

# DEVELOPMENT CONSTRUCTION SPECIFICATION

C201

## **CONTROL OF TRAFFIC**

### **Amendment Record for this Specification Part**

This Specification is Council's edition of the AUS-SPEC generic specification part and includes Council's primary amendments.

Details are provided below outlining the clauses amended from the Council edition of this AUS-SPEC Specification Part. The clause numbering and context of each clause are preserved. New clauses are added towards the rear of the specification part as special requirements clauses. Project specific additional script is shown in the specification as italic font.

The amendment code indicated below is 'A' for additional script 'M' for modification to script and 'O' for omission of script. An additional code 'P' is included when the amendment is project specific.

<b>Amendment Sequence No.</b>	<b>Key Topic addressed in amendment</b>	<b>Clause No.</b>	<b>Amendment Code</b>	<b>Author Initials</b>	<b>Amendment Date</b>
<i>EXAMPLE 1</i>	<i>Provision for acceptance of nonconformance with deduction in Payment</i>	<i>XYZ.00</i>	<i>AP</i>	<i>KP</i>	<i>2/6/97</i>

## SPECIFICATION C201 : CONTROL OF TRAFFIC

### GENERAL

#### C201.01 SCOPE

1. The work to be executed under this Specification consists of all work necessary to provide for the safe movement of traffic and the protection of persons and property through and/or around the work site.

2. The extent of work includes the design, construction, maintenance and removal of temporary roadways and detours, the provision of traffic controllers, signposting, roadmarkings, raised pavement markers, lights, barriers and any other items required. All temporary traffic arrangements required by works under this Contract are included under this Specification except where specified otherwise.

***Works  
Included***

3. Control of traffic shall be in accordance with AS1742.3, SAA HB81, this Specification, and the Drawings.

***Standards***

4. Wherever the word 'should' occurs in AS 1742.3 the word 'shall' applies and the required action is the Contractor's responsibility.

***Contractor's  
Responsibility***

#### C201.02 REFERENCE DOCUMENTS

1. Documents referenced in this specification are listed in full below whilst being cited in the text in the abbreviated form or code indicated.

***Documents  
Standards  
Test Methods***

##### (a) Australian Standards

AS 1165	-	Traffic Hazard Warning Lamps
AS 1742.3	-	Traffic Control Devices for Works on Roads
AS 1743	-	Road Signs Specifications
AS 1744	-	Standard Alphabets for Road Signs
AS 1906	-	Retroreflective Materials & Devices for Road Traffic Control Purposes
SAA HB81	-	Field Guide for Traffic Control at Works on Roads

##### (b) AUSTRROADS Publications

AUSTRROADS	-	Guide to Traffic Engineering Practice - Intersections at Grade
AUSTRROADS	-	Guide to the Geometric Design of Rural Roads

#### C201.03 TRAFFIC GUIDANCE SCHEME

1. The Contractor shall construct the work with the least possible obstruction to traffic.

***Minimise  
Obstruction***

2. The Contractor shall obtain all necessary approvals from Councils and other Authorities for temporary traffic arrangements except where specified otherwise.

***Contractor's  
Responsibility***

3. Two weeks before undertaking work which would involve any obstruction whatsoever to traffic the Contractor shall submit, for the Superintendent's approval, a Traffic Guidance Scheme in accordance with AS 1742.3.

***Guidance  
Scheme***

4. The Traffic Guidance Scheme shall include:-

**Control  
PlanContents**

- (a) design drawings for any temporary roadways and detours in accordance with Clause C201.11 showing pavement, wearing surface and drainage details,
- (b) details of arrangements for construction under traffic in accordance with SAA HB81, and
- (c) a signpost layout plan showing:
  - (i) location, size and legend of all temporary signs
  - (ii) temporary regulatory signs and temporary speed zones, and
  - (iii) all traffic control devices such as temporary traffic signals, linemarking, pavement reflectors, guideposts, guardfence and barrier boards.

5. Where the Traffic Guidance Scheme involves Regulatory Traffic Control Signs or Devices and/or where in the opinion of the Superintendent the disruption to local traffic is significant, the prior approval of the Council Local Traffic Committee will be sought and obtained. In such cases the period of notice shall be increased to five weeks in accordance with Clause C201.24.

**Notice**

6. The Traffic Guidance Scheme shall be in accordance with the requirements of this specification and the Drawings.

7. Special consideration to the safety of pedestrians and workers shall be given in the preparation of the traffic guidance scheme. Particular care shall be taken when requiring reversal of traffic flows or the separation of unidirectional flow by medians or other physical separation.

**Safety**

#### **C201.04 SIDE ROADS AND PROPERTY ACCESSES**

1. At all times, the Contractor shall provide safe and convenient passage for vehicles, pedestrians and stock to and from side roads and property accesses connecting to the roadway. Work which affects the use of side roads and existing accesses shall not be undertaken without providing adequate alternative provisions to the prior satisfaction of the Superintendent.

**Access**

#### **C201.05 TRAFFIC CONTROLLERS**

1. The Contractor shall advise the Superintendent of the names of proposed traffic controllers with a signed declaration that they are appropriately trained in the duties of traffic controllers in accordance with AS 1742.3 and SAA HB81.

**Trained Traffic  
Controllers**

#### **C201.06 APPROVED CLOTHING FOR WORK PERSONNEL**

1. All personnel working in close proximity to traffic shall wear high visibility clothing to the requirements of AS 1742.3.

**Safety  
Clothing**

#### **C201.07 TEMPORARY SPEED ZONING**

1. Where a temporary speed limit has been approved by the Council Local Traffic Committee or Road Authority, the Contractor shall arrange for the supply of appropriate temporary speed zoning signs, including posts and fittings, for erection. Where and when directed by the Superintendent, the Contractor shall erect these signs, cover the signs

**Speed Zone  
Signs**

when the speed zone is not in use and remove the signs when the speed zone is no longer required as part of the provision for traffic. A diary recording operation times of the speed zone shall be kept by the Contractor.

2. All costs associated with temporary speed zoning signposting shall be borne by the Contractor.

**Contractor's  
Cost**

### **C201.08 PLANT AND EQUIPMENT**

1. During the day plant and equipment working in a position adjacent to traffic and having a projection beyond the normal width of the item, for example, a grader blade, shall have a fluorescent red flag attached to the outer end of the projection. During poor light conditions or at night, an additional traffic controller with an illuminated red wand shall direct traffic around such plant and equipment.

**Plant  
Delineation**

2. At night, where traffic is permitted to use the whole or portion of the existing road, all plant items and similar obstructions shall be removed from the normal path of vehicles to provide a lateral clearance of at least 6 m where practicable, with a minimum clearance of 1.2 m.

**Night Time  
Clearance**

3. Plant and equipment, within 6 m of the normal path of vehicles, shall be lit by not less than two yellow steady lamps suspended vertically from the point of the obstruction nearest to a traffic lane and one yellow steady lamp at each end of the obstruction on the side furthest away from the traffic lane.

**Warning  
Lamps**

## **TEMPORARY ROADWAYS AND DETOURS**

### **C201.09 APPROVAL**

1. The Contractor shall submit for the Superintendent's approval the design of all proposed temporary roadways and detours.

**Temporary  
Roads**

### **C201.10 DESIGN STANDARDS**

1. The standard of alignment and grading adopted shall be in accordance with specific provisions of this Specification and shall otherwise be in accordance with the AUSTROADS publication 'Guide to the Geometric Design of Rural Roads'.

**Alignment &  
Grading**

2. Intersections shall be designed in accordance with the AUSTROADS publication 'Guide to Traffic Engineering Practice - Intersections at Grade'.

**Intersections**

3. Design drawings, geometric standards, design speed, wearing surface type and pavement design of the proposed temporary roadways and detours shall be submitted by the Contractor with the Traffic Guidance Scheme.

**Standards &  
Pavement**

### **C201.11 DESIGN DRAWINGS**

1. Design drawings submitted for approval shall show:

- (a) Alignment and grading at a horizontal scale of 1:2000 for rural roads and 1:500 for urban roads. Where the temporary road rejoins the existing road, levels showing the full cross section shall be extended along the existing road for a minimum length of 200 m.
- (b) A sight distance diagram if opposing traffic is to use a single carriageway
- (c) Intersections, and any other locations where traffic may be required to make turning, merging or diverging movements, at a scale of 1:500.

**Contents**

- (d) Pavement marking details.
- (e) Sufficient cross-sections to indicate the feasibility of making connections between various parts of the work.
- (f) Sufficient dimensions, especially lane widths, to make clear the geometry and clearances of the proposed Works.
- (g) A north point or some other location method to orientate the plan.

**C201.12 DRAINAGE**

1. Drainage structures and drains shall be constructed in accordance with the following Specifications: **Standard**

- C220 - Stormwater Drainage - General
- C221 - Pipe Drainage
- C223 - Drainage Structures
- C224 - Open Drains, including Kerb and Gutter

2. Drainage proposed in accordance with Clause C201.03 shall be able to cope with upstream rainfall run-off resulting from all rainfall intensities up to that expected for a once in five year frequency, without overflow over the road. **Design Frequency**

3. Pavements shall be designed and constructed to not pond water on the wearing surface or shoulders. Temporary formations to be constructed shall not dam water. **Pavement Drainage**

**C201.13 CONSTRUCTION OF EARTHWORKS AND PAVEMENT**

1. Temporary roadways shall be constructed in accordance with the following Specifications: **Temporary Roadways**

- C211 - Control of Erosion and Sedimentation
- C212 - Clearing And Grubbing
- C213 - Earthworks
- C242 - Flexible Pavements

**C201.14 SURFACING**

1. The wearing surface width shall extend across the full width of the traffic lanes plus the width for each shoulder, or as shown on the Drawings. **Wearing Surface**

2. The wearing surface shall be carried onto any existing connecting roadway so as to finish square to the existing roadway centreline. **Tie-in to existing work**

3. Surfacing shall be constructed in accordance with: **Standards**

- C244 - Sprayed Bituminous Surfacing and/or
- C245 - Asphaltic Concrete

**C201.15 GUARDFENCE**

1. Corrugated steel guardfence shall be erected on all temporary embankments where the vertical height between the edge of the shoulder and the intersection of the embankment slope and natural surface exceeds 2m and as otherwise shown on the drawings. **Warrant**

2. Guardfence shall be erected in accordance with: **Erection**  
 C264 - Guardfence

### **C201.16 OPENING TO TRAFFIC**

1. Temporary roadways and detours (including portable or temporary traffic signals sites) shall not be open to traffic until they have been inspected, approved and authorised in writing by the Superintendent. **Approval to use**
2. All signposting, pavement marking, guardfence and portable or temporary traffic signals shall be completed before the opening of temporary roadways to traffic. **Signposting**
3. Unless otherwise approved by the Superintendent, the opening of temporary roadways shall be arranged so that sections of existing roadway being replaced are not disturbed for a minimum of forty-eight hours in the event of temporary roadway failure and there is a warrant to redirect traffic back onto the existing roadway. The determination to redirect traffic shall be by the Superintendent. **Existing Roadway Retained**
4. The costs associated with the redirection of traffic back onto the existing roadway shall be borne by the Contractor. **Contractor's Cost**
5. Unless otherwise approved by the Superintendent, traffic shall be switched to a temporary roadway or detour only where the Contractor's usual workforce will be on site for a minimum of two days thereafter. **Traffic Switch**

### **C201.17 MAINTENANCE**

1. The Contractor shall be responsible for the maintenance of temporary roadways and detours and shall ensure the road surface is kept safe for traffic. Any potholes or other failures shall be repaired without delay. **Contractor's Responsibility**

### **C201.18 REMOVAL**

1. Upon completion of the Work the temporary roadways and/or detour arrangements shall be removed and the area restored to a condition equivalent to that which existed prior to the commencement of the work. **Restoration**

## **ARRANGEMENTS FOR TRAFFIC**

### **C201.19 CONSTRUCTION UNDER TRAFFIC**

1. Where a temporary roadway or a detour is not provided or available then, subject to the approval of the Superintendent, construction under traffic may be permitted provided a minimum of 3.5 m lane width is available for through traffic on a two lane roadway and where 3.5 m lanes are available in both directions for through traffic when working on multilane roads. **Lane Width**
2. The carriageway/s shall be restored to a safe and trafficable state for through traffic prior to cessation of work each day in accordance with the approved Traffic Guidance Scheme. **Carriageway Restoration**
3. Full details of temporary signposting, traffic control devices and traffic control methods, in accordance with the appropriate arrangement diagrams in SAA HB81, are to be submitted for the Superintendent's approval at least five working days before undertaking any work which would involve construction under traffic. **Signs and Markings**

**C201.20 OPENING COMPLETED WORK**

1. The Contractor shall give the Superintendent at least five working days written notice confirming the date of opening completed work to traffic. The procedure for opening shall be determined through consultation between the Superintendent, the Contractor and the Council.

**Written Notice**

2. The Contractor shall be responsible for the removal of all temporary traffic control devices no longer required for the safety of traffic, when the Works or part thereof are opened to traffic.

**Contractor's  
Responsibility**

**TRAFFIC CONTROL DEVICES****C201.21 ARRANGEMENT OF TRAFFIC CONTROL DEVICES**

1. The arrangement and placement of traffic control devices shall be carried out in accordance with the approved Traffic Guidance Scheme, AS 1742.3 and SAA HB81. The arrangement diagrams illustrate the more common examples of the arrangement of traffic control devices and set out the minimum requirements.

**Arrangement  
Diagrams**

2. All temporary traffic control devices when no longer required shall be covered and/or removed without delay in order to maintain unambiguous safe guidance to traffic.

**Unnecessary  
Signs**

**C201.22 MAINTENANCE OF TRAFFIC CONTROL DEVICES**

1. All traffic control devices shall be maintained in accordance with AS 1742.3 so that they are in good order and in the correct positions day and night. They shall be neat and clean, and signs shall be clear and legible at all times.

**Contractor's  
Responsibility**

2. The Contractor may need to be contacted outside normal working hours to arrange for adjustments or maintenance of traffic control devices. The Contractor shall notify the Superintendent, the Council and the local Police, in writing, the names, addresses, and means of communicating with personnel nominated for this purpose.

**Out of Hours  
Contact**

**C201.23 ADEQUATE TRAFFIC CONTROL DEVICES**

1. Where the Contractor fails to provide and maintain adequate traffic control devices specified in this Specification, the Superintendent shall arrange to have such items provided and maintained.

**Default by  
Contractor**

2. The cost of providing and maintaining adequate traffic control devices arranged by the Superintendent shall be borne by the Contractor.

**Contractor's  
Cost**

**C201.24 REGULATORY TRAFFIC CONTROL SIGNS AND DEVICES**

1. A Regulatory Traffic Control Sign or Device shall be in accordance with AS 1742.3, and shall require approval by the Council Local Traffic Committee before its erection. This approval should be obtained through the Superintendent, refer to Clause C201.07.

**Prior Approval**

**C201.25 SIGNS**

1. Signs shall be designed and manufactured in accordance with AS 1743. Details of each letter shall be as shown in AS 1744.

**Specifications**



2. The reflective material used on signs shall be Class 2 material complying with AS 1906.1 except where otherwise specified.

**Reflective  
Material**

#### **C201.26 SUPPLEMENTARY SIGNS**

1. Signs supplementary to AS 1742.3 are shown in Annexure C201A. These signs may be used in lieu of or in addition to those shown in AS 1742.3.

##### **(a) Heavy Machinery Crossing**

This temporary sign, shown as Sign SW5-22, shall be used in lieu of W5-22, trucks entering.

##### **(b) Cycle Hazard Grooved Road**

This temporary sign, shown as Sign ST1-10, shall be used in addition to T1-10 of AS 1742.3 where the road is grooved and is a hazard to cyclists.

##### **(c) Tar Spraying Possible Short Delay**

This temporary sign, shown as Sign ST3-1, shall be used in addition to T3-1 for bituminous surfacing works.

##### **(d) Changed Traffic Conditions Ahead**

This temporary sign, shown as Sign ST1-6, shall be used in addition to T1-1, T1-6, T2-6 and T2-21 on long term works, sidetracks and detours.

#### **C201.27 FLASHING ARROW SIGNS**

1. Flashing arrow signs shall comply with AS 1742.3.

#### **C201.28 BARRIER BOARDS**

1. Barrier boards shall comply with AS 1742.3.
2. Trestles supporting the barrier boards may be manufactured of timber, metal or other suitable material and shall be yellow. The trestles shall provide firm supports for the barrier board and be kept in place by sandbags or other devices. The bases of the trestles shall not protrude beyond the ends of the boards.

**Standard**

**Trestle  
Support**

#### **C201.29 HIGH VISIBILITY MESH FENCING**

1. High visibility mesh fencing shall be constructed where shown on the Drawings, Traffic Guidance Scheme or as directed by the Superintendent.
2. High visibility mesh fencing shall be constructed in accordance with AS 1742.3, containment fences.
3. The mesh fencing shall be paraweb or equivalent as approved by the Superintendent.

#### **C201.30 TEMPORARY POST-MOUNTED DELINEATORS**

1. In addition to the requirements of AS 1742.3, temporary post mounted delineators shall be provided in conjunction with high visibility mesh fencing which is erected parallel to and in close proximity to traffic.

**C201.31 CONES AND BOLLARDS**

1. Traffic cones and bollards shall comply with AS 1742.3 and be placed in accordance with the arrangement diagrams in SAA HB81. **Standard and Placement**
2. Unless cones are firmly fixed in position they shall be used only while work is in progress, or in locations where there is an employee in attendance who shall reinstate any of the cones which have been dislodged by traffic. Otherwise they shall be removed and bollards or barriers substituted. **Conditions of Use**
3. Cones and bollards used under night conditions shall be reflectorised in accordance with AS 1742.3. **Reflectorised for Night Work**

**C201.32 TRAFFIC WARNING LAMPS**

1. Traffic warning lamps shall comply with AS 1165 and shall be installed in accordance with AS 1742.3. The Contractor shall ensure that warning lamps are in good working order, correctly aligned and positioned with respect to the direction of traffic flow each night, before the site is left unattended. **Standards and Positioning**

**C201.33 TEMPORARY PAVEMENT MARKINGS**

1. All pavement markings shall be reflectorised and consist of painted lines, roadmarking tape and/or raised pavement markers in accordance with the relevant Australian Standards or as otherwise approved by the Superintendent and shall be provided in accordance with AS 1742.3. **Reflectorised Markings**
2. Where the adjoining roadway is edgeline, temporary roadways shall be similarly edgeline. **Adjoining Work**

**C201.34 TEMPORARY LINEMARKING**

1. Where temporary linemarking is required on the final wearing surface, only pavement marking tape shall be used. **On Final Surface**
2. Where the pavement linemarking has become ineffective in the opinion of the Superintendent, remarking shall be undertaken within forty-eight hours of direction by the Superintendent. The cost of remarking the pavement lines shall be borne by the Contractor. **Contractor's Cost**
3. Where a single carriageway is opened adjacent to or used in lieu of an existing dual carriageway length, pavement arrows indicating the direction of flow of traffic shall be placed at not more than 500 m or at a spacing nominated by the Superintendent. The arrows shall be removed if the section is then reincorporated as dual carriageway. **Pavement Arrows**
4. Immediately before or after placement of new markings all superseded pavement markings shall be obliterated or removed to the satisfaction of the Superintendent. **Old Markings Removed**
5. On a final surface, obliteration by painting shall not be permitted.

**C201.35 RAISED PAVEMENT MARKERS**

1. Where raised pavement markers have become ineffective in the opinion of the Superintendent, they shall be replaced within twenty four hours of direction by the Superintendent. **Ineffective Markers**

2. The cost of replacing ineffective pavement markers shall be borne by the Contractor. **Contractor's Cost**
3. All superseded raised pavement markers shall be immediately removed from the pavement by the Contractor. **Removal of Superseded Markers**

### SPECIAL REQUIREMENTS

**C201.36 RESERVED**

**C201.37 RESERVED**

**C201.38 RESERVED**

**C201.39 RESERVED**

**C201.40 RESERVED**

### MEASUREMENT AND PAYMENT

#### **C201.41 PAY ITEMS**

1. Payment shall be made for all activities associated with completing the work detailed in this Specification and shown on the Drawings in accordance with Pay Item C201(a) - Control of Traffic.
2. All activities for the construction, maintenance and removal of temporary roadways, including side-tracks and divided road crossovers, and detours detailed in this Specification to the requirements of specific activity Specifications are measured and paid in accordance with the Specifications for the specific activities.

#### **Pay Item C201(a) CONTROL OF TRAFFIC**

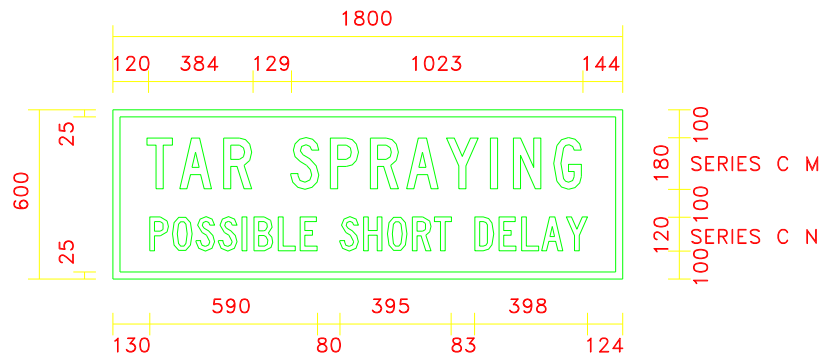
1. This shall be a Lump Sum item.
2. The Lump Sum shall include the design of temporary roadways and detours, traffic switching operations, the provision of traffic controllers, signposting, roadmarkings, raised pavement markers, lights, barriers and any other items required for the safe movement of traffic and the protection of persons and property in accordance with this Specification.
3. Progress payments shall be made on a pro-rata basis of work done under this item, having due regard to the duration of the Contract.



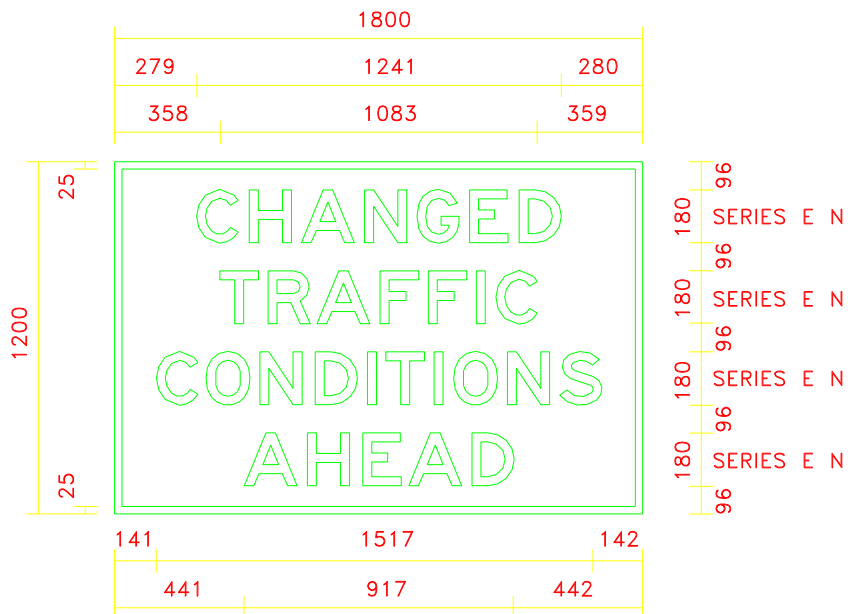
**ANNEXURE C201A**  
**SUPPLEMENTARY TEMPORARY WARNING SIGNS TO AS 1742.3**

Black letters and border on yellow reflectorised ground  
Dimensions are in mm

**(iii) ST3-1**



**(iv) ST1-6**





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