

MUNICIPAL STANDARDS

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14.1 LOCAL GOVERNMENT (HIGHWAYS) ACT and REGULATIONS

Pursuant to Section 46.1(e) of the Local Government (Highways) Act 1982, prior to any works commencing, the Installer shall request from the relevant Local Authority a Road Opening Permit prepared in accordance with the Local Government (Highways) Regulations 2003, together with any necessary conditions.

14.2 DEFINITIONS

In this Part 14:

Installer is a 'Gas Entity' licensed under Part 3 of the Gas Act 2000, and refers to the Distribution Company responsible for the works, its agents, contractors and other representatives as appropriate.

Authorised Officer refers to the person nominated under Section 46.2 of the Local Government (Highways) Act 1982 by the Council in which the works are located, to act as its representative for all matters relating to the work.

Certifier refers to the Installer's representative responsible for preparation and submission of the Completion Report prescribed under Clause 10 of Schedule 1 of the Local Government (Highways) Regulations 2003.

SAOP refers to the Installer's Safety and Operating Plan required under the Gas Act 2000, and approved by the Director of Gas Safety.

14.3 SCOPE OF WORK

This section includes the supply of materials, equipment, labour and services necessary for the construction of gas infrastructure.

14.4 HOURS OF WORK

With respect to the construction of gas infrastructure, Clause 1.8 of Part 1 is replaced by the following.

Works shall proceed between the hours of 7am and 5pm Monday to Friday, excluding public holidays, and 7am to 4pm Saturday, unless otherwise agreed between the Installer and the Authorised Officer.

Any construction adjacent to or within a 'Commercial' or 'Business' zone, or other areas with a significant traffic or public impact, may be subject to alternative hours by discussion between the Installer and the Authorised Officer.

14.5 STANDARDS

The Installer shall comply with all relevant codes and standards, to the satisfaction of the Director of Gas Safety.

The following Standard Drawings are also applicable:

Standard Drawings

SD-1002 - Service locations (Urban Subdivisions)

SD- 1011 - Rural Roads – Service Locations

SD-5001 - Typical Pipe Trench Details

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14.6 MATERIALS

14.6.1 Pipes and Fittings

Pipes and fittings shall comply with all requirements of the Director of Gas Safety.

14.6.2 Storage and Handling

Materials shall be stored and handled in accordance with the requirements of the Director of Gas Safety.

Any material stored on public land must be appropriately fenced, signed and contained to protect the general public, the environment and surrounding infrastructure.

14.6.3 Bedding and Haunching

Pipe bedding and haunching material will depend on the type of pipe installed. It shall be clean sand or gravel, free from organic matter and clay lumps and conform to the grading given in Table 14.6 .1.

Pipe bedding material shall also have a sand equivalent of at least 60.

Table 14.6 .1

AS Sieve (mm)	Percentage Passing By Mass
9.5	100
2.36	25 - 100
0.425	0 - 60
0.075	0 - 10

Refer drawing SD-5001.

14.6.4 Backfill

a) Select Fill

Select Fill shall comply with the requirements of AS 3725, Section 4, generally being sands or gravels or sand and gravel mixtures with fines of low plasticity obtained from excavation of the pipe trench or elsewhere with a particle size not greater than 75 mm.

b) Ordinary Fill

Shall comply with the requirements of AS 3725, Section 4, being material obtained from excavation of the pipe trench or elsewhere and containing not more than 20 per cent by mass of stones with a size between 75 mm and 150 mm and none larger than 150 mm.

c) Fine Crushed Rock

Fine crushed rock shall be material complying with the requirements of aggregate used for basecourse construction in accordance with the Municipal Standards Specifications Part 6, Material and Pavement Construction.

14.6.5 Concrete

Concrete for minor concrete structures shall be in accordance with the Municipal Standards Specifications Part 9, Construction of Minor Concrete Structures.

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14.7 CONSTRUCTION

14.7.1 General

Prior to excavation the Installer shall note all existing surface features and locate and mark all underground services.

The Installer shall make reasonable efforts to consult with the Authorised Officer in the event of a need to make a material change to the pipe alignment during construction.

If the Installer identifies errors or omissions in records of existing services, he shall notify the relevant authority. A representative of that authority shall be granted access to the site to make adequate records of services so identified.

The Installer shall ensure that the Traffic Management Plan prepared for the project in accordance with the Local Government (Highways) Regulations provides for management of both pedestrian and vehicular traffic, and shall ensure that the Plan is implemented. The Installer shall liaise with the Authorised Officer when developing this Plan.

14.7.2 Assessment of Pre-Existing Conditions

Prior to commencement of works on site, the Installer and the Authorised Officer shall jointly inspect the works site and surrounds, and establish a suitable record of existing conditions. This shall include, but not be limited to, the condition of road pavement and seal, drainage (including kerb and channel), footpaths, nature strips and the like. The form of the records shall be as agreed between the Installer and the Authorised Officer, and may include photographic records, and/or a written record signed by both parties.

14.7.3 Clearing and Preparation

Clearing of vegetation over 2.5m in height shall be subject to the approval of the Authorised Officer. The Authorised Officer may also direct the retention of vegetation up to 2.5m in height in particular locations where the vegetation has significant value to the community.

Wherever excavation of roads, kerb and channel, driveways, footpaths and other sealed or paved surfaces is required, the surfaces shall firstly be saw-cut. All such cuts are to be straight, or over a uniform curve to the satisfaction of the Authorised Officer, and located a minimum of 150mm from the face of the proposed excavation.

This requirement does not apply to segmental pavers. Pavers are to be removed, and relaid on completion of the works; saw-cutting of pavers is not permitted. (Note – care is required when removing pavers, as some pavers are no longer available. Replacement of all damaged pavers is at the Installer's expense.)

14.7.4 Trenching

Trenches shall be excavated to the lines and levels shown on the construction drawings with allowance being made for bedding. As far as practically possible, the dimensions of the trench shall comply with the relevant Standard Drawing. The Installer shall excavate such chambers or recesses as are necessary to enable joints to be made, and shall prepare the trench bottom so as to give even bedding to the pipe. The base of the excavated trench shall be made square for its full length. Boulders, roots and any other hard objects in the bottom of the trench shall be removed; soft areas in the bottom of the trench shall be taken out and filled to grade level with approved bedding material and compacted.

At any time the length of open trench shall not be more than 120 metres. The Installer shall maintain all trenches in a safe condition for protection of people and property. The Installer shall notify the

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Department of Infrastructure, Energy and Resources – Workplace Standards Tasmania of any excavation over 1.5 m deep and be responsible for carrying out the instructions of its officers. Trenches shall be backfilled as soon as practicable after installation and should not be left open unless testing or other requirements determine this.

14.7.5 Trenchless Construction

Trenchless construction techniques may be used providing crossings of existing services are adequately located before construction. Minimum clearances to services specified in Clause 14.7.7 must be maintained and no installation under permanent structures is permitted without the Authorised Officer's approval.

All trenchless construction is to be in accordance with all applicable standards and industry best practice. Individual trenchless construction techniques shall be selected and implemented to minimise any settlement or lifting of the ground surface. The Installer shall rectify any consequential effects of such construction on roads, driveways, footpaths, nature strips and the like to the satisfaction of the Authorised Officer.

It is considered reasonably practicable to normally use trenchless technology for installation of polyethylene gas infrastructure under sealed and impervious areas subject to underlying ground conditions and other buried infrastructure, and open trenching in other areas of the local road reservation. Selection of the installation technique for welded steel pipework shall be at the discretion of the Installer.

14.7.6 Construction Beneath Existing or Proposed Roads

All construction beneath existing or proposed roads shall be in accordance with AS 1697 Section 3.

14.7.7 Pipe Alignment and Clearances

Where the location of existing services and other obstructions within a roadway allows, gas mains shall be constructed in the location indicated on drawings SD-1002 and SD-1011. In other cases, gas mains shall be constructed in a location as determined by the Installer and agreed with the Authorised Officer.

Gas mains shall be constructed with clearances to existing services and structures and with cover in accordance with AS 1697 Section 6. Where an authority requires additional minimum clearance to their services for reasons of safety, such clearance or appropriate mechanical separation between the services shall be provided.

Gas mains shall be constructed so as to minimise crossing of existing services

14.7.8 Dewatering

During construction, the Installer shall provide for effective diversion and disposal of surface and ground water, and shall provide appropriate diversion of discharge from dewatering equipment to minimise any damage to any portion of the works or surrounding properties.

Consideration shall be had during construction to the creation of subsoil drainage systems as a result of the backfilling of trenches with free draining granular material. In locations where it is apparent that the completed pipe trench will act as a subsoil drain, appropriate provisions shall be made to divert any such flows along trenches to the stormwater drainage system, or such other disposal point as agreed by the Authorised Officer. Similarly, the Installer shall rectify any such subsoil drainage effects that become apparent during the maintenance period.

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14.7.9 Storage and Disposal of Material

Excavated material not required or not suitable for the works shall be removed from the site within two working days. No excavated material shall be placed against any fence or wall without the written consent of the owner and the approval of the Authorised Officer.

Material shall be placed a minimum of 1.0 m clear of the edge of the trench.

14.7.10 Environmental Management

The Installer shall comply with Environmental Management Plan prepared as part of the SAOP.

14.8 PIPE LAYING, JOINTING AND BACKFILLING

Trenching shall generally be in accordance with Standard Drawing SD-5001.

14.8.1 Bedding

Bedding shall be compacted bedding material complying with Clause 14.6.3 and placed in accordance with the relevant Standard Drawing. Compaction shall be to 95 per cent standard compaction in accordance with AS 1289.

14.8.2 Laying and Jointing

Laying and jointing of pipes and fittings shall comply with all requirements of the Director of Gas Safety

14.8.3 Haunching

Haunching shall be material complying with Clause 14.6.3 placed in accordance with the relevant Standard Drawing.

14.8.4 Marker Tape Installation

Lay detectable marker tape within the pipe refill material before filling the trench. Lay and splice the tape continuously for trenched construction along the line of the main. Strip the ends of the tape to expose its conductor and connect the conductor to metal surface fittings or provide a stake within boxes as appropriate. Termination points must be marked on As Constructed drawings.

14.8.5 Backfilling

Backfilling material shall be as shown on the relevant Standard Drawing and shall be compacted in layers not exceeding 150 mm thick when compacted. The degree of compaction shall depend on the location of the trench.

For trenches clear of trafficked areas the layers shall be compacted to a minimum density of 95 per cent standard compaction in accordance with AS 1289. For trenches under trafficked areas the layers shall be compacted to comply with the pavement requirements as shown in

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Table 14.8 .1.

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Table 14.8 .1

Pavement Layer	Characteristic Density in accordance with AS 1289.
Sub-grade	95% standard compaction
Sub-base	95% modified compaction
Base	98% modified compaction

14.8.6 Services in Common Trench

Where more than one service is laid in a common trench the trench size, depth and backfill shall be in accordance with requirements of the relevant Authority, in consultation with the Installer.

14.8.7 Property Connections

Property connections shall be laid in accordance with the requirements of this Specification. The Installer shall maintain full records of the location and details of property connections installed.

14.9 SURFACE REINSTATEMENT

This section is to be read in conjunction with Clause 7 of Schedule 1 of the Local Government (Highways) Regulations 2003.

14.9.1 Asphalt and Sprayed Bituminous Surfaces

Final reinstatement of excavations is to comply with the following:

- Reinstatement of footpaths and driveway surfaces is to include full replacement of the asphalt surface over the length affected, between the saw cuts undertaken in accordance with Clause 14.6.3 , provided any residual section is a minimum of 250mm width.. The Authorised Officer may direct that any saw cuts that are not straight or that have been damaged be re-cut to achieve a straight alignment prior to seal replacement. Replacement sections must have a similar finish to original or remaining sections as appropriate.
- Asphalt and sprayed bituminous road seal reinstatement to be 40mm thick, or the thickness of the existing seal, whichever is the greater.
- Prior to placement of new asphalt, a tack coat shall be applied to the face of the cut edge of the existing asphalt.

Tack Coat Material: A mixture of three parts of bitumen emulsion to AS 1160, designation ARS/170, to two parts of water. It may be necessary to use cut back bitumen in instances of low temperature (<10deg C).

Tack Coat Application: Apply tack coat not less than 30 minutes nor more than 2 hours before asphalt surfacing is placed. Cover the surface uniformly at an application rate of between 0.10 and 0.30 L/m² of residual bitumen. Prior to application of tack coat ensure that base material is swept clean of all loose material.

- Reheating of the existing asphalt is not required.
- Road surfaces shall be reinstated to surface level with asphalt within 48 hours of completion of backfilling.

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- Reinstated surfaces are to be brought flush with existing surfaces; no trip hazards are to be present. If settlement of asphalt surfaces occurs, mill out and bring flush, or other remedial action as agreed with the Authorised Officer.
- All asphalt work to be in accordance with AS 2734 "*Asphalt Hot-Mixed Paving - Guide to Good Practice*". Material to be dense graded asphalt in accordance with DIER standard specification R55, or open graded to match existing in accordance with DIER standard specification R56.

14.9.2 Concrete Surfaces

Final reinstatement of excavations is to comply with the following:

- Reinstatement of footpaths and driveway surfaces is to include full replacement of the concrete surface over the length affected, between the saw cuts undertaken in accordance with Clause 14.6.3, provided any residual section is a minimum of 250mm width. Saw cuts are to align with the edges of individual bays where appropriate. The Authorised Officer may direct that any saw cuts that are not straight or that have been damaged be re-cut to achieve a straight alignment prior to surface replacement. Replacement sections must have a similar finish to original or remaining sections as appropriate.
- The footpath grade is to be no greater than the grade prior to the works.
- Reinstatement of concrete road surfaces may be trench width surface reinstatement, provided any residual section is a minimum of 250mm width. The Authorised Officer may direct that any saw cuts that are not straight or that have been damaged be re-cut to achieve a straight alignment prior to seal replacement.
- Concrete road seal reinstatement is to match the thickness and reinforcement of the existing concrete surfaces, with reinforcement and dowels into existing work to the approval of the Authorised Officer.
- Road surfaces shall be reinstated to surface level with concrete within 48 hours of completion of backfilling.
- Reinstated surfaces are to be brought flush with existing surfaces; no trip hazards are to be present.

14.9.3 Segmental Pavers

Final reinstatement of excavations is to comply with the following:

- Reinstatement of footpaths, driveways and road surfaces is to include replacement of the previously removed segmental pavers to the pattern and grade existing prior to the works, in accordance with the manufacturer's recommendation. All damaged pavers are to be replaced with new matching pavers. Where identical pavers are not readily available, the Installer shall consult with the Authorised Officer and agree on a suitable replacement taking into account the existing size, shape and colour and matching as closely as possible.
- The footpath grade is to be no greater than the grade prior to the works.
- Reinstated surfaces are to be brought flush with existing surfaces; no trip hazards are to be present. Remedial actions to address non-compliance with this requirement are to be agreed between the Installer and the Authorised Officer.

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14.10 INSPECTIONS

With respect to the construction of gas infrastructure, Clause 1.21 of Part 1 is replaced by Clauses 14.10 and 14.11 .

The Authorised Officer is to have unrestricted access to the works.

The Authorised Officer shall notify the Certifier of any observed or perceived non-compliance with any regulation, specification or standard applicable to the works. The Authorised Officer and the Certifier shall agree any required remedial action to address the non-compliance, and any other required actions to validate the adequacy of previously completed work with respect to the identified non-compliance. The Installer shall respond to any directions from the Certifier under this clause in a timely manner, and in accordance with any time frame stipulated in the directions.

Prior to preparation of the Completion Report prescribed under Clause 10 of Schedule 1 of the Local Government (Highways) Regulations 2003, the Certifier shall contact the Authorised Officer and propose a joint inspection of the site of the completed works. The Authorised Officer is not obliged to participate in this inspection, and must not restrict the Installer in achieving the prescribed time frame for submission of the Completion Report.

14.11 MAINTENANCE AND HANDOVER

The reinstatement works shall be maintained for a period of twelve months. The maintenance period commences when the Installer provides the Authorised Officer with a Completion Report pursuant to Clause 10 of Schedule 1 of the Local Government (Highways) Regulations 2003.

Any identified maintenance requirements during the Maintenance Period are to be inspected by the Authorised Officer and the Installer's representative within three days of notice being received from either party. The responsibility for rectification will be determined during the inspection visit if possible. Rectification must be completed within three days or a reasonable time frame agreed between the parties during the inspection. Maintenance requirements that represent a safety hazard must be addressed in accordance with the Gas (Safety) Regulations 2002, and the SAOP.

On expiry of the Maintenance Period, the Certifier shall advise the Authorised Officer in writing that the reinstatement works are in a satisfactory state of repair. The Authorised Officer may, within 14 days of receipt of such notice, notify the Installer that certain aspects of the work are considered unsatisfactory, otherwise the Council is deemed to have accepted the reinstatement works,, which shall be taken over by Council.

The Authorised Officer may request a joint inspection with the Installer and/or the Certifier to discuss any aspects of the reinstatement works considered unsatisfactory.

The Installer is to address all unsatisfactory work within 14 days, and advise the Authorised Officer that all reinstatement works are now in a satisfactory state of repair, whereupon the Authorised Officer shall re-assess the works in accordance with the above procedure within a further 14 days. In the absence of any further advice from the Authorised Officer, the Council is deemed to have accepted the reinstatement works.