Modification history

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| Release | Comments |
| Release 1 | This version released with FWP Forest and Wood Products Training Package Version 6.0. |

| FWPTMM4xxx | Interpret details of timber roof trusses to inform design of plans and production documents |
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| Application | This unit of competency describes the skills and knowledge required to interpret and apply a broad range of information into the design of timber roof trusses.  The unit applies to individuals who prepare timber roof truss drawings, production documents and installation instructions using custom software for timber systems design.  This unit of competency is suitable for individuals using their own judgment to deal with predictable and unpredictable problems and decide on solutions to a range of complex problems during the documentation preparation process.  Work is completed in a timber production or design setting.  No licensing, legislative or certification requirements apply to this unit at the time of publication. |
| Prerequisite Unit | Nil |
| Unit Sector | Timber Manufacturing Products (TMM) |

| Elements | Performance Criteria |
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| Elements describe the essential outcomes. | Performance criteria describe the performance needed to demonstrate achievement of the element. |
| 1. Prepare for design of layout plans | 1.1 Read and interpret building plans and specifications to determine and verify applied loads and other design factors  1.2 Interpret and apply relevant building codes, regulations and standards  1.3 Follow organisational quality requirements for the design of timber roof trusses  1.4 Consult with stakeholders/clients to clarify design requirements  1.5 Identify and resolve design, production and/or installation issues outside software limitations and seek appropriate advice  1.6 Check custom computer software for currency |
| 2. Create and review design options | 2.1 Design and draft a timber roof truss layout plan  2.2 Review design to ensure it meets client requirements and complies with appropriate building regulations, codes and standards  2.3 Review layout to ensure it optimises efficiency of material use and production procedures  2.4 Amend design options if necessary |
| 3. Design production and installation documentation | 3.1 Confirm dimensions, span measurements and timber floor sections from building plans and specification  3.2 Input applied spans, loads and data into software and create a timber roof truss layout  3.3 Prepare production and client installation documentation following organisational quality requirements  3.4 Certify timber floor design complies with relevant building regulation, codes and practices, in accordance with regulatory and organisational requirements  3.6 Store drawings and documentation following organisational procedures |

| Foundation Skills  This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria. | |
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| Skill | Description |
| Reading | * Select and extract information from a range of documents and diagrammatic texts |
| Writing | * Apply interrelationships between written and diagrammatic forms to produce installation documentation |

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| Unit Mapping Information | | | |
| Code and title current version | Code and title previous version | Comments | Equivalence status |
| FWPTMM4XXX Interpret details of timber roof trusses to inform design of plans and production documents | FWPTMM4205 Prepare and advise on a broad range of timber roof truss details using computers | Redesigned unit using content from FWPTMM4205 Prepare and advise on a broad range of timber roof truss details using computers FWPTMM3204 Interpret designs to prepare timber roof truss drawings and documents using computers  Re-titled | No equivalent unit |

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| Links | Companion Volumes, including Implementation Guides, are available at VETNet: https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=0d96fe23-5747-4c01-9d6f-3509ff8d3d47 |

| TITLE | Assessment requirements for FWPTMM4XXX Interpret details of timber roof trusses to inform design of plans and production documents |
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| Performance Evidence | |
| An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.  There must be evidence that the individual has designed truss layout plans and developed production and installation documentation using timber systems design software for a hip and valley roof:   * with a minimum area of 100 square metres * including one dutch gable. | |

| Knowledge Evidence |
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| An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:   * relevant building industry regulations codes and standards * National Construction Code (NCC) * organisational policies, procedures and processes: * outcomes and consequences of non-conforming design * responsibilities and limits of authority with regard to certifying and non-conforming design * types of roofs: * bell * bowstring * dual pitch * gabled * hipped * mansard * skillion * types of timber roof trusses * A type * truncated * girder * jack * rafter * gable * saddle * raking * interaction between roof truss types * factors that contribute to roof truss design: * climate zones * wind forces * timber grading * tie down requirements * roof lining materials * key features of plans, drawings and specifications * types and applications of plans and drawings * relating specified information with plan and drawing details * appropriate software, including custom software for timber systems design to: * research information * communicate with internal and external stakeholders * input and amend design factors and other data * produce drawings, plans and documents * store and retrieve documents * types, functions, capabilities and limitations of drawing software * application, characteristics and limitations of materials and components used for roofing systems * certifying timber roof truss design layouts * relevant work health and safety and environmental requirements. |

| Assessment Conditions |
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| Assessment of skills must take place under the following conditions:   * physical conditions: * skills must be demonstrated in design or manufacturing workplace or an environment that accurately represents workplace conditions * resources, equipment and materials: * computers and software, including timber systems design software * printer/s and stationary * specifications: * specific organisational policies, procedures and processes * relevant building regulations, codes and standards * work health and safety and environmental documentations * relationships: * clients/stakeholders to discuss and confirm timber roof truss design   Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards. |

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