Australian Government

CPCPPS5032 Design siphonic stormwater drainage systems

Release: 1

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Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 5.0.

Supersedes and is equivalent to CPCPPS5032A Design siphonic stormwater drainage systems. Updated to meet the Standards for Training Packages 2012.

Application

This unit specifies the skills and knowledge required to design siphonic stormwater drainage systems, determine installation details, and prepare specifications for a range of residential, commercial and industrial buildings.

The role involves interaction with architects, builders, suppliers, clients and relevant planning authorities and requires a sound understanding of applicable legislation, standards and codes.

The unit requirements are typically carried out by experienced people such as hydraulic design consultants or persons in a supervisory capacity in relation to plumbing services on a new or existing site.

In some jurisdictions, this unit of competency may form part of accreditation, licensing, legislative, regulatory or certification requirements.

Pre-requisite Unit

Nil.

Unit Sector

Plumbing and Fire Services

Elements and Performance Criteria

Elements describe the essential outcomes.	Performance criteria describe what needs to be done to demonstrate achievement of the element.
1 Evaluate design parameters.	1.1 Establish scope of work for siphonic stormwater drainage systems.
	1.2 Determine design parameters from relevant statutory and regulatory requirements, codes, plans, specifications and client brief.

	1.3	Establish performance requirements considering safety of system users or building occupants.
	1.4	Apply sustainability principles and concepts as part of the design process.
	1.5	Interpret stormwater design manuals, manufacturer requirements and trade and technical manuals
	1.6	Conduct additional research, including a desktop study, to outline design parameters.
	1.7	Determine factors that contribute to quality, safety and time efficiency.
	1.8	Evaluate siphonic system attributes and conduct cost-benefit analysis, comparing a range of pipe materials and system designs.
2 Plan and detail system components.	2.1	Integrate siphonic stormwater drainage systems with the building structure.
	2.2	Calculate volume of roof water and stormwater using approved methods.
	2.3	Plan layout of pipework systems including type and location of fittings.
	2.4	Calculate pipe size and flow requirements for applications according to stormwater collection requirements.
	2.5	Plan pipe supports for applications.
	2.6	Specify approved materials and components, jointing methods and installation requirements for siphonic stormwater drainage systems.
3 Design and size systems.	3.1	Design siphonic stormwater drainage systems for applications.
	3.2	Calculate catchment areas, determine collection points and size siphonic systems.
	3.3	Design and size siphonic stormwater drainage systems

		using calculations and computer software packages.
4 Prepare documentation.	4.1	Prepare client brief of the preferred design.
	4.2	Prepare plans and specification for siphonic stormwater drainage systems.
	4.3	Prepare testing and commissioning schedule.
	4.4	Produce operation and maintenance manual, including information on how to properly and safely maintain the system.

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Supersedes and is equivalent to CPCPPS5032A Design siphonic stormwater drainage systems.

Links

Companion volumes to this training package are available at the VETNet website - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad