

Superseded

Specification (Measurement)

**Transport and Main Roads Specifications
MRS66 Driven Steel Piles**

October 2016

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Contents

- 1 Introduction 1**
- 2 Measurement of work 1**
 - 2.1 Standard Work Items 1
 - 2.2 Work Operations 1
 - 2.3 Calculation of quantities 4
 - 2.3.1 *Natural ground surface level* 4
 - 2.3.2 *Pile driving* 4
 - 2.3.3 *Pre-boring* 4
 - 2.3.4 *Jetting* 4
 - 2.3.5 *Drilling and firing* 4
 - 2.4 No additional payments for compliance with MRTS66 4

Superseded

1 Introduction

This Specification applies to the supply and/or installation of driven steel piles.

This Specification shall be read in conjunction with MRS01 *Introduction to Specifications* 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 incorporated in this Specification are listed in Table 2.1.

Table 2.1 – Standard Work Items

Standard Item No.	Description	Unit of Measurement
Driven Steel Piles		
7601	Steel piles, supply on Site	m
7602	Handling and pitching of steel piles	each
7603P	Driving steel piles (Provisional Quantity)	m
7604	Setting up for pre-boring for steel piles	lump sum
7605	Pre-boring for steel piles	m
7606	Setting up for jetting for steel piles	lump sum
7607	Jetting for steel piles	m
7608	Setting up for drilling and firing for steel piles	lump sum
7609	Drilling and firing for steel piles	m
7611P	Splicing steel piles (Provisional Quantity, as directed)	each
7612	Trimming of steel pile heads including welding of bond bars	each
7613P	Setting up for re-driving of steel piles (Provisional Quantity, as directed)	each

2.2 Work Operations

Item 7601 Steel piles, supply on site

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) manufacture of steel piles
- c) transport to site
- d) unloading at site, and
- e) storage at site.

Item 7602 Handling and pitching of steel piles

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) transferring pile from on site storage to its aligned position in the driving rig
- c) provision and use of the driving rig, and
- d) retention of pile on line for driving.

Item 7603P Driving steel piles (Provisional Quantity)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) driving the pile
- c) provision and use of the pile driving hammer, and
- d) setting up for and re-driving piles which have lifted as a result of other driving operations.

Item 7604 Setting up for pre-boring for steel piles

This item is only used where pre-boring is shown in the Standard Drawings or directed by the Superintendent. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) provision and establishment on site of plant and equipment required for pre-boring.

Item 7605 Pre-boring for steel piles

This item is only used where pre-boring is shown in the Standard Drawings or directed by the Superintendent. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) boring the hole, and
- c) disposal of the excavated material.

Item 7606 Setting up for jetting for steel piles

This item is only used where jetting is shown in the Standard Drawings or directed by the Superintendent. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) provision and establishment on site of plant and equipment required for jetting.

Item 7607 Jetting for steel piles

This item is only used where jetting is shown in the Standard Drawings or directed by the Superintendent. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) operation of the jetting equipment, and
- c) disposal of waste material.

Item 7608 Setting up for drilling and firing for steel piles

This item is only used where drilling and firing is shown in the Standard Drawings or directed by the Superintendent. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*, and
- b) provision and establishment on site of plant and equipment required for drilling and firing.

Item 7609 Drilling and firing for steel piles

This item is only used where drilling and firing is shown in the Standard Drawings or directed by the Superintendent. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) drilling of holes
- c) lining of holes, where necessary
- d) charging holes with explosives, and
- e) firing.

Item 7611P Splicing steel piles (Provisional Quantity, as directed)

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) preparation of pile ends
- c) welding of spliced joint, and
- d) application of protective coating on joint.

Item 7612 Trimming of steel pile heads including welding of bond bars

Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) cutting off piles
- c) welding of bond bars to pile heads, and
- d) disposing of offcuts.

Item 7613P Setting up for re-driving of steel piles (Provisional Quantity, as directed)

This item is used where the Superintendent directs that a pile requires re-driving after the original driving operation has been completed. This item shall not be used for re-driving piles which have lifted as a result of other driving operations. Work Operations incorporated in the above item include:

- a) Work Operations listed in Clause 2.1.5 of MRS01 *Introduction to Specifications*
- b) repositioning of driving equipment over pile, and
- c) removal of driving equipment on completion.

2.3 Calculation of quantities

2.3.1 Natural ground surface level

The natural ground surface level shall be taken as the level determined from the contours shown in the Standard Drawings unless agreed otherwise, in writing, by the Contractor and the Superintendent, prior to commencing driving.

2.3.2 Pile driving

Pile driving shall be measured on the basis of the driven length of pile, which length shall be taken to be the axial length from the toe of the pile to the underside of the headstock or pile cap or to the natural ground surface level, whichever is the lower.

Ground material forced up between the piles during the driving operation shall be removed by the Contractor at no cost to the Principal.

Piles which lift as a result of other pile driving operations nearby shall be re-driven to their correct levels at no cost to the Principal.

2.3.3 Pre-boring

Pre-boring shall be measured as the length along the hole axis from the level at the bottom of the hole, as shown in the Standard Drawings unless otherwise directed by the Superintendent, to the level of the underside of the pile cap or to natural ground surface level, whichever is the lower.

2.3.4 Jetting

Jetting shall be measured as the length along the pile axis over which jetting is required, as shown in the Standard Drawings unless otherwise directed by the Superintendent.

2.3.5 Drilling and firing

Drilling and firing shall be measured as the length along the hole axis from the level at the bottom of the hole, as shown in the Standard Drawings unless otherwise directed by the Superintendent, to the level of the underside of the pile cap or to natural ground surface level, whichever is the lower.

2.4 No additional payments for compliance with MRTS66

In accordance with Clause 5.2 of MRTS66, any damage which occurs to coatings during handling, transport or storage shall be rectified by the contractor at no additional cost to the Principal.

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