

Specification (Measurement)

**Transport and Main Roads Specifications
MRS204 Vehicle Detectors**

October 2017

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1 Introduction

This Specification applies to the supply and installation of Vehicle Detectors.

This document applies to the following types of vehicle detectors.

- Loop Detectors
- Radar Vehicle Detectors, and
- Infrared Vehicle Detectors.

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications*, MRS204 *Vehicle Detectors* and other Specifications as appropriate.

This Specification forms part of the Transport and Main Roads Specifications Manual.

2 Measurement of works

2.1 Vehicle detectors

2.1.1 Standard Work Items

In accordance with the provisions of Clause 2 of MRS01 *Introduction to Specifications*, the Standard Work Items covered by this Specification are listed in Table 2.1.

Table 2.1 – Standard Work Items

Standard Item No.	Description	Unit of Measurement
Vehicle loop detectors		
61501	Supply of Vehicle Loop Detector Equipment incorporating [1 2 3 4 5 6 7 8] channel cards	each
61502	Supply and Installation of Vehicle Loop Detector Equipment incorporating [1 2 3 4 5 6 7 8] channel cards	each
61503	Installation of Vehicle Loop Detector Equipment incorporating [1 2 3 4 5 6 7 8] channel cards	each
Radar vehicle detectors		
61531	Supply and Installation of radar vehicle detectors as per manufacturer's requirements	each
Infrared vehicle detectors		
61551	Supply and Installation of infrared vehicle detectors as per manufacturer's requirements	each
Ancillary items		
61571	Provision of Vehicle Detection Spares [<i>as listed in the contract documents or on drawing reference</i>]	item
Removal of existing vehicle loop detectors		
61591	Removal of Vehicle Detection Equipment for re-use	each
61592	Removal of Vehicle Detection Equipment for disposal	each

2.1.2 Method of measurement

Item 61501 Supply of Vehicle Loop Detector Equipment incorporating [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8] channel cards

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) general equipment requirements stated in MRTS201, 204 and 258.

Item 61502 Supply and installation of Vehicle Loop Detector Equipment incorporating [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8] channel cards

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) general equipment requirements stated in MRTS201, 204 and 258.

Item 61503 Installation of Vehicle Loop Detector Equipment incorporating [1 | 2 | 3 | 4 | 5 | 6 | 7 | 8] channel cards

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) general equipment requirements stated in MRTS201, 204 and 258.

Item 61531 Supply and installation of radar vehicle detectors as per manufacturer's requirements

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) general equipment requirements stated in MRTS201, 204 and 258, and
- c) any applicable requirements of MRTS93, 204 and 258.

Item 61551 Supply and installation of infrared vehicle detectors as per manufacturer's requirements

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) general equipment requirements stated in MRTS201, 204 and 258, and
- c) any applicable requirements of MRTS93, 204 and 258.

Item 61571 Provision of Vehicle Detection Spares [as listed in the contract documents or on drawing reference]

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) provision of spares in accordance with the requirements of MRTS201 and as listed in the Scheme Documentation, and
- c) transport of all components to the Principal's storage facility.

Item 61591 Removal of Vehicle Detection Equipment for re-use

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) disconnection of Electrical Supply including termination and “making safe” of supply cable
- c) disconnection of Telecommunications connection
- d) removal of Internal Cabinet Equipment, supporting pole and associated cabinet enclosure, and
- e) transport of all components to Principal’s storage facility or designated site storage area for re- use.

Item 61592 Removal of Vehicle Detection Equipment for disposal

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) disconnection of Electrical Supply including termination and “making safe” of supply cable
- c) disconnection of Telecommunications connection
- d) removal of Internal Cabinet Equipment, supporting pole and associated cabinet enclosure, and
- e) transport of all components and disposal.

2.2 Method of measurement of vehicle detection equipment

This Specification provides Standard Work Items for:

- a) supply only of individual components
- b) installation only of individual components
- c) supply and installation of individual components, and
- d) supply and installation of complete vehicle detection site on a lump sum basis.

Any combination of Standard Work Items relating to these methods of measurement may be used in the Schedule of Rates. However:

- a) Where a Standard Work Item for supply and installation of a particular component or group of components is included in the Schedule of Rates, no supply only nor installation only Standard Work Item shall also apply to that component or group of components, as applicable, and
- b) Where a Standard Work Item for supply and installation of a complete vehicle detection site on a lump sum basis is included in the Schedule of Rates, no supply only, installation only nor supply and installation Standard Work Item shall also apply to that work.

2.3 Supply of materials

Any materials to be supplied by the Principal will be as stated in the Principal Supplied Material List, Form C6827. All other material shall be supplied by the Contractor.

The responsibility for transport to the Site of materials supplied by the Principal shall be as stated in the Principal Supplied Material List, Form C6827. Transport to the Site of all other materials shall be the responsibility of the Contractor.

2.4 *Removal of existing equipment*

The Superintendent will inspect the salvaged materials at the storage site and will reject any materials which, in the opinion of the Superintendent, have been damaged during the salvage operation. The Contractor shall be required to reimburse the Principal for materials damaged during salvage.

