



Australian Government

Assessment Requirements for CPCPRE3000 Lift and place prefabricated concrete elements

Release: 1

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Modification History

Release 1 This version first released with CPC Construction, Plumbing and Services Training Package Release 9.0.

Newly created unit.

Performance Evidence

To demonstrate competency, a candidate must meet the elements and performance criteria of this unit by:

- determining the requirements for, and preparing for the lifting and placing of three prefabricated concrete elements in coordination with the crane driver and crane crew:
 - unloading, lifting, placing and temporarily securing one prefabricated element (that is at least 4 m x 3 m) by face-lifting the element
 - unloading, lifting and placing and temporarily securing one prefabricated element (that is at least 4 m x 3 m) by edge-lifting the element, and
 - unloading, lifting and conducting a mid-air rotation, placing and temporarily securing one prefabricated element (that is at least 7 m x 3 m).

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- compliance requirements of legislation, regulations, codes of practice and Australian Standards relevant to the erection of prefabricated concrete elements, including:
 - AS 3850.1, 2 & 3 Prefabricated concrete elements re the types of rigging.
 - environmental protection and waste disposal
 - work health and safety (WHS) regulations, including:
 - Safe Work Australia 'Guide to managing risk in construction: prefabricated concrete' 2019
 - use of personal protective equipment (PPE)
 - risk when working at heights/on ladders
 - fall protection
 - drop zones
 - hazardous substances
 - safe manual handling techniques
- principles of effective team leadership

- erection design documentation
- the strength of concrete at the time of lifting and handling from the manufacturers' "birth certificate" contained in the erection documentation
- faulty manufacturing and concrete defects which could compromise the strength of the prefabricated elements and pose a potential safety issue for lifting and handling
- serviceability of temporary erection supports, including:
 - braces
 - props
 - working load limit (WLL)
- erection documentation, including:
 - manufacturer specification
 - element drawings
 - rigging configurations and drawings
 - layout drawings
 - specifications required for the lifting and placing of prefabricated concrete elements
- types of prefabricated concrete elements, including:
 - panels
 - columns
 - beams
 - planks
 - stairs
 - barriers
 - poles
 - pipes
 - box culverts
 - pits
 - wall elements
- relevant types and procedures for the temporary support of prefabricated concrete elements, including:
 - erection sequence
 - orientation of prefabricated concrete components
 - bracing details, including type and angle
 - requirement for temporary brace and prop footings
 - placement and positioning of propping systems
 - levelling
- crane operations, including:
 - crane standing
 - suspended slab operations
 - hoist reeving for single and multi-winch operations
 - requirements for single and multi-crane mid-air rotations

- types, characteristics and limitations of tools, equipment and materials required for rigging, lifting and placing prefabricated concrete elements, including:
 - chain slings
 - flexible steel wire rope (FSWR) slings
 - concrete lifting clutches and compatible lifting inserts
 - post-installed lifting plates
 - hooks, shackles, chain links, swivels and lifting rings
 - sheaves and pulley blocks
 - lifting beams
 - equalising beams
 - spanners
 - spirit levels and automatic levels
 - tape measures
 - wrenches
 - heights access equipment, such as elevated work platforms (EWPs)
- load slinging methods:
 - straight sling
 - adjustable sling
 - reeved sling
 - inclined sling
 - multi-point lift
 - balanced load and CoG
- load equalisation and methods
- advanced lifting techniques:
 - standard lift from a truck
 - load balancing when lifting from vehicles
 - flat lifting from supports or on ground
 - edge lifting and tilting by rotation about one edge
 - face lifting and tilting by rotation about one edge
 - single crane and multi-crane mid-air rotation
 - multi-crane lifts
- workplace requirements when working with prefabricated concrete components:
 - cleaning up the work area
 - maintaining and storing plant, labelling, tools and equipment
 - material reuse
 - reporting problems
 - quality
- workplace procedures related to communication protocols
- principles of sustainability relevant to material reuse
- work planning and logical task sequencing.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

Assessment must be conducted in the workplace or a simulated workplace using realistic conditions, materials, activities, responsibilities, procedures, safety requirements and environmental considerations.

Candidates must have access to erection design documentation, materials, manufacturer specifications, plant, tools and equipment required to achieve the performance evidence.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>