

SUPERSEDED

Specification (Measurement)

**Transport and Main Roads Specifications
MRS74 Supply and Erection of Prestressed Concrete
Deck and Kerb Units**

July 2018

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1 Introduction

This Specification applies to the supply and / or transport and erection of precast prestressed concrete deck and kerb units and transverse stressing units for a bridge superstructure.

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications*, MRS50 *Specific Quality System Requirements* and other Specifications as appropriate.

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

2 Measurement of work

2.1 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
Prestressed concrete deck and kerb units, and transverse stressing units		
71701	Prestressed concrete deck and kerb unit, supply on Site, [<i>depth</i>] mm deep, [<i>length</i>] metres long	each
71702	Transverse stressing units, supply on Site	lump sum
71703	Transport of prestressed concrete deck and kerb units to the Site, [<i>depth</i>] mm deep, [<i>length</i>] metres long, ex works [<i>location</i>]	each
71704	Transport of transverse stressing units to the Site, ex works [<i>location</i>]	lump sum
71705	Single layer elastomeric bearings, [<i>length</i>] x [<i>breadth</i>] x [<i>depth</i>]	each
71706	Laminated elastomeric bearings, [<i>length</i>] x [<i>breadth</i>] x [<i>depth</i>]	each
71707	Erection of prestressed concrete deck and kerb units, [<i>depth</i>] mm deep, [<i>length</i>] metres long	each
71708	Erection of transverse stressing units	lump sum
71709	Holding-down bolts for prestressed concrete deck and kerb units, [<i>length</i>] mm long	each
71711	Transverse stressing of prestressed concrete deck and kerb units	lump sum

2.2 Work Operations

Item 71701 **Prestressed concrete deck and kerb unit, supply on Site, [*depth*] mm deep, [*length*] metres long**

Item 71702 **Transverse stressing units, supply on Site**

These items are used only where prestressed concrete deck and kerb units and / or transverse stressing units are supplied by the Contractor. Work Operations incorporated in the above items include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*

- b) manufacture of prestressed concrete deck and kerb units or transverse stressing units, as appropriate
- c) transport to the Site
- d) preparation of the Site storage area
- e) unloading at the Site, and
- f) storage at the Site.

Item 71703 **Transport of prestressed concrete deck and kerb units to the Site, [*depth*] mm deep, [*length*] metres long, ex works [*location*]**

Item 71704 **Transport of transverse stressing units to the Site, ex works [*location*]**

These items are used only where prestressed concrete deck and kerb units and / or transverse stressing units are supplied by the Principal for collection by the Contractor at the place of manufacture. Work Operations incorporated in the above items include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) taking delivery of deck and kerb units and / or transverse stressing units at the location and by the mode nominated in the Contract
- c) transport to the Site
- d) unloading at the Site, and
- e) storage at the Site.

Item 71705 **Single layer elastomeric bearings, [*length*] x [*breadth*] x [*depth*]**

Item 71706 **Laminated elastomeric bearings, [*length*] x [*breadth*] x [*depth*]**

Work Operations incorporated in the above items include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of bearings
- c) supply of epoxy paste
- d) preparation of bearing seat, and
- e) installation of bearing.

Item 71707 **Erection of prestressed concrete deck and kerb units, [*depth*] mm deep, [*length*] metres long**

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) removal of advertising labels
- c) provision of mortar seatings
- d) provision of temporary support including packers
- e) installing deck and kerb units onto headstocks
- f) cutting and epoxy coating of lifting hoop anchors

- g) epoxy coating of foot anchors
- h) filling of foot anchor recesses, and
- i) cleaning of bridge deck.

Item 71708 Erection of transverse stressing units

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) straightening transverse stressing bars, where necessary
- c) inserting transverse stressing bars into formed holes in deck and kerb units, and
- d) coupling transverse stressing bars, where necessary.

Item 71709 Holding-down bolts for prestressed concrete deck and kerb units, [*length*] mm long

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials
- c) installation of holding-down bolts, and
- d) grouting of holding-down bolts.

Item 71711 Transverse stressing of prestressed concrete deck and kerb units

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) supply of all materials and equipment, including provision of stressing jacks
- c) transverse stressing operations
- d) supply and installation of mortar between prestressed concrete units and at ends of prestressed concrete units
- e) grouting of transverse stressing holes
- f) trimming of stressing bars
- g) epoxy coating of exposed anchorages, and
- h) filling of bearing plate recesses.

2.3 Prestressed concrete units and / or stressing units supplied by the Principal

2.3.1 Supply of prestressed concrete units and stressing units

Where listed in the Principal Supplied Materials List (Form C6827), prestressed concrete deck and kerb units and transverse stressing units shall be supplied by the Principal. Where not so listed, prestressed concrete deck and kerb units and transverse stressing units shall be supplied by the Contractor.

2.3.2 Supply location

Prestressed concrete deck and kerb units and/or stressing units supplied by the Principal will be made available at the point of delivery and by the transport mode shown in the Principal Supplied Materials List (Form C6827).

2.3.3 Time of delivery

The time of delivery shall generally conform to the construction program supplied by the Contractor with its tender.

Should on-site construction be delayed, the Contractor may be required to accept delivery of the deck and kerb units and / or stressing units at any time after the programmed date and to store the members at no cost to the Principal.

2.3.4 Acceptance of prestressed concrete units and / or stressing units by the Contractor

The Contractor shall check the prestressed concrete deck and kerb units and / or stressing units for quantity and condition upon taking delivery and shall immediately report to the Administrator any defect or deficiency. **Nonconformance**

2.3.5 Damage to prestressed concrete units and/or stressing units

In the event of any deck or kerb unit or stressing unit sustaining damage after having been accepted by the Contractor, such as cracking, spalling or deformation of projecting reinforcement or bolts or damage to cast-in sockets and formwork cones, the unit shall be set aside until it has been inspected by the Administrator. **Nonconformance** The cost of repairs to damaged prestressed concrete units and / or stressing units and the cost of replacing rejected prestressed concrete units and / or stressing units shall be borne by the Contractor.

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