

Domain	PLUMBING	Unit ID: 462
Title:	Install storm water and sub-soil drainage systems as part of plumbing operations	
Level: 3		Credits: 4

Purpose

This unit standard specifies the competencies required to install storm water and sub-soil drainage systems up to the points of connection. It includes planning and preparing for work, determining installation requirements, installing storm water and subsoil drainage, and cleaning up the work area.

This unit standard is intended for those who work as plumbers.

Special Notes

1. Entry information:
 - Prerequisite
 - 434 - *Apply safety rules and regulations in plumbing operations or demonstrated equivalent knowledge and skills.*
2. Assessment evidence may be collected from a real workplace or simulated real workplace or an appropriate simulated realistic environment in which plumbing operations are carried out.
3. Tools and equipment include but are not limited hacksaws, drop saws, grinders, compression cutters, files, hand excavating tools, testing equipment, levelling equipment, measuring equipment, mechanical excavating equipment and trench shoring equipment.
4. Materials may include but are not limited to UPVC (Unplasticised Poly Vinyl Chloride), reinforced concrete, cast iron and vitreous clay pipes.
5. Performance of all elements in this unit standard must comply with all relevant workplace requirements and/or manufacturers' specifications.
6. Safe operating procedures may include but are not limited to recognising and preventing hazards associated with excavation equipment and plant, uneven/unstable terrain, pits, poles, trip hazards, dirt mounds, underground services, surrounding structure and facilities, hazardous materials, recently filled trenches, other machines, traffic control, working in proximity to others, worksites visitors, the public and may include working in confined spaces.
7. Regulations and legislation relevant to this unit standard include the following:
 - Labour Act, No. 6, 1992
 - Occupational Health and Safety Regulations No. 18, 1997 and all subsequent amendments.

Quality Assurance Requirements

This unit standard and others within this subfield may be awarded by institutions which meet the accreditation requirements set by the Namibia Qualifications Authority and the Namibia Training Authority and which comply with the national assessment and moderation requirements. Details of specific accreditation requirements and the national assessment arrangements are available from the Namibia Qualifications Authority and the Namibia Training Authority on www.nta.com.na.

Elements and Performance Criteria

Element 1: Plan and prepare for work

Range

Planning and preparation may include but is not be limited to workplace inspection, equipment defect identification, assessment of conditions and hazards and determination of work requirements.

Performance Criteria

- 1.1 Plans and specifications are obtained, confirmed and applied.
- 1.2 Safety requirements associated with installing storm water and sub-soil drainage systems, and the workplace environment, are adhered to throughout the work.
- 1.3 Quality assurance requirements are identified and adhered to in accordance with workplace procedures.
- 1.4 Tasks are planned and sequenced in conjunction with others involved or affected by the work in line with workplace procedures.
- 1.5 Tools and equipment including personal safety equipment are selected and checked for serviceability in line with workplace procedures.
- 1.6 Work area is prepared to support the efficient installation of the storm water and sib-soil drainage system.

Element 2: Determine installation requirements

Performance criteria

- 2.1 Position of installation is determined in accordance with plans, specifications and site requirements.
- 2.2 Quantity and type of materials required are calculated from design drawings/specifications and comply with standards, local authorities' requirements and job plan/specifications.
- 2.3 Materials are identified and ordered/collected in accordance with workplace procedures.
- 2.4 Materials are checked for compliance with docket/order form and for acceptable condition.

Element 3: Install storm water and sub-soil drainage

Performance criteria

- 3.1 Size and location of excavation is marked out to comply with drawings/specifications, installations and site requirements.
- 3.2 Site is excavated in accordance with drawings/specifications, site requirements and standards, ensuring minimum damage to surrounding structures or environment.
- 3.3 Pipework and storm water/subsoil drainage system is installed in accordance with drawings/specifications, site requirements or job instructions and standard, with consideration to existing pipework and other services.
- 3.4 Installation is tested to comply with standards and relevant authorities' requirements.
- 3.5 Inspection openings and covers are fitted in accordance with job specifications and workplace procedures.
- 3.6 Excavation is back-filled in accordance with job specifications and workplace procedures.

Element 4: Clean up work area

Performance criteria

- 4.1 Work area is cleared in accordance with workplace procedures, including reinstatement of ground level.
- 4.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' recommendations and workplace procedures.
- 4.3 Documentation is completed in line with workplace requirements.

Registration Data

Subfield:	General Construction
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