



# CITY OF WHITEHORSE

ENGINEERING SERVICES &  
WATER & WASTE SERVICES

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## AMENDMENT NOTICE - REQUIREMENTS FOR PIPE INSULATION

**Date: June 2, 2017**

**File: 2017\_AN\_SSM\_001**

### **General**

This notice is intended to inform stakeholders of revised requirements for installation of insulated pipes for watermains, sanitary sewer mains and services.

The following sections of the City of Whitehorse Servicing Standards Manual (SSM) are affected by these changes:

#### Section 2 – Construction Design Criteria

- Sub-Section 2.3.4 – Water Distribution System, Insulation;
- Sub-Section 2.4.3 – Sanitary Sewer System, Insulation;
- Sub-Section 2.6.1 – Sewer and Water Service Connections, Service Connection Minimum Requirements.

#### Section 3 – Construction Standards

- Sub-Section 3.5.2.4 – Watermains, Insulation.
- Sub-Section 3.9.2.2 – Sewer Service Connections, Insulation.

### **Revisions**

The following revisions modify, delete or add to the content of the published 2007 SSM:

All watermains, gravity sanitary sewers and services are to be insulated using a factory-applied rigid polyurethane foam, specified as follows:

Density	35.2 kg/m <sup>3</sup> minimum, ASTM D1622, apparent core density
Closed cell content	90% minimum, ASTM D6226.
Water absorption	Maximum 4.0% by Volume, ASTM D2842
Thermal conductivity	0.023 W/m K, at 50mm thickness 22 degrees Celsius, ASTM C518

System Compressive strength	Modified ASTM D 1621 with 50 mil (1.27mm) jacket: Approximately 414 to 552 KPa.  *Note: Varies with pipe diameter.
Thickness	Minimum 50 mm

All watermains, gravity sanitary sewers and services are to have a UV stable high-density polyethylene jacket that is factory applied by continuous extrusion and specially formulated for below grade applications. Jacket thickness varies depending on pipe diameter.

A pipe is to be located at the centre of the insulation material. An allowable tolerance on this specification is as follows:

- Total diameter of insulation pipe structure shall in no instance be less than the pipe diameter plus 100 mm.
- The minimum thickness of insulation on any side of the pipe at any location is to be no less than 50 mm.

All joints in services are to be fused. Compression joints are not acceptable.

Installation of insulation at pipe joints and fittings shall be in strict conformance with system approved by the manufacturer of the insulated pipe being installed.

Should you require any further information regarding the above changes please contact Engineering Services at (867) 668-8305.