PART M19

MAINTENANCE ACTIVITY AND DEFECT REGISTER DATA REQUIREMENTS

CONTENTS

1. GENERAL

This Part sets out the minimum requirements for the collection and provision of Maintenance Defect and Activity data. The purpose of this document is to ensure that all data from internal and external parties is provided in a consistent format that can be entered into the Asset Management Information System to enable the performance of Asset Management functions in line with ISO 55001.

Defect, Activity and any other Works data shall be provided to the Principal as specified in the relevant maintenance specification. If not specified it shall be on a quarterly basis. The data shall include all Defects and Activities opened or closed since last supplied. A total annual summary shall be provided at the end of the financial year.

Maintenance Defects, Activities and Works data is used by the Principal to:
   a) Identify defect hot spots and use this information to influence programs;
   b) Undertake additional pavement condition analysis, to allow defect hotspots or maintenance to influence the periodic and projects capital work programs' selection processes;
   c) Enable analysis works to set the Level of Service (LOS) for assets;
   d) Ensure that the specified LOS are being met for all assets;
   e) Assess the effects of Defects, Activities and Works on the LOS for road classification;
   f) Undertake assessments for continual improvement works; and
   g) Analyse and make decisions on the interaction between Routine, Specific and Periodic Maintenance.

2. DATA ATTRIBUTION

2.1 Asset Condition and Defects

Data attributes related to maintenance works, condition, or defects on assets will be provided in a form of Maintenance Defect Register (MDR). The unique identifier of each asset is required to connect assets to the MDR information.

2.2 Geographic Location

Location data must be provided using geographic coordinates (i.e. latitude and longitude) in decimal degrees. Accuracy is to be to 5 decimal places. Latitude must be shown as a negative number.

Geographic coordinates in the WGS84 Datum must be used for exchange of asset location. Contractor systems may store location data in any coordinate system, but the system must be capable of converting the data to WGS84 coordinates.

All Defects, Activities or Works must be captured as point location data where the point location is located approximately at the centre of the item.

2.3   Road Number

Road numbers must be in accordance with the state roads Common Road Referencing System (CRRS), consisting of five (5) numbers.

At intersections and junctions, Defects shall be assigned to one designated priority road number in accordance with the following:

- Where both roads are National Highway, priority shall be assigned the lower National Link Number.

- Where one road is a National Highway, priority shall be assigned to the National Highway.

- Where neither roads are National Highway priority shall be assigned the road with the higher road number.

2.4   Carriageway Code

Roads have either 1 or 2 carriageways.

Roads with a median are considered to be divided and have 2 carriageways. A left (L) and a Right (R). Roads without a median are undivided and have only 1 carriageway and are undivided (U).

All Roads have an implied direction from the zero point, or start of Road Running Distance (RRD), towards increasing RRD. Left and Right are assigned as looking towards the higher RRD.
The carriageway codes which must be used are as follows:

TABLE M19.1: CARRIAGEWAY AND LANE CODES

L	Carriageway to the Left looking towards increasing RRD
R	Carriageway to Right looking towards increasing RRD
U	Undivided Road, Single Carriageway, no median separation

See Figure 1 "Carriageway and Lane Codes".

2.4   Lane Code

Lane IDs must be specified in the direction of the increasing Road Running Distance (RRD).

L1 denotes the lane ID closest to the left of centreline or median, looking in the increasing RRD direction and working outwards to the edge of the road, L2, L3 etc.

R1 denotes the lane ID closest to the right of centreline or median and works outwards to the edge of the road R2, R3 etc.

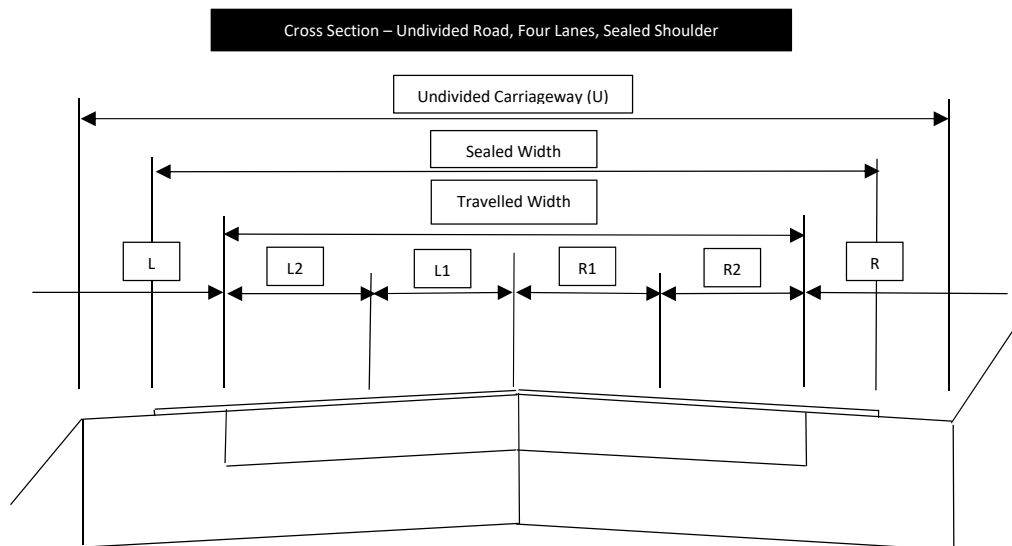The codes L1, L2, L3 etc or R1, R2, R3 etc increasing in numerical order must be used.

For activities which occur outside the travelled lane, the designation of L, R or M shall apply for works undertaken on the left, right or the median of the road.

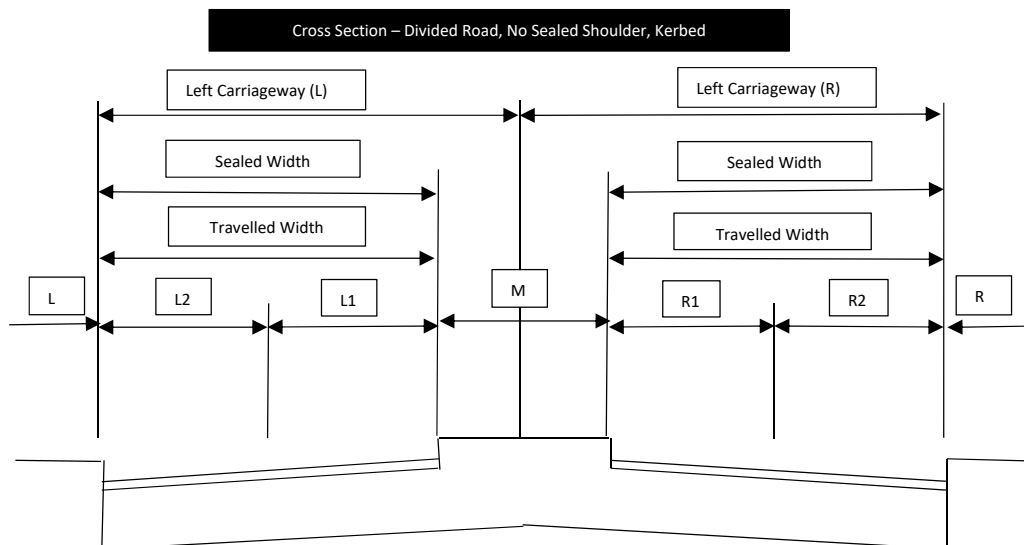Only the data format shown above shall be used as lane codes.

See Figure 1 "Carriageway and Lane Codes".

Figure 1: Carriageway Codes

Carriageway and Lane codes

Undivided Road: Only one carriageway exists and there is no painted or other median.
Carriageway code is **U** for Undivided.

Cross Section – Undivided Road, Four Lanes, Sealed Shoulder

Undivided Carriageway (U)

Sealed Width

Travelled Width

L   L2   L1   R1   R2   R

Divided Road: Two carriageways divided by a median strip (painted or concrete etc.)
Carriageway code is L for Left and R for Right carriageway

Cross Section – Divided Road, No Sealed Shoulder, Kerbed

Left Carriageway (L)   Left Carriageway (R)

Sealed Width   Sealed Width

Travelled Width   Travelled Width

L   L2   L1   M   R1   R2   R

2.5   Maintenance / Activity Codes

Codes must be entered exactly as shown in Part M2 Attachment 1: Maintenance / Activity Codes.

2.6 Unique Identifiers

The Contractor must assign a unique identifier for all Maintenance Activities / Defects. The Contractor's identifier must begin with the contract number "YYCNNN-xxxxxx".

Works undertaken on corridor Assets such as a signs, safety barriers etc, must also include the Principal's Asset ID for that Asset.

2.7 Quantity and Units

The size and units attributes are used together to define and clarify the number of or size of the Activity, Defect or Works undertaken.

The units of measure used for each activity must be in the format shown in Part M2 Attachment 1: Maintenance / Activity Codes.

If for a particular task these units do not describe the magnitude of the task, further description should be added to the comments field described in Clause 2.11 Comments below.

2.8 Cost

All Works undertaken to Assets which are not Routine Maintenance activities must include their actual and final costs.

Cost must be entered in standard dollar format.

2.9 Date Entered

The date entered is the date and time at which the Defect, Activity or Works were identified or reported for the first time. This date must not be changed.

For many routine maintenance activities this may be the same as the completed date if the works are undertaken on the same day.

This data field must be entered as "dd/mm/yyyy".

2.10 Date Closed

The date closed is the date and time at which the Defect, Activity or Works were repaired, undertaken or removed so that they no longer exist.

If these items have been removed due to works by others the date closed must be entered into the system as early as possible to ensure accuracy of the database.

This data field must be entered as "dd/mm/yyyy".

2.11 Comments

The comments field must be used where the scope, magnitude or complexity of the activity or works cannot be defined simply within the data fields provided above.

The data entered in this field is not restricted.

2.12 Asset Inspections

For any asset inspections undertaken the associated asset report shall be provided and the document name entered into the comments field of the maintenance defect register.

2.13   Empty Fields

The only allowable empty fields are:

a) Routine Maintenance Activity - the cost field is empty;

b) Defect is still open therefore date closed is empty; or

c) Principal's Asset ID is empty if not required to be linked to an asset as per Specification Part M18.

3.   ADDITIONAL REQUIREMENTS FOR PAVEMENT MARKING

In addition to the requirements of Clause 2, pavement marking data shall also include the following:

a) Schedule / Work Order No.

Schedule or Job Numbers shall be a unique ID for all pavement markings. This number shall remain consistent until the works are complete.
All activity data provided to DPTI as per section 1.3 including programmed, commenced and completed works shall include the Unique ID.

b) Start Date

The start date is the date the pavement marking began for a road section.
This data field must be entered as "dd/mm/yyyy".

c) Finish Date

The date finished is the date the pavement marking of the road section is completely finished including all dividing lines, edge lines, barrier lines, turning lines, transverse markings, symbols, pavement bars, kerbing, etc.

This data field must be entered as "dd/mm/yyyy".

ATTACHMENT 1: EXAMPLES

EXAMPLE OF DATA FORMAT REQUIRED FOR MAINTENANCE DEFECT REGISTER

Maintainer Unique ID	Latitude	Longitude	Road No	C/way Code	Lane Code	Activity Code	Quantity	Units	Cost	Date Entered	Date Closed	Comments	DPTI Asset ID
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	R	L1	RPN	15	m^2		01/02/2020	31/02/2020		
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	L	R2	RPP	1	item		01/02/2020	31/02/2020		
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	U	R	RSR	200	m		01/02/2020			
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	U	L	RFR	1	item		01/02/2020	31/02/2020		SI-xxxx
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	R	L1	RPJ	100	m^2	$55,000	01/02/2020	31/02/2020		
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	L	R2	RDO	1	item		01/02/2020			DR-xxx
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	U	R	RSR	500	m	$234,000	01/02/2020	31/02/2020		
YYCNNN-xxxxxx	-xx.xxxx	xxx.xxxx	01000	U	L	RFG	5	m	$5,000	01/02/2020	31/02/2020		SB-xxxx

EXAMPLE OF DATA FORMAT REQUIRED FOR PAVEMENT MARKING

Schedule / Job No.	Start Date	Finish Date	Road Number	Start Latitude	Start Longitude	Finish Latitude	Finish Longitude	Cost	Comments
xxxxxx	01/02/2016	31/02/2016	01000	-xx.xxxx	xxx.xxxx	-xx.xxxx	xxx.xxxx	$45,000	
xxxxxx	01/02/2016	31/02/2016	01000	-xx.xxxx	xxx.xxxx	-xx.xxxx	xxx.xxxx	$155,000	
xxxxxx	01/02/2016		01000	-xx.xxxx	xxx.xxxx	-xx.xxxx	xxx.xxxx	$255,000	
xxxxxx	01/02/2016	31/02/2016	01000	-xx.xxxx	xxx.xxxx	-xx.xxxx	xxx.xxxx	$354,000	
xxxxxx	01/02/2016	31/02/2016	01000	-xx.xxxx	xxx.xxxx	-xx.xxxx	xxx.xxxx	$42,000	