

# Main Roads Specification

## **MRS01**

### **Introduction to Specifications**

**April 11**

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# Introduction to Specifications

## 1 INTRODUCTION

This document serves as an introduction to Specifications.

This document shall be read in conjunction with the other Specifications.

The requirements of this document apply to all Specifications including Supplementary Specifications incorporated into the Contract.

Reference to Clause numbers shall be taken to mean reference to the Clauses of that number within that Specification unless stated otherwise.

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

Technical Standards set out the requirements for the standard of work to be carried out for the department under all forms of contract. Specifications set out additional requirements for particular forms of contract. Each Specification includes the associated Technical Standard. For example, MRS02 consists of MRS02 plus MRTS02.

## 2 MEASUREMENT OF WORK

### 2.1 *Schedule of Rates Contract*

#### 2.1.1 Standard Method of Measurement

The Schedule of Rates contains a set of items with estimated quantities for various elements of work to be carried out under the Contract.

Item numbering and descriptions generally conform to the provisions of the standard work description methodology set out in Clause 2.1.2.

Unless marked provisional in accordance with Clause 2.1.7, the estimated quantities included in the Schedule of Rates have been measured –

- a) where a specific “Calculation of Quantities” Clause is included in the relevant specification, in accordance with that Clause; or
- b) in other cases, from the dimensions shown on the Drawings.

The estimated quantities have been rounded (up or down as required) to the nearest unit or decimal part of a unit as specified in Table 2.1.1.

**Table 2.1.1 – Rounding Values for Quantities**

Unit of Measurement	Rounding Value
cubic metre	0.1
each	1
litre	1
metre	1
square metre	1
tonne	0.01

In valuing completed work for the purposes of Clauses 42.1, 42.2 and 42.8 of the General Conditions of Contract, the Superintendent will measure the completed work in accordance with the method of measurement described in Clause 2.1. In the case of a variation approved or directed by the Superintendent under Clause 40 of the General Conditions of Contract, the Superintendent will measure the completed work in accordance with the method of measurement described in the variation, but if no method is so described, then the method of measurement described in Clause 2.1 will be used. Quantities will be rounded (up or down as required) as stated above.

**2.1.2 Standard Work Description Methodology**

The work required to be carried out under a schedule of rates contract is described in terms of the Standard Work Items referred to in Clause 2.1.3 and/or Supplementary Work Items referred to in Clause 2.1.4. The Standard Work Items and the Supplementary Work Items are collectively referred to as “Work Items”.

Work Items are defined by an item number, description and unit of measurement. The work represented by a Work Item is described in terms of Work Operations referred to in Clause 2.1.5.

The complete set of Standard Work Items in all Specifications plus any Supplementary Work Items included in the Schedule of Rates are referred to as the Measurement Set for the Contract and are deemed to fully describe the work under the Contract. Notwithstanding the requirements of Clause 3.2 of the General Conditions of Contract, any work under the Contract which is not specifically mentioned in the Work Items in the Measurement Set or in the Work Operations associated with those Work Items shall nevertheless be deemed to be included in the Work Items in the Measurement Set.

However, not all of the Standard Work Items will necessarily be applicable to work under the Contract and will not be shown in the Schedule of Rates.

**2.1.3 Standard Work Items**

Relevant Standard Work Items are listed in Clause 2 of individual Specifications.

Some Specifications contain no Standard Work Items (e.g. material supply or component manufacturing specifications). In such a case however, provision for the elements of work described in those specifications is included in a companion construction or erection specification.

Work Items in the Schedule of Rates are numbered using the relevant Standard Item Number followed by a decimal point and a one or two digit counter. The counter will normally be incremented for each additional Work Item based on that Standard Work Item. As an example, the first Work Item based on Standard Work Item 4101 Base, unbound pavement, Type 1, Subtype [subtype], [location], would be numbered 4101.1 or 4101.01.

Where text in a specification or the description of a Work Item contains a reference to a Standard Item Number, that reference shall be taken as a reference to all Work Items based on the Standard Work Item with that Standard Item Number.

Descriptions of some Standard Work Items contain parameters as defined in Clause 2.1.6.

The addition to the description of any Work Item of a parameter for the location of the specific work being measured shall not affect the provisions of Clause 2.1.

Where there are a number of tasks to be performed under a Work Item (e.g. sprayed bituminous surfacing) and each of the tasks are different or have different parameters, the requirements of specific Work Items included in the Schedule of Rates are specified in the Annexure to the relevant Specification.

Minor differences between the description of a Work Item in the Schedule of Rates and the description of the Standard Work Item on which that Work Item is based shall not materially affect the provisions of Clause 2.1.

Generally Standard Work Items have been grouped as set out in Table 2.1.3.

**Table 2.1.3 – Standard Work Item Groups**

<b>Standard Item Number Group</b>	<b>Description of Work</b>	<b>Standard Item Number Group</b>	<b>Description of Work</b>
1000 – 1999	Site establishment Provision for traffic Environmental management	5000 – 5999	Surfacing
2000 – 2999	Drainage Retaining structures Protective treatments	6000 – 6999	Road furniture Pavement marking Electrical
3000 – 3999	Earthworks Landscape works	7000 – 7999	Bridge substructure
4000 – 4999	Pavement	8000 – 8999	Bridge substructure

#### 2.1.4 Supplementary Work Items

Applicable Supplementary Work Items are identified in the supplementary specifications.

Some supplementary specifications may not include Supplementary Work Items, in which case the work described by that supplementary specification shall be deemed to be included in the Work Items which are included in the Schedule of Rates.

Supplementary Work Items may include parameters as described in Clause 2.1.6.

Generally, Supplementary Item Numbers range from 9000 to 9900.

However, in some cases a Supplementary Work Item may be represented by an item number which is based on a Standard Item Number but which is followed by a suffix "S". In such cases the work represented by the Supplementary Work Item –

- a) will be described by its item description which may be slightly different to the description of the Standard Work Item on which it is based in that the description may contain additional information to fully describe the location and/or extent of the work required;
- b) shall include at least the Work Operations described for the corresponding Standard Work Item; and
- c) may or may not be described further in a supplementary specification.

#### 2.1.5 Work Operations

The Work Operations applicable to a Work Item include those tasks listed below in Clause 2.1.5, those tasks listed in the relevant Specification and/or supplementary specification as being directly applicable to the Work Item, and any other tasks which could reasonably be inferred to be applicable to the Work Item having regard to the description of the Work Item, the context in which it is used in the relevant specification or the Schedule of Rates and the tasks necessary to complete the work in accordance with the Contract.

The listed Work Operations do not necessarily comprise a complete description of the Work Items or the work under the Contract, but provide a guide to the work required and highlight significant operations.

The Work Operations which describe any specific Work Item in the Schedule of Rates shall be those applicable to the Standard Work Item on which the Work Item is based.

The following Work Operations are common to all Work Items and are deemed to be included in the Work Items shown in the Schedule of Rates –

- a) establishment and disestablishment including cleaning up and making good, except to the extent that establishment and disestablishment are the subject of a separate specific Work Item in the Schedule of Rates;
- b) provision of all site facilities, except to the extent that the provision of any site facilities is the subject of a separate specific Work Item in the Schedule of Rates;
- c) provision of all labour, plant and equipment;
- d) supply, delivery, handling and storage of all materials except for materials supplied by the Principal and except to the extent that supply, delivery, handling and storage of any materials is the subject of a separate specific Work Item in the Schedule of Rates;
- e) provision of all supervisory and support staff;
- f) all costs associated with the operation of the Contractor's Workplace Health and Safety obligations, Quality System, environmental management obligations, traffic management obligations, community liaison obligations, Public Utility Plant obligations, works programming, road maintenance obligations and all other supervisory and coordination functions, except to the extent that such obligations and functions are the subject of separate specific Work Items in the Schedule of Rates;
- g) all costs incurred by the Contractor in complying with Commonwealth and State legislation and Local Government By-laws;
- h) all testing, except to the extent that testing is the subject of a separate specific Work Item in the Schedule of Rates;
- i) all costs associated with the work with respect to security, interest, fees, charges, taxes, royalties, insurance and compensation;

- j) all costs associated with the provision of workshop drawings, bar bending schedules and materials lists;
- k) any design for work required to be designed by the Contractor, except to the extent that such design is the subject of a separate specific Work Item in the Schedule of Rates;
- l) all overheads and profit; and
- m) all other expenses associated with the work not specifically listed above.

### **2.1.6 Parameters in Work Item Descriptions**

Where they occur in descriptions of Work Items, parameters are place markers for additional information (dimensions, location, material type, application rates, etc). When Work Items with parameters appear in the Schedule of Rates, the parameters are replaced with the additional specific information.

Parameters are shown in the item description in italics and in square brackets [*diameter*].

### **2.1.7 Provisional Quantities and Provisional Items**

Where a Work Item Number contains a suffix "P," that Work Item shall be deemed to be Provisional and it shall be treated as specified below.

At the time of tendering, the Principal was unable to determine an estimated quantity for such items in the manner mentioned in Clause 2.1.1.

In practice, any Work Item can be shown in the Schedule of Rates as Provisional (by the addition of a suffix "P" to the Work Item Number) whether or not that Work Item is so designated in the Specifications or supplementary specifications.

Where a Work Item Number contains a suffix "P" and the words "Provisional Quantity" appear in the description of the item, the Contractor shall be entitled to be paid for that work with the applicable limits of accuracy for the quantities of plus 50% minus 50%.

Where a Work Item Number contains a suffix "P" and the words "Provisional Quantity, as directed" appear in the description of the item, the Contractor shall be entitled to be paid for that work with the applicable limits of accuracy for the quantities of plus 50% minus 50%. The Superintendent will direct or mark out the extent of the work. The Contractor shall not proceed until the extent of the work is agreed.

Where a Work Item Number contains a suffix "P" and the words "Provisional Quantity, if ordered" appear in the description of the item, the Contractor shall only be entitled to be paid for that work if the Superintendent has directed the Contractor in writing to undertake that work. The applicable limits of accuracy for the quantities for an item marked as "Provisional Quantity, if ordered" shall be plus 100% minus 100%.

Where a Work Item Number contains a suffix "P" and the words "Provisional Item, if ordered" appear in the description of the item, the Contractor shall only be entitled to be paid for that work if the Superintendent has directed the Contractor in writing to undertake that work. It shall be understood that the work represented by that Work Item may not be required under the Contract. Limits of accuracy do not apply to these Work Items.

### **2.1.8 Recycled Materials**

Where a Work Item Number contains a suffix "R":

- a) recycled materials for this Work Item Number shall be manufactured from recycled materials and Works shall be completed in accordance with the requirements of MRS35; and
- b) where in the Tender Schedule there is a pair of Work Item Numbers where one has a suffix "R" and the other has no suffix, and each of these paired Work Item Numbers has the same quantity:
  - i) the Work Item Number with no suffix refers to the parent specification as defined in MRS35;
  - ii) the Tenderer may submit a tender for either one or both of the Work Item Numbers;
  - iii) the Contract will be awarded on the basis of only one of the Work Item Numbers; and
  - iv) the Contractor shall complete the Works using either, but not both, of the Work Item Numbers as ordered by the Principal.

## 2.2 Lump Sum Contracts

In general, quantities will not be measured by the Principal nor provided to the Contractor under a Lump Sum Contract.

Any Clause titled "Measurement of Work" in a Specification (generally Clause 2), shall not apply to a Lump Sum Contract.

Items included in a Schedule of Prices have been allocated specifically for the Contract without reference to any standard methodology. Under no circumstances shall items included in a Schedule of Prices be interpreted as being described by the method of measurement for schedule of rates contracts specified in Clause 2.1.

Where there is a high probability that the work required might differ from that shown on the Drawings (e.g. length of piles or rock quantities), items may be included in a Schedule of Rates for Variations. If such a change actually occurs during the Contract, reimbursement shall be made for the quantities actually carried out at the rates included in the Schedule of Rates for Variations in the Contractor's tender.

## 2.3 Measurement of Quantities

The Conformance Report for each lot shall include measured quantities for all scheduled items associated with the lot.

## 3 DEFINITION OF TERMS

### 3.1 Standard Definitions

The terms used in specifications shall be as defined in Clause 2 of MRTS01 *Introduction to Technical Standards*.

Additional terms used in specifications shall be as defined in Table 3.1.

**Table 3.1 – Definition of Terms**

Term	Definition
Corrective action request	A written communication from the Superintendent to the Contractor identifying a nonconformance and includes a direction for the Contractor to issue a nonconformance report.
CQR	Abbreviation for Contractor's Quality Representative who is the Contractor's employee responsible for the Contractor's quality system for the Contract.
Defect	Any single nonconformance of the product or process with the relevant standards and requirements of the Contract.
Measurement Set	The set of Work Items containing all Standard Work Items in all Specifications plus any Supplementary Work Items included in the Schedule of Rates.
Standard Item Number	A unique number assigned to a Standard Work Item as shown in a Specification.
Specification	Any document published by the department as a Specification forming part of the Main Roads Specifications and Technical Standards Manual.
Standard Work Item	A unique description of a discrete element of work specified in a Specification used for measurement and payment purposes in a schedule of rates contract.
Supplementary Item Number	A unique number assigned to a Supplementary Work Item as shown in a supplementary specification.
Supplementary Specification	Any specification included in the Contract which is not a Standard Specification.
Supplementary Work Item	A unique description of a discrete element of work specified in a supplementary specification used for measurement and payment purposes in a schedule of rates contract.
Technical Standard	Any document published by the department as a Technical Standard forming part

<b>Term</b>	<b>Definition</b>
	of the Main Roads Specifications and Technical Standards Manual.
Utilisation of a rejected lot for a reduced level of service	Concession, as defined by ISO AS/NZS 9000.
Work Operation	One of a set of tasks which together generally describe the work represented by a Work Item.
Work Item	A Standard Work Item or a Supplementary Work Item.
Work Item Number	A Standard Item Number or a Supplementary Item Number. The meanings of suffixes attached to the Work Item Number, are as described within the Specification to which the Work Item Number relates.

### **3.2 Definitions in Other Documents**

Further relevant definitions are contained in the following documents –

- a) a particular Supplementary Specification;
- b) a particular Specification; and
- c) as stated in MRTS01 *Introduction to Technical Standards*.

### **3.3 Priority of Definitions**

In the event of conflict in definition, priority shall be assigned in the order that the documents are listed below –

- a) the relevant Supplementary Specification;
- b) the relevant Specification; and
- c) as stated in MRTS01 *Introduction to Technical Standards*.

## **4 REFERENCED DOCUMENTS**

Requirements for referenced documents are given in MRTS01 *Introduction to Technical Standards*.

Table 4 lists documents referenced in this Specification.

**Table 4 – Referenced Documents**

<b>Reference</b>	<b>Title</b>
AS/NZS ISO 9000	Quality management systems – Fundamentals and vocabulary

## **5 APPLICATION OF CONCESSION PROVISIONS FOR BELOW STANDARD WORK**

A rejected lot may be considered by the Superintendent for use for a reduced level of service provided that a specific *Utilisation of a Rejected Lot for a Reduced level of Service* Clause is included in the relevant Technical Standard.

The Superintendent may consider the lot for a reduced level of service based on the Superintendent's assessment of the consequences of the deficiencies on the performance of the work and provided that the Contractor takes the necessary action to prevent recurrence of the non-compliance and states, on the nonconformance report, what action is to be taken.

If the Superintendent does not reject the lot but allows its use for a reduced level of service, payment will be made at the reduced value as calculated from the specific *Utilisation of a Rejected Lot for a Reduced Level of Service* clause. Where there is no specific clause, the reduction in value will be determined by the Superintendent.

The non-rejection of and payment for a lot utilised for a reduced level of service shall be on the basis of the minimisation of losses to both the Principal and the Contractor due to the failure by the Contractor to present the minimum standard of work required by the Contract.

## **6 APPLICATION OF BONUS PROVISIONS FOR ABOVE STANDARD WORK**

A lot may be considered by the Superintendent for bonus payment for above standard work provided that –

- a) a specific *Additional Payment for A Higher Standard of Product* Clause is included in the relevant Technical Standard; and
- b) the inclusion of the provisions of that Clause in the Contract is indicated in the Annexure to that Technical Standard.

The bonus payment as detailed in the contract is based on the Principal's assessment of the additional benefit to the Principal.

Payment will be made at the increased value as calculated from the specific *Additional Payment for A Higher Standard of Product* Clause.