



Australian Government

Department of Education, Employment and Workplace Relations

RIICWM602A Establish civil works maintenance programs

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This unit covers the establishment of civil works maintenance programs in Civil Construction. It includes: the requirements to prepare, analyse and plan for; initiate, monitor, adjust and report on the execution of civil works maintenance programs.

Application of the Unit

This unit is appropriate for those working in a management role or as a technical specialist, to establish civil works maintenance programs within:

- Civil construction

Licensing/Regulatory Information

Refer to Unit Descriptor.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for establishing civil works maintenance programs	1.1. Access, interpret and apply compliance documentation relevant to the work activity 1.2. Access, interpret and clarify the client's requirements for a civil works maintenance program 1.3. Schedule, initiate and ensure the completion of inspections of assets to classify their serviceability
2. Plan civil works maintenance program	2.1. Classify the condition of assets in terms of their serviceability 2.2. Prioritise maintenance works 2.3. Identify the viable available options for the maintenance program 2.4. Select the preferred options and draft the maintenance program in consultation with relevant team members, which makes best use of the available resources and meets the project requirements 2.5. Identify contingency requirements to be allowed for in the execution of the program 2.6. Monitor and coordinate the progress of other team members involved in the programming process 2.7. Identify and schedule the resources required for the execution of the maintenance program 2.8. Identify the key performance indicators to be used in the monitoring and assessment of the project performance 2.9. Gain client agreement on maintenance milestones 2.10. Prepare an accurate estimate of the cost of execution of the program in consultation with relevant team members 2.11. Gain approval of the civil works maintenance program 2.12. Document the civil works maintenance program
3. Initiate civil works maintenance programs	3.1. Acquire and make available the necessary resources for the safe, effective and

	efficient conduct of the program 3.2. Issue clear and timely instructions to team members and others involved, for the safe, effective and efficient conduct of the program, to meet the specific task requirements
4. Monitor, adjust and report on the execution of civil works maintenance programs	4.1. Ensure the safe, effective and efficient execution of the program 4.2. Monitor the civil works maintenance program performance to ensure it achieves the required outcomes 4.3. Initiate adjustments to civil works maintenance program to ensure achievement of required outcomes 4.4. Provide ongoing clarification and advice to those applying the program to ensure the successful completion of the project 4.5. Ensure reports are complete and submit as required 4.6. Conduct performance review the works maintenance program 4.7. Recommend changes to improve the safety, efficiency and effectiveness of civil works maintenance programming process

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to establish civil works maintenance programs:

- apply legislative, organisation and site requirements and procedures
- interpret asset plans and drawings
- interpret maintenance program specifications
- interpret maintenance program briefs and contracts
- interpret engineering survey information
- interpret hydrological data
- interpret meteorological data
- interpret geotechnical data
- schedule of inspection programs
- interpret of inspection data
- classify the levels of the serviceability of assets
- prioritise maintenance works
- provide team leadership and coordination
- apply innovative solutions and new technology
- apply consultative processes
- choose appropriate maintenance operational techniques
- develop and apply works maintenance programs
- apply project scheduling and resource management technology
- calculate of maintenance resource quantities and program costs
- maintain maintenance program cost records
- provide clarification and advice
- apply negotiation techniques
- apply feedback techniques

Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to establish civil works maintenance programs:

- risk management requirement and procedures
- statutory compliance requirements and procedures
- works maintenance program development and implementation requirements and procedures

- occupational health and safety requirements and procedures
- environmental requirements and procedures
- quality management requirements and procedures
- communication requirements and procedures
- Australian and other relevant standards
- inspection program scheduling requirements and procedures
- inspection data interpreting requirements and procedures
- asset condition classification requirements and procedures
- maintenance works prioritisation requirements and procedures
- industry and organisational maintenance procedures and practice
- civil works maintenance options
- sources of information on innovation and new technology
- techniques for choosing preferred options
- team leadership techniques
- operational techniques required for the execution of civil works maintenance programs
- civil works maintenance plant and equipment capabilities
- cost estimation techniques
- maintenance program review principles and procedures
- maintenance program documentation requirements
- maintenance program reporting requirements and procedures
- maintenance program approval requirements and procedures
- maintenance program records filing requirements and procedures
- performance review requirements and procedures
- principles of road user behaviour

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following: • knowledge of the requirements, procedures and instructions for the establishment of civil works maintenance programs • implementation of procedures and techniques for the safe, effective and efficient completion of the establishment of civil works maintenance programs • the identification of the relevant information and scope of the work required to meet the required outcomes • the identification of viable program options and the selection of programs that best meet the required outcomes • working with others to undertake and complete the establishment of civil works maintenance programs • consistent and timely completion of civil works maintenance programs
Context of and specific resources for assessment	• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills. • Evidence for assessment is best gathered using the outcomes of products and processes of the workplace. • The assessment environment should not

	disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job. • Customisation of assessment and delivery environment to sensitively accommodate cultural diversity. • Aboriginal people and other people from a non English speaking background may have second language issues. • Assessment of this competency requires typical resources normally used in a civil works environment. Selection and use of resources for particular worksites may differ due to site circumstances. • Where applicable, physical resources should include equipment modified for people with disabilities. • Access must be provided to appropriate learning and/or assessment support when required.
Method of assessment	This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods: • written and/or oral assessment of the candidate's required knowledge • observed, documented and/or first hand testimonial evidence of the candidate's: • implementation of appropriate procedures and techniques for the safe, effective and efficient achievement of the required outcomes • identification of the relevant information and scope of the work required • identification of viable options and the selection of civil works maintenance programs that best meet the required outcomes • consistently achieving the required outcomes • first hand testimonial and documentary evidence of the candidate's:

	• working with others to undertake and complete the establishment of civil works maintenance programs • consistent and timely gaining of approval of civil works maintenance programs • provision of clear, timely required support and advice on the implementation of civil works maintenance programs
Guidance information for assessment	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Relevant compliance documentation may include:	• legislative, organisational and site requirements and procedures • manufacturer's guidelines and specifications • Australian standards • code of practice • Employment and workplace relations legislation • Equal Employment Opportunity and Disability Discrimination legislation
Civil maintenance projects may include:	• surface drainage works • water storage dams • tailings dams • rehabilitation works • pavement, including: • flexible pavements, including: • natural pavement materials • manufactured pavement materials • asphalt placement • spray seal application • stabilisation • rigid pavement • underground services • civil structures • tunnels • canals
Civil works maintenance programs may include:	• risk management requirements and procedures • statutory compliance requirements and procedures • occupational health and safety requirements and procedures • environmental management requirements and procedures • quality requirements and procedures • inspection and testing requirements and

	procedures • communication and consultation requirements and procedures • community relations requirements and procedures • traffic management requirements and procedures • training requirements and procedures • allocation of responsibilities • position descriptions • administration requirements and procedures, including records and reporting • operational techniques required for the execution of the program • cost management requirements and procedures • client liaison requirements and procedures • maintenance program review requirements and procedures • maintenance program documentation requirements and procedures • maintenance program reporting requirements and procedures • maintenance program implementation plan approval requirements and procedures • maintenance program records filing requirements and procedures • performance review requirements and procedures • scheduling requirements and procedures • priority requirements and procedures • resource requirements and procedures • production rates requirements and procedures • coordination requirements and procedures • review requirements • communication and reporting requirements • drawings and specifications • ancillary documentation, which may include: • maintenance notes • maintenance notes • supplementary drawings
Monitor may include:	• review of records and reports • general supervision

Instructions may include:	• program documents • briefings • handovers • work orders • toolbox meetings • site meetings
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Unit Sector(s)

Civil Works (Management and Supervision)

Competency field

Refer to Unit Sector(s).

Co-requisite units

Not applicable.