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AMENDMENTS TO STANDARD DRAWING FOR SANITARY WORKS

Following the addendum to Code of Practice on Sewerage and Sanitary Works (COPSSW) 2nd Edition released on Mar 2021, PUB has made amendments to the standard drawing for sanitary works. The changes to provide greater clarity on some of the requirements are summarised in **Annex A**.

2 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). Tel: 67313674. Thank you.






Yours faithfully

















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Annex A









AMENDMENTS TO STANDARD DRAWINGS FOR SANITARY WORKS




Std Dwg. No.	Amended Standard Sanitary Drawings	Main Changes
3-1	<p><u>Layout of Sanitary Drainage System</u></p> 	<ul style="list-style-type: none"> (i) Added Note 1 that top level of all IC and Floor traps shall be at the same level or higher than the top level of manhole. (ii) Included in Note 2, the minimum self-cleansing velocity (0.9m/s) & maximum scouring velocity (2.4 m/s) in the table of drain-line gradients (iii) Minimum diameter of waste pipes is now shown
3-2	<p><u>Discharge Pipe & Floor Waste Connection on Ground Level</u></p> 	<ul style="list-style-type: none"> (i) Drawing title amended to include Floor Waste connection (ii) Added Note 1 that the Floor Waste shall not be smaller than 50mm diameter (iii) Added Note 2 that Floor trap shall not receive flow from different premises/units/ rooms.
3-3	<p><u>Discharge Stack Connection with Backdrop to Inspection Chamber</u></p> 	<ul style="list-style-type: none"> (i) Indicated maximum gradient of discharge pipe is 1:70
3-4	<p><u>Backdrop and Tumbling Bay Details</u></p> 	<ul style="list-style-type: none"> (i) Added to Note 2 the min. and max. gradient of drain-line (ii) Indicated min. 150mm dia. of 'drain-line between ICs' and min. 200mm dia. Of 'connection to MH'
3-5	<p><u>Bedding for Drain-line & Discharge Pipe</u></p> 	<ul style="list-style-type: none"> (i) Drawing title amended to include discharge pipe (ii) Standardised to one type of bedding for all drain-line and discharge pipe in the ground (iii) Added a note that Foundation structure and piling shall be designed by a PE. (iv) Added a note on concrete grade to be used.

3-6	<p><u>Ground Level Floor Trap with or without a Sump (for Connection to Inspection Chamber)</u></p> 	<ul style="list-style-type: none"> (i) Amended to indicate that removable precast concrete slab cover of sump is no longer used. (ii) Both S-type and P-type of floor trap configuration are shown (iii) Max. depth of floor trap outlets from ground level changed to 1500mm (iv) Notes amended to indicate that UPVC floor trap shall comply with SS272 and the floor trap, grating frame and connected riser shall be embedded in concrete
3-7	<p><u>Inspection Chamber (IC) and Break Joint for Drain-Line</u></p> 	<ul style="list-style-type: none"> (i) Editorial changes in Notes with clarification that HDPE lining is not required in IC (ii) Added Note 6, that UPVC pipe joints shall comply with SS272
3-8	<p><u>Wash Area</u></p> 	<ul style="list-style-type: none"> (i) Notes amended to indicate that wash area shall be sheltered and appropriately kerbed to prevent rainwater from entering the sewerage system (ii) Changed max. depth of floor trap to 1500mm
3-9	<p><u>Sanitary Drainage System for Hawker Centre/Food Court</u></p> 	<ul style="list-style-type: none"> (i) Title amended from Food Shop to Hawker Centre/Food Court (ii) Indicated that Cast Iron Floor Trap shall be to BS EN 877 and Ductile Iron Floor Trap shall be to BS EN598 (iii) Amended Notes on the acceptable types of grease traps
3-10	<p><u>Waste Sump (for Sullage Water Drainage)</u></p> 	<ul style="list-style-type: none"> (i) Notes amended to indicate that Precast concrete slab cover of sump is no longer used. (ii) Editorial changes to notes and annotation
3-11	<p><u>Sanitary Drainage System for Typical Bin Centre</u></p> 	<ul style="list-style-type: none"> (i) Standard sanitary drainage for bin centre changed to be in-line with Code of Practice on Environmental Health Bin Centre layout with compactor.
3-12	<p><u>Sanitary Plumbing and Drainage System for Market</u></p>	<ul style="list-style-type: none"> (i) Note 4 added to indicate that the discharge pipes serving markets at upper storey shall be corrosion resistant, high

		temperature (90 deg C) resistant and with a min. 2bar pressure rating. (ii) Editorial changes to annotation
3-13	<u>Floor Sump for Market</u> 	(i) Added section A-A for clarity (ii) Editorial changes to annotation
3-14	<u>Sanitary Drainage System for Toilet at Beach Site/Construction Site</u> 	(i) Removable RC slabs or Cast Iron frame and cover of silt sump replaced with IC cover or chequered plate cover to SS30 (ii) Notes simplified with editorial changes to annotation.
3-15	<u>Fully Ventilated System (without Secondary Discharge Stack) for Landed Housing</u> 	(i) Title amended from 'with single stack' to 'without secondary discharge stack' (ii) Added a note to indicate that for landed houses separate discharge stack from kitchen and toilet is not required (iii) Editorial changes to annotation and diagram
3-16	<u>Fully Ventilated System (with Secondary Discharge Stack) for All Buildings</u> 	(i) Added a note to indicate that discharge from kitchen and toilet shall be separated (ii) Amended Note 2 to cover stack pipe design to BS EN 12056-2, Table 2, System 1 (iii) Editorial changes to annotation and diagram
3-17	<u>Single Stack System for Building up to 6 Storeys</u> 	(i) Added a note to indicate that discharge from kitchen and toilet shall be separated (ii) Editorial changes to annotation and diagram
3-18	<u>Ventilated Stack System for All Buildings</u> 	(i) Added a note to indicate that discharge from kitchen and toilet shall be separated (ii) Amended Note 2 to cover stack pipe design to BS EN 12056-2, Table 2, System 1 (iii) Editorial changes to annotation and diagram
3-19	<u>Floor Trap and Water Closet Pan Connected in Series</u> 	(i) Amended Note 3 on the condition to allow discharge pipe of 75mm dia. serving single WC. (ii) Added Note 4 that cleaning eye/inspection opening shall

		be oriented to allow pipe cleaning/inspection
3-20	<p><u>Connection of Floor Trap Ventilating Pipe to Ventilating Stack</u></p> 	<p>(i) Title changed to ‘Connection of Floor trap Ventilating pipe to ventilating stack’.</p> <p>(ii) Added Note 2 that cleaning eye/inspection opening shall be oriented to allow pipe cleaning/inspection</p> <p>(iii) Editorial changes to annotation</p>
3-21	<p><u>Offset and Cross-Vent Pipe</u></p> 	<p>(i) Title changed to ‘Offset and Cross-vent Pipe’</p> <p>(ii) Note 1 amended that radius of elbow shall be at least 2x diameter of discharge stack and elbow shall be securely held and bolted.</p> <p>(iii) Indicated max. 300mm distance between ventilating pipe to discharge stack</p> <p>(iv) Editorial changes on the annotation</p>
3-22	<p><u>Details of Connection between Discharge Stacks and Inspection Chamber (below Ground Level)</u></p> 	<p>(i) Amended annotation of short straight pipe length between 45° bends to ‘not less than 2x diameter of discharge stack’</p> <p>(ii) Editorial changes on annotation</p>
3-23	<p><u>Jointing of Outlet of Pedestal Water Closet to Discharge Pipe</u></p> 	<p>(i) Notes amended to address only WC jointing details with added requirement that plastic bend connector shall comply with BS 5627</p>
3-24	<p><u>Wash Basin Connected in Series to a Common Waste Pipe</u></p> 	<p>(i) Title changed to ‘Wash Basins connected in series to a common waste pipe’</p> <p>(ii) Added air admittance valve as alternative to vent cowl at termination of ventilating pipe</p> <p>(iii) Amended ventilating pipe for floor trap to connect to ventilating stack at min. 150mm above floor level</p> <p>(iv) Editorial changes to annotation</p>
3-25	<p><u>Ventilating Pipe Requirements for Urinals Connected in Series</u></p>	<p>(i) Title changed to ‘Ventilating Pipe requirements for Urinals connected in series’</p>

		(ii) Notes added to allow use of air admittance valve in lieu of ventilating and loop venting pipe. (iii) Editorial changes to annotation
3-27	<u>Sanitary Plumbing System for Prefabricated Toilet</u> 	(i) Illustration only shows a ventilated stack system. Note added that in fully ventilated system, ventilating pipes shall be provided.
3-28	<u>Connection to Common Discharge Pipe at Basements</u> 	(i) Title changed to 'Connection of Discharge Stacks to a Common discharge Pipe' (ii) Added note that multiple discharge stacks connecting to a common discharge pipe at ceiling of ground floor or basement shall comply with COPSSW (iii) Editorial changes to diagram and annotation
3-29	<u>Sanitary Plumbing System for Hawker Centre/Food Court at Upper Storey Level</u> 	(i) Title changed to 'Sanitary Plumbing System for Hawker Centre/Food Court at Upper Storey Level' (ii) Change to description of use of Alternatives 1 and 2, instead of for new development or A/A. (iii) Editorial changes to annotation
040	<u>Standard Circular Grease Trap (Equivalent to NS 4 of BS EN 1825)</u> 	(i) Added 'Equivalent to NS 4 of BS EN 1825' to title (ii) Editorial changes on annotation
041	<u>Standard Grease Trap (Equivalent to NS 2 of BS EN 1825)</u> 	(i) Added 'Equivalent to NS 2 of BS EN 1825' to title (ii) Editorial changes on annotation
042	<u>Standard Oil Interceptor</u> 	(i) Added note that chequered plate cover to SS30 may be used (ii) Interceptor capacity shown as flow rate (iii) Editorial changes to notes and annotation
043	<u>Cast Iron Gully Trap for Car Washing Area</u> 	(i) Title changed to 'Cast Iron Gully Trap for Sheltered Car Washing Area in Carpark' (ii) Added connection detail at outlet (iii) Amended note on strainer (iv) Editorial changes on annotation

044	<p><u>Cast Iron Gully Trap for Bin Centre</u></p> 	<p>(i) Added connection detail at outlet (ii) Added a note on gully exterior bituminous coating (iii) Amended note on strainer material (iv) Editorial changes on annotation</p>
045	<p><u>Cast Iron Gully Trap for Market</u></p> 	<p>(i) Added connection detail at outlet (ii) Amended note on strainer material (iii) Editorial changes on annotation</p>
046	<p><u>Standard Alum. Alloy Strainer Bucket and C.I. Gully Trap</u></p> 	<p>(i) This standard drawing has been withdrawn</p>

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