.8m seal width; 2m shoulders
	Unsealed Laneway	Unsealed roads carrying only very local traffic, typically only providing occasional secondary access to properties with more than one street frontage.	F	Variable pavement width; 1m shoulders
	Unsealed Local Road (Dryland)	Unsealed roads in dryland areas carrying only low volumes of local traffic.	F	Variable pavement width; 1m shoulders
	Unsealed Local Road (Irrigated)	Unsealed roads in Council's irrigated area carrying only low volumes of local traffic.	F	Variable pavement width; 1m shoulders
	Unmade Natural Surface (Dryland)	Unshaped road lacking imported pavement material but graded occasionally, located in dryland area. (Typically only used by a few vehicles per day.)	G	No design provided
	Unmade Natural Surface (Irrigated)	Unshaped road lacking imported pavement material but graded occasionally, located in irrigated area. (Typically only used by a few vehicles per day.)	G	No design provided
<b>Other</b>	Unconstructed	Unconstructed roads often fenced off and licensed to adjoining landowners, and at best a "goat track." (Typically < 1 vehicle per day.)	-	Council has no maintenance responsibility



## Appendix '6' - Inspection Requirements

Inspection Type	Purpose	Inspection Performed by & Reporting Requirements
<b>Reactive/Safety Inspection</b>	<ul style="list-style-type: none"> <li>▪ Safety inspections are designed to identify all defects likely to create danger or serious inconvenience to users of the network or the wider community.</li> <li>▪ Safety issues may be detected as the result of:               <ul style="list-style-type: none"> <li>(a) formal programmed defect inspection; or</li> <li>(b) observation followed by notification to council by members of the community or council employees while undertaking their normal work duties with a subsequent safety inspection to be conducted by an appropriate council officer.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Council representative with some knowledge of road maintenance techniques who may then call in a higher level of expertise if necessary.</li> <li>▪ Recording to identify specific safety defect, time first reported, time inspected &amp; by whom, subsequent action &amp; time of completion.</li> </ul>
<b>Incident Inspection</b>	<ul style="list-style-type: none"> <li>▪ An inspection carried out to comply with the requirements the Road Management Act [Division 5 – Claims Procedure, Clause 116];</li> <li>▪ This inspection enables an incident condition report to be prepared for use in legal proceedings and the gathering of information for the analysis of the causes of accidents and the planning and implementation of road management and safety measures.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Qualified engineer or experienced technical officer with extensive knowledge and experience in road construction and maintenance practices.</li> <li>▪ Formal Incident Report required, as described.</li> </ul>
<b>Programmed Inspection</b>	<ul style="list-style-type: none"> <li>▪ Inspection undertaken in accordance with a formal programmed inspection schedule to determine if the road asset complies with the levels of service as specified in the Asset Management Plan;</li> <li>▪ A record of each street/road is to be completed detailing the name of the inspector, the inspection date, time and street/road name and a description of any defects found that are at the specified intervention levels defined in the Asset Management Plan;</li> <li>▪ In addition, a notation must to be recorded of any street/road inspected where no defect was apparent under the specific rigour of the inspection.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Engineer or technical officer with knowledge of road maintenance techniques;</li> <li>▪ A record of the inspection is to be signed by the inspector for placing on council's asset database for reference purposes (NB: this may include insurance or litigation requirements).</li> </ul>
<b>Condition Inspection</b>	<ul style="list-style-type: none"> <li>▪ An inspection specifically to identify deficiencies in the structural integrity of the various components of the road infrastructure assets which if untreated, are likely to adversely affect network values. The deficiencies may well impact short-term serviceability as well as the ability of the component to continue to perform for the duration of its intended life span;</li> <li>▪ The condition inspection process must also meet the requirements for accounting regulations and asset management;</li> <li>▪ Regular or periodic assessment, measurement and interpretation of the resulting condition data is required so as to determine the need for any preventive or remedial action then development of relevant programs of rehabilitation or renewal works.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Inspection undertaken under the direction of a qualified engineer or experienced technical officer with extensive knowledge and experience in road construction and maintenance practices;</li> <li>▪ Specific data to be recorded is determined by requirements of the Asset Management Plan &amp; the Asset Information System used to assess asset component needs.</li> </ul>

## Appendix '7' – Programmed Inspection Frequencies

Asset Group	Hierarchy Category	Inspection Type, Frequency & Department Responsible to undertake Inspection			
		Programmed	Department	Condition	Department
Sealed Roads	Link - Urban	6 months	Works and Infrastructure Services	4 years	Asset Services
	- Irrigated	6 months	Works and Infrastructure Services	4 years	Asset Services
	- Dry Land	6 months	Works and Infrastructure Services	4 years	Asset Services
	Collector - Urban	6 months	Works and Infrastructure Services	4 years	Asset Services
	- Irrigated	6 months	Works and Infrastructure Services	4 years	Asset Services
	- Dry Land	6 months	Works and Infrastructure Services	4 years	Asset Services
	Local - Urban	6 months	Works and Infrastructure Services	4 years	Asset Services
	- Irrigated	6 months	Works and Infrastructure Services	4 years	Asset Services
	- Dry Land	6 months	Works and Infrastructure Services	4 years	Asset Services
Laneways – Urban	6 months	Works and Infrastructure Services	4 years	Asset Services	
Unsealed Roads	Collector - Irrigated	6 months	Works and Infrastructure Services	5 years	Asset Services
	- Dry Land	6 months	Works and Infrastructure Services	5 years	Asset Services
	Local - Irrigated	6 months	Works and Infrastructure Services	5 years	Asset Services
	- Dry Land	6 months	Works and Infrastructure Services	5 years	Asset Services
	Laneways – Urban	6 months	Works and Infrastructure Services	5 years	Asset Services
	Unmade Natural Surface	12 months	Works and Infrastructure Services	5 years	Asset Services
Off-Street Car Parks	Sealed	6 months	Works and Infrastructure Services	4 years	Asset Services
	Unsealed	6 months	Works and Infrastructure Services	5 years	Asset Services
Bridges	Guardrail protection	6 months	Works and Infrastructure Services	5 years	Asset Services
	MRCC Responsibility Only	6 months	Works and Infrastructure Services	5 years	Asset Services
Line marking	Link	6 months	Works and Infrastructure Services	5 years	Asset Services
	Collector	6 months	Works and Infrastructure Services	5 years	Asset Services
	Local	12 months	Works and Infrastructure Services	5 years	Asset Services

## Appendix '7' - Inspection Frequencies (cont)

Asset Group	Hierarchy Category	Inspection Type, Frequency & Department Responsible to undertake Inspection			
		Programmed	Department	Condition	Department
Roadside Furniture	Regulatory Signs	6 months	Works and Infrastructure Services	N/A	
	Bus Shelters	2 years	Works and Infrastructure Services	4 years	Asset Services
Roadside Vegetation	Street Trees Urban (General)	2 years	Environmental Services	N/A	
	Street Trees Urban (Power line clearance)	12 months	Environmental Services	N/A	
Footpaths	Langtree Mall , 8 <sup>th</sup> & 9 <sup>th</sup> St paved areas	6 months	Works and Infrastructure Services	4 years	Asset Services
	Mildura CBD	6 months	Works and Infrastructure Services	4 years	Asset Services
	Other Urban areas	12 months	Works and Infrastructure Services	4 years	Asset Services
	Irrigation and Rural areas unsealed	12 Months	Works and Infrastructure Services	4 years	Asset Services
Kerb & Channel	Link	6 months	Works and Infrastructure Services	4 years	Asset Services
	Collector	6 months	Works and Infrastructure Services	4 years	Asset Services
	Local	6 months	Works and Infrastructure Services	4 years	Asset Services
	Rural Irrigated Intersections	6 months	Works and Infrastructure Services	4 years	Asset Services

**CRM:** When applied to Inspection frequency, CRM (Customer Request) indicates that an inspection will only be undertaken upon a request being submitted and an assessment made as to whether an inspection is warranted on the grounds of a risk to public safety.

**N/A:** This denotes that the issue is not applicable as that asset component does not exist in that category or an inspection is not warranted.



# Appendix '8' - Inspection Roster

Inspection Roster	Modified April 2013												
	January	February	March	April	May	June	July	August	September	October	November	December	
Sealed Roads	Grading Area's 1-15: Financial Plan Zones Footpath Zones: Mildura CBD & A-F Zones												
	Link (6 Months) - Urban - Irrigated	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine
	Night - Time - Safety inspection (12 Months)					Night Audit							
	Collector (6 Months) - Urban - Irrigated	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine
	Night - Time - Safety inspection (12 Months)					Night Audit							
	Local (6 Months) -Urban -Irrigated -Dry Land	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine
	Laneways (6 Months) -Urban	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine
	Mildura Zones (6 Months)	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
	Off Street Car Parks (6 Months)	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
							Mildura CBD						Mildura CBD
							Mildura CBD						Mildura CBD
	Unsealed Roads	(6 Months) C=Collector SB= School Bus Route L=Local U=Unmade	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein
Unsealed Laneways (6 Months)		Zone A	Zone B	Zone C	Zone D	Zone E	Zone F	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
Guardrail Protection	Guardrail - MRCC Responsibility (6 Months)	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine
Footpaths	Langtree Mall, 8 <sup>th</sup> & 9 <sup>th</sup> St paved areas (6 Months)						Mildura CBD						Mildura CBD
	Mildura CBD (6 Months)						Mildura CBD						Mildura CBD
	Other Areas Sealed (12 Months)	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F
Other Areas Unsealed (12 Months)	Werrimull Nangiloc/Colignan Nichols Point	Ouyen Irymple	Walpeup Red Cliffs	Underbool Cardross	Murrayville Merbein	Meringur Lake Cullulleraine	Zone A	Zone B	Zone C	Zone D	Zone E	Zone F	
Drainage	Drainage Basins (6 Months)	Werrimull Nangiloc/Colignan Nichols Point Zone A	Ouyen Irymple Zone B	Walpeup Red Cliffs Zone C	Underbool Cardross Zone D	Murrayville Merbein Zone E	Meringur Lake Cullulleraine Zone F	Werrimull Nangiloc/Colignan Nichols Point Zone A	Ouyen Irymple Zone B	Walpeup Red Cliffs Zone C	Underbool Cardross Zone D	Murrayville Merbein Zone E	Meringur Lake Cullulleraine Zone F
	Gross Pollutant Traps (6 Months)	Werrimull Nangiloc/Colignan Nichols Point Zone A	Ouyen Irymple Zone B	Walpeup Red Cliffs Zone C	Underbool Cardross Zone D	Murrayville Merbein Zone E	Meringur Lake Cullulleraine Zone F	Werrimull Nangiloc/Colignan Nichols Point Zone A	Ouyen Irymple Zone B	Walpeup Red Cliffs Zone C	Underbool Cardross Zone D	Murrayville Merbein Zone E	Meringur Lake Cullulleraine Zone F

### Sealed Link and Collection – Activity List

Activity	Guide Posts
	Sight Distance
	Pavement
	Line Marking
	Kerb & Channel
	Shoulders
	Bus Shelters
	Trees

### Sealed Local – Activity List

Activity	Pavement
	Guide Posts
	Signage
	Shoulders
	Carparks
	Kerb & Channel
	Laneways
	Line Marking
	Bus Shelters
	Trees

### Northern Unsealed – Activity List

Activity	Pavement
	Shoulders
	Guide Posts
	Signage
	Sight Distance
	Trees

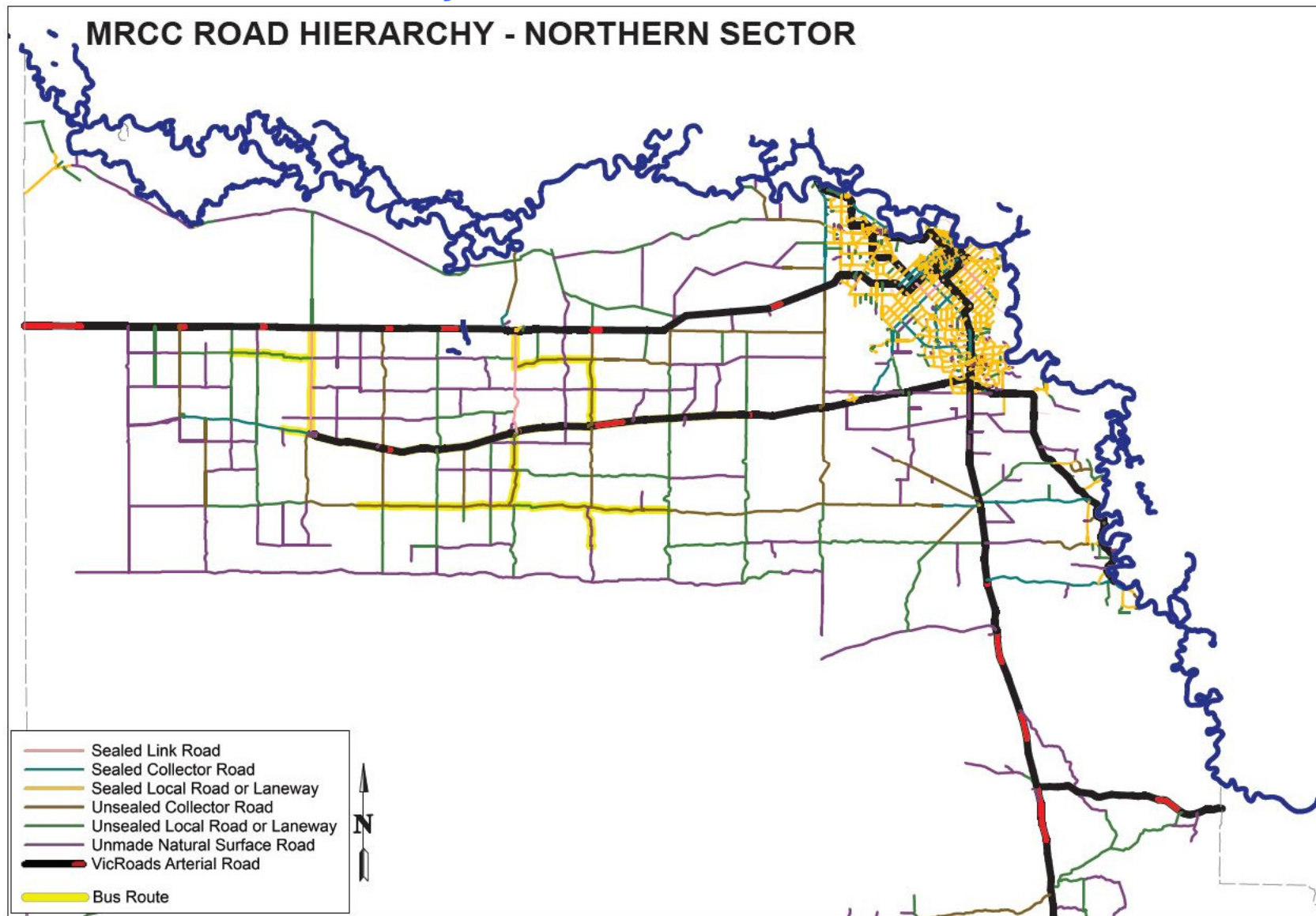
### Southern Unsealed – Activity List

Activity	Pavement
	Shoulders
	Guide Posts
	Signage
	Sight Distance
	Trees

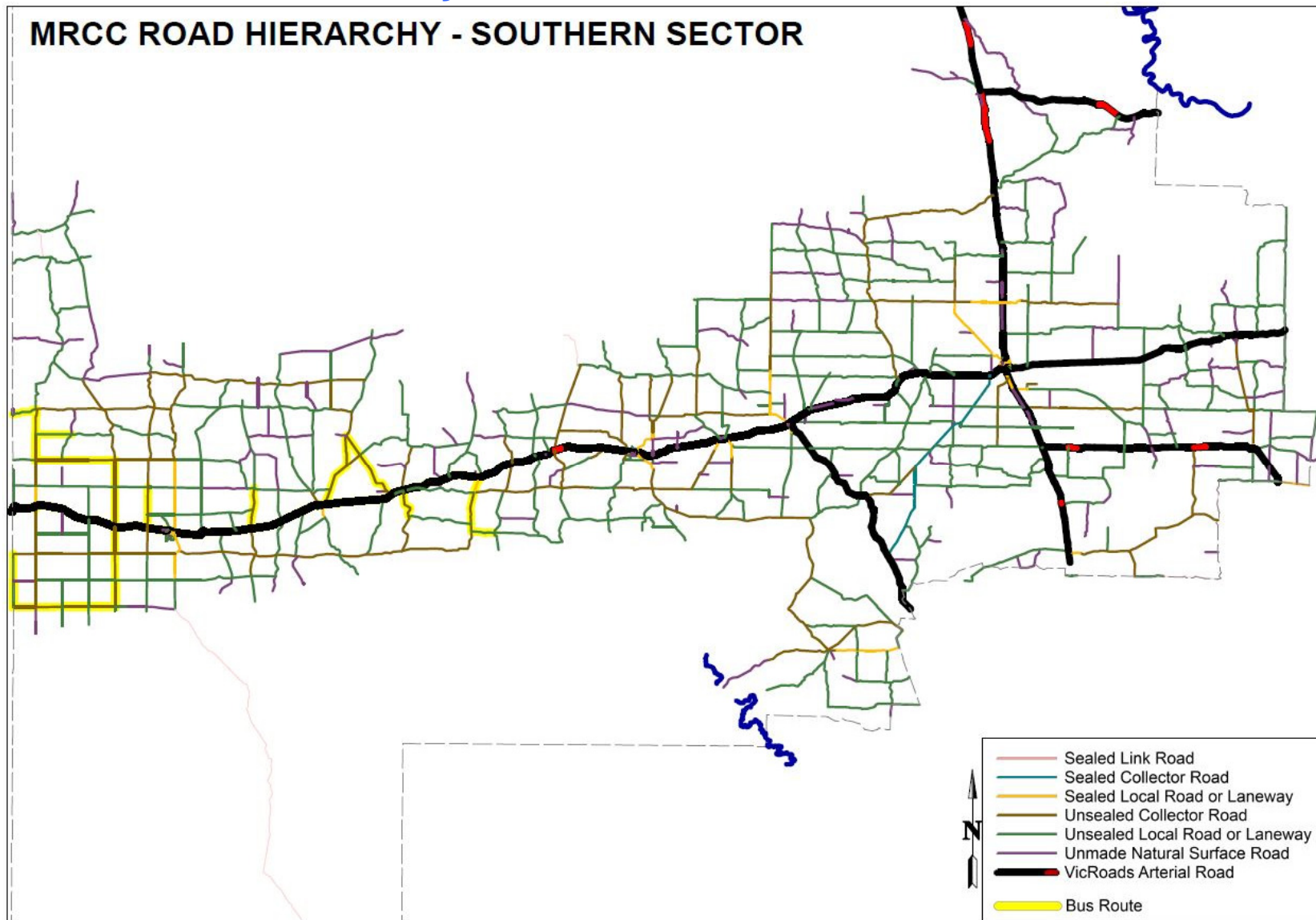
## Footpath & Shared Path – Activity List

Activity	Trips 10-40
	Trips <40
	Cracking
	Slipperiness
	Washout
	Services
	Trees (Private)
	Trees (Council)

## Appendix '9' – Road Hierarchy

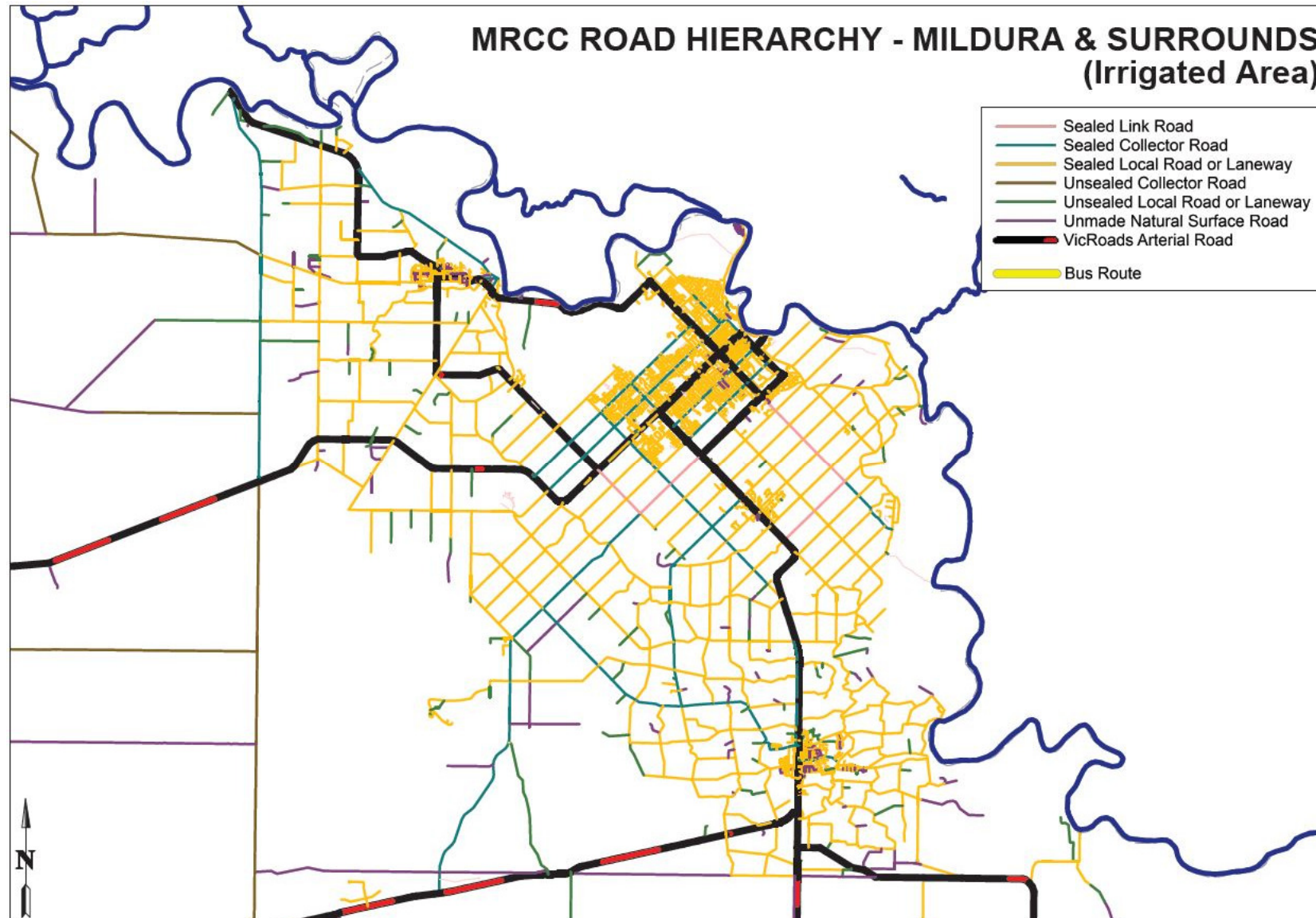


## Appendix '9' – Road Hierarchy





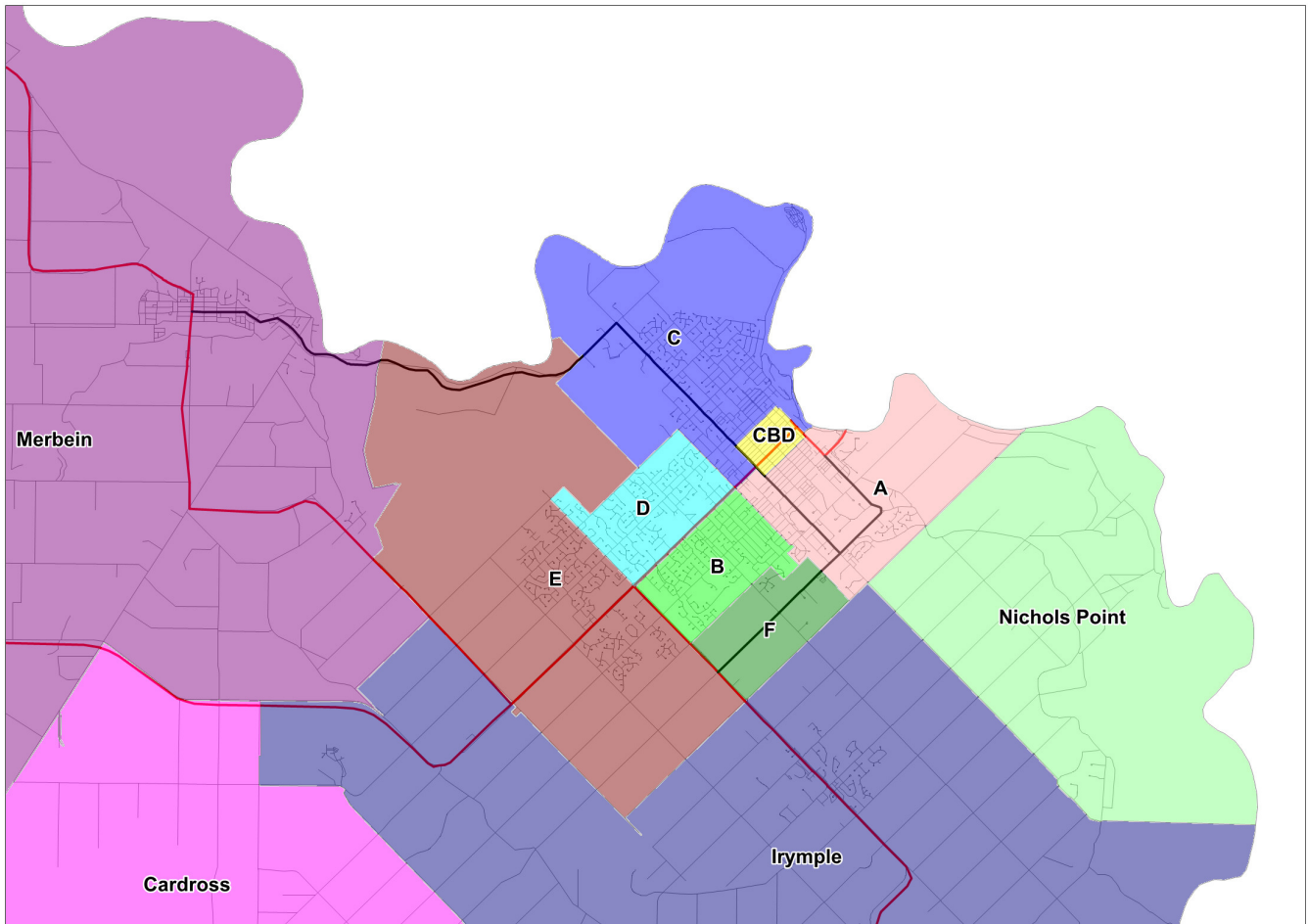
## Appendix '9' – Road Hierarchy



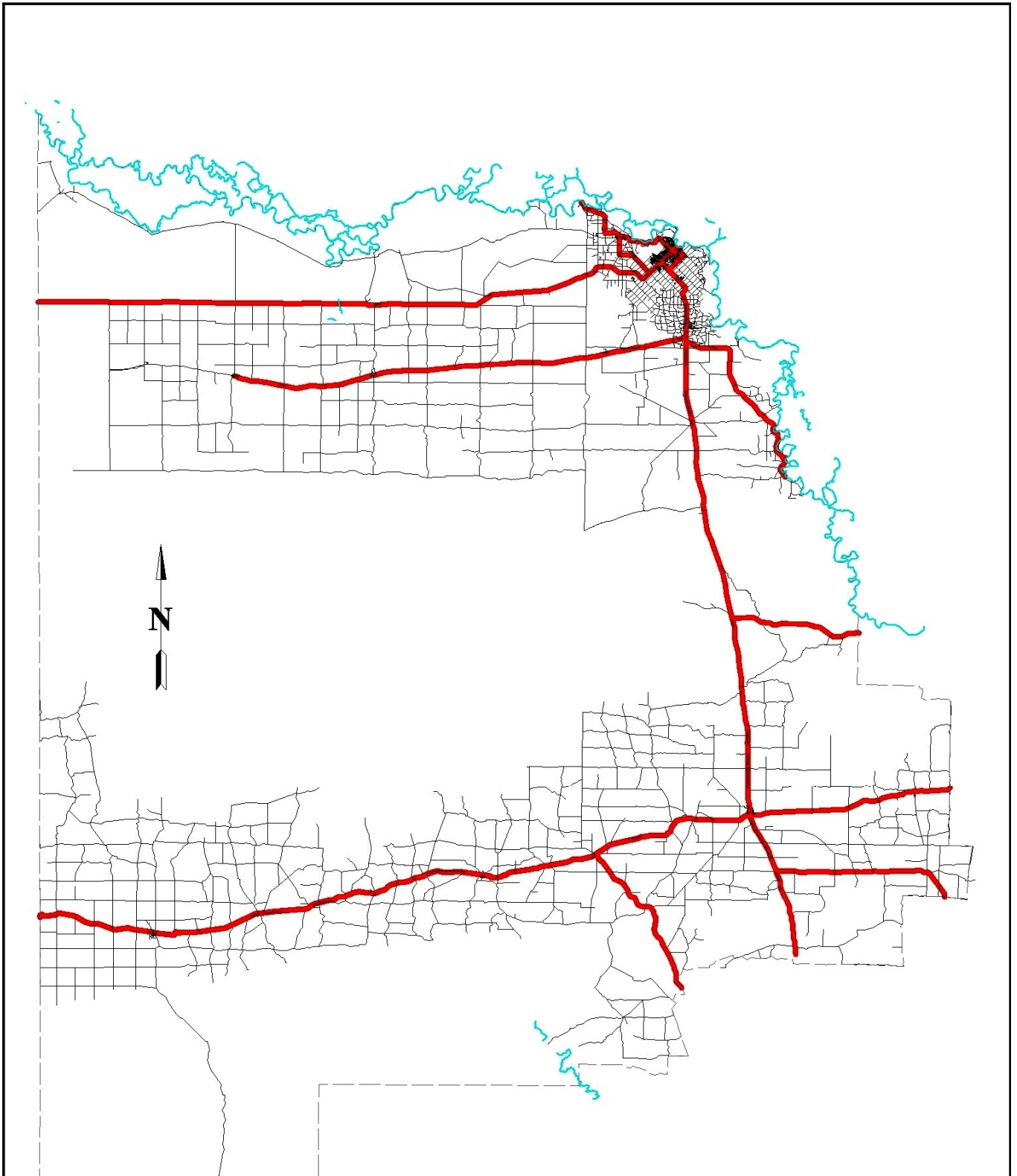


## Appendix '10' – Mildura Footpath Zones

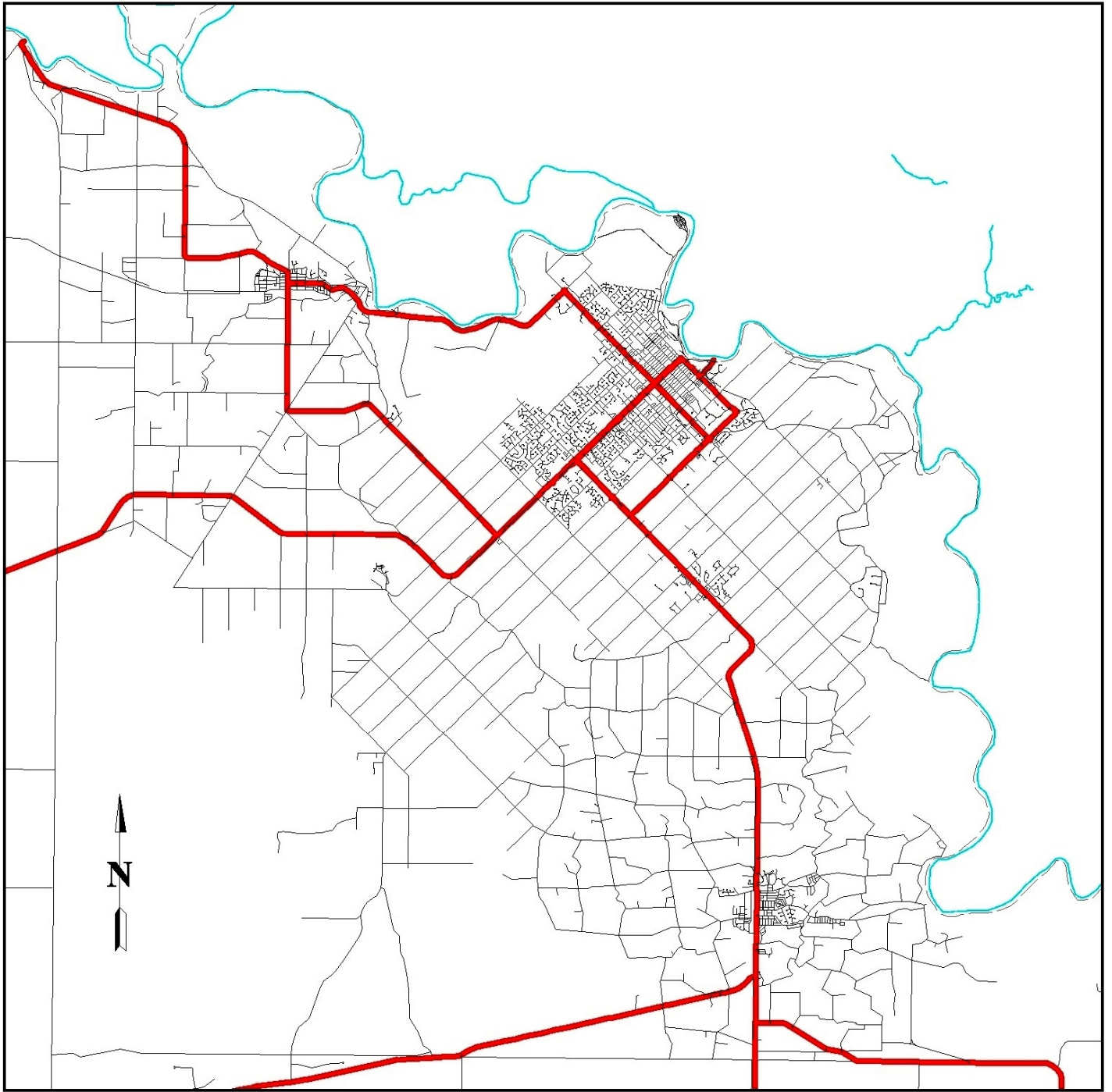
Hierarchy Category
CBD Mildura
Other Areas:- Sealed
Other Areas:- Unsealed



## Appendix '11' – VicRoads Zones



Roads marked red are declared Highways and Main Roads and are the responsibility of VicRoads.



### Mildura Irrigated Area

Roads marked red are declared Highways and Main Roads and are the responsibility of VicRoads

## Appendix '12' - Glossary of Terms

<i>Activity</i>	means action necessary to restore or repair a particular asset to a specified condition;
<i>Asset</i>	means a physical feature or item that is required to be maintained by the Contractor under this Service Level Agreement
<i>Asset Management System</i>	means an asset recording database, the data of which reverts to the property of Council at the expiry of the Contract
<i>Best Value Principles</i>	means the Best Value Principles described in section 208B of the Local Government Act 1989;
<i>Council</i>	means the Mildura Rural City Council.
<i>Day</i>	means all calendar days apart from Christmas and Good Friday.
<i>Defect</i>	means identified group of like features together with their location, whose condition is outside the intervention levels with the activity needed to restore those features to the acceptable level;
<i>Intervention Level</i>	defines the condition of a feature or a frequency at which action is necessary to restore/repair the asset to the specified state;
<i>Manager Asset Services</i>	means the person appointed by Council to represent the Mildura Rural City Council for the management of the Asset Services Branch
<i>Manager Works and Infrastructure Services</i>	means the person appointed by Council to represent the Mildura Rural City Council for the management of the Works and Infrastructure Services Branch
<i>Performance Standard</i>	is a measure (as a percentage of the specified standard) that the condition of the asset or the performance of the Works and Infrastructure Services Branch shall not fall below at any point in time;
<i>Roads</i>	means all those roads of various hierarchies detailed in the MRCC Register of Roads.



*The Services*

means -

- (a) the performance of work;
- (b) the supply of materials; and
- (c) all other things required to be done –

under this Service Level Agreement by the Works and Infrastructure Services Branch, as indicated in the SLA Documents.

**Abbreviations**

CCF – Civil Contractors Federation

CRM – Customer Request Management

WIS – Works and Infrastructure Services

MRCC – Mildura Rural City Council

RFS – Request for Service

SLA – Service Level Agreement