

MUNICIPAL STANDARDS

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SPECIFICATIONS

PART 3 - SUBSOIL DRAINS

3.1 SCOPE OF WORK

This section includes the requirements for the supply of materials, equipment, labour and services for the construction of subsoil drains.

3.2 STANDARDS

The following Australian Standards and Standard Drawings are referred to:

Australian Standards

AS 2439.1	Perforated Drainage Pipe and Associated Fittings
AS 3704	Geotextiles - Glossary of Terms
AS 3705	Geotextiles - Identification, marking and general data
AS 3706	Geotextiles - Methods of test

Standard Drawings

SD 2050 - Subsoil Drain

3.3 MATERIAL

3.3.1 Pipes

The type, diameter and lengths of pipe used shall be as shown on the Drawings. Subsoil drain pipe shall comply with the relevant Australian Standard.

3.3.2 Filter Material

Filter material shall consist of an angular, clean, hard and durable crushed rock with a uniformly sized particle size of 14 mm. The filter material shall be free from lumps of clay or organic matter.

3.3.3 Geotextile Fabric

Geotextile fabric shall be of non-woven type thermally bonded, minimum weight 100 g/m², or equivalent as approved by the Superintendent. References, identification and testing of geotextile fabric shall comply with the requirements of the relevant Australian Standards.

3.3.4 Alternative Drain

Alternative drain types shall not be installed unless otherwise approved by the Superintendent.

3.4 EXCAVATION

Trenches shall be excavated and trimmed clean true to grade and alignment as shown on the Drawings or directed by the Superintendent. Unless noted on the Drawings the trenches shall be constructed in accordance with the Standard Drawings to a grade not flatter than that of the carriageway but having a minimum grade of 1 in 200 (0.5 per cent).

3.5 TRENCH LINING

Trenches shall be lined with geotextile filter fabric as shown on the Standard Drawings. Where fabric requires jointing, fabric shall overlap a minimum of 500 mm at transverse joints and the full trench width at the top.

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3.6 LAYING AND JOINTING SUBSOIL DRAIN PIPE

Subsoil drains shall be laid and bedded as detailed on the Drawings. Subsoil drain pipe shall be jointed according to the manufacturer's recommendations.

3.7 BACKFILLING

The trench shall be backfilled with filter material as described in Clause 3.3.2 and in layers not exceeding 150 mm loose depth. Where trenches are not covered by pavement or other works, 100 mm of material matching the adjacent insitu material shall be placed as surface layer.

3.8 OUTLETS

Outlets shall be placed as shown on the Drawings. Outlets to discharge clear of embankments shall be of sufficient slope to prevent silting and where outlets will discharge into culverts, waterways, etc., the pipes shall be positioned above flood level. Outlets for street drainage shall discharge into stormwater pits at locations or intervals as shown on the Drawings.

Where subsoil drains discharge through concrete headwalls, pits, stone walls, etc., a neat entry is required, free of any obstruction. Any blockouts shall be rendered after drain installation.

3.9 INSPECTIONS

The Contractor shall give not less than twenty-four (24) hours notice of the commencement or completion of the undermentioned works, and shall submit such works for inspection. The Contractor shall not proceed with the next succeeding operation until specific approval has been given for the following:

- a) Trench excavation.
- b) Trench lining with filter fabric and laying of subsoil drain pipe.
- c) Filter material backfill.