

MATERIAL LIST

ITEM	No OFF	ITEM DESCRIPTION	MATERIAL DESCRIPTION	LENGTH	GRADE
1	8	Bar threaded 190 at top to M33	36 dia deformed bar	To suit each standard cage	D500N
2	1	Circular helix	10 dia round bar at 150 pitch	To suit each standard cage	R250N
3	-	Spider cage Type 1, 1 off for each anchor cage	12 dia round bar, with 10 dia round bar as cross brace, welded together and to threaded bar, refer Section A	12 dia round bar, 1425 + 4 x 370 = 2905 10 dia round bar = 370	R250N
3a	-	Spider cage Type 2, 2 off for 3200 anchor cage, 3 off for 4900 anchor cage	12 dia round bar, welded together and as shown and to threaded bar to form anchor cage, refer Section B	4 x 400 lengths = 1600	R250N
4	8	M33 levelling nuts	M33 hex, high strength	-	Class 8
5	8	M33 fixing nuts	M33 hex, high strength	-	Class 8
5a	8	M33 temporary fixing nuts	M33 hex, high strength	-	Class 8
6	16	M33 structural flat washers	To suit M33 threaded bar	-	Class 8.8

NOTES:

(5a) Temporary fixing nut

6) Structural flat washer

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at top to M33

36 dia bar threaded 190

required length for 4400 or 3700 lengths.

as detailed in Standard Drawing 1680.

(c) Extend old stock 2000 or 3000 long anchor

Standard Drawing 1680.

cage using suitable extension as detailed in

(d) Fabricate non-standard length anchor cage using

the details on this drawing, modified to suit.

5) Fixing nut

- 1. SCOPE: This Standard Drawing provides details of the Mast Arm anchor cage in accordance with MRTS92.
- 2. TOLERANCE: General \pm 5mm PCD \pm 1mm.
- 3. SELECTION OF CAGE LENGTH shall be in accordance with the footing details on Standard Drawing 1403, and is based on finished surface crossfall and foundation material at mast arm position, and shall be approved by the Project Administrator.
- 4. STANDARD MAST ARM ANCHOR CAGES are to be fabricated in 3200 and 4900 lengths. Refer to Drawing 2 of this Standard Drawing for depiction of all cage lengths. Extensions to Anchor Cages shall be to Standard Drawing 1680 for use with 3200 length cages to achieve the required length up to 4900. Current stocks of 2000 and 3000 length cages may continue to be used with suitable extensions until exhausted. Refer to Note on this drawing for how to achieve Non-standard cage lengths.
- 5. REINFORCING STEEL shall be in accordance with Standard Drawing 1044, and with MRTS71 and AS/NZS 4671.

Deformed bars Grade D500N.

Round bars Grade R250N.

All carbon reinforcing steel shall be ACRS certified.

Bars shall be threaded in accordance with AS 1275 before galvanising. Prior to galvanising all weld splatter and welding slag shall be removed. Completed Anchor Cage shall be hot dip galvanised to AS/NZS 4680.

- 6. Nuts Class 8 and structural washers for Class 8.8 bolts shall be supplied in accordance with MRTS78. Assembly testing of threaded bar and nut shall be in accordance with MRTS278 with test loads as for Class 4.6 bolts.
- All nuts and washers shall be hot dip galvanized to AS 1214.
- 7. WELDING symbols conform to AS 1101.3.
- All welding to AS/NZS 1554.3.
- Welding consumables to be controlled hydrogen type G493 to AS/NZS ISO 14341-B or T493 to AS/NZS ISO 17632-B.
- 8. LIFTING POINTS on cages shall comply to the details shown on Drawing 2 of this Standard Drawing and are required on cages 4m or greater in length.
- 9. Anchor cages shall be labelled for identification in accordance MRTS71.
- 10. DIMENSIONS are in millimetres unless shown otherwise.

REFERENCED DOCUMENTS:

Departmental Standard Drawings:

1044 Reinforcing Steel - Lap Lengths

1680 Extension to Light Pole and Mast Arm Anchor Cages

1699 Traffic Signals/Road Lighting/ITS - Parts List

Departmental Specifications:

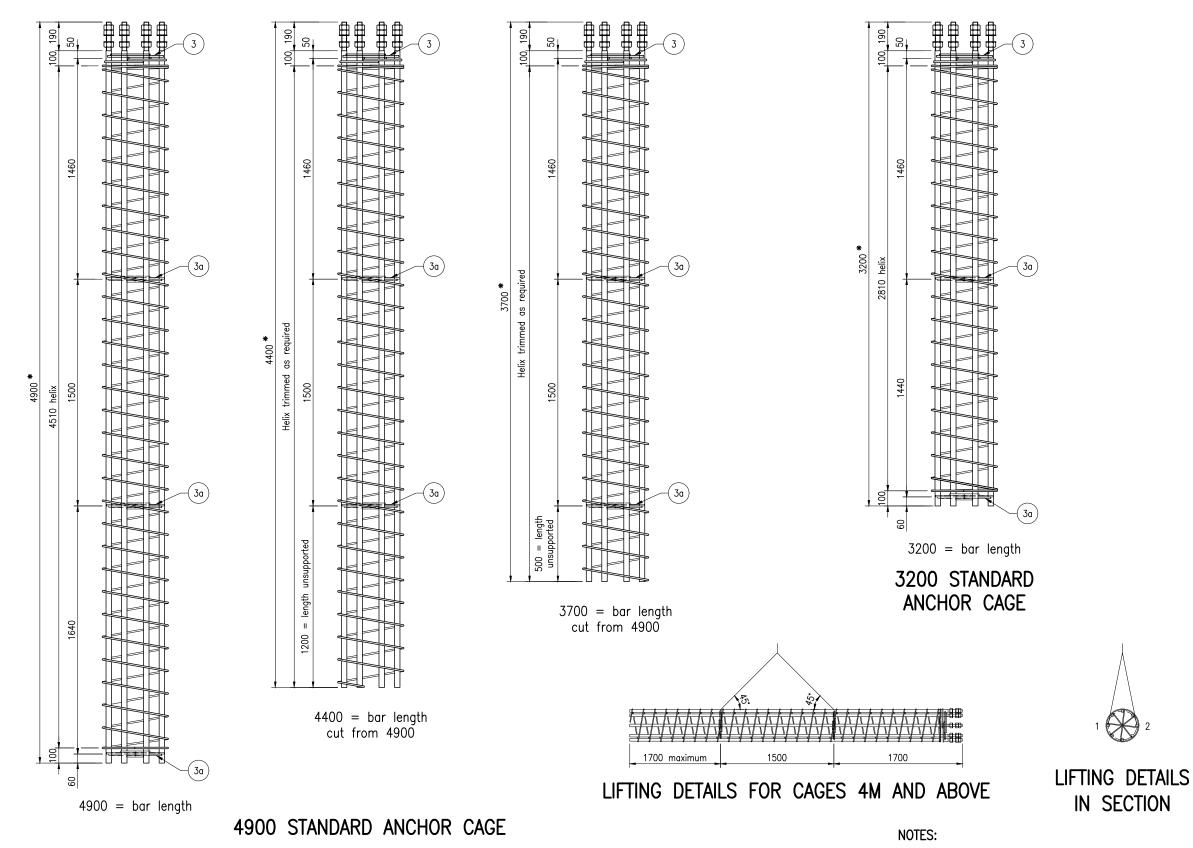
MRTS71 Reinforcing Steel

MRTS78 Fabrication of Structural Steelwork

MRTS92 Traffic Signal and Road Lighting Footings

MRTS278 Supply of Structural Fasteners

Department of Transport and Main Roads The State of Queensland (Department of Transport and Main Roads) 2025 TRAFFIC SIGNALS MAST ARM ANCHOR CAGE Α3 Standard Drawing No Not to 1404 FABRICATION DETAILS DRAWING 1 OF 2 Date 3/2025



- 1. Refer Drawing 1 for fabrication details and General Notes.
- 2. Refer Drawing 1 for information on selection of cage lengths.
- 3. For non-standard lengths, bars and helix shall be trimmed and sharp edges ground

IN SECTION

Department of Transport and Main Roads TRAFFIC SIGNALS MAST ARM ANCHOR CAGE Standard Drawing No 1404 FABRICATION DETAILS DRAWING 2 OF 2