

**DIVISION 9**  
**TRAM TECHNICAL**

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**1. GENERAL**

This Part specifies the requirements for working in the vicinity of Tramway infrastructure, which includes working above the tramway tracks or within the horizontal track clearances specified by the TransAdelaide.

The Contractor shall comply with the following:

- Rail Safety Act 1996
- AS 4292 Railway Safety Management
- AS 1085 Railway Track Material
- TransAdelaide Track and Civil Infrastructure Code of Practice
- Code of Practice for the Defined Interstate Rail Network and addendums, where applicable ([www.arou.gov.au](http://www.arou.gov.au)).

**2. LIAISON WITH TRANSADELAIDE**

The Contractor shall:

- pay all costs associated with the provision of Track Safety Officer,
- provide any information requested by TransAdelaide regarding the nature and programming of the works,
- unless specified otherwise, give TransAdelaide at least 4 weeks notice of the Contractor's intention to enter TransAdelaide's property or work in the vicinity of Tramway infrastructure,
- regularly liaise with TransAdelaide so as to remain informed of any changes to the tram schedules, and
- comply with all requirements of TransAdelaide regarding access and rail/tram safety.

The Rail Authority contact for this Contract and any special requirements, if required, are stated in the **Contract Specific Requirements**.

The Contractor is deemed to be fully informed of the tram schedules and movements and acknowledges the right of TransAdelaide to change tram schedules at any time.

**3. SAFETY OF TRAMWAY OPERATIONS****3.1 Working in the Vicinity of the Tram Tracks**

TransAdelaide will appoint a Track Safety Officer to arrange for a track protector to be in attendance when work is undertaken in the vicinity of Tramway infrastructure. The Contractor shall comply with any direction relating to safe work practices given by the Track Safety Officer and be responsible for all associated costs.

Plant, scaffolding, strutting or other obstructions that cannot be readily removed prior to the passage of rail vehicles shall be placed outside of the horizontal track clearances as specified by TransAdelaide.

The Contractor, the Contractor's employees, mobile plant, vehicles or any other piece of movable equipment shall not remain within the horizontal track clearances during the passage of any rail/tram vehicle or at any time stipulated by the Track Safety Officer.

Where any portion of the Works is to be performed in the vicinity of tramway tracks, the protection of rail operations shall be of paramount importance and as well as statutory requirement of safety and the avoidance of inconvenience to the Principal, the following particular requirements shall apply.

The Contractor shall arrange for the work under the Contract to be carried out in a way that will ensure safety and will not delay, obstruct or stop tramway traffic, except as approved.

Employees of the Contractor and sub Contractors shall not move onto any tramway track without prior approval of the Superintendent.

The Contractor shall not in any way interfere with any rail track, formation, equipment or installation owned or operated by The Principal except with the permission of and under conditions approved beforehand by the Superintendent.

TransAdelaide will determine the appropriate safe working and/or protection requirements.

The Contractor shall not perform work, including operating any motor vehicle or mechanical equipment, in the proximity of the tramway operations without the presence of the track protector unless the Superintendent approves otherwise or makes special arrangement for the Contractor.

Refer to the Track Clearance Drawing for clearances from the tram tracks for any works to be carried out while trams are still running.

The operation of track machines on or foul of tracks in use, or the travel of machines on tracks between worksites, will require special operating arrangements to be made by the Superintendent.

### **3.2 Working Within 3 Metres of the Track**

When working within 3 m of the track centreline, or within the limits specified by TransAdelaide, the following shall apply:

- all of the Contractor's staff working within this zone limit shall attend and pass a Track Safety Awareness Training Course,
- the Contractor shall keep records of staff who have attended the course and ensure only those who have attended the course work within the limit,
- all work shall be undertaken under the direction of the Track Safety Officer,
- if required by TransAdelaide, the Contractor's staff shall attend a briefing given by the Track Safety Officer prior to the commencement of each shift.

### **3.3 Crossing of Tram Tracks**

The Contractor and the Contractor's employees shall not proceed across any Tramway tracks except at times and places approved by the Track Safety Officer. The Contractor shall erect suitable fencing to restrict crossing to the approved locations.

Before proceeding across any Tramway tracks, the Contractor and the Contractor's employees shall exercise due care and give way to any Tramway rolling stock on the tracks, and shall comply with flag and other signals and instructions made or given by the Track Safety Officer.

Where approval is given for the Contractor to cross Tramway tracks other than at existing tram crossings, the Contractor shall liaise with TransAdelaide for the provision of a suitable temporary Tramway crossing. The cost of providing the temporary Tramway crossing and reinstating the track to its original condition shall be borne by the Contractor.

### **3.4 Temporary Works in the Vicinity of the Tram Tracks**

If any temporary falsework or formwork placed over the Tramway is designed to deflect, the actual unloaded clearance above the rail level shall be the specified clearance plus twice the design deflection.

Fixed power services (aerial or underground) shall not be installed on Tramway property without the approval of TransAdelaide and they shall only be used in a manner as specified by TransAdelaide.

Any piling, earthworks or temporary works shall not affect the stability or alignment of the rail tracks. Details of proposals for such work, including fully detailed calculations demonstrating the above, shall be provided at least 4 weeks prior to the commencement of this work on site.

Provision of the proposal shall constitute a **HOLD POINT**.

### **3.5 Risk Analysis and Mitigation**

Further to the requirements of Part 160 "Occupational Health, Safety and Welfare Requirements", the Contractor shall undertake a Risk Assessment and prepare and implement a Risk Management Plan. At a minimum, this shall include analysis of the protection of:

- construction personnel,
- the general public, and
- the works and rail infrastructure (including trams and Tramway vehicles) against damage or delay.

Where staging of the work involves changes in risk profile, each stage shall be subject to a full risk assessment. The Risk Management Plan shall be a Controlled Document in accordance with Clause 140.4 "Document Control". If not provided beforehand, the Contractor shall provide a copy of the Risk Management Plan at least 10 working days prior to the commencement of the work under consideration in the Risk Management Plan.

Provision of the Risk Management Plan shall constitute a **HOLD POINT**.

## **4. TRAMWAY INFRASTRUCTURE**

### **4.1 General**

Attention is drawn to communication cables and control equipment that may be present above or below ground at the site. The Contractor shall ensure that no damage occurs to such equipment during the course of the Contract.

Plant, scaffolding or other obstruction shall not at any time obscure any fixed Tramway signal. The Contractor or the Contractor's employees shall not exhibit lights, flags or other signs in a manner that may interfere with the safe operation of trams.

The Contractor's Safety Plan shall provide details of safe work practices if plant is likely to be operating in the vicinity of TransAdelaide's aerial lines.

### **4.2 Damage to Tramway Infrastructure**

In the event of the Contractor damaging the Tramway Authorities Infrastructure, the Contractor shall immediately advise the Track Safety Officer. Further to Clause 15 "Protection of People and Property" of the General Conditions of Contract, the Contractor shall comply with any instructions from TransAdelaide with respect to undertaking any repairs deemed necessary.

## **5. SAFETY OF RAILWAY OPERATIONS**

### **5.1 Tramway Clearances**

Plant, scaffolding, strutting or other obstruction that cannot be readily removed before the passage of any rail/tramway vehicles shall not be placed closer 3 m of the nearest rail.

The Contractor, his employees and the other persons aforesaid shall not remain upon nor allow any crane, mobile plant, vehicles or any other piece of movable equipment to remain within 3m of the nearest rail of said tracks during the passage of any rail movement.

## **5.2 Tramway Schedules**

Normal tram schedules will be disclosed to the Contractor but extra movements as required may operate and the track protector assigned to the work will advise the Contractor as necessary.

## **5.3 Tramway Signals and Lights**

The Contractor shall provide sufficient lighting for any night work associated with the project and shall allow for this lighting in its rates. The Contractor shall ensure that any lighting so provided does not conflict with the sighting of any railway/tramway signals and road traffic lights.

## **5.4 Interference with Tramway Signalling and Communications**

Attention is drawn to communication cables and control equipment in the vicinity of the site (including detector loops for road traffic signal coordination). The Contractor shall ensure that no damage occurs to such equipment during the course of the Contract and shall arrange through the Superintendent for the disconnection/connection of any such equipment that may be damaged.

## **5.5 Power Supplies**

No fixed power services (aerial or underground) shall be installed on the Principal's property without approval and shall only be used in a manner as specified by the Superintendent.

## **5.6 Dead Line Work**

No construction work requiring dead line conditions shall proceed unless the power has been removed from the overhead trolley wire network and an appropriate permit to work has been issued.

No connection to the existing electrical system shall be made without approval.

## **6. TRAINING**

### **6.1 Training by the Contractor**

This Clause covers the training required by the Contractor and subcontractors employees.

The Contractor shall provide training in safety related matters applicable to the carrying out of this Contract to all employees engaged in the contract administration and safe working aspects of this Contract.

All employees of the Contractor and any sub Contractor required to enter the Principal's work site shall be required to attend safety awareness training applicable to working on the Principal's rail system. This training can be obtained from:

Company:	Regency Institute of TAFE
Contact:	Sandra Fischer
Telephone:	(08) 8348 1994

All costs associated with this training shall be borne by the Contractor.

## **7. SAFETY VESTS**

The Contractor shall provide their employees with safety vests that comply with the following requirements:

Standards:	AS 4602, Class D/N, AS 1906.4, Class RF
Colour:	Lime Green

The wording "Contractor" shall be placed on the rear of the vest with 100 mm high lettering and in Helvetica font. The placement of the wording shall not interfere with the visibility or reflective properties of the vest.

These safety vests shall identify the Contractor's employees and shall be worn at all times while working on or near The Principal's tramway lines or in the right of way. The Contractor shall replace safety vests as needed.

#### **8. HOLD POINTS**

The following is a summary of Hold Points, vide Part 140 "Quality System Requirements", referenced in this Part:

<b>CLAUSE REF.</b>	<b>HOLD POINT</b>	<b>RESPONSE TIME</b>
3.4	Provision of proposal detailing temporary works in the vicinity of the tram tracks.	1 working day
3.5	Provision of the Risk Management Plan	3 working days