



**Australian Government**

# **MEM09223 Interpret design specifications for structural steel detailing**

**Release: 1**

# MEM09223 Interpret design specifications for structural steel detailing

## Modification History

Release 1. Supersedes and is equivalent to MSATCS301A Interpret architectural and engineering design specifications for structural steel detailing.

## Application

This unit of competency defines the skills and knowledge required to interpret design-related information required for the commencement of structural steel detailing for residential, commercial, industrial or mining fabrication and construction projects. It is suitable primarily for those working within a drafting work environment with engineering and manufacturing applications.

This unit applies to the initial receiving and checking of design-related information by structural steel detailers including obtaining additional information or clarifying information already received. Structural steel detailers must obtain and interpret design-related information from architects and consulting engineers to carry out structural steel detailing. Design information may also be provided via drawings produced by design draftspersons.

Work may be performed individually on a contracting/project basis or as part of a project team in response to combinations of paper based and digital instructions.

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

## Pre-requisite Unit

MEM09229 Read and interpret technical engineering drawings.

## Competency Field

Drawing, drafting and design

## Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Determine job requirements	1.1 Follow standard operating procedures (SOPs) 1.2 Comply with work health and safety (WHS) requirements at all times 1.3 Identify job and client requirements from specifications

<b>Elements</b>	<b>Performance Criteria</b>
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Obtain and check adequacy of design-related information for structural steel detailing purposes	2.1 Obtain and interpret general arrangement drawings including standard symbols, terms and figures used by designers 2.2 Check adequacy of arrangement information against detailer and client requirements 2.3 Check design information for any drawings or descriptions of members, connections, components or details that lie outside the scope of standard structural practice 2.4 Obtain and check information on suspended floors 2.5 Check column base layouts and schedules, if any 2.6 Obtain and check specifications for grades of steel and bolt grades 2.7 Check information on standards and other design-related specifications to be shown on detail drawings 2.8 Review work and confirm that sufficient design information is provided to enable preparation of drawings that will provide all information required for fabrication and erection
3. Obtain additional information	3.1 Submit requests for further information (RFIs) according to organisational and project procedures 3.2 Make and note adjustments to design information based on RFI responses in accordance with SOPs

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Adequacy of arrangement	<ul style="list-style-type: none"> <li>building orientation</li> </ul>
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information refers to the information normally provided on arrangement or layout drawings provided by architects and/or consulting engineers information and includes:	<ul style="list-style-type: none"> <li>• layout on a site and relationship to any other structures</li> <li>• primary dimensions</li> <li>• floor levels</li> <li>• beam spacing</li> <li>• column centres</li> <li>• sizes for all members (beams, trusses, columns, rafters, purlins, girts, braces or crane beams)</li> <li>• dimensions and layout drawing for any special features.</li> </ul>
Client requirements include one or more of the following:	<ul style="list-style-type: none"> <li>• shop detail drawings, erection diagrams and material schedules and lists</li> <li>• program and format for computer-aided design (CAD) files and models</li> <li>• downloading by the structural steel detailer of files direct to client computers and CNC machines</li> <li>• size and number of hard copy drawings</li> <li>• specification of programs and requirements for word processed documents, spreadsheets, presentations and invoices.</li> </ul>
Suspended floors include one or more of the following:	<ul style="list-style-type: none"> <li>• reinforced concrete slab</li> <li>• composite slab</li> <li>• pre-cast planks and topping</li> <li>• steel plate or grating</li> <li>• other specified material.</li> </ul>

## Unit Mapping Information

Release 1. Supersedes and is equivalent to MSATCS301A Interpret architectural and engineering design specifications for structural steel detailing.

## Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>