



Australian Government

DEFMIL087 Supervise the construction of short term roads or tracks

Release: 1

DEFMIL087 Supervise the construction of short term roads or tracks

Modification History

Release	Comments
1	This unit was released in DEF Defence Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to DEFCA316B Supervise the construction of short term roads or tracks. • Unit code updated • Content and formatting updated to comply with the new standards • All PC transitioned from passive to active voice • PC 1.13 removed • Element 1 reworded

Application

This unit describes the skills required to plan and direct the construction and to ensure the maintenance of a short-term road or track. It includes repairs to all weather dirt roads to prepare them for sealing without additional construction and repairs, that would normally involve:

- potholes that cause the slowing of traffic
- removal and replacement of culverts emergency repairs to bomb damaged airfield runway, taxi-way and hard standings
- small scale stabilisation tasks
- construction of short distance emergency bypass routes
- expedient roadways

This unit applies to combat engineer personnel who are required to plan and direct the construction and to ensure the maintenance of, a short term road or track in a deployed operational environment.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work independently and lead a team under direct and/or indirect supervision. They use discretion and judgement, and take responsibility for the quality of their outputs. They would perform complex tasks in a broad range of unpredictable contexts.

No licensing, legislative or certification requirements apply to unit at the time of publication.

Competency Field

Military Skills

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Plan road or track construction	1.1 Interpret road requirements and restrictions from instructions, expected time frame for usage and likely weather conditions. 1.2 Seek assistance to survey road location. 1.3 Survey water courses and other ground obstacles and note their impact on road design. 1.4 Plan crossing or entry points for other roads and tracks. 1.5 Investigate soil conditions to establish profile to sub-base level. 1.6 Plan extent and depth of clearing and cutting. 1.7 Plan soil dumping or storage areas to accommodate volume of soil to be removed, access and restoration. 1.8 Develop construction plan in accordance with design, resources, risks and environmental considerations. 1.9 Confirm availability of required road base and additional material. 1.10 Confirm and monitor competence of team members. 1.11 Brief construction team. 1.12 Liaise with outside agencies.
2. Supervise road or track construction	2.1 Direct and supervise construction team in accordance with the construction plan. 2.2 Recognise and respond to unexpected situations that require a quick and decisive response. 2.3 Check drainage, levelling, road alignment and soil stability. 2.4 Organise and direct support from outside agencies. 2.5 Provide technical advice to higher authority or support agencies.
3. Supervise	3.1 Monitor condition of road/track in relation to volume of traffic

maintenance of road or track	and expected future requirements. 3.2 Identify and repair, or report to controlling body, specific damage likely to lead to safety or environmental issues. 3.3 Plan and carry out normal wear and damage repair with minimal disruption. 3.4 Note and modify ineffective drainage. 3.5 Redesign and remake areas of consistent damage.
4. Finalise the task	4.1 Conduct post activity analysis and make recommendations. 4.2 Recondition, replace or return equipment and stores. 4.3 Complete documentation.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to DEFCA316B Supervise the construction of short term roads or tracks.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=6bdbab1e-11ed-4bc9-9cba-9e1a55d4e4a9>

Companion Volume implementation guides are found in VETNet -

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Assessment Requirements for DEFMIL087 Supervise the construction of short term roads or tracks

Modification History

Release	Comments
1	These Assessment Requirements were released in DEF Defence Training Package release 1.0 and meet the Standards for Training Packages. Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- analysing pavement using cone penetrometer
- conducting reconnaissance for quarries and gravel pits
- conducting route reconnaissance:
 - route formula symbols
 - limiting factors
 - construction materials
 - overhead obstructions
 - tunnels and underpasses
 - map overlays
- conducting soils testing (CBR)
- designing and constructing culverts:
 - determining ground bearing pressure and angle of repose
 - determining soil characteristics and properties
 - employing geo textiles
 - employing soil stabilisation methods
- measuring roadway parts:
 - pavement widths and thickness
 - shoulders
 - camber and crossfall
 - drainage
- preparing terrain analysis

- constructing roads and track to a standard that they could be classified as all-weather dirt roads and tracks capable of sustained heavy vehicle traffic
- constructing roads or tracks able to be sealed without further construction

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- techniques of:
 - compaction
 - pavement analysis using cone penetrometer
 - route reconnaissance
 - soil stabilisation methods
 - soil testing
 - terrain analysis
- construction standards
- types of:
 - geo textiles
 - ground bearing pressure and angle of repose
 - quarries and gravel pits
 - road systems and their relevant parts
 - soil characteristics and properties

Assessment Conditions

Competency should be demonstrated over a time frame that encompasses all aspects of the unit, in the workplace or in a simulated work environment. Assessment need only be conducted supervising the construction of one road or track due to the high cost and complex nature of the task. Specifically, access is required to the following resources:

- construction equipment and materials
- communications equipment
- suitable site
- construction team

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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