

EXECUTE BUILDING SUPERSTRUCTURE WORKS

UNIT CODE: CON/OS/BUT /CR/03/5/A

UNIT DESCRIPTION:

This Unit describes the competencies required to execute superstructure works. It involves setting out and constructing superstructure walls and columns, setting out and casting superstructure beams and suspended slabs, and constructing stair structure.

ELEMENTS AND PERFORMANCE CRITERIA

| ELEMENT These describe the key outcomes which make up workplace functions | PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements <i>(Bold and italicized terms are elaborated in the range)</i> |
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| 1. Set out wall and columns | 1.1 Dimensions for superstructure walls and columns are transferred from the profiles as per working drawings. 1.2 Kickers for columns are positioned and cast as per specifications. 1.3 Method of setting out is identified. 1.4 Tools for setting out are identified according to setting out method . 1.5 Wall and column measurements are taken as per the building drawing. |
| 2. Construct superstructure wall and columns | 2.1 Kickers for columns are positioned and cast as per specifications. 2.2 Walls, columns and door openings dimensions are marked on the solid ground floor according to the design details 2.3 Building wall mortar is prepared as per building codes 2.4 DPC is laid as per specifications 2.5 Building wall courses are laid according to prescribed bonding methods, building regulations and design details 2.6 Windows and ventilator openings are determined as per design details 2.7 Dimensions for superstructure walls and columns are transferred from the profiles as per working drawings 2.8 Method of setting out is identified 2.9 Tools for setting out are identified according to setting out method 2.10 Wall and column measurements are taken as per the building drawing. |
| 3. Set out superstructure beams and suspended slabs | 3.1 Levels for slab headroom are determined. 3.2 Levels for beam headroom are determined. 3.3 Formwork to sides and soffits of beams is erected. 3.4 Formwork to soffits for suspended slabs is erected. |
| 4. Construct stair structure | 4.1 Type of stair is identified as per working drawing. 4.2 Setting out is executed as per specifications 4.3 Formwork is erected as per specifications 4.4 Reinforcement bars are fixed as per structural design requirement's |

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| | 4.5 Concrete is casted according to Engineer's specification 4.6 Curing is done as per the building standards |
| 5. Cast suspended slab and beams | 5.1 Reinforcement bars are positioned as per structural design drawings 5.2 Concrete materials are mixed as per design ratio requirement. 5.3 Mixed concrete is placed and compacted as per construction regulations 5.4 Concrete is cured as per the construction regulations |

RANGE

This section provides work environment and conditions to which the performance criteria apply. It allows for different work environment and situations that will affect performance.

| Variable | Range |
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| 1. Method of setting out include but are not limited to: | <ul style="list-style-type: none"> • Grabbing • Burning • Dozing • Hand clearing |
| 2. Tools for setting out include but are not limited to: | <ul style="list-style-type: none"> • Building line • Hammers • Pegs • Spirit level • Tape measure • Panga • lime |
| 3. setting out method include but are not limited to: | <ul style="list-style-type: none"> • 3-4-5 • Mechanical method • Builders square |
| 4. Stair include but are not limited to: | <ul style="list-style-type: none"> • Spiral • Dogs leg • Straight flight • Quarter turn |
| 5. Reinforcement bars include but are not limited to: | <ul style="list-style-type: none"> • Main bars • Distribution bar • links/ Stirrups • Top reinforcement • Bottom reinforcement |
| 6. Concrete materials include but are not limited to: | <ul style="list-style-type: none"> • Binders • Fine aggregates • coarse aggregates • Additives and admixtures |

REQUIRED KNOWLEDGE AND SKILLS

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

- Building Drawing
- Mensuration
- Construction plants and equipment
- Construction materials
- Concrete and mortar mix ratios
- Curing
- Use of building tools and equipment
- Batching
- Formwork
- Scaffolding

Required skills

The individual needs to demonstrate the following skills:

- Communication skills
- Problem solving skills
- Analytical skills
- Numeracy skills
- concrete mixer operation
- Critical thinking
- Construction tools handling skills

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills range.

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| <p>1. Critical aspects of competency</p> | <p>Assessment requires evidence that the candidate:</p> <p>1.1 Constructed out wall and columns as per standards building procedure and designs.</p> <p>1.2 Laid building wall courses based on building regulations and design details</p> <p>1.3 Laid superstructure beams and slabs as per building design and building regulations.</p> |
| <p>2. Resource implications</p> | <p>The following resources should be provided:</p> <p>2.1 Access to relevant workplace where assessment can take place.</p> <p>2.2 Appropriately simulated environment where assessment can take place.</p> <p>2.3 Resources relevant to proposed activity or task.</p> |

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| 3. Methods of assessment | Competency in this unit may be assessed through: 3.1 Practical assignment 3.2 Written 3.3 Oral interview 3.4 Demonstrations 3.5 Observation |
| 4. Context of assessment | Competency may be assessed: 4.1 On-the-job 4.2 In a simulated workplace setting |
| 5. Guidance information for assessment | Holistic assessment with other units relevant to the industry sector and workplace job role is recommended. |

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