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1 Mar 2021

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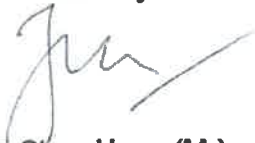
ADDENDUM NO. 1 TO CODE OF PRACTICE ON SEWERAGE AND SANITARY WORKS (2ND EDITION- JAN 2019)

The Code of Practice on Sewerage and Sanitary Works (COPSSW) 2nd Edition was released in Jan 2019 with new requirements and updates to guide qualified persons, professional engineers and licensed plumbers in the proper planning and design of the sewerage and sanitary system.

2 In the past 2 years since the release of the 2nd Edition of COPSSW, we have received some feedback and comments. PUB will be releasing addendum no. 1 to the COPSSW 2nd Edition in Jan 2021 to address the feedback. Addendum No 1 has no new requirements but provides greater clarity on some of the requirements (See **Annex A**).

3 Please circulate the changes to your members for information. If there is need for further clarification, please forward your queries to Mr Steven Candra (steven_candra_setiokusumo@pub.gov.sg). You may also contact him at 67313674. Thank you.

Yours faithfully



Tan Chee Hoon (Mr)
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Water Reclamation (Network) Department
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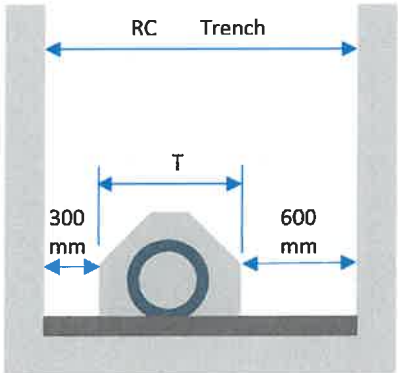
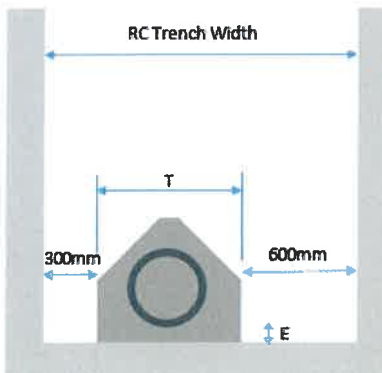
Annex A

ADDENDUM NO. 1 TO CODE OF PRACTICE ON SEWERAGE AND SANITARY WORKS (2ND EDITION- JAN 2019)

Clause	COPSSW 2nd Edition - Existing Clauses	Amended Clauses	Remarks on Changes
3.2.1 d. i.	<p><u>Sewer Design Basis</u></p> <p>The minimum size of new sewers <i>and the drain-line connection from the last IC</i> shall be 200mm in diameter.</p>	The minimum size of new sewers shall be 200mm in diameter.	<p>The minimum size of drain-lines connection is already stated in clause 4.2.1 d. iii as follows:</p> <p><i>iii. Where the last section of the drain-line is connected to the public sewer via a Y-junction, the size of pipe and material shall follow that of the sewer it is connecting to.</i></p> <p><i>iv. Where the last section of the drain-line is connected to a manhole, the size shall be minimum 200mm in diameter and no uPVC pipe shall be used.</i></p>
3.2.2 e.	<p><u>Sewers, Manholes and Pipe Connections</u></p> <p>All incoming sewer pipes connecting to manhole shall be joined at soffit level of the outgoing sewer. <i>Where a new 200mm diameter sewer connects to an existing 150mm diameter outgoing sewer, the connection shall be made at grade.</i></p>	Incoming sewer pipes connecting to manhole shall be joined at soffit level of the outgoing sewer pipe. For connection to a smaller diameter outgoing sewer, the connecting sewer pipe shall be made at the invert level of the outgoing sewer pipe.	<p>“At grade” means on the same level.</p> <p>Where the diameter of the incoming sewer pipe is larger than the outgoing sewer pipe, the incoming sewer pipe connecting to manhole shall be joined at invert level of the outgoing sewer pipe.</p>
4.2.1 b. i.	<p><u>Drain-lines</u></p> <p>The size shall be determined by the flow from all sanitary appliances/fixture using Discharge Units (DUs) of each type of sanitary appliance based on <i>BS EN 12056-2 subject to a minimum size of 150mm diameter and a maximum length shall be 50m.</i></p>	The size shall be determined by the flow from all sanitary appliances/fixture using Discharge Units (DUs) of each type of sanitary appliance based on BS EN 12056-2 Table 2 System 1 , subject to a minimum size of 150mm diameter. The	For determining the size of the discharge pipe/stack and drain-lines, the Discharge Units (DU) given in System 1 of table 2 shall be used for calculation of the expected flow rate from sanitary appliances/fittings

		<p>maximum length shall be 50m.</p>	<p>connecting to a discharge pipe which is designed with a filling degree of 0.5 (ie 50%).</p> <p>Our gravity sanitary plumbing and drainage systems are designed for peak flow at half-bore (ie 50% filled) so that there is an air-core to release the pressure in pipe to prevent loss of water seal from the trap of a discharging appliance caused by self-siphonage. Traps on appliances not discharging may also suffer water seal loss by induced siphonage.</p>
<p>4.3.3 a.</p>	<p><u>Sizing Discharge Pipes & Stacks</u></p> <p>The size shall be determined by the total flow from all sanitary appliances/fixtures using Discharge Units (DUs- litres/second) of each type of sanitary appliance (<i>based on the BS EN 12056-2</i>)</p>	<p>The size shall be determined by the total flow from all sanitary appliances/fixtures using Discharge Units (DUs- litres/second) of each type of sanitary appliance (based on the BS EN 12056-2 Table 2 System 1).</p> <p>Note: QP shall refer to section 4 and to consult PUB for sizing of pumped sanitary system.</p>	

<p>4.3.10</p> <p>Table 8</p>	<p><u>Connection of Sanitary Appliances</u></p> <table border="1"> <thead> <tr> <th>Appliances</th> <th>Specific Installation Details</th> </tr> </thead> <tbody> <tr> <td>WC</td> <td> <ul style="list-style-type: none"> i. Conform to Singapore Standard SS 574. ii. A purpose made <i>flexible</i> connector (pan collar, bend connector or floor flange) shall be used to connect WC to the discharge pipe. (See Sanitary Standard drawing No. 3- 23a). iii. For change of WC, it is advisable that the <i>flexible</i> connector be replaced to ensure air tightness. </td> </tr> </tbody> </table>	Appliances	Specific Installation Details	WC	<ul style="list-style-type: none"> i. Conform to Singapore Standard SS 574. ii. A purpose made <i>flexible</i> connector (pan collar, bend connector or floor flange) shall be used to connect WC to the discharge pipe. (See Sanitary Standard drawing No. 3- 23a). iii. For change of WC, it is advisable that the <i>flexible</i> connector be replaced to ensure air tightness. 	<table border="1"> <thead> <tr> <th>Appliances</th> <th>Specific Installation Details</th> </tr> </thead> <tbody> <tr> <td>WC</td> <td> <ul style="list-style-type: none"> i. Conform to Singapore Standard SS 574. ii. A purpose made connector (pan collar, bend connector or floor flange) shall be used to connect WC to the discharge pipe. (See Sanitary Standard drawing No. 3- 23a). iii. For change of WC, it is advisable that the connector be replaced to ensure air tightness. </td> </tr> </tbody> </table>	Appliances	Specific Installation Details	WC	<ul style="list-style-type: none"> i. Conform to Singapore Standard SS 574. ii. A purpose made connector (pan collar, bend connector or floor flange) shall be used to connect WC to the discharge pipe. (See Sanitary Standard drawing No. 3- 23a). iii. For change of WC, it is advisable that the connector be replaced to ensure air tightness. 	<p>Both the standard design (rigid type) and flexible type WC connectors are allowed for use.</p>
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<p>4.3.11 a.</p>	<p><u>Floor Trap, Shallow Floor Trap and Floor Waste</u></p> <p>Floor trap shall be provided to receive the flow from sink, washbasin, bath and shower and floor waste and be connected to a discharge pipe (at upper storey) or an IC (at ground floor).</p>	<p>Floor trap shall be provided to receive flow from sink, washbasin, bathtub, shower and floor waste. The floor trap on an upper storey shall be connected to a discharge pipe while floor trap on the ground floor shall be connected to an IC. Such floor trap shall not receive flow from different premises/units/rooms.</p>	<p>Floor trap should only serve flow from same premises/units/rooms for separation of flow from different premises.</p>								

<p>4.6.1 g.</p>	<p><u>Food Establishments</u></p> <p>The pipe material for the drain-lines shall be ductile iron pipes, vitrified clay <i>or</i> HDPE. Vitrified Clay pipe shall be used for the connection line to public sewer.</p>	<p>The pipe material for the drain-lines shall be ductile iron or vitrified clay. Vitrified Clay pipe shall be used for the connection line to public sewer.</p>	<p>HDPE pipe should not be used for discharge pipe/drain-lines serving food establishment due to low temperature resistance (refer to clause 4.6.1 h below).</p> <p><i>h. The discharge pipe serving food establishment shall be of corrosion resistant, high temperature resistant (min 90 deg C intermittent), and with a minimum 2 bar (PN2) pressure rating.</i></p>
<p>Annex A Figure 2</p>	<p><u>REQUIREMENTS FOR CONSTRUCTION OF RC TRENCH</u></p>  <p>Figure 2: RC trench Width for Sewer with Depth >3m or Larger than 300mm in Diameter</p>	 <p>E: 150mm for sewer up to 900mm in diameter.</p> <p>Figure 2: RC trench Width for Sewer Depth >3m or Diameter Larger than 300mm</p>	<p>Amended Figure 2 to show the thickness of concrete (E) at bottom of the sewer pipe.</p>

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