

COFFS HARBOUR CITY COUNCIL



**DEVELOPMENT SPECIFICATION
DESIGN**

1192 Signposting

Version 1 01 January 2009

1192 SIGNPOSTING

1 SCOPE AND GENERAL

1.1 SCOPE

The work to be executed under this worksection consists of:

- the supply and erection of the Regulatory, Warning and Guide signs as described in AS 1742 (all parts), AS 1743 and AS 1744,
- the supply and erection of proprietary Street Name and Community Facility Name signs,
- the supply and erection of sign support structures to support the signs, and
- the adjustment of existing signs and sign support structures.

1.2 QUALITY

Requirements for quality control and testing, including maximum lot sizes and minimum test frequencies, are given in 0161 *Quality (Construction)*.

1.3 REFERENCED DOCUMENTS

The following documents referred to in this worksection shall be deemed as the latest edition of the Australian Standards, including amendments and supplements.

Worksections

0161 *Quality (Construction)*

0310 *Minor concrete works*

1101 *Control of traffic*

Standards

AS 1163	Structural steel hollow sections
AS 1214	Hot-dip galvanized coatings on threaded fasteners (ISO metric coarse thread series)
AS 1379	Specification and supply of concrete
AS 1580	Paints and related materials—Methods of test
AS 1580.108.2	Dry film thickness—Paint inspection gauge
AS 1742 (Various)	Manual of uniform traffic control devices
AS 1743	Road signs—Specifications
AS 1744	Forms of letters and numerals for road signs
AS 2700	Colour standards for general purposes
AS 4100	Steel in structures
AS/NZS 1554	Structural steel welding
AS/NZS 1554.1	Welding of steel structures
AS/NZS 1734	Aluminium and aluminium alloys—flat sheet, coiled sheet and plate
AS/NZS 1580	Paints and related materials—Methods of test
AS/NZS 1580.602.2	Measurement of specular gloss of non-metallic paint films at 20°, 60° and 85°
AS/NZS 1866	Aluminium and aluminium alloys—Extruded rod, bar, solid and hollow shapes
AS/NZS 3678	Structural steel—Hot-rolled plates, floorplates and slabs
AS/NZS 3679	Structural steel
AS/NZS 3679.1	Hot-rolled bars and sections
AS/NZS 4671	Steel reinforcing materials
AS/NZS 4680	Hot-dip galvanized (zinc) coatings on fabricated ferrous articles

1.4 PROVISION FOR TRAFFIC

Minimise inconvenience

The Contractor shall provide for traffic in accordance with 1101 *Control of traffic* while undertaking the work and shall organise the work to avoid or minimise delays and inconvenience to traffic, both vehicular and pedestrian.

Premature sign exposure

Where a sign is erected before it is intended for use by traffic and is visible to traffic, the face of the sign shall be completely and securely wrapped in porous cloth sheeting or other opaque covering material approved by the Superintendent, until the Superintendent directs that the sign shall be uncovered.

2 SIGNS

2.1 STREET AND COMMUNITY FACILITY NAME SIGNS

Signage system

All street and community facility name signs shall comply with Council's adopted signage system and with the details as shown on the Drawings.

Proprietary sign requirements

Proprietary signs shall be manufactured and installed in accordance with the requirements of AS 1742.5, Street Name and Community Facility Name Signs, to the following details:

- [complete/delete]

Logo

Details of Council's logo shall be supplied to the Contractor by the Superintendent.

Legends

Details of the signs and legends to be provided under the Contract shall be as shown on the Drawings.

Approval

The Contractor shall submit details of Manufacturer, all sign materials and sign attachment system to the Superintendent for approval prior to commencement of sign manufacture.

This action constitutes a HOLD POINT.

The Superintendent's approval of the submitted details is required prior to the release of the hold point.

2.2 REGULATORY, WARNING AND GUIDE SIGNS

General

Approved supplier: The Contractor shall advise the names of the proposed suppliers of signs for the Superintendent's concurrence. Only suppliers who have previously established, or can now establish, their competence to carry out the work in accordance with this worksection shall be used.

Proof of quality: The Contractor shall supply documentary evidence, satisfactory to the Superintendent, that all materials and parts proposed for use comply with the requirements of this worksection. This action constitutes a HOLD POINT.

The Superintendent's approval of the documentary evidence is required prior to the release of the hold point.

Dimensions, legend, background and other details: Details of the signs to be provided under the Contract shall be as shown on the Drawings. The dimensions, legend and background for each sign shall be in accordance with this worksection and the Drawings.

Temporary signs: Temporary signs for control of traffic shall be as specified in 1101 *Control of traffic*.

Sign blanks

Aluminium quality: Sign blanks shall be 1.6 mm thick aluminium sheet alloy of Type 5251 or Type 5052 and Temper H38 or Temper H36 in accordance with AS 1734.

Dimension tolerances: Sign blanks shall be free of cracks, tears and other surface blemishes and the edges shall be true and smooth. The dimensions of the sign blank shall be within plus or minus 1.5 mm of the dimensions specified and the finished sign shall be flat within a maximum allowable bow of 0.5% of the maximum dimension of the sign blank in any direction.

One piece: Sign blanks shall be one piece except where the sign is of such a size as to require more than one full sheet of aluminium in which case a multipiece sign shall be allowed.

Multipiece sign: A multipiece sign shall be made up of the minimum number of pieces practical and sheets of the multipiece sign shall be butted together with a maximum gap of 1 mm at any point along the joint.

Joint backing strips: All joints shall be covered by a backing strip. The backing strip shall be riveted to each sheet with rivets, coloured to match the background material on the face of the sign, at a spacing not exceeding 200 mm. Backing strips shall be of the same material and colour as used for the sign blank and shall have a minimum width of 50 mm over the full length of the joint.

Aluminium extrusion as backing strip: The aluminium extrusion used for mounting may be used as the backing strip for horizontal joints where it complies with the spacing requirements.

Face treatment: The face of each sign blank shall be chemically cleaned and etched or mechanically abraded.

Where the sign blank is to receive a paint background, the face shall be spray painted with a compatible etch primer.

Back treatment: The back of each sign blank shall be uncoated and the surface finish shall be rendered dull and non-reflective either by mechanical or chemical means and shall be free of scratches and blemishes.

Mounting: Signs shall be supplied with square holes or aluminium extrusion backing for mounting purposes, at the centre spacings as shown on the Drawings.

Aluminium extrusion backing

Design section: The signs shall include special aluminium extruded sections, as shown on the Drawings, for mounting purposes. The aluminium shall be Type 6063-T5 in accordance with AS 1866.

Fixing: The aluminium extrusion shall be fixed at the centre spacings as shown on the Drawings and shall be riveted to the sign blank with correctly coloured rivets at a spacing not exceeding 200 mm.

Rivets

Head and shank: Each rivet shall consist of a domed head and shank made of aluminium alloy and a steel mandrel which is discarded after securing the rivet.

Painted head: A paint coating shall be applied to the domed head so that when the rivet is in position it will show the same colour as the material to which it is attached. Paint may cover the shank of the rivet, providing the coating thickness does not restrict the insertion of the shank into the standard drilled hole for that rivet.

Paint application: The paint shall be an alkyd enamel, which shall be applied after an appropriate treatment of the shank of the rivet to ensure long lasting adhesion.

Retro-reflective material for background and legend

Approved: The retro-reflective material shall be approved by the Superintendent. The background and legend material shall be compatible both in application and durability.

Standard: Retroreflective material shall conform in colour and class to the requirements of AS 1743 for Class 1, Class 2 and Class 2A materials. Unless shown otherwise on the Drawings, the material shall be Class 2.

Application: Retroreflective material shall be applied to the sign blank in accordance with the manufacturers recommended methods so that it is completely adhered without bubbles, cracks or blemishes.

Non-reflective background material—Background paint

Quality: Background paint shall be an approved long life industrial quality, two compound polyurethane paint. The paint shall exhibit high standards of adhesion, abrasion resistance, resistance to weathering and colour fastness under widely varying conditions of exposure. The paint shall be compatible with the etch primer used on the sign blank.

Application: The paint shall be applied using conventional air spray application to give a uniform cover free of blemishes. A minimum dry film thickness of 38 microns is required when tested in accordance with AS 1580.108.2.

Colours: Non-reflective background paint shall be as specified in AS 1743 from one of the following AS 2700 colours:

- Red: R13 Signal Red
- Yellow: Y14 Golden Yellow

- Brown: X65 Dark Brown
- Blue: B11 Rich Blue
- Standard Green: G12 Holly Green
- Freeway Green: Emerald

Background colours shall be specified from one of the following colours:

- White—Gloss
- 'Dark' Green—Matt Colour No G61 as specified in AS 2700.
- 'Tourist' Brown—Matt Colour No X65, Dark Brown, as specified in AS 2700.
- 'Dark Grey'—Matt Colour No N64, Dark Grey as specified in AS 2700.

Exact colorimetric values are set out in AS 2700.

Gloss levels: For matt coatings, the gloss level, determined by AS/NZS 1580.602.2, using an 85° head, shall be neither less than 12 per cent of gloss nor more than 15 per cent of gloss. For gloss coatings, the gloss level, determined by AS/NZS 1580.602.2 using a 20° head shall be neither less than 85% of gloss nor more than 95% of gloss.

Non-reflective background material—Background sheet material

Quality: Adhesive cast vinyl sheet material or other equivalent material approved by the Superintendent may be used in place of background paint. The material shall be of uniform density and compatible with the material used for the legend both in application and durability.

Colours and gloss: The colours and gloss levels shall be uniform and conform to the requirements as above.

Application: Sheet material shall be applied to the sign blank in accordance with the manufacturers recommended methods so that it is completely adhered without bubbles, cracks or blemishes.

Non-reflective material for legend—Legend screening ink

Quality: Screening ink shall be a high quality, full gloss, non-fade, non-bleed and scratch resistant type of ink compatible with the material to which it is applied. Screening ink shall have durability at least equal to the material to which the screening ink is applied.

Application: Screening ink legends shall be applied to the background material in accordance with the manufacturers recommended methods.

Non-reflective material for legend—Legend sheet material

Quality: Adhesive cast vinyl sheet material or other equivalent material approved by the Superintendent may be used in place of screening ink. The material shall be of uniform density and compatible with the material used for the background both in application and durability.

Application: Sheet material legends shall be applied to the background material in accordance with the manufacturers recommended methods so that it is completely adhered without bubbles, cracks or blemishes.

Non-reflective material for legend—Colours and finish

The requirements of **Regulatory, warning and guide signs** shall also apply to non-reflective materials for legends but additional colours complying with AS 2700 may be specified.

2.3 REFERENCE MARKINGS

Identification code

All warning, regulatory and guide signs shall be clearly and permanently stamped or engraved with an identification coding.

The coding shall appear in ciphers of height neither less than 6 mm nor more than 10 mm on the rear of the sign and shall be carried out in such a manner that the front face of the sign is not damaged.

Location

For rectangular signs, the coding shall appear as near as practicable to the bottom rear left hand corner.

For other shaped signs, the coding shall be positioned on or below the horizontal centre line and as near as practicable to the left hand rear edge.

Information shown

Manufacturers shall include coding information in the following format:

- Sign Reference Number

- Manufacturer's Name
- Month and Year of Manufacture
- Manufacturer and Class of Retro-Reflective Material

Proprietary signs

The requirements for reference markings shall not apply to proprietary street name or community facility name signs.

2.4 PROTECTION OF SIGNS

Signs shall be adequately protected from damage during storage and transportation to site.

3 SIGN SUPPORT STRUCTURES

3.1 GENERAL

Scope

The work to be executed under this section includes the supply of materials, fabrication of components and protective treatment of the sign support structures and anchor bolt assemblies and the supply and fabrication of footing reinforcement cages.

Approved supplier

The Contractor shall advise the names of the proposed suppliers of sign support structures for the Superintendent's concurrence.

Only suppliers who have previously established, or can now establish, their competence to carry out the work in accordance with this worksection shall be used

Proof of quality

The Contractor shall supply documentary evidence, satisfactory to the Superintendent, that all materials and parts proposed for use comply with the requirements of this worksection.

This action constitutes a HOLD POINT.

The Superintendent's approval of the documentary evidence is required prior to the release of the hold point.

Structure details

Details of the sign support structures to be provided under the Contract shall be as shown on the Drawings.

3.2 SIGN STRUCTURES AND ANCHOR BOLT ASSEMBLIES

Fabrication

Type: Sign support structures shall be either:

- Standard round galvanised steel posts of size 50, 65 or 80 mm nominal bore, as shown on the Drawings, fitted with a cap for waterproofing.
- Purpose-designed steel structures as shown on the Drawings and manufactured in accordance with the requirements of AS 1250.

Standards: Purpose-designed steel structures shall be fabricated from steel sections which shall comply with the requirement of AS 1163, AS 3678 and AS 3679.1.

Splices: Splices in members shall be restricted to a maximum of one splice per member. Splices shall be full penetration butt welds. All welding shall be as shown on the Drawings and in accordance with the requirements of AS 1554.1, Category SP for sign structure welds and Category GP for anchor bolt assemblies.

Anchor bolts: Anchor bolt assemblies for purpose-designed structures shall be fabricated as shown on the Drawings.

Finish: All steelwork shall be finished in a workmanlike manner and shall be free from pitting, sharp corners and projections and cleaned of mill scale, loose rust and foreign particles either by blast cleaning or other effective method.

Protective treatment

Hot-dip galvanizing: Except for standard galvanised steel posts, all steel components including brackets and anchor bolt assemblies shall be protected by hot-dip galvanizing after all fabrication processes are completed.

Finish: The steel components shall be finished by the hot-dip galvanising process in accordance with AS/NZS 4680 to provide an average minimum coating thickness of 85 microns and a bright finished surface free from white rust and stains.

Bolts and nuts: Bolts, nuts and washers and brackets shall be galvanized in accordance with AS 1214.

Splices in galvanized posts: Splices in standard galvanized steel posts shall be painted by using an organic zinc-rich primer, or inorganic zinc silicate paint, in accordance with the repair requirements in Clause 8 of AS/NZS 4680.

Attachment of signs

Typical systems: Posts and other components shall be provided with the required sign attachment holes or fittings to suit the typical attachment systems as shown on the Drawings. Sign panels shall be attached to each supporting member at each extrusion section or bolt hole in the sign panel.

Contractor's responsibility: The Contractor shall submit details of the proposed attachment systems for the Superintendent's approval.

3.3 STEEL REINFORCEMENT CAGES

Standards

Steel reinforcement in cages for sign support structure footings shall comply with the requirements AS/NZS 4671.

Evidence of quality

If requested, the Contractor shall supply evidence satisfactory to the Superintendent that all materials conform with the requirements of this worksection.

This action constitutes a HOLD POINT.

The Superintendent's approval of the supplied evidence is required prior to the release of the hold point.

Cleanliness

Steel reinforcement shall be free from loose or thick rust, grease, tar, paint, oil, mud, millscale, mortar or any other coating, but shall not be brought to a smooth polished condition.

Accuracy

Reinforcement shall be formed to the dimensions and shapes shown on the Drawings. Heating of reinforcement for purposes of bending will not be permitted unless Grade 400 deformed bar reinforcement is specified.

Full bars

All reinforcement shall be furnished in the lengths indicated on the Drawings. Splicing of bars will only be permitted with the approval of the Superintendent as to the location and method of splicing.

Splicing

Splicing in reinforcing fabric shall be measured as the overlap between the outermost wire in each sheet of fabric transverse to the direction of splice. This overlap shall not be less than the pitch of the transverse wires plus 25 mm.

Welding

Welded splices and tack welding of bars shall conform to the requirements of AS 1554.

3.4 MANUFACTURER'S IDENTIFICATION

Information shown

Each purpose-designed structure shall carry a clear marking on the post column one metre above base plate, the outreach arm, as well as the sign support vertical, showing:

- Sign reference number
- Manufacturer's name
- Month and year of manufacture
- Drawing No.

Application

The marking shall be legibly and durably applied by etching, stamping, engraving or welding.

Warranty

This marking shall be additional to date stamping required under **Sign structure warranty**.

3.5 INSPECTION

Pre-delivery Inspection

All purpose-designed structures covered by this worksection shall be subject to an inspection at the Contractor's Works prior to acceptance.

Two days notice

The Contractor shall give the Superintendent at least two working day's notice of the availability of the sign structures for pre-storage or pre-delivery inspection.

This action constitutes a HOLD POINT.

The Superintendent's certification of the sign support structures is required prior to the release of the hold point.

Inspection certificate

The Superintendent will issue the Contractor with a Certificate listing particulars of the items inspected.

The Certificate will indicate either:

- the sign structures satisfy the requirements of the worksection and shall be accepted; or
- the grounds for rejection of the goods.

3.6 STORAGE

The Contractor shall store the sign support structures and reinforcement cages until required to be incorporated into the Works or required by the Superintendent.

Completed reinforcement cages shall be stored under a waterproof shelter and supported above the surface of the ground, and shall be protected from injury and from deterioration due to exposure.

3.7 SIGN STRUCTURE WARRANTY

Warranty period

Supply of any structure under this worksection shall be subject to a warranty period of 12 months following the date of dispatch from the Contractor's Works to the Site.

Failed for defective structures

Any sign structure which has failed in service or found to be defective within 12 months of the date of dispatch shall be removed by the Contractor, who shall then make good the defect or arrange to have the defect made good, and subsequently return and re-erect the good unit at the original location at no charge to the Principal.

Unless otherwise agreed, defective structures shall be processed and returned within 30 calendar days from the date the Contractor is notified by the Principal of the defect.

Warranty exclusion

It is expressly understood that any structure which has failed as a result of a traffic accident, abuse or act of vandalism caused by a third party after delivery to the Site shall not be covered by warranty provisions.

Date of dispatch mark

In order to facilitate checking of warranty claims all separate items of the sign structure shall be legibly stamped, etched or engraved to show the date of dispatch from the Contractor's Works to the Site.

Application

This warranty shall apply notwithstanding any defects liability period provided for in the General Conditions of Contract.

4 ERECTION OF NEW SIGNS

4.1 SET OUT

Location

The location of signs shall be as shown on the Drawings or as directed by the Superintendent.

The Contractor shall set out the work to ensure that all signs and support structures are placed in accordance with the Drawings or as directed by the Superintendent.

Underground services laid in proximity to the signs shall be located prior to placement of footings and erection of signs, all care shall be taken not to damage such services.

Alignment

Signs shall be aligned approximately at right angles to the direction of the traffic they are intended to serve.

On curved alignments, the angle of placement should be determined by the course of approaching traffic rather than the orientation of the road at the point where the sign is located.

Set out approval

The Contractor shall submit details of the set out, for the Superintendent's inspection and approval, and the proposed disposition and alignment of each sign support structure.

This action constitutes a HOLD POINT.

The Superintendent's approval of the set out, disposition and alignment of the sign support structures is required prior to the release of the hold point.

4.2 CLEARING

Any trees and undergrowth within three metres of the sign support structure and along a driver's line of sight to the front of the sign shall be cleared and removed following set out approval by the Superintendent on advice from Council's Tree Preservation Officer.

4.3 SIGN STRUCTURE FOOTINGS**Details**

The footings for a simple pipe support or the footings for each post of a purpose-designed sign support structure shall be constructed in accordance with the Drawings or as directed by the Superintendent.

Excavation

The footings shall be neatly excavated to the depth and width shown on the Drawings. The material from the excavation shall be disposed of in a manner approved by the Superintendent.

Anchor bolt assemblies

When anchor bolt assemblies are specified they shall be accurately placed and firmly supported.

Anchor bolt assemblies shall be provided with levelling nuts under the sign structure baseplates to allow adjustment of the structure after installation.

All exposed bolt threads shall be protected from damage or adhesion of concrete during footing construction.

Steel reinforcement

Steel reinforcement shall be placed as shown on the Drawings.

Concrete quality

Concrete in the footings of sign support structures shall comply with *0310 Minor concrete works* and have a minimum compressive strength at 28 days of 20 MPa for pipe support footings and 32 MPa for purpose-designed support footings.

Ready mixed concrete

If ready mixed concrete is used, the concrete shall be mixed and delivered in accordance with AS 1379.

4.4 ERECTION**Position and support**

All components shall be accurately positioned and supported during erection.

Top of post level

The top of each pipe support post shall extend sufficiently beyond the upper extrusion section or bolt holes on the sign panels to enable attachment of the signs.

The top of each post shall be below the top edge of the sign panel.

Multi-post installation

For pipe support multi-post installations, the tops of the posts shall be at the same level except where sign shape or the arrangement of sign panels dictates otherwise.

Sign damage

During erection, sign panels shall be suitably supported and braced and the sign face protected from damage.

Signs damaged during erection shall be repaired to a standard equivalent to the original sign or replaced by the Contractor at the Contractor's cost.

Treatment of damaged areas

Galvanized coatings on purpose-designed support structures which are scratched or slightly damaged during erection shall be renovated by using an organic zinc-rich primer, or inorganic zinc silicate paint, in accordance with the repair requirements in Clauses of AS/NZS 4680.

This method of renovation shall be restricted to areas not exceeding 2500 square millimetres on any one structure.

Any structure with totally-damaged coating areas exceeding 2500 square millimetres shall be regalvanized.

The cost of regalvanizing such damaged coating areas shall be borne by the Contractor.

5 ADJUSTMENT OF EXISTING SIGNS AND SUPPORT STRUCTURES

5.1 GENERAL

Where shown on the Drawings and where directed by the Superintendent, the Contractor shall adjust existing sign panels and sign support structures.

The work shall include minor adjustments of existing sign panels and/or sign support structures or the work may extend to the dismantling of signs and sign support structures, relocation or replacement of sign support structures including footings and re-erection of signs

6 LIMITS AND TOLERANCES

The limits and tolerances applicable to this worksection are summarised in Table 6.1.

Table 6.1 Summary of limits and tolerances

Activity	Limits/Tolerances	Worksection Clause Reference
Sign blank		
-Dimensions	± 1.50 mm	Regulatory, warning and guide signs
-Bow	< 0.5% of maximum dimension	Regulatory, warning and guide signs
-Butt gap in multipiece sign	< 1 mm	Regulatory, warning and guide signs
-Rivet spacing in backing strip	< 200 mm	Regulatory, warning and guide signs
-Backing strip width	>50 mm	Regulatory, warning and guide signs
Extrusion Backing		
-Rivet Spacing	<200 mm	Regulatory, warning and guide signs
Background Paint		
-For matt coatings, gloss level	>12% and <15%	Regulatory, warning and guide signs

Activity	Limits/Tolerances	Worksection Clause Reference
-For gloss coatings, gloss level	>85% and <95%	Regulatory, warning and guide signs
Reference marking		
-Height of Coding	>6 mm and <10 mm	Reference markings
Sign Support Structures		
-Protective Treatment thickness	>100 microns	Sign structures and anchor bolt assemblies
-Paint coating over Splices in standard galvanised posts	>100 microns	Sign structures and anchor bolt assemblies
-Damaged surface of galvanised surfaces:		
. Coating with zinc rich paint	Area <2500 sq. mm	Erection
. Regalvanise	Area >2500 sq. mm	Erection
Clearing		
-Trees and Undergrowth to be cleared	<3 metres from sign support structure	Clearing
Concrete in footings of sign support structures		
-Strength	>20	Sign structure footings
. Pipe support	MPa at	Sign structure footings
. Purpose-designed support footings	28 days >32 MPa at 28 days	

7 MEASUREMENT AND PAYMENT

7.1 MEASUREMENT

Payment shall be made for all the activities associated with completing the work detailed in this worksection on a schedule of rates basis in accordance with Pay Items 1192.1 to 1192.12 inclusive. A lump sum price for any of these items shall not be accepted.

If any item, for which a quantity of work is listed in the Schedule of Rates, has not been priced by the Contractor, it shall be understood that due allowance has been made in the prices of other items for the cost of the activity which has not been priced.

The cost of any provision for traffic and covering of signs shall be deemed to be included in the various pay items in this worksection and not 1101 *Control of traffic*.

Sign structure support concrete footings are measured and paid in accordance with this worksection and not 0310 *Minor concrete works*.

Miscellaneous minor concrete work not included in the pay items in this worksection shall be in accordance with pay items described in 0310 *Minor concrete work*.

7.2 PAY ITEMS (UNITS OF MEASURE)

1192.1 Supply and delivery of signs (area less than 1 sq m)

The unit of measurement shall be each.

The schedule rate shall include the costs of mounting extrusions, fittings, labelling, packaging and delivery to site.

1192.2 Supply and delivery of signs (area between 1 and 3 sq m)

The unit of measurement shall be each.

The schedule rate shall include the costs of mounting extrusions, fittings, labelling, packaging and delivery to site.

1192.3 Supply and delivery of signs (area greater than 3 sq m)

The unit of measurement shall be the area in square metres of signs supplied.

The area shall be calculated by totalling the face surface area of each sign supplied.

The schedule rate shall include the costs of mounting extrusions, fittings, labelling, packaging and delivery to site.

1192.4 Supply and delivery of sign support structures (standard round galvanised posts)

The unit of measurement shall be each post.

The schedule rate shall include the costs of fabrication, fittings, caps, packaging, storage for up to 2 months and delivery free on truck.

1192.5 Supply and delivery of sign support structures (purpose-designed)

The unit of measurement shall be each sign support structure.

The schedule rate shall include fabrication, hot-dip galvanising, fittings, packaging, storage for up to 2 months and delivery free on truck.

Where a purpose-designed sign support structure consists of more than one post, the unit of measurement (each) shall include all posts required for that particular sign.

1192.6 Supply and delivery of anchor bolt assemblies

- 1192.6(1) Mk 1
- 1192.6(2) Mk 2
- 1192.6(3) Mk 3
- 1192.6(etc) etc

The unit of measurement shall be each for the anchor bolt assemblies for each individual footing.

The Schedule rate shall include the costs of fabrication, hot-dip galvanising, fittings, packaging, storage for up to 2 months and delivery free on truck.

C0602.7 Supply and delivery of reinforcement cages

- 1192.7(1) (Size)
- 1192.7(2) (Size)
- 1192.7(3) (Size)
- 1192.7(etc) etc

The unit of measurement shall be each for the complete reinforcement cage for each individual footing.

The schedule rate shall include the costs of fabrication, packaging, storage for up to 2 months and delivery free on truck.

1192.8 Erection of sign structures (standard round galvanised posts)

The unit of measurement shall be each post erected.

The schedule rate shall include the costs of clearing, excavation, casting of concrete footings, erection and bracing.

1192.9 Erection of sign structures (purpose-designed)

The unit of measurement shall be each sign support structure erected.

The schedule of rate shall include the costs of clearing, excavation, placement of reinforcement cages and anchor bolt assemblies, casting of concrete footings, erection and bracing.

Where a purpose-designed sign support structure consists of more than one post and footing, the unit of measurement (each) shall include all posts and footings required for that particular sign.

1192.10 Erection of signs (to standard round galvanised posts)

The unit of measurement shall be each sign erected.

The schedule rate shall include the costs of erection and attachment costs and any necessary temporary covering of signs with plastic or other approved opaque covering.

1192.11 Erection of signs (to purpose-designed structures)

The unit of measurement shall be the area in square metres of signs erected.

The area shall be determined by totalling the face surface area of the signs.

The schedule rate shall include the costs of erection and attachment costs and any necessary temporary covering of signs with plastic or other approved opaque covering.

1192.12 Adjustment of existing signs and support structures

The unit of measurement shall be the area in square metres of signs adjusted.

The area shall be determined by totalling the face surface area of the signs adjusted.

The schedule rate shall include the costs of dismantling of signs and sign structure, relocation or replacement of sign structures including excavation, concrete footings, (including placement of reinforcement cages and anchor bolt assemblies where specified) and re-erection of signs including all fittings.

Separate pay items shall be included for each adjustment required to re-erect existing signs and sign support structures and shall cover all work required that is not covered by the other pay items under signposting.