



COMPETENCY STANDARDS & ASSESSMENT GUIDE FOR STEEL BINDING AND FABRICATION

**Skills for Employment Investment Program (SEIP)
Finance Division, Ministry of Finance**

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The Competency Standards for Steel Binding and Fabrication is a document for the development of curricula, teaching and learning materials, and assessment tools. It also serves as the document for providing trainings consistent with the requirement of industry in order for individuals who passed through the set standard via assessment would be qualified and settled for a relevant job.

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INTRODUCTION:

The Skills for Employment Investment Program (SEIP) Project of the Finance Division of the Ministry of Finance has embarked on a project which aims to qualitatively and quantitatively expand the skilling capacity of identified public and private training providers by establishing and operationalizing a responsive skill eco system and delivery mechanism through a combination of well-defined set of funding triggers and targeted capacity support.

Among the many components of the project, one is to promote a Market Responsive Inclusive Skills Training Delivery program. Key priority economic growth sectors identified by government have been targeted by the project to improve current job skills along with up-skilling of the existing workforce to ensure 'required skills to industry standards'. Training providers are encouraged and supported to work with the industry to address identified skills to enable industry growth and increased employment through the provision of market responsive inclusive skills training programs. Priority sectors were identified to adopt a demand driven approach to training with effective inputs from Industry Skills Councils (ISCs), Employer Associations and Employers.

This document is developed to improve skills in accordance with the job roles and skill sets of the occupation and ensure that the required skills are aligned to industry requirements.

The document details the format, sequencing, wording and layout of the Competency Standard for an occupation which comprised Units of Competence and its corresponding Elements.

OVERVIEW:

A **Competency Standard** is a written specification of the knowledge, skills and attitudes required for the performance of a job or occupation or trade corresponding to the standard of performance required in the workplace.

Competency standard:

- provides a consistent and reliable set of components for training, recognizing and assessing people's skills, and may also have optional support materials.
- enables industry recognized qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

Competency Standards are developed by a working group who comprised national and international process experts and the participation of experts from the industry to identify the competencies required of an occupation in a particular sector.

Competency Standards describe the skills, knowledge and attitude needed to perform effectively in the workplace. Competency Standards acknowledge that people can achieve vocational and technical competency in many ways by emphasizing what the learner can do, not how or where they learned to do it.

With Competency Standards, training and assessment may be conducted at the workplace or training organization or any combination of these.

A Unit of Competence describes a distinct work activity that would normally be undertaken by one person in accordance with industry standards.

Units of Competence are documented in a standard format that comprises:

- Reference to Industry Sector, Occupational Title and Occupational Description
- Unit code
- Unit title
- Unit descriptor
- Unit of Competence
- Elements and performance criteria
- Variables and range statement
- Evidence guides

Together all the parts of a Unit of Competence:

- Describe a work activity
- Guide the assessor in determining whether the candidate is competent.

Identification and validation of units of competency and elements for this occupation were made by experts of various construction companies through an industry consultative workshop held at the Bangladesh Association of Construction Industry (BACI) on the 14th of February 2016.

Profile of experts and facilitators who participated in the Competency Verification and Validation Workshop are given below.

Competency Verification-Validation Experts/Participants:

Name	Company	Job Position
Mr. Nibirkanti Sarker	Project builders Ltd(PBL)	Head, Machinery Division
Mr. Faysoluzzaman	Diligent Engineers	Project Engineer
Md. SaminYasar	Building Design & Consultant	Site Engineer
Md. Monirul Islam	National Development Engineers	Project Engineer
Md. Jalal Mia	Atlanta group of industries	Manager
Engr. Dilip Kumar Sarker	Project Builders Ltd(PBL)	Deputy Chief engineer
Md. Mohiuddin Ahmed	Samsuddin Mia & Associates Ltd.	Sr. Site Engineer
Md. Amanulla	Engineer foundation & Consultant	Sr. Engineer
Md. Khairuzzaman Mia	Asset development and holding Ltd.	Sr. Project Engineer
Md. Majed Ali	Asset Development & holding	Sr. Project Engineer

Workshop Facilitators:

Md. Mohiuzzaman	SEIP	Course Specialist
Emeterio Cedillo, Jr.	SEIP	International Specialist
Md. Nuruzzaman	SEIP	National Specialist

Another workshop was held on 15 January 2017 at the SDCMU conference room to further verify the units of competencies, unit descriptors, elements of competencies, learning provision, sequencing of learning etc with the involvement of industry experts and trainers from BMET, BTEB, DTE, PKSf and BACI.

Profile of experts, trainers and facilitators who participated in the Competency Verification and Validation Workshop held on 15 January 2017 are given below:

Name	Company	Job Position/Expertise
Mr. Md Mostafa	BTEB	Industry Liaison Officer
Mr. Ratan Lal Das	TSC- Majidee/DTE	Chief Instructor
Mr. Delwar Hossain	TSC- Rajbari/DTE	Chief Instructor
Mr. Abul Bashar Miah	BKTTC-Dhaka/BMET	Instructor
Mr. SaifulAlam	Montage/BACI	Instructor
Mr. SK Kamran Hasan	PKSF	Program Officer
Mr. Jewel Ahmed Sarker	PKSF	Program Officer

Workshop Facilitators

Mr. Syed Nasir Ershad	AEPD(Public- 1)
Mr. Md Ahasan	TVET Specialist, SEIP
Mr Mohiuzzaman	Course Specialist SEIP

The ensuing sections of this document comprise a description of the respective occupation with all the key components of a Unit of Competency:

- A chart with an overview of all Units of Competency for the respective occupation including the Unit Codes and the Unit of Competency titles and corresponding Elements.
- The Competency Standards that include the Unit of Competency, Unit Descriptor, Elements and Performance Criteria, Range of Variables, Curricular Content Guide and Assessment Evidence Guide.

COMPETENCY PROFILE/CHART for Steel Binding and Fabrication

UNITS OF COMPETENCY

ELEMENTS

A. Generic (Basic) Competencies

PERFORM COMPUTATIONS USING BASIC MATHEMATICAL CONCEPTS (SEIP-CON-STE-1-G)	Identify calculation requirements in the workplace.	Select appropriate mathematical methods/concepts for the calculation	Use tool/instrument to perform calculations	
APPLY OCCUPATIONAL HEALTH AND SAFETY (OHS) PRACTICES IN THE WORKPLACE (SEIP-CON-STE-2-G)	Identify OHS policies and procedures	Apply personal health and safety practices	Report hazards and risks	Respond to emergencies
COMMUNICATE IN ENGLISH IN THE WORKPLACE (SEIP-CON-STE-3-G)	Read and understand workplace documents in English	Write simple workplace written communications in English.	Listen and comprehend to English conversation	Perform conversations in English language
OPERATE IN A SELF-DIRECTED TEAM. (SEIP-CON-STE-4-G)	Identify team goals and processes.	Communicate and cooperate with team members.	Work as a team member	Solve problems as a team member

B. Sector Specific (Common) Competencies

TRANSLATE DRAWINGS, PLANS AND SPECIFICATIONS (SEIP-CON-STE-1-S)	Carry out basic engineering drawings applied in construction	Interpret drawings and specifications from manuals, designs and plans	Interpret drawings and specifications from manuals, designs and plans	Interpret drawings and specifications from manuals, designs and plans
WORK WITH HAND TOOLS AND POWER TOOLS (SEIP-CON-STE-2-S)	Inspect hand tools and power tools for usability	Use hand tools properly and safely	Operate power tools properly and safely	Clean/maintain hand tools and power tools after use
CARRY OUT MEASUREMENTS AND CALCULATIONS (SEIP-CON-STE-3-S)	Check usability of measuring devices	Carry out accurate construction work measurements	Execute simple construction work calculations	Clean and maintain measuring instruments

C. Occupation Specific (Course) Competencies

PERFORM PREPARATION WORKS (SEIP-CON-STE-1-O)	Acquire job assignment from lead man	Read and interpret construction drawing	Check work area	Prepare hand tools, equipment and materials
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PERFORM FABRICATION WORKS (SEIP-CON-STE-2-O)	Cut steel re-bars	Bend main bars using manual benders	Bend main bar using bending machine	Bend stirrups using manual bender
	Bend stirrups using bending machine	Clean/maintain the workplace		
PERFORM ASSEMBLY OF PREFABRICATED STEEL WORKS (SEIP-CON-STE-3-O)	Assemble re-bars for columns	Assemble re-bars for beams	Assemble re-bars for joists	Assemble re-bars for girders
	Assemble re-bars for slabs	Assemble re-bars for board piles/pile caps		
PERFORM STEEL RE-BAR INSTALLATION WORKS (SEIP-CON-STE-4-O)	Check reference point for determining elevation and center line	Install scaffolding	Install re-bars for building elements	Check reinforcement prior to pouring concrete
	Dismantle scaffoldings			
PERFORM BASIC CONSTRUCTION LEVELING PROCEDURES (SEIP-CON-STE-5-O)	Plan and prepare for work	Set up level	Clean/maintain work area	
PERFORM FORMWORKS INSTALLATION (SEIP-CON-STE-6-O)	Plan and prepare formwork installation	Install formworks for building elements	Install formworks for catch basin and manhole	Repair and replace damaged formworks

**Units & Elements at Glance:
Generic (Basic) Competencies (46 hrs.)**

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SEIP-CON-STE-1-G	Perform Computations Using Basic Mathematical Concepts	<ol style="list-style-type: none"> 1. Identify calculation requirements in the workplace 2. Select appropriate mathematical methods/concepts for the calculation. 3. Use tool/instrument to perform calculations 	14
SEIP-CON-STE-2-G	Apply Occupational Health and Safety (OHS) Practices in the Workplace	<ol style="list-style-type: none"> 1. Identify OHS policies and procedures 2. Apply personal health and safety practices 3. Report hazards and risks 4. Respond to emergencies 	10
SEIP-CON-STE-3-G	Communicate in English in the Workplace	<ol style="list-style-type: none"> 1. Read and understand workplace documents in English 2. Write simple workplace communications in English 3. Listen and comprehend to English conversations 4. Perform conversations in English language 	14
SEIP-CON-STE-4-G	Operate in a Self-Directed Team	<ol style="list-style-type: none"> 1. Identify team goals and work processes 2. Communicate and cooperate with team members. 3. Work as a team member. 4. Solve problems as a team member 	8
Total Hour			46

Sector Specific (Common) Competencies (36 hrs.)

Code	Unit of Competency	Elements of Competency	Duration (Hours)
SEIP-CON-STE-1-S	Translate Drawings, Plans and Specifications	<ol style="list-style-type: none"> 1. Carry out basic engineering drawings applied in construction 2. Access information from manuals, designs and plans 3. Interpret drawings and specifications from manuals, designs and plans 4. Store manuals, designs and plans 	16
SEIP-CON-STE-2-S	Work with Hand Tools and Power Tools	<ol style="list-style-type: none"> 1. Inspect hand tools and power tools for usability 2. Use hand tools properly and safely 3. Operate power tools properly and safely 4. Clean/maintain hand tools and power tools after use 	10
SEIP-CON-STE-3-S	Carry Out Measurements and Calculations	<ol style="list-style-type: none"> 1. Check usability of measuring devices 2. Carry out accurate construction work measurements 3. Execute simple construction work calculations 4. Clean and maintain measuring instruments 	10
Total Hours			36

Occupation Specific (Core) Competencies (278 hrs.)

Code	Unit of Competency	Elements of Competency	Guided Learning Hours
SEIP-CON-STE-1-O	Perform Preparation Works	<ol style="list-style-type: none"> 1. Acquire job assignment from lead man 2. Read and interpret construction drawing 3. Check work area 4. Prepare hand tools, equipment and materials 	32

SEIP-CON-STE-2-O	Perform Fabrication Works	<ol style="list-style-type: none"> 1. Cut steel re-bars 2. Bend main bars using manual benders 3. Bend main bar using bending machine 4. Bend stirrups using manual bender 5. Bend stirrups using bending machine 6. Clean/maintain the workplace 	56
SEIP-CON-STE-3-O	Perform Assembly of Prefabricated Steel Works	<ol style="list-style-type: none"> 1. Assemble re-bars for columns 2. Assemble re-bars for beams 3. Assemble re-bars for joists 4. Assemble re-bars for girders 5. Assemble re-bars for slabs 6. Assemble re-bars for board piles/pile caps 	62
SEIP-CON-STE-4-O	Perform Steel Re-Bar Installation Works	<ol style="list-style-type: none"> 1. Check reference point for determining elevation and center line 1. Install scaffolding 2. Install re-bars for building elements 3. Check reinforcement prior to pouring concrete 4. Dismantle scaffoldings 	56
SEIP-CON-STE-5-O	Perform Basic Construction Leveling Procedures	<ol style="list-style-type: none"> 1. Plan and prepare for work 2. Set up level 3. Clean/maintain work area 	32
SEIP-CON-STE-6-O	Perform Formworks Installation	<ol style="list-style-type: none"> 1. Plan and prepare formwork installation 2. Install formworks for building elements 2. Install formworks for catch basin and manhole 3. Repair and replace damaged formworks 	40
Total Hours			278

COMPETENCY STANDARD: STEEL BINDING/FABRICATION

A. The Generic (Basic Competencies)

Unit of Competency: PERFORM COMPUTATIONS USING BASIC MATHEMATICAL CONCEPTS	Nominal Duration: 14 hrs.	Unit Code: SEIP-CON-STE-1-G
Unit Descriptor: This unit of competency requires the knowledge, skills and attitude to perform computations using basic mathematical concepts in the workplace. It specifically includes the tasks of identifying calculation requirements in the workplace, selecting appropriate mathematical method/concept for the calculation and using appropriate instruments tools to carry out calculation.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify calculation requirements in the workplace	1.1 <u>Calculation requirements</u> are identified from <u>workplace information.</u>
2. Select appropriate mathematical methods/concepts for the calculation.	2.1 <u>Appropriate method</u> is selected to carry out the calculation requirements.
3. Use tool/instrument to perform calculations	3.1 Calculations are completed using appropriate <u>tools and instruments.</u>

Range of variables:

Variable	Range
	May include but not limited to:
1. Calculation requirements.	1.1 Area 1.2 Height 1.3 Length/Breath/thickness 1.4 Diameter 1.5 Weight 1.6 Capacity 1.7 Time 1.8 Temperature. 1.9 Material usage 1.10 Speed 1.11 Costing 1.12 Mass 1.13 Density
2. Workplace information	2.1 Mechanical Plan 2.2 Design 2.3 Working drawing 2.4 Verbal instructions

	2.5 Job order
3. Appropriate method	3.1 Addition 3.2 Subtraction 3.3 Division 3.4 Multiplication 3.5 Conversion 3.6 Percentage and ratio calculation 3.7 Simple equation
4. Tools/instruments	4.1 Calculator 4.2 Computer

Curricular Content Guide

1. Underpinning Knowledge	1.1 Numerical concept 1.2 Basic mathematical methods such as addition, subtraction, multiplication and division and percentage. 1.3 Mathematical language, symbols and terminology. 1.4 Measuring units 1.5 Knowledge of computer application
2. Underpinning Skills	2.1 Adding numbers 2.2 Subtracting numbers 2.3 Multiplying numbers. 2.4 Dividing numbers. 2.5 Measuring of linear 2.6 Using of mathematical language, symbols, terminology and technology. 2.7 Measuring of different physical parameter. 2.8 Calculating geometrical parameters: angle, parallelism, perpendicularity, area and volume
3. Underpinning Attitudes	3.1 Commitment to occupational health and safety practices 3.2 Promptness in carrying out activities. 3.3 Tidiness and timeliness. 3.4 Respect to peers, sub-ordinates and seniors in workplace. 3.5 Environmental concern. 3.6 Sincerity and honesty
4. Resource Implications	The following resources must be provided. 4.1 Stationeries 4.2 Consumables 4.3 Calculators 4.4 Computers 4.5 Measuring tape

Assessment Evidence Guide

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 Identified calculation requirements from workplace information
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	<p>1.2 Selected appropriate method to carry out the calculation requirements</p> <p>1.3 Completed calculations using appropriate tools/instruments</p>
2. Methods of Assessment	<p>Methods of assessment may include but not limited to:</p> <p>2.1 Written test</p> <p>2.2 Oral questioning</p> <p>2.3 Demonstration.</p>
5. Context of Assessment	<p>3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.</p>

Unit of Competency: APPLY OCCUPATIONAL HEALTH AND SAFETY (OHS) PRACTICES IN THE WORKPLACE	Nominal Duration: 10 hrs.	Unit Code: SEIP-CON-STE-2-G
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to apply occupational health and safety (OH&S) practices in the workplace. It specifically includes the tasks of identifying OHS policies and procedures, applying personal health and safety practices, reporting hazards and risks and responding to emergencies.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify OHS policies and procedures	1.1 <u>OHS policies</u> and safe operating procedures are read and understood. 1.2 Safety signs and symbols are identified and followed 1.3 Emergency response, evacuation procedures and other contingency measures are determined.
2. Apply personal health and safety practices	2.1 OHS policies and procedures are followed and practiced 2.2 <u>Personal Protective Equipment (PPE)</u> is selected and used 2.3 Personal hygiene is maintained
3. Report hazards and risks	3.1 <u>Hazards and risks</u> are identified, assessed and controlled. 3.2 Incidents arising from hazards and risks are reported to authority 3.3 Corrective actions are implemented to correct unsafe conditions in the workplace
4. Respond to emergencies	4.1 Alarms and warning devices are responded 4.2 <u>Emergency response plans and procedures</u> are implemented 4.3 <u>First aid procedure</u> is applied during emergency situations

Range of Variables

Variable	Range
	May include but not limited to:
1. OHS policies	1.1 International OHS requirements 1.2 Bangladesh standards for OHS 1.3 Building Code 1.4 Fire Safety Rules and Regulations 1.5 Light Engineering Industry Guidelines
2. Personal Protective Equipment (PPE)	2.1 Apron 2.2 Gas Mask 2.3 Gloves 2.4 Safety shoes 2.5 Helmet 2.6 Face mask 2.7 Overalls

	<ul style="list-style-type: none"> 2.8 Goggles and safety glasses 2.9 Ear plugs 2.10 Sun block 2.11 Chemical/Gas masks
3. Hazards and risks	<ul style="list-style-type: none"> 3.1 Chemical hazards. 3.2 Biological hazards. 3.3 Physical Hazards. <ul style="list-style-type: none"> 3.3.1 Machine hazards. 3.3.2 Materials hazards. 3.3.3 Tools and Equipment hazards.
4. Emergency response plans and procedures	<ul style="list-style-type: none"> 4.1 Firefighting procedures 4.2 Earthquake response procedures 4.3 Evacuation procedures 4.4 Medical and first aid
5. First aid procedure	<ul style="list-style-type: none"> 5.1 Washing of open wound 5.2 Washing chemically infected area 5.3 Applying bandage 5.4 Tourniquet 5.5 Applying CPR (Cardiopulmonary Resuscitation) 5.6 Taking appropriate medicine

Curricular Evidence Guide:

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1 OHS workplace policies and procedures. 1.2 Work safety procedures. 1.3 Emergency procedures. <ul style="list-style-type: none"> 1.3.1 Firefighting. 1.3.2 Earthquake response. 1.3.3 Explosion response. 1.3.4 Accident response. 1.4 Types of hazards (biological, chemical and physical) and their effects. 1.5 PPE types and uses. 1.6 Personal hygiene practices. 1.7 OHS awareness.
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Identifying OHS policies and procedures 2.2 Following personal work safety practices 2.3 Reporting hazards and risks 2.4 Responding to emergency procedures 2.5 Maintaining physical well-being in the workplace 2.6 Performing first aid. 2.7 Performing basic firefighting accessories using fire extinguishers 2.8 Applying basic first aid procedures
3. Underpinning Attitudes	<ul style="list-style-type: none"> 3.1 Commitment to occupational safety and health 3.2 Communication with peers, sub-ordinates and seniors in workplace. 3.3 Promptness in carrying out activities.

	<ul style="list-style-type: none"> 3.4 Tidiness and timeliness. 3.5 Respect of peers, sub-ordinates and seniors in workplace. 3.6 Environmental concern. 3.7 Sincere and honest to duties
4. Resource Implications	<ul style="list-style-type: none"> 4.1 Workplace (simulated or actual) 4.2 PPEs 4.3 Firefighting equipment 4.4 Emergency response manual 4.5 First aid kits

Assessment Evidence Guide:

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Followed OHS policies and procedures 1.2 Selected and used personal protective equipment (PPE) 1.3 Reported incidents arising from hazards and risks to authority 1.4 Emergency response plans and procedures are implemented 1.5 Applied basic first aid procedure
2. Methods of Assessment	<p>Methods of assessment may include but not limited to:</p> <ul style="list-style-type: none"> 2.1 Written test 2.2 Demonstration 2.3 Oral questioning
3. Context of Assessment	<ul style="list-style-type: none"> 3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

Unit of Competency: COMMUNICATE IN ENGLISH IN THE WORKPLACE	Nominal Duration: 14 hrs.	Unit Code: SEIP-CON-STE-3-G
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to communicate in English in the workplace. It specifically includes work tasks of reading and understanding workplace documents in English, writing simple workplace written communications in English, listening and comprehending to English conversations and performing conversations in English.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Read and understand workplace documents in English	1.1 Workplace documents are read and understood 1.2 Visual information is interpreted.
2. Write simple workplace communications in English	2.1 Simple <u>routine workplace documents</u> are prepared using key words, phrases, simple sentences and <u>visual aids</u> are prepared 2.2 Key information is written in the appropriate places in standard forms.
3. Listen and comprehend to English conversations	3.1 Active listening is demonstrated.
4. Perform conversations in English language	4.1 Conversation is performed in English with peers, customers and management to the required workplace standard.

Range of Variables

Variable	Range
	May Include but not limited to:
1. Routine workplace documents	1.1 Agenda 1.2 Simple reports such as progress and incident reports 1.3 Job sheets 1.4 Operational manuals 1.5 Brochures and promotional material 1.6 Visual and graphic materials 1.7 Standards 1.8 OSH information 1.9 Signs
2. Visual aids	2.1 Maps 2.2 Diagrams 2.3 Forms 2.4 Labels 2.5 Graphs 2.6 Charts

Curricular Evidence Guide:

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1 Read workplace documents in English 1.2 Write simple routine workplace documents in English 1.3 Listen to conversation in English. 1.4 Perform conversation in English. 1.5 Interaction skills (i.e., teamwork, interpersonal skills, etc.). 1.6 Job roles, responsibilities and compliances.
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Ability to read and understand workplace documents in English by using appropriate vocabulary and grammar, standard spelling and punctuation 2.2 Ability to write simple routine workplace documents in English such as: Schedules and agenda, job sheets and reports. 2.3 Ability of listening in English and interpreting 2.4 Ability to perform conversation in English with peers, customers and management to the required workplace standard. 2.5 Work effectively with others. <ul style="list-style-type: none"> 2.5.1 Listening and questioning skills 2.5.2 Ability to follow simple directions
3. Underpinning Attitudes	<ul style="list-style-type: none"> 3.1 Commitment to occupational health and safety practices Promptness in carrying out activities. 3.2 Tidiness and timeliness 3.3 Respect of peers, sub-ordinates and seniors in workplace 3.4 Environmental concern 3.5 Sincere and honest to duties
4. Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> 4.1 Work place Procedure 4.2 Materials relevant to the proposed activity 4.3 All tools, equipment, material and documentation required. 4.4 Relevant specifications or work instructions

Assessment Evidence Guide:

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Converse in English with peers and customers. 1.2 Made reports and workplace documents in accordance with company requirements.
2. Methods of Assessment	<p>Methods of assessment may include but not limited to:</p> <ul style="list-style-type: none"> 2.1 Written test 2.2 Demonstration 2.3 Oral questioning
3. Context of Assessment	<ul style="list-style-type: none"> 3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

Unit of Competency: OPERATE IN A SELF-DIRECTED TEAM	Nominal Duration: 8 hrs.	Unit Code: SEIP-CON-STE-4-G
Unit Descriptor: This unit covers the knowledge, skills and attitudes required to operate in a self-directed team. It specifically includes work tasks of identifying team goals and work processes, communicating and cooperating with team members, working and solving problems as a team member.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Identify team goals and work processes	1.1 Team goals and collaborative decision making processes are identified. 1.2 Roles and responsibilities of team members are identified 1.3 Relationships within team and with other workers are identified
2. Communicate and cooperate with team members.	2.1 Effective interpersonal skills are used to interact with team members and to contribute to activities and objectives 2.2 Formal and informal <u>forms of communication</u> are used effectively to support team achievement. 2.3 Diversity in character is respected and valued in team functioning. 2.4 Views and opinions of other team members are understood and valued. 2.5 Workplace terminology is used correctly to assist communication
3. Work as a team member.	3.1 Duties, responsibilities, authorities, objectives and task requirements are identified and clarified with team 3.2 Tasks are performed in accordance with organizational and team requirements, specifications and workplace procedures. 3.3 Team member's support with other members are made to ensure team achieves goals, awareness and requirements. 3.4 Agreed reporting lines are followed using standard operating procedure.
4. Solve problems as a team member	4.1 Current and potential problems faced by team are identified 4.2 Solution to the problem is identified 4.3 Problems are solved effectively and the outcome of the implemented solution is evaluated

Range of Variables

Variable	Range
	May Include but not limited to:
1. Forms of communication	1.1 Agenda 1.2 Simple reports such as progress and incident reports. 1.3 Job sheets. 1.4 Operational manuals. 1.5 Brochures and promotional material.

	<ul style="list-style-type: none"> 1.6 Visual and graphic materials. 1.7 Standards. 1.8 OSH information. 1.9 Signs.
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Curricular Evidence Guide:

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1 Team goals and collaborative decision making processes 1.2 Roles and responsibilities of team members 1.3 Relationships within team and with other workers 1.4 Effective interpersonal skills to interact with team members 1.5 Effective formal and informal forms of communication 1.6 Value of diversity in team functioning. 1.7 Correct use of workplace terminology 1.8 Team’s duties, responsibilities, authorities, objectives and task requirements 1.9 Support mechanism to other members of team to ensure achievements of goals. 1.10 Methods of identifying current and potential problems faced by a team 1.11 Effectively problems solving methods and evaluation of outcomes
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Identifying team goals and collaborative decision making processes 2.2 Identifying roles and responsibilities of team members 2.3 Identifying relationships within team and with other workers 2.4 Using effective interpersonal skills to interact with team members and to contribute to activities and objectives 2.5 Using formal and informal forms of communication 2.6 Understanding and valuing views and opinions of other team members 2.7 Performing tasks in accordance with organizational and team requirements, specifications and workplace procedures. 2.8 Supporting other members of the team to ensure team achieves goals, awareness and requirements. 2.9 Identifying current and potential problems faced by the team 2.10 Identifying solutions to the problem 2.11 Solving problems effectively and evaluating the outcome of the implemented solution
3. Underpinning Attitudes	<ul style="list-style-type: none"> 3.1 Teamwork 3.2 Promptness in carrying out activities. 3.3 Tidiness and timeliness. 3.4 Respect of peers, sub-ordinates and seniors in workplace. 3.5 Sincere and honest to duties
4. Resource Implications	<p>The following resources must be provided:</p> <ul style="list-style-type: none"> 4.1 Workplace (simulated or actual) 4.2 Pens

	4.3 Papers 4.4 Work books 4.5 Learning manuals
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Assessment Evidence Guide:

1. Critical Aspects of Competency	Assessment required evidence that the candidate: 1.1 Identified team goals and work processes 1.2 Communicated and cooperated with team members. 1.3 Worked as a team member 1.4 Solved problems as a team member
2. Methods of Assessment	Methods of assessment may include but not limited to: 2.1 Written test 2.2 Demonstration 2.3 Oral questioning
3. Context of Assessment	3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

B. The Sector Specific (Common) Competencies

Unit of Competency: TRANSLATE DRAWINGS, PLANS AND SPECIFICATIONS	Nominal Duration: 16 hrs.	Unit Code: SEIP-CON-STE-1-S
Unit Descriptor: This unit covers the knowledge, skills and attitudes required for a worker to translate drawings, plans and specifications. It specifically includes the tasks of carrying out basic engineering drawings applied in construction, accessing information from manuals, designs and plans, interpreting drawings and specifications from manuals, designs and plans and storing manuals, designs and plans.		

Elements and Performance Criteria Template:

(Terms in the performance criteria that are written in **bold and underlined** are described in the range of variables)

Elements of Competency	Performance Criteria
1. Carry out basic engineering drawings applied in construction	1.1 Basic <u>shapes and objects</u> are sketched. 1.2 Ability to properly use <u>manual drafting equipment</u> is demonstrated. 1.3 <u>Geometrical shapes</u> utilizing manual drafting equipment is created. 1.4 Manual lettering is demonstrated in accordance with workplace standard.
2. Access information from manuals, designs and plans	1.5 Appropriate <u>manuals</u> are identified and accessed. 1.6 Version and date of the manual are checked to ensure up-to-date specifications of tools, equipment, materials and procedures.
3. Interpret drawings and specifications from manuals, designs and plans	2.1 Relevant <u>drawings</u> and <u>specifications</u> are correctly recognized from manuals, designs and plans. 2.2 Terms and abbreviations are recognized. 2.3 <u>Signs and symbols</u> are interpreted.
4. Store manuals, designs and plans	3.1 Manuals, designs and plans are collected and packed. 3.2 Manuals, designs and plans are stored to prevent damage, and ready access and updating of information when required.

Range of Variables

Variable	Range (Includes but not limited to):
1. Shapes and objects	1.1 Lines 1.2 Geometrical shapes 1.3 Projections 1.4 Pictorial drawings 1.5 Isometric drawings
2. Manual drafting equipment	2.1 Pencils 2.2 Compass 2.3 Divider 2.4 Triangles

	<ul style="list-style-type: none"> 2.5 French curve 2.6 Protractor 2.7 Eraser
3. Geometric shapes	<ul style="list-style-type: none"> 3.1 Circle 3.2 Oval 3.3 Ellipse 3.4 Square 3.5 Rectangle 3.6 Polygons
4. Manuals	<ul style="list-style-type: none"> 4.4 Manufacturer's Specification Manual 4.5 Repair Manual 4.6 Maintenance Procedure Manual 4.7 Periodic Maintenance Manual 4.8 Quality Manual 4.9 Instruction Manual
5. Drawings	<ul style="list-style-type: none"> 5.1 Technical drawings 5.2 Sketches
6. Specifications	<ul style="list-style-type: none"> 6.1 Product specifications 6.2 Performance specifications 6.3 Method specifications
7. Signs and symbols	<ul style="list-style-type: none"> 7.1 Refers to all signs and symbols associated in the construction sector

Curricular Content Guide

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1 Methods and techniques of sketching/drawing of basic shapes and objects 1.2 Types and use of manual drafting equipment 1.3 Types of geometric shapes 1.4 Techniques of sketching using manual drafting equipment 1.5 Standard technical/engineering lettering 1.6 Types of construction manuals 1.7 Identification of signs and symbols 1.8 Identification of units of measurement 1.9 Identification of units of conversion 1.10 Drawings and specifications 1.11 Terms and abbreviations used
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Sketching/drawing of basic shapes and objects 2.2 Using of manual drafting equipment 2.3 Sketching using manual drafting equipment 2.4 Lettering using standard technical/engineering lettering 2.5 Checking version and date of the manual to ensure up-to-date specifications of tools, equipment, materials and procedures 2.6 Identifying relevant drawings and specifications correctly 2.7 Identifying terms and abbreviations 2.8 Identifying signs and symbols 2.9 Interpreting drawings and specifications

	<p>2.10 Interpreting schedules, dimensions and specifications contained in drawings</p> <p>2.11 Storing manuals</p>
3. Underpinning Attitudes	<p>3.1 Cleanliness/tidiness</p> <p>3.2 Commitment to occupational health and safety practices</p> <p>3.3 Environmental concerns</p> <p>3.4 Eagerness to learn</p> <p>3.5 Timeliness and orderliness</p> <p>3.6 Respect for rights of peers and seniors in workplace</p> <p>3.7 Orderliness</p>
4. Resource Implications	<p>4.1 Workplace (simulated or actual)</p> <p>4.2 Different types of construction manuals and literatures</p> <p>4.3 Pens</p> <p>4.4 Papers</p> <p>4.5 Work books</p>

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 Sketched shapes and objects using manual drafting equipment</p> <p>1.2 Checked version and date of the manual to ensure up-to-date specifications of tools, equipment, materials and procedures</p> <p>1.3 Identified relevant drawings and specifications correctly</p> <p>1.4 Identified terms and abbreviations</p> <p>1.5 Identified signs and symbols</p> <p>1.6 Interpreted construction drawings and specifications</p> <p>1.7 Interpreted schedules, dimensions and specifications contained in the drawings</p>
2. Methods of Assessment	<p>Competency should be assessed by:</p> <p>2.1 Written examination</p> <p>2.2 Demonstration</p> <p>2.3 Oral questioning</p> <p>2.4 Workplace observation</p> <p>2.5 Portfolio</p>
3. Context of Assessment	<p>3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.</p>

Unit of Competency: WORK WITH HAND TOOLS AND POWER TOOLS	Nominal Duration: 10 hrs.	Unit Code: SEIP-CON-STE-2-S
Unit Descriptor: This unit covers the knowledge, skills and attitudes required for a worker to work with hand tools and power tools properly and safely. It specifically includes the tasks of inspecting hand tools and power tools for usability, using hand tools properly and safely, operating power tools properly and safely and cleaning/maintaining hand tools and power tools after use.		

Elements and Performance Criteria Template:

(Terms in the performance criteria that are written in **bold and underlined** are described in the range of variables)

Elements of Competency	Performance Criteria
1. Inspect hand tools and power tools for usability	1.1 Appropriate tools are selected. 1.2 Application of tools to job requirement is determined. 1.3 Usability of tools are checked and verified. 1.4 <u>Hand tools</u> and <u>power tools</u> are prepared. 1.5 Sources of power supply for power tools are identified.
2. Use hand tools properly and safely	2.1 Appropriate hand tool for the job is used. 2.2 Proper and safe operation is applied for the different types of hand tools. 2.3 <u>Safety precautions</u> is observed when using hand tools. 2.4 Unsafe or faulty tools are identified and marked for repair.
3. Operate power tools properly and safely	3.1 Power supply outlet and electrical cord are inspected for safe use in accordance with established workplace safety requirements. 3.2 Proper sequence of operation is applied when using power tools to produce desired results. 3.3 Power tools are used safely in accordance to manufacturer's operating specification.
4. Clean/maintain hand tools and power tools after use	4.1 Dust and foreign matters are removed from power tools in accordance to workplace standard. 4.2 Condition of tool is checked after use. 4.3 Appropriate lubricant is applied after use and prior to storage. 4.4 <u>Measuring tools</u> are checked and calibrated. 4.5 Defective tools, instruments, power tools and accessories are inspected and corrected or replaced.

Range of Variables

Variable	Range (Includes but not limited to):	
1. Hand tools	1.1 Adjustable spanners 1.2 Bars (crow and pitch) 1.3 Bench vise 1.4 Bolt cutters 1.5 C-clamp 1.6 Chisels 1.7 Die and stock 1.8 Drill bits	1.13 Measuring Tapes 1.14 Pliers 1.15 Plumb bob 1.16 Punches 1.17 Scrapers 1.18 Screwdrivers 1.19 Sledge Hammers 1.20 Sockets

	1.9 Files of all cross-sectional shapes and types 1.10 Hacksaw 1.11 Hammer 1.12 Hand drill	1.21 Spanners and Wrenches 1.22 String Lines 1.23 Vice grip 1.24 Wire Cutters
2. Power tools	2.1 Portable drilling machine 2.2 Pedestal drills 2.3 Angle grinders 2.4 Bench grinder 2.5 Pedestal Grinder 2.6 Jack hammer 2.7 Power hacksaw 2.8 Circular (Friction) saw	
3. Safety precautions	3.1 Use of appropriate PPEs 3.2 Proper hand, feet and eye coordination 3.3 Safe condition of electrical outlets, cords and lamps 3.4 Working environment 3.5 Safe operating condition of hand tools and power tools 3.6 Awareness to OHS requirements	
4. Measuring and checking instruments	4.1 Steel rule 4.2 Measuring tape 4.3 Hose level 4.4 Water level 4.5 Caliper 4.6 Tri-square	

Curricular Content Guide

1. Underpinning Knowledge	1.1 Types of tools, functions and their use 1.2 Types of hand tools and their proper use 1.3 Types of power tools, application and safe handling procedures 1.4 Technical application of tools 1.5 Procedures in the use of hand tools and power tools 1.6 Policies and procedures for occupational health and safety 1.7 Proper use of PPE 1.8 Handling of tools and equipment 1.9 Reporting and documentation 1.10 Preventive maintenance 1.11 Methods and techniques 1.12 Quality procedures 1.13 Storage procedures
2. Underpinning Skills	2.1 Using appropriate hand tool for the job. 2.2 Observing safety precautions when using hand tools. 2.3 Using power tools correctly and safely in accordance with manufacturer's operating specification. 2.4 Checking condition of tools after use.

	<p>2.5 Applying appropriate lubricant on hand tools and power tools after use and prior to storage.</p> <p>2.6 Inspecting and correcting faults of instruments, power tools and accessories.</p> <p>2.7 Reporting faulty/defective tools, instruments, power tools and accessories for repair or replacement.</p> <p>2.8 Storing tools and power tools safely in an appropriate location.</p>
3. Underpinning Attitudes	<p>3.1 Cleanliness/tidiness</p> <p>3.2 Commitment to occupational health and safety practices</p> <p>3.3 Environmental concerns</p> <p>3.4 Eagerness to learn</p> <p>3.5 Timeliness and orderliness</p> <p>3.6 Respect for rights of peers and seniors in workplace</p> <p>3.7 Orderliness</p>
4. Resource Implications	<p>4.1 Workplace (simulated or actual)</p> <p>4.2 Different types of construction hand tools and power tools</p> <p>4.3 Pens</p> <p>4.4 Papers</p> <p>4.5 Work books</p> <p>4.6 Tools and power tools operating and maintenance manuals</p>

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 Used appropriate hand tool for the job.</p> <p>1.2 Observed safety precautions when using hand tools.</p> <p>1.3 Used power tools safely in accordance to manufacturer's operating specification.</p> <p>1.4 Cleaned and maintained hand tools and power tools after use and prior to storage</p> <p>1.5 Inspected and corrected or replaced defective tools, instruments, power tools and accessories.</p> <p>1.6 Stored tools and power tools safely in appropriate location.</p>
2. Methods of Assessment	<p>Competency should be assessed by:</p> <p>2.1 Written examination</p> <p>2.2 Demonstration</p> <p>2.3 Oral questioning</p> <p>2.4 Workplace observation</p> <p>2.5 Portfolio</p>
3. Context of Assessment	<p>3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.</p>

Unit of Competency: CARRY OUT MEASUREMENTS AND CALCULATIONS	Nominal Duration: 10 hrs.	Unit Code: SEIP-CON-STE-3-S
Unit Descriptor: This unit covers the knowledge, skills and attitudes required for a worker to carry-out measurements and calculations. It specifically includes the tasks of checking usability of measuring devices, carrying out accurate work measurements, executing simple work related calculations and cleaning and maintaining measuring instruments.		

Elements and Performance Criteria Template:

(Terms in the performance criteria that are written in **bold and underlined** are described in the range of variables)

Elements of Competency	Performance Criteria
1. Check usability of measuring devices	1.1 Appropriate <u>measuring device</u> is selected for the job. 1.2 Applications of measuring device is determined. 1.3 Usability of measuring device is checked and verified 1.4 Measuring device is prepared for use.
2. Carry out accurate construction work measurements	2.1 Working drawings are analyzed. 2.2 Measurements are obtained using appropriate measuring device in accordance with workplace requirements. 2.3 <u>Systems of measurements</u> are identified and converted where necessary. 2.4 Measurement results are confirmed and recorded.
3. Execute simple construction work calculations	3.1 Simple calculations involving <u>four basic mathematical operations</u> are executed. 3.2 Other calculation operations are used to complete tasks in accordance with workplace requirements. 3.3 Appropriate formulas for calculating quantities of materials are selected. 3.4 Calculations are performed and verified. 3.5 Material quantities are calculated in accordance with workplace requirements. 3.6 Results are interpreted and communicated to authority.
4. Clean and maintain measuring instruments	4.1 Dust and foreign matters are removed from measuring instrument. 4.2 Condition of measuring instruments are checked and calibrated in accordance with instrument manufacturer's specifications. 4.3 Apply appropriate lubricant after use and prior to storage. 4.4 Instruments are stored in accordance to workplace procedure.

Range of Variables

Variable	Range (Includes but not limited to):
1. Measuring device	1.1 Slide calipers 1.2 Steel tape measure 1.3 Steel rule

	<ul style="list-style-type: none"> 1.4 Carpenter's square 1.5 Water level 1.6 Hose level 1.7 String (for alignment) 1.8 Plumb bob
2. Systems of measurements	<ul style="list-style-type: none"> 2.1 ISO standard 2.2 English system 2.3 Metric system
3. Four basic mathematical operations	<ul style="list-style-type: none"> 3.1 Addition 3.2 Subtraction 3.3 Multiplication 3.4 Division

Curricular Content Guide

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1 Techniques of analyzing working drawings 1.2 Types and principles of operation of measuring and checking devices 1.3 The ISO standard of measurements 1.4 Methods of measurement and calculation 1.5 Fraction and decimals 1.6 Linear measurement 1.7 Units of conversion and conversion factors in measurements 1.8 Dimensioning and fits and tolerances 1.9 Calculating ratio and proportion 1.10 Care in the use of measuring devices 1.11 Procedure of estimating materials requirements 1.12 Tools and equipment identification methods
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Analyzing working drawings 2.2 Selecting appropriate measuring device for the job 2.3 Checking and verifying usability of measuring device 2.4 Obtaining measurements using appropriate measuring device 2.5 Confirming measurements and recording results 2.6 Carrying out simple calculations involving four basic mathematical operations 2.7 Calculating material quantities 2.8 Identifying tools and equipment 2.9 Cleaning and storing measuring instruments
3. Underpinning Attitudes	<ul style="list-style-type: none"> 3.1 Cleanliness/tidiness 3.2 Commitment to occupational health and safety practices 3.3 Environmental concerns 3.4 Eagerness to learn 3.5 Timeliness and orderliness 3.6 Respect for rights of peers and seniors in workplace 3.7 Orderliness
1. Resource Implications	<ul style="list-style-type: none"> 4.1 Workplace (simulated or actual)

	<ul style="list-style-type: none"> 4.2 Different types of measuring and checking tools/instruments 4.3 Pens 4.4 Papers 4.5 Work books 4.6 Measuring tools operating and maintenance manual
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Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Selected appropriate measuring device for the job. 1.2 Checked and verified usability of measuring device. 1.3 Obtained measurements using appropriate measuring device. 1.4 Confirmed measurements and recorded results. 1.5 Carried out simple calculations involving four basic mathematical operations. 1.6 Calculated material quantities. 1.7 Interpreted and communicated results to authority.
2. Methods of Assessment	<p>Competency should be assessed by:</p> <ul style="list-style-type: none"> 2.1 Written examination 2.2 Demonstration 2.3 Oral questioning 2.4 Workplace observation 2.5 Portfolio
3. Context of Assessment	<ul style="list-style-type: none"> 3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

C. Occupation Specific (Core) Competencies

Unit of Competency: PERFORM PREPARATION WORKS	Nominal Duration: 32 hrs.	Unit Code: SEIP-CON-STE-1-O
Unit Descriptor: This unit covers the knowledge, skills and attitudes required for a worker to perform preparation works when performing steel binding and fabrication activities in the construction sector. It specifically includes the tasks of acquiring job assignment from lead man, reading and interpreting construction drawing, checking work area and preparing hand tools, equipment and materials.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Acquire job assignment from lead man	1.1. Job assignment is received from immediate superior based on work priority. 1.2. Details about job assignment are received through <u>appropriate means</u> in accordance with company practices.
2. Read and interpret construction drawing	2.1. Symbols and abbreviations for steel work are recognized based on applicable construction drawings/plans. 2.2. Detailed work specifications are interpreted in accordance with applicable construction drawings and plans. 2.3. Re-bar materials are identified from design specifications. 2.4. Measurement and calculation is made
3. Check work area	3.1. Work area is arranged in accordance with work requirements and OHS guidelines and procedures. 3.2. <u>Unused/excess materials</u> , debris and other obstacles are removed in accordance with workplace and safety requirements. 3.3. Layout is checked to ensure alignment of structures based on approved plans/drawings.
4. Prepare hand tools, equipment and materials	4.1. <u>Hand tools and equipment</u> are identified and gathered in accordance with workplace procedures. 4.2. Hand tools, equipment and <u>PPEs</u> are checked in accordance with work requirements. 4.3. Hand tools and equipment are maintained and stored in compliance with OHS requirements. 4.4. Bending table is assembled. 4.5. Bending and cutting equipment is set-up and get ready. 4.6. <u>Materials</u> are hauled to work site and stationed in accordance with workplace requirements.

Range of Variables

Variable	Range
	May include but not limited to:
1. Appropriate means	1.1 Verbal instructions 1.2 Work order 1.3 Group meeting 1.4 Tool box meeting
2. Unused/excess materials	2.1 Cement sacks 2.2 Wood planks 2.3 Debris 2.4 Scaffolding components 2.5 Cement mixing equipment
3. Hand tools and equipment	3.1 Tools; 3.1.1 Hand hacksaw 3.1.2 Hammer 3.1.3 Pliers(Diagonal Cutting) 3.1.4 Steel wire twisting tool/Nipper 3.1.5 Vise grip 3.1.6 Adjustable wrench 3.2 Equipment 3.2.1 Re-bar bending table/stand 3.2.2 Bar cutting machine 3.2.3 Steel bender 3.2.4 Power hacksaw 3.2.5 Friction cutter (Circular cutter) 3.2.6 Oxy-acetylene cutting/welding outfit
4. PPE	4.1 Safety helmet 4.2 Safety shoes 4.3 Hand gloves 4.4 Safety goggles 4.5 Apron/appropriate working clothes
5. Materials	5.1 Re-bar, steel bar (Different sizes) 5.2 Tie wire, (different sizes and gauge) 5.3 Cotton rag

Curricular Evidence Guide

1. Underpinning Knowledge	1.1 Workplace methods of communicating job assignment 1.2 Types of structural steels and their properties 1.3 Workplace requirements in work area arrangement and OHS guideline when working with steel fabrication 1.4 Hand tools used in steel fabrication works and their functions and proper handling 1.5 Equipment used in steel fabrication works, functions and handling procedures 1.6 Preventive maintenance of hand tools and equipment used in steel fabrication works
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	<p>1.7 Workplace storage procedures for tools, equipment and materials</p> <p>1.8 Bending and cutting equipment setting up procedures</p>
2. Underpinning Skills	<p>2.1 Receiving job assignment</p> <p>2.2 Identifying re-bar materials from design specifications</p> <p>2.3 Arranging work area in accordance with work requirements and OHS guidelines and procedures</p> <p>2.4 Removing unused/excess materials, debris and other obstacles</p> <p>2.5 Identifying and gathering hand tools and equipment</p> <p>2.6 Checking hand tools, equipment and PPEs for usability</p> <p>2.7 Maintaining hand tools and equipment</p> <p>2.8 Storing hand tools and equipment</p> <p>2.9 Setting-up bending and cutting equipment on site</p>
3. Underpinning Attitudes	<p>3.1 Patience</p> <p>3.2 Commitment to occupational health and safety practices</p> <p>3.3 Environmental concerns</p> <p>3.4 Eagerness to learn</p> <p>3.5 Tidiness and timeliness</p> <p>3.6 Respect for rights of peers and seniors in workplace</p>
4. Resource Implications	<p>4.1 Workplace (simulated or actual)</p> <p>4.2 Steel fabrication and tools, equipment and materials</p> <p>4.3 Work instruction sheet</p>

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 Received details about job assignment in accordance with company practices.</p> <p>1.2 Identified re-bar materials from design specifications.</p> <p>1.3 Arranged work area in accordance with work requirements and OHS guidelines and procedures.</p> <p>1.4 Removed unused/excess materials, debris and other obstacles in accordance with workplace and safety requirements.</p> <p>1.5 Identified hand tools and equipment and gathered in accordance with workplace procedures.</p> <p>1.6 Checked hand tools, equipment and PPEs for usability in accordance with work requirements</p> <p>1.7 Maintained hand tools and equipment and stored in compliance with OHS requirements.</p> <p>1.8 Set-up bending and cutting equipment and get ready.</p>
2. Methods of Assessment	<p>Competency may be assessed by means of:</p> <p>2.1 Written examination</p> <p>2.2 Demonstration</p> <p>2.3 Oral questioning</p> <p>2.4 Workplace observation</p> <p>2.5 Portfolio</p>

3. Context of Assessment	3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.
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Unit of Competency: PERFORM FABRICATION WORKS	Nominal Duration: 56 hrs.	Unit Code: SEIP-CON-STE-2-O
Unit descriptor: This unit covers the knowledge, skills and attitudes required for a worker to perform fabrication works when performing steel binding and fabrication activities. It specifically includes the tasks of cutting steel re-bars, bending main bars using manual benders, bending main bar using bending machine, bending stirrups using manual bender, bending stirrups using bending machine and cleaning/maintaining the workplace.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Cut steel re-bars	1.1. Cutting tools/equipment are selected in accordance with steel <u>re-bar size and type.</u> 1.2. Steel re-bars are accurately measured and marked ready for cutting. 1.3. Steel re-bars are cut using appropriate cutting tools/equipment based on cutting list. 1.4. Cut steel re-bars are arranged in designated area according to workplace requirements. 1.5. Excess steel re-bars are gathered and disposed in accordance with workplace procedures. 1.6. <u>Relevant OHS guidelines</u> are applied.
2. Bend main bars using manual benders	2.1 Appropriate bending tools and equipment are prepared in accordance with the work requirements. 2.2 Bending forms/jigs are installed according to cutting list specifications. 2.3 Main bars are manually bended according to required <u>bending pattern.</u> 2.4 Bended main bars are stocked pile at the designated storage area. 2.5 Relevant OHS guidelines are applied.
3. Bend main bar using bending machine	3.1 Bending machine components are checked and maintained in accordance with manufacturer's specifications. 3.2 Bending guides/forms are set based on re-bar size and shape. 3.3 Main steel bars are bended according to required shape and quantity. 3.4 Bended main steel bars are stock-piled at the designated storage area. 3.5 Relevant OHS guidelines are applied.
4. Bend stirrups using manual bender	4.1 Appropriate bending tools and equipment are prepared in accordance with the work requirements. 4.2 Stirrup bending guides/forms are installed according to cutting list specifications.

	<p>4.3 Stirrups are manually bended according to required stirrup shapes and quantity.</p> <p>4.4 All bended stirrups are grouped according to shapes or use.</p> <p>4.5 Relevant OHS guidelines are applied.</p>
5. Bend stirrups using bending machine	<p>5.1 Bending machine components are checked and maintained in accordance with manufacturer's specifications.</p> <p>5.2 Bending guides/forms are set based on re-bar size and shape.</p> <p>5.3 Stirrups are bended according to required shapes and quantity.</p> <p>5.4 Bended stirrups are stocked pile at the designated storage area.</p> <p>5.5 Relevant OSH guidelines are applied.</p>
6. Clean/maintain the workplace	<p>6.1 Tools and equipment are cleaned and stored in accordance with workplace requirements.</p> <p>6.2 Work place is cleaned in accordance with workplace requirements.</p> <p>6.3 Waste materials are disposed in designated and proper place.</p>

Range of Variables

Variable	Range
	May include but not limited to:
1. Re-bar size and type	<p>1.1. Re-bar type: 1.1.1 round bar, deformed bar</p> <p>1.2. Re-bar size: 1.6.1 Round bar: RB6, RB8, RB9, RB10, RB12, RB14, RB16, RB18, RB20, RB22, RB25, RB28, RB32 1.6.2 Deformed bar: BD 8, DB10, DB12, DB14, DB16, DB18, DB20, DB22, DB25, DB28, DB32</p>
2. Relevant OHS guidelines	<p>2.1 Wearing of relevant PPEs; hand gloves, hard hat, safety shoes; safety glass/goggles, appropriate working clothes</p> <p>2.2 Workshop cleanliness</p> <p>2.3 Steel bar piling standard</p> <p>2.4 Safety requirements in steel cutting</p> <p>2.5 Safety guards for rotating machine parts</p> <p>2.6 Environmental requirements</p>
3. Bending Pattern	<p>3.1 Double hook</p> <p>3.2 Chair bars</p> <p>3.3 L-shape</p> <p>3.4 C-shape</p>
4. Stirrup shapes	<p>4.1 Square</p> <p>4.2 Rectangle</p> <p>4.3 Double hook bars</p> <p>4.4 L-shape</p> <p>4.5 C-shape</p> <p>4.6 U-shape</p>

	<p>4.7 V-shape</p> <p>4.8 Octagonal</p> <p>4.9 Spirals</p>
5. Bending guides/forms	5.1 Bending guides come in various sizes and shapes for bending main bars and stirrups as enumerated in variable no. 2 & 3 above

Curricular Evidence Guide

1. Underpinning Knowledge	<p>1.1 Steel re-bar measurement and marking procedures</p> <p>1.2 Steel cutting operations and techniques</p> <p>1.3 Types of cutting tools/equipment used for steels</p> <p>1.4 Safety requirements when performing steel cutting operations</p> <p>1.5 Methods of steel bending</p> <p>1.6 Techniques of manual method of bending steels</p> <p>1.7 Purpose of the different bending shapes of main steel bars</p> <p>1.8 Bending machines used for bending of steels used for construction re-bars</p> <p>1.9 Purpose/functions of bended stirrups in construction</p> <p>1.10 Bending methods and techniques for stirrups</p> <p>1.11 Bending shapes of stirrups and their purpose</p> <p>1.12 Workplace requirements for tools and equipment maintenance and storing</p>
2. Underpinning Skills	<p>2.1 Measuring and marking of steel re-bars</p> <p>2.2 Cutting steel re-bars</p> <p>2.3 using right type of cutting tools/equipment in steel cutting operations</p> <p>2.4 Applying relevant OHS guidelines when cutting steels</p> <p>2.5 Installing bending forms/jigs in the worksite</p> <p>2.6 Bending main steel bars manually</p> <p>2.7 Bended main steel bars using bending machine</p> <p>2.8 Bending stirrups manually according to required shapes and quantity</p> <p>2.9 Bending stirrups using bending machine</p> <p>2.10 Cleaning tools and equipment and storing in accordance with workplace requirements</p>
3. Underpinning Attitudes	<p>3.1 Patience</p> <p>3.2 Commitment to occupational health and safety practices</p> <p>3.3 Environmental concerns</p> <p>3.4 Eagerness to learn</p> <p>3.5 Tidiness and timeliness</p> <p>3.6 Respect for rights of peers and seniors in workplace</p>
4. Resource Implications	<p>4.1 Workplace (simulated or actual)</p> <p>4.2 Steel fabrication and tools, equipment and materials</p> <p>4.3 Work instruction sheet</p>

Assessment Evidence Guide

<p>1. Critical Aspects of Competency</p>	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Measured and marked steel re-bars precisely. 1.2 Cut steel re-bars using right type of cutting tools/equipment in accordance with cutting list. 1.3 Installed bending forms/jigs in accordance with specifications. 1.4 Bended main steel bars manually according to required bar shapes and quantity. 1.5 Bended main steel bars using bending machine in accordance with the required shape and quantity. 1.6 Bended stirrups manually according to required shapes and quantity. 1.7 Bended stirrups using bending machine in accordance with required shapes and quantity. 1.8 Cleaned tools and equipment and stored in accordance with workplace requirements.
<p>2. Methods of Assessment</p>	<p>Competency may be assessed by means of:</p> <ul style="list-style-type: none"> 2.1 Written examination 2.2 Demonstration 2.3 Oral questioning 2.4 Workplace observation 2.5 Portfolio
<p>3. Context of Assessment</p>	<ul style="list-style-type: none"> 3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

Unit of Competency: PERFORM ASSEMBLY OF PREFABRICATED STEEL WORKS	Nominal Duration: 62 hrs.	Unit Code: SEIP-CON-STE-3-O
Unit descriptor: This unit covers the knowledge, skills and attitudes required for a worker to perform assembly of prefabricated steel works when performing steel binding and fabrication activities in the construction sector. It specifically includes the tasks of assembling re-bars for columns, assembling re-bars for beams, assembling re-bars for joists, assembling re-bars for girders, assembling re-bars for slabs, and assembling re-bars for board piles/pile caps.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Assemble re-bars for columns	<p>1.1 Assembly of re-bars for columns is carried out in accordance with OHS requirements.</p> <p>1.2 Metal/wooden supports for main/vertical bars are prepared and assembled according to work requirements.</p> <p>1.3 <u>Size of main/vertical bars and lateral ties</u> are selected based on structural plan, <u>design specifications</u> and relevant local and international construction codes.</p> <p>1.4 Main/vertical bars are held in position by lateral ties in accordance with the column design plan.</p> <p>1.5 <u>Spacing of main/vertical bars and lateral ties</u> are determined in accordance with design specifications and relevant local and international construction codes.</p> <p>1.6 Lateral ties are tied/welded in order to hold the main /vertical bars firmly to its designed position.</p> <p>1.7 Completed column reinforcement assembly is hauled to designated storage area.</p> <p>1.8 Excess materials and debris are properly disposed and work area is cleaned in compliance with OHS guidelines.</p>
2. Assemble re-bars for beams	<p>2.1. Assembly of re-bars for beams is carried out in accordance with OHS requirements.</p> <p>2.2. Metal/wooden supports for main bars are prepared and assembled according to work requirements.</p> <p>2.3. Size of main bars, extra/cut bars and closed stirrups are selected based on structural plan, design specifications and relevant local and international construction codes.</p> <p>2.4. Main bars and extra/cut bars are held in position by closed stirrups in accordance with the beam design plan.</p> <p>2.5. Closed stirrups are properly spaced and tied/welded in order to hold the main bars firmly to its designed position.</p> <p>2.6. Completed beam reinforcement assembly is hauled to designated storage area.</p> <p>2.7. Personal protective equipment and hand tools are used in accordance with safety and work requirements.</p>

	<p>2.8. Excess materials and debris are properly disposed and work area is cleaned in compliance with OHS guidelines.</p>
<p>3. Assemble re-bars for joists</p>	<p>3.1 Assembly of re-bars for joist is carried out in accordance with OHS requirements.</p> <p>3.2 Metal/wooden supports for main bars are prepared and assembled according to work requirements.</p> <p>3.3 Size of main bars, extra/cut bars and closed stirrups are selected based on structural plan, design specifications and relevant local and international construction codes.</p> <p>3.4 Main bars and extra/cut bars are held in position by closed stirrups in accordance with the joists design plan.</p> <p>3.5 Closed stirrups are properly spaced and tied/welded in order to hold the main bars firmly to its designed position.</p> <p>3.6 Completed joist reinforcement assembly is hauled to designated storage area.</p> <p>3.7 Excess materials and debris are properly disposed and work area is cleaned in compliance with OHS guidelines.</p>
<p>4. Assemble re-bars for girders</p>	<p>4.1. Assembly of re-bars for girders is carried out in accordance with OHS requirements.</p> <p>4.2. Metal/wooden supports for main bars are prepared and assembled according to work requirements.</p> <p>4.3. Size of main bars, extra/cut bars and closed stirrups are selected based on structural plan, design specifications and relevant local and international construction codes.</p> <p>4.4. Main bars and extra/cut bars are held in position by closed stirrups in accordance with the girder design plan.</p> <p>4.5. Closed stirrups are properly spaced and tied/welded in order to hold the main bars firmly to its designed position.</p> <p>4.6. Completed girder reinforcement assembly is hauled to designated storage area.</p> <p>4.7. Personal protective equipment and hand tools are used in accordance with safety and work requirements.</p> <p>4.8. Excess materials and debris are properly disposed and work area is cleaned in compliance with OSHA guidelines.</p>
<p>5. Assemble re-bars for slabs</p>	<p>5.1. Assembly of re-bars for slabs is carried out in accordance with OHS requirements.</p> <p>5.2. Metal bed for slab fabrication is prepared in accordance with work requirements.</p> <p>5.3. Size of bars are selected based on structural plan, design specifications and relevant local and international construction codes.</p> <p>5.4. Slab re-bars are properly spaced and tied/welded in accordance with design specifications and relevant local and international construction codes.</p> <p>5.5. Completed slab reinforcement assembly is hauled to designated storage area.</p>

	<p>5.6. Personal protective equipment and hand tools are used in accordance with safety and work requirements.</p> <p>5.7. Excess materials and debris are properly disposed and work area is cleaned in compliance with OHS guidelines.</p>
6. Assemble re-bars for board piles/pile caps	<p>6.1 Assembly of re-bars for board piles/pile caps is carried out in accordance with OHS requirements.</p> <p>6.2 Size of main bars are selected based on structural plan, design specifications and relevant local and international construction codes.</p> <p>6.3 Board pile re-bars are properly spaced and tied/welded in accordance with design specifications and relevant local and international construction codes.</p> <p>6.4 Completed board pile reinforcement assembly is hauled to designated storage area.</p> <p>6.5 Personal protective equipment and hand tools are used in accordance with safety and work requirements.</p> <p>6.6 Excess materials and debris are properly disposed and work area is cleaned in compliance with OHS.</p>

Range of Variables

Variable	Range
	May include but not limited to:
1. OHS requirements	<p>1.1 Wearing of appropriate PPEs</p> <p>1.1.1 Hard hat/construction helmet</p> <p>1.1.2 Safety shoes</p> <p>1.1.3 Safety glasses</p> <p>1.1.4 Hand gloves</p> <p>1.1.5 Safety belts</p> <p>1.1.6 Appropriate working clothes</p> <p>1.2 Disposal of waste materials</p> <p>1.3 Availability of first aid kit</p> <p>1.4 Using of appropriate steel assembly tools and equipment</p>
2. Size of main/vertical bars and lateral ties	<p>2.1 Available sizes of deformed bar for main/vertical bars is from 16 mm to 36mm</p> <p>2.2 Available sizes of round bar for lateral ties is from 6mm to 12mm</p>
3. Design specifications	<p>3.1 Local building code provisions related to bar cutting and bending specifications, bar spacing specifications</p> <p>3.2 ASTM specifications related to types of materials, steel bars identification/marketing system, size, diameter, area, length and weight of steel bars, types of steel bars</p> <p>3.3 Other relevant local and international building codes</p>

<p>4. Spacing of main/vertical bars and lateral ties</p>	<p>Main/vertical bars and lateral ties spacing may include but not limited to rules and regulations of local and international building code for:</p> <ul style="list-style-type: none"> 4.1 Short and long column 4.2 Tied column 4.3 Spiral column 4.4 Composite, combined and lally column <p>Main bars and stirrups spacing may include but not limited to rules and regulations of local and international building code for:</p> <ul style="list-style-type: none"> 4.5 Simple beam 4.6 Continuous beam 4.7 Simple-continuous beam 4.8 Cantilever beam 4.9 Girders 4.10 Joists <p>Steel bars spacing may include but not limited to rules and regulations of local and international building code for:</p> <ul style="list-style-type: none"> 4.11 One way slab 4.12 Two way slab 4.13 Ribbed slab 4.14 Flat Slab 4.15 Flat Plate
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Curricular Evidence Guide

<p>1. Underpinning Knowledge</p>	<ul style="list-style-type: none"> 1.1 OHS requirements when performing steel fabrication works in construction 1.2 Types of metal/wooden supports for main/vertical bars 1.3 Methods and techniques when assembling metal/wooden supports for main/vertical bars 1.4 Local and international building codes in relation to applicable sizes of main/vertical bars and lateral ties 1.5 Procedures and techniques of holding in position the main/vertical bars using lateral ties 1.6 Relevant local and international construction codes in relation to spacing of main/vertical bars and lateral ties 1.7 Procedure of holding the main /vertical bars using ties/weld method 1.8 Advantages and disadvantages with the use of ties and welds 1.9 Workplace and OHS requirements on disposal of excess materials and debris
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2. Underpinning Skills	<p>2.1 Carrying out assembly of re-bars in accordance with OHS requirements.</p> <p>2.2 Preparing metal/wooden supports for main/vertical bars and assembled according to work requirements.</p> <p>2.3 Selecting size of main/vertical bars and lateral ties based on structural plan, design specifications and relevant local and international construction codes.</p> <p>2.4 Holding main/vertical bars in position by lateral ties in accordance with the column design plan.</p> <p>2.5 Spacing of main/vertical bars and lateral ties in accordance with design specifications and relevant local and international construction codes.</p> <p>2.6 Binding rods using ties in order to hold the main /vertical bars firmly in accordance with the plan.</p> <p>2.7 Welding lateral ties in order to hold the main /vertical bars firmly in accordance with the plan.</p> <p>2.8 Disposing excess materials and debris properly.</p> <p>2.9 Cleaning of work area in compliance with workplace and OHS requirements</p>
3 Underpinning Attitudes	<p>3.1 Patience</p> <p>3.2 Commitment to occupational health and safety practices</p> <p>3.3 Environmental concerns</p> <p>3.4 Eagerness to learn</p> <p>3.5 Tidiness and timeliness</p> <p>3.6 Respect for rights of peers and seniors in workplace</p>
4 Resource Implications	<p>4.1 Workplace (simulated or actual)</p> <p>4.2 Steel Assembly and tools, equipment and materials</p> <p>4.3 Work instruction sheet</p>

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 Carried out assembly of re-bars in accordance with OHS requirements</p> <p>1.2 prepared Metal/wooden supports for main/vertical bars and assembled according to work requirements</p> <p>1.3 Selected size of main/vertical bars and lateral ties based on structural plan, design specifications and relevant local and international construction codes</p> <p>1.4 Held main/vertical bars in position by lateral ties in accordance with the column design plan</p> <p>1.5 Determined spacing of main/vertical bars and lateral ties in accordance with design specifications and relevant local and international construction codes</p> <p>1.6 Tied/welded lateral ties in order to hold the main /vertical bars firmly to its designed position</p>
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	1.7 Disposed Excess materials and debris properly and work area is cleaned in compliance with OHS requirements
2. Methods of Assessment	Competency may be assessed by means of: 2.1 Written examination 2.2 Demonstration 2.3 Oral questioning 2.4 Workplace observation 2.5 Portfolio
3. Context of Assessment	3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

Unit of Competency: PERFORM STEEL RE-BARINSTALLATION WORKS	Nominal Duration: 56 hrs.	Unit Code: SEIP-CON-STE-4-O
Unit descriptor: This unit covers the knowledge, skills and attitudes required for a worker to perform steel re-bar installation works in the construction sector. It specifically includes the tasks of checking reference point for determining elevation and center line, installing scaffolding, installing re-bars for building elements, checking reinforcement prior to pouring concrete and dismantling scaffoldings.		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Check reference point for determining elevation and center line	1.1. Alignment and elevations are checked based on architectural drawings, structural drawings and specifications. 1.2. Misalign dowel bars are adjusted in accordance with the <u>line marks</u> or building specifications. 1.3. Misalignment of initial re-bar is corrected in accordance with approved structural plan. 1.4. Tools, equipment and <u>PPE</u> are identified and used according to OHS guidelines and work requirements.
2. Install scaffolding	2.1. Installation of scaffolding is carried out in accordance with <u>OHS requirements</u> . 2.2. <u>Types of scaffolding</u> required are confirmed and associated work tasks identified. 2.3. Projected loading on scaffolding and supporting structure is determined based on local and international building codes and project specifications. 2.4. Site/workplace access and egress routes are identified. 2.5. <u>Scaffolding components</u> are selected and inspected for damage; rejects are labeled and segregated. 2.6. Sole board/base plate is selected in accordance with relevant code rules and regulations, and work requirements. 2.7. Scaffolding is set up/erected in accordance with work requirements and workplace rules and regulations. 2.8. Static/safety lines are installed where specified in accordance with safety rules and regulations. 2.9. <u>Lifting device</u> is assembled and installed where specified.
3. Install re-bars for building elements	3.1. Safety net is placed into position in accordance with design drawings and specifications. 3.2. Size of reinforcement bars for the various <u>building elements</u> are checked based on structural drawing and specifications. 3.3. Reinforcement bars are located and positioned in accordance with structural drawings and specifications. 3.4. Dowels are cleaned and aligned before joining with vertical bars.

	<p>3.5. Reinforcement is located and placed using bar chair, ligatures and spacers according to structural drawing/plan and specifications.</p> <p>3.6. Lateral ties/stirrups are installed and secured in place using appropriate method.</p> <p>3.7. Main re-bars are joined using appropriate splicing method in accordance with relevant code requirements.</p> <p>3.8. Steel reinforcement for slabs are bent according to design drawing and specifications.</p> <p>3.9. Slab reinforcements are positioned and fixed in place in accordance with design specifications.</p> <p>3.10. Stair reinforcements are bent, positioned and fixed in place in accordance with design specifications.</p> <p>3.11. Appropriate PPE are used in accordance with workplace and safety requirements.</p>
4. Check reinforcement prior to pouring concrete	<p>4.1. Location and position of reinforcement and fixing ties to reinforcement are checked for accuracy.</p> <p>4.2. Depth of coverage, clearance, spacing and overlap of reinforcement materials are checked in accordance with structural drawings/job specifications.</p>
5. Dismantle scaffoldings	<p>5.1. Scaffolding is isolated and appropriately signed and barricaded to ensure safe dismantling.</p> <p>5.2. Scaffolding is dismantled using reverse procedure as for erection in accordance with safety practices.</p> <p>5.3. Scaffolding components are cleaned, inventoried and returned to storage area based on workplace rules and procedures.</p>

Range of Variables

Variable	Range
	May include but not limited to:
1. line marks	<p>1.1. Horizontal alignment</p> <p>1.2. Vertical alignment</p> <p>1.3. Angle alignment</p>
2. PPE	<p>2.1 Hard hat/construction helmet</p> <p>2.2 Safety shoes</p> <p>2.3 Safety glasses</p> <p>2.4 Hand gloves</p> <p>2.5 Safety belts</p> <p>2.6 Appropriate working clothes</p>
3. OHS requirements	<p>3.1 Wearing of appropriate PPEs</p> <p>3.2 Disposal of waste materials</p> <p>3.3 Availability of first aid kit</p> <p>3.4 Using of appropriate steel re-bar installation tools and equipment</p>

4. Types of scaffolding	4.1 Steel scaffolding 4.2 Wooden/timber scaffolding 4.3 Bamboo scaffolding
5. Scaffolding components	5.1 Bracing 5.2 Fixed/rotating clamps 5.3 U –jack 5.4 Plate jack 5.5 Lock pins 5.6 Steel/wood platform 5.7 Steel/wood ladder 5.8 Bolts and nuts 5.9 Stand 5.10 Ledger 5.11 Putlog
6. Lifting device	6.1 Fork lift 6.2 Truck crane 6.3 Tower crane 6.4 Derrick 6.5 Pulleys 6.6 Hoist
7. Building elements	7.1 Foundations 7.2 Ground Beams 7.3 Stump column 7.4 Column 7.5 Beam 7.6 Slab 7.7 Retaining wall 7.8 Shear wall/lift wall 7.9 Joist 7.10 Girder 7.11 Stairs 7.12 Lintel/Sunshade 7.13 Arch 7.14 Shell
8. Splicing method	8.1 Tension bars may be spliced through the following: 8.1.1 Welding 8.1.2 Sleeves 8.1.3 Tying 8.1.4 Mechanical devices which provides full positive connection between bars 8.2 Compression bars may be spliced by: 8.2.1 Lapping 8.2.2 Direct and bearing 8.2.3 Welding

	8.2.4 Mechanical devices which will provided full positive connection
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Curricular Evidence Guide

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1. Procedure for correcting misalignment of initial re-bar 1.2. Scaffolding components selection and inspection 1.3. Types of lifting device and their characteristics 1.4. Lifting device assembly and installation procedure 1.5. Procedure of locating and positioning reinforcement bars 1.6. Installing and securing methods and techniques of lateral ties/stirrups 1.7. Methods and techniques in splicing of re-bars 1.8. Steel reinforcement bending procedure for slabs 1.9. Workplace specification for positioning and fixing of slab reinforcements 1.10. Workplace and job specifications on depth of coverage, clearance, spacing and overlap of reinforcement materials 1.11. Dismantling procedures and safety requirements for scaffolding 1.12. Workplace and OHS requirements for cleaning, inventory and storing scaffolding components
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Correcting misalignment of initial re-bar in accordance with approved structural plan 2.2 Selecting scaffolding components and inspecting for damage 2.3 Assembling lifting device and installing where specified 2.4 Locating and positioning reinforcement bars in accordance with structural drawings and specifications 2.5 Installing and securing lateral ties/stirrups in place using appropriate method 2.6 Joining main re-bars using appropriate splicing method in accordance with relevant code requirements 2.7 Bending steel reinforcement for slabs according to design drawing and specifications 2.8 Positioning slab reinforcements and fixing in place in accordance with design specifications 2.9 Checking depth of coverage, clearance, spacing and overlap of reinforcement materials in accordance with structural drawings/job specifications 2.10 Dismantling scaffolding in accordance with workplace procedure and OHS requirements 2.11 Cleaning and storing scaffolding components
3. Underpinning Attitudes	<ul style="list-style-type: none"> 3.1 Patience 3.2 Commitment to occupational health and safety practices

	<ul style="list-style-type: none"> 3.3 Environmental concerns 3.4 Eagerness to learn 3.5 Tidiness and timeliness 3.6 Respect for rights of peers and seniors in workplace
4. Resource Implications	<ul style="list-style-type: none"> 4.1 Workplace (simulated or actual) 4.2 Steel Assembly and tools, equipment and materials 4.3 Work instruction sheet

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Corrected misalignment of initial re-bar in accordance with approved structural plan. 1.2 Selected scaffolding components and inspected for damage. 1.3 Assembled lifting device and installed where specified. 1.4 Located and positioned reinforcement bars in accordance with structural drawings and specifications. 1.5 Installed and secured lateral ties/stirrups in place using appropriate method. 1.6 Joined main re-bars using appropriate splicing method in accordance with relevant code requirements. 1.7 Bent steel reinforcement for slabs according to design drawing and specifications. 1.8 Positioned slab reinforcements and fixed in place in accordance with design specifications. 1.9 Checked depth of coverage, clearance, spacing and overlap of reinforcement materials in accordance with structural drawings/job specifications. 1.10 Dismantled scaffolding in accordance with workplace procedure and OHS requirements.
2. Methods of Assessment	<p>Competency may be assessed by means of:</p> <ul style="list-style-type: none"> 2.1 Written examination 2.2 Demonstration 2.3 Oral questioning 2.4 Workplace observation 2.5 Portfolio
3. Context of Assessment	<ul style="list-style-type: none"> 3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

Unit of Competency: PERFORM BASIC CONSTRUCTION LEVELING PROCEDURES	Nominal Duration: 32 hrs.	Unit Code: SEIP-CON-STE-5-O
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Unit descriptor:

This unit covers the knowledge, skills and attitudes required for a worker to perform basic construction leveling procedures. It specifically includes the tasks of checking reference point for planning and preparing for work, setting up level, cleaning/maintaining work area.

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Plan and prepare for work	<p>1.1 Work instructions, including plans, specifications, <u>quality requirements</u> and operational details are obtained, confirmed and applied in accordance with organizational standards and procedures.</p> <p>1.2 Safety requirements are followed in accordance with <u>OHS regulations</u> and procedures.</p> <p>1.3 Signage/barricade requirement are selected and implemented according to workplace operation.</p> <p>1.4 <u>Tools and equipment</u> are selected, checked for serviceability and any defect are rectified consistent with job requirements.</p> <p>1.5 <u>Environmental protection requirements</u> are identified and applied in accordance with environmental protection plans and regulations.</p>
2. Set up level	<p>2.1 Heights or levels to be transferred/established are identified from project plans or instructions.</p> <p>2.2 <u>Leveling devices</u> and staffs are set-up, tested and correctly used in accordance with standard operating procedures and manufacturers' guidelines.</p> <p>2.3 Levels are measured and heights transferred to required location and marked and/or recorded consistent with job requirements.</p> <p>2.4 Results of leveling procedure are documented according to organizational requirements.</p>
3. Clean/maintain work area	<p>3.1 Work area is cleared of any obstruction and scraps materials disposed of or recycled in accordance with workplace environmental plan and regulations.</p> <p>3.2 Tools and equipment are cleaned, checked, maintained and stored in accordance with manufacturers' specification and instruction, and workplace standard practices.</p>

Range of Variables

Variable	Range
1. Quality requirements	May include but not limited to: 1.1 Internal company quality policy and standards 1.2 Workplace operations and procedures 1.3 Manufacturer's specifications and guidelines
2. OHS regulations	2.1 Personal protective equipment 2.1.1 Use of tools and equipment 2.1.2 Workplace safety 2.1.3 Handling of materials 2.1.4 Use of firefighting equipment 2.1.5 First aid treatment 2.1.6 Hazard control 2.1.7 Hazardous materials and substances 2.1.8 Environment protection 2.2 Safe Operating procedures are to include but not limited to: 2.2.1 Conduct of operational risk assessment and treatments associated with the tasks 2.2.2 Confined work areas 2.2.3 Lighting and ventilation 2.2.4 Hazardous materials 2.2.5 Traffic control 2.2.6 Work at heights 2.2.7 Work in proximity to others 2.2.8 Worksite visitors and public 2.3 Emergency procedures related to this unit are to include but may be not limited to: 2.3.1 First aid requirements 2.3.2 Personnel evacuation 2.3.3 Firefighting and control
3. Tools and equipment	3.1 Measuring tapes/rules 3.2 Spirit levels 3.3 String lines 3.4 Laser targets 3.5 Marking equipment 3.6 Plumb bobs 3.7 Signage for laser leveling 3.8 Wooden/steel pegs 3.9 Hammers 3.10 Chalk lines 3.11 Water levels
4. Environmental protection requirements	4.1 Waste segregation 4.2 Noise pollution and protection 4.3 Dust protection 4.4 Vibration control and protection 4.5 Clean up management

5. Leveling devices	<ul style="list-style-type: none"> 5.1 Laser Levels 5.2 Optical levels 5.3 Automatic levels 5.4 Digital levels
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Curricular Evidence Guide

1. Underpinning Knowledge	<ul style="list-style-type: none"> 1.1 Tools and equipment used for levelling and their applications 1.2 Selecting the proper levelling tools and equipment for a certain levelling job 1.3 OHS requirements applied in construction levelling works 1.4 environmental protection requirements in construction works 1.5 Methods and procedures of transferring heights/elevations in construction works 1.6 Testing the correctness of levelling tools/equipment 1.7 Workplace cleaning and maintenance requirements in construction 1.8 Tools and equipment maintenance procedures and storage
2. Underpinning Skills	<ul style="list-style-type: none"> 2.1 Selecting and checking tools and equipment for serviceability 2.2 Rectifying defects of tools and equipment 2.3 Identifying and applying environmental protection requirements 2.4 Identifying heights or levels to be transferred 2.5 Testing of leveling devices and using correctly in accordance with standard operating procedures and manufacturers' guidelines 2.6 Measuring levels and transferring heights to required location 2.7 Marking and/or recording consistent with job requirements 2.8 Cleaning, checking and maintaining tools and equipment 2.9 Storing tools and equipment in accordance with manufacturers' specification and workplace standard practices
3. Underpinning Attitudes	<ul style="list-style-type: none"> 3.1 Patience 3.2 Commitment to occupational health and safety practices 3.3 Environmental concerns 3.4 Eagerness to learn 3.5 Tidiness and timeliness 3.6 Respect for rights of peers and seniors in workplace
4. Resource Implications	<ul style="list-style-type: none"> 4.1 Workplace (simulated or actual) 4.2 Steel Assembly and tools, equipment and materials 4.3 Work instruction sheet

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <ul style="list-style-type: none"> 1.1 Selected tools and equipment and checked for serviceability and rectified any defect consistent with job requirements. 1.2 Identified and applied environmental protection requirements in accordance with environmental protection plans and regulations.
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	<p>1.3 Identified heights or levels to be transferred/established from project plans or instructions.</p> <p>1.4 Tested leveling devices and used correctly in accordance with standard operating procedures and manufacturers' guidelines.</p> <p>1.5 Measured levels and heights transferred to required location and marked and/or recorded consistent with job requirements.</p> <p>1.6 Cleaned, checked, maintained tools and equipment and stored in accordance with manufacturers' specification and instruction, and workplace standard practices.</p>
2. Methods of Assessment	<p>Competency may be assessed by means of:</p> <p>2.1 Written examination</p> <p>2.2 Demonstration</p> <p>2.3 Oral questioning</p> <p>2.4 Workplace observation</p> <p>2.5 Portfolio</p>
3. Context of Assessment	<p>3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.</p>

Unit of Competency: PERFORM FORMWORKS INSTALLATION	Nominal Duration: 40 hrs.	Unit Code: SEIP-CON-STE-6-O
Unit descriptor: This unit covers the knowledge, skills and attitudes required for a worker to perform formwork installation in construction. It specifically includes the tasks of plan and prepare formwork installation, install formworks for building elements, install formworks for catch basin and manhole and repair and replace damaged formworks		

Elements and Performance Criteria:

(Terms in the performance criteria that are written in **bold and underlined** are elaborated in the range of variables).

Elements of Competency	Performance Criteria
1. Plan and prepare formwork installation	1.1 Work instructions, including plans, specifications, quality requirements and operational details are obtained, confirmed and applied according to <u>preparation plan</u> . 1.2 Appropriate <u>PPE</u> is selected and used according to job requirements and construction safety guidelines. 1.3 Signage/barricade requirements are identified and implemented according to safety and workplace regulations. 1.4 Tools and equipment selected to carry out tasks are checked for serviceability and any faults are rectified or reported to immediate superior prior to commencement. 1.5 <u>Hand and power tools</u> are selected and used in accordance with safe operating requirements of the workplace. 1.6 <u>Formwork components and materials</u> are selected and prepared consistent with job requirements. 1.7 Material quantity requirements are calculated in accordance with plans and/or specifications. 1.8 Materials appropriate to the task are identified, obtained, prepared, safely handled and located ready for use.
2. Install formworks for building elements	2.1 Appropriate PPE is selected and used according to job requirements and OHS guidelines. 2.2 Formworks components are installed in accordance with <u>specified tolerance requirements</u> . 2.3 Form panel components are installed/fixed in accordance with specified tolerance requirements. 2.4 Connectors, braces, locks, bolts and nuts for plastic forms are properly secured according to job requirements. 2.5 Accomplishment report is made according to company rules and regulations. 2.6 Housekeeping is performed in accordance with workplace and OHS requirements.
3. Install formworks for catch basin and manhole	3.1 Appropriate PPE is selected and used according to job requirements and OHS guidelines. 3.2 Formwork components for catch basin and manhole are installed in accordance with specified dimensions and tolerance requirements.

	<p>3.3 Form panels components for catch basin and manhole are installed/fixed for in accordance with specified dimension and tolerance requirements.</p> <p>3.4 Accomplishment report is made according to company rules and regulations</p> <p>3.5 Housekeeping is performed according to OHS site safety regulations</p>
4. Repair and replace damaged formworks	<p>4.1 Appropriate PPE is selected and used according to job requirements and OHS safety guidelines.</p> <p>4.2 Formworks are checked for damage according to worksite guidelines and procedures.</p> <p>4.3 Damaged formworks are repaired and replaced in accordance with work requirements.</p> <p>4.4 Accomplishment report is made according to company requirement.</p> <p>4.5 Housekeeping is performed according to worksite safety regulations.</p>

Range of Variables

Variable	Range
	May include but not limited to:
1. Preparation plan	<p>1.1 Worksite inspection</p> <p>1.2 Equipment defect identification</p> <p>1.3 Assessment of conditions and hazards</p> <p>1.1 Determination of work requirements</p>
2. PPE	<p>2.1 Safety working uniform</p> <p>2.2 Hard hat/safety helmet</p> <p>2.3 Safety shoes</p> <p>2.4 Safety hand gloves</p> <p>2.5 Safety belt</p> <p>2.6 Dust mask</p> <p>2.7 Safety glass/receptacles</p> <p>2.8 First aid kit</p>
3. Hand and power tools	<p>3.1 Hand tools</p> <p>3.1.1 Hand saw</p> <p>3.1.2 Hammer</p> <p>3.1.3 Tool holster</p> <p>3.1.4 Spanners</p> <p>3.1.5 Steel square/ wooden square</p> <p>3.1.6 Push-pull tape</p> <p>3.1.7 Spirit level</p> <p>3.1.8 Plumb bob</p> <p>3.1.9 Crow bar</p> <p>3.2 Power tools</p> <p>3.2.1 Electric drill</p> <p>3.2.2 Impact gun</p> <p>3.2.3 Portable grinder</p>

	3.2.4 Power (electric) wood saw
4. Formwork components and materials	<p>4.1 Formworks components:</p> <p>4.1.1 Wooden and plastic form panels</p> <p>4.1.2 Stiffener/frame</p> <p>4.1.3 Braces</p> <p>4.1.4 Connectors</p> <p>4.2 Fasteners:</p> <p>4.2.1 Nails</p> <p>4.2.2 Screws</p> <p>4.2.3 Bolts and nuts</p> <p>4.2.4 Lock washers</p> <p>4.2.5 Lock pins</p> <p>4.2.6 Tie wire</p> <p>4.3 Materials:</p> <p>4.3.1 steel</p> <p>4.3.2 polyvinyl/plastic</p> <p>4.3.3 Composite construction</p> <p>4.3.4 plywood</p> <p>4.3.5 lumbers</p> <p>4.4 Scaffolds</p> <p>4.4.1 Frames,</p> <p>4.4.2 Tubular post,</p> <p>4.4.3 Connectors,</p> <p>4.4.4 Shoring</p> <p>4.4.5 And planks</p>
5. specified tolerance requirements	<p>Tolerances for:</p> <p>5.1 Linear measurement</p> <p>5.2 Alignment</p> <p>5.3 Squareness</p> <p>5.4 Levelness</p> <p>5.5 Plumbness</p>
6. Damaged formworks	<p>6.1 Deformed wooden formworks</p> <p>6.2 Cracked/broken plastic formworks</p> <p>6.3 Deformed metal formworks</p>

Curricular Evidence Guide

1. Underpinning Knowledge	<p>1.1 Construction signage and their meanings</p> <p>1.2 Implementation procedures for construction signage</p> <p>1.3 Operation and maintenance of tools and equipment used in installing formworks</p> <p>1.4 Preparation and selecting procedures for formwork components and materials</p> <p>1.5 Methods and techniques of formwork components</p> <p>1.6 Methods and techniques form panels installation</p>
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	<p>1.7 Specified tolerance requirements for formwork components and form panel installation</p> <p>1.8 Procedure of securing connectors, braces, locks, bolts and nuts for plastic forms</p> <p>1.9 Identifying damaged formworks</p> <p>1.10 Repair procedures and replacement techniques for damaged formworks</p> <p>1.11 Workplace requirements in making of accomplishment report</p> <p>1.12 Workplace and OHS housekeeping requirements</p>
2. Underpinning Skills	<p>2.1 Identifying and implementing signage/barricade requirements in accordance with workplace safety regulations.</p> <p>2.2 Checking tools and equipment for serviceability and rectifying or reporting faults with immediate superior prior to commencement of work.</p> <p>2.3 Selecting and preparing formwork components and materials in accordance with job requirements.</p> <p>2.4 Installing formwork components and form panels in accordance with specified dimensions and tolerance requirements.</p> <p>2.5 Securing connectors, braces, locks, bolts and nuts for plastic forms.</p> <p>2.6 Repairing and replacing damaged formworks in accordance with work requirements.</p> <p>2.7 Making accomplishment report.</p> <p>2.8 Performing housekeeping in accordance with OHS site safety regulations.</p>
3. Underpinning Attitudes	<p>3.1 Patience</p> <p>3.2 Commitment to occupational health and safety practices</p> <p>3.3 Environmental concerns</p> <p>3.4 Eagerness to learn</p> <p>3.5 Tidiness and timeliness</p> <p>3.6 Respect for rights of peers and seniors in workplace</p>
4. Resource Implications	<p>4.1 Workplace (simulated or actual)</p> <p>4.2 Steel Assembly and tools, equipment and materials</p> <p>4.3 Work instruction sheet</p>

Assessment Evidence Guide

1. Critical Aspects of Competency	<p>Assessment required evidence that the candidate:</p> <p>1.1 Identified signage/barricade requirements and implemented according to safety and workplace regulations</p> <p>1.2 Checked tools and equipment for serviceability and faults are rectified or reported with immediate superior prior to commencement of work.</p> <p>1.3 Selected and prepared formwork components and materials in accordance with job requirements.</p> <p>1.4 Installed formwork components and form panels in accordance with specified dimension and tolerance requirements</p>
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	<ul style="list-style-type: none"> 1.5 Secured connectors, braces, locks, bolts and nuts for plastic forms properly in accordance with job requirements 1.6 Repaired and replaced damaged formworks in accordance with work requirements 1.7 Made accomplishment report in accordance with company requirement. 1.8 Performed housekeeping in accordance with OHS site safety regulations.
2. Methods of Assessment	<p>Competency may be assessed by means of:</p> <ul style="list-style-type: none"> 2.1 Written examination 2.2 Demonstration 2.3 Oral questioning 2.4 Workplace observation 2.5 Portfolio
3. Context of Assessment	<ul style="list-style-type: none"> 3.1 Competency assessment must be done in a training center or in an actual or simulated work place after completion of the training module.

End of Competency Standard

Assessment Guide

A Framework for Effective Assessment

Steel Binding and Fabrication

How to Use this Assessment Guide

- This Assessment Guide presents need-to-know information for Assessors and others who want to know more about the assessment process. A handy Table of Contents Guide on the next page shows you where to look.
- If you want the basics of assessment, its key terms and definitions, in a Question & Answer (Q&A) format, see Section One.
- If you want a knowledge of who does what, the key roles and responsibilities involved in assessment, see Section Two.
- If you want a “toolbox” of tools and templates, that you can select from depending on your assessment need, see Section Three.
- If you want to look at working samples of completed assessment tools, see the Appendices.

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Assessment Guide

Section One: Objectives linked to Key Terms & Definitions

Define assessment.

Assessment is a systematic process of collecting proof or evidence on whether or not a candidate has demonstrated competence in the performance of a work-related activity/task that is directly linked to a performance standard. The assessment confirms that the individual can perform to the standard expected in the workplace and/or the nationally approved competency standard.

Give an example of assessment.

A helpful example in this regard is the driving test. The driver must prove his competence to drive by demonstrating to the driving assessor his ability to do so. The driving assessor uses a checklist to assess the candidate and make the necessary recommendations, based on the evidence he has collected in observing the candidate's driving. S/He either records/recommends that the candidate is **competent** or **not yet competent**.

What is the purpose of assessment?

The Purpose of Assessment is to confirm that a trainee can perform competently to the standards expected in the workplace.

What is Assessment based on?

- An effective Assessment is based on a Competency Standard.
- A Competency Standard describes the skills, knowledge, and attitudes needed to perform effectively in the workplace, not the classroom.

Define the term "competency."

Competency is the ability to do a task successfully. Aspects of competency include:

- The capacity to perform tasks to the required standard consistently
- The ability to respond to different needs in the workplace
- The ability to plan and integrate a variety of tasks to attain a work outcome
-

Describe what makes up a competency standard.

It must be noted that a competency standard is made up of individual units of competency that include elements of competency as well as the performance criteria needed to accomplish them.

Define the term “Assessment tool.”

An assessment tool is, in effect, an evidence-gathering tool. It contains both the instrument used for the assessment and instructions for gathering evidence in the assessment process. As an assessment instrument it contains the context and conditions for the assessment; tasks to be administered to the learner; an outline of the evidence to be gathered for the learner; the criteria for judging the evidence; and the necessary housekeeping records for recording and reporting requirements.

Describe the difference between Conventional Testing & Competency Based Assessment.

Conventional Testing	CBT Assessment
<ul style="list-style-type: none"> • Emphasis on knowledge/memorization • Teachers/Training Providers have main role • Theory & practical Tests can become outdated • High cost & central control • Relatively inflexible 	<ul style="list-style-type: none"> • Based on competency standards • Involve industry partners in crucial role • Assessment based on demonstration of work skills rather than classroom knowledge • Flexible delivery • Competencies widely recognized • Guidelines & Templates used

Describe briefly what makes up an assessment system.

An Assessment System must be understood as a well-coordinated set of documented policies and procedures, including assessment materials and tools, that ensure assessments are consistently valid, reliable, flexible, fair, and safe.

Define the purpose of the Assessor role.

The role of Assessor is the heart and soul of effective competency based assessment. Without this pivotal role, determining the competency of the trainee is mere guesswork.

Note:

- The Industry Assessor will be asked to provide specs and practical demonstration tests from his workplace that will provide the evidence for determining competency.
- The importance of this input cannot be overemphasized for it best matches and tests the required performance criteria from the Standard.

Describe the basic questions that an Assessor must ask when planning an Assessment.

Planning an Assessment: What Needs to Happen?

- Determine which Units of Competency need to be assessed?
- Determine what Assessment Methods will be used?
- Determine what evidence-based tools (specs) need to be developed by the Assessor to guide the assessment?
- Determine how long it will take?
- Determine when the assessment will occur?
- Determine where the assessment will take place?
- Determine how it will be recorded?

Give some Assessor Requirements/Competencies.

Requirements/Competencies of an Assessor-

- The ability to use assessment tools to gather evidence effectively is essential, adjusting the language where necessary to reflect the language/literacy/numeracy levels of the workplace and not to exceed them in order to ensure learner understanding. This will also entail an ability to respond to learner needs such as responding to learner disability.

- The skill to develop specifications and practical tests, based on performance criteria, that provide evidence of competency that will fast track the assessment process.
- The ability to clearly demonstrate current industry skills and competencies relevant to the Standard.
- The Assessor is selected/appointed by Industry to act as an Assessor because of his proven competencies.
- Knows what needs to be done to assess the performance criteria
- Demonstrates a high level of expertise in the technical area to be examined
- Can provide constructive feedback

Define the challenges of the Assessor Role.

Assessor Role: Challenges

- Needs to be objective and unbiased
- Must have interpersonal skills to relax nervous candidates or deal with those who are aggressive or emotional
- Must have ability to deal with those who have literacy problems or difficult dialect

Review some basic need-to-know elements concerning assessment.

Assessment Basics: Need to Know Elements

- Assessment to be conducted by Industry Assessor selected by industry
- Industry assessor must be familiar with units of competency outlined in the course standards
- Industry Assessor should drafts specs that reflect industry requirements for trainees and that are based on critical aspects of competency
- Industry assessor is responsible for making final judgment of **competent** or **not yet competent**
- Trainer will assist industry assessor
- Trainees must demonstrate competence based on the units of competency outlined in the standards
- All resources related to units of competency must be made available prior to the assessment event, e.g., tools, equipment, materials

Describe the trainer's role in the assessment process.

The Trainer acts as a primary resource for the Assessor and acts as a Facilitator.

Trainer ensures:

- All industry required tools, equipment, and materials are available for the assessment
- The training venue is booked and has sufficient space for demonstrations/tasks
- That all logistics such as admission slips, signature sheets, and records are readily available for distribution and collection
- That all teaching materials and Standard documents and Assessment tools are ready for the Assessor

Discuss the importance of principles of assessment and what is involved.

Principles of Assessment Table

Key Principles	Relevance/Meaning
Valid	Ensures assessment aligned with the Unit of Competency and is based on evidence that shows the learner can demonstrate skills and knowledge in other similar contexts (workplace)
Reliable	Evidence presented for assessment is consistently interpreted regardless of the Assessor
Flexible	Assesses competencies held by the learner regardless of where they have been acquired; reflects the individual learner's needs
Fair	The individual learner's needs or disability is considered in the assessment process; the learner is provided with information about the assessment process and given the opportunity to challenge the result of the assessment if warranted
Safe	The assessor has inspected the venue for assessment and determined that it is safe for all involved and that emergency evacuations are in place if needed

Define the term "evidence."

Evidence is information that is gathered and matched against a Unit of Competency to provide proof of competency.

State the different forms of evidence that can be collected.

Different forms of evidence that can be collected are-

- **Direct** such as demonstration test, or observation of Candidate
- **Indirect** such as Candidate’s self-assessment or third party reports such as an employer interview

Describe and outline what is involved in “rules of evidence” and why they are important.

Rules of Evidence Table

Rules of Evidence	Meaning
Valid	The assessor is given assurance that the learner possesses the skills, knowledge, and attitudes described in the Unit of Competency and related assessment requirements
Sufficient	The assessor is assured that the quality, quantity, and relevance of the evidence is sufficient to enable a judgment to be made on the learner’s competency
Authentic	The assessor is assured that the evidence provided for assessment is the learner’s own work
Current	The assessor is assured that the assessment evidence demonstrates current competency of the learner. This evidence must be from the present or very recent past.

Describe the purpose of evidence gathering tools.

The Purpose of evidence gathering tools are-

- To help candidates understand what is expected of them
- To provide a focus for the assessment
- To identify what is needed to verify competency

State the use of the evidence guide.

The evidence guide provides useful advice on Unit of Competency assessment and must be read in conjunction with the performance criteria, required underpinning skills/knowledge/attitudes, range statement, and the critical aspects of competency for the Standard.

State why assessment evidence is important.

Evidence is the information gathered that provides proof that the performance criteria of a unit of competency has been met. Evidence can take many forms:

- **Observation:** watching the trainee perform
- **Questioning:** asking the trainee questions
- **Demonstration of specific skills:** seeing how the trainee performs a procedure or creates a final product
- **Examining** previous work the trainee has done

Describe the kinds of Assessment Methods that can be used for Evidence gathering purposes.

Various kinds of Assessment Methods can be used for Evidence gathering purposes. A wide range of assessment methods are available for Evidence- gathering purposes. Assessment methods are not limited to those listed below. The greater the range of assessment methods applied, the better the accuracy of the assessment.

Assessment Methods Table

Methods	Examples
Direct Observation of Candidate	Actual real-time activities in the workplace Work activities in a simulated workplace/training center
Questioning	Written questions; interviews; self-evaluation with questions; verbal questioning; questionnaires

Evidence compiled by Candidate	Portfolio; collection of work samples; products with supporting documentation; logbooks; information about life experience
Methods	Examples
Review of Product	Work samples and products; products as a result of a demonstration test/spec
Third Party Feedback	Reports/testimonials from Employers and Supervisors; evidence of training; interviews with Employers and Supervisors

Advice to the Assessor: use these methods and examples as a means of making your assessment valid, reliable, flexible, fair, and safe.

Define the term “evidence gathering tools” and give some examples of these tools.

Evidence gathering tools are the actual instruments that the Assessor uses to collect evidence. Evidence may be collected through:

- Demonstration of work activity
- Observation Checklist
- Question List
- Third party reports e.g. supervisor to verify consistent performance
- Review of candidate’s portfolio
- Verifying the Candidate’s capacity to deal with contingencies (unexpected things that come up)
- Written test

Define the term “portfolio.”

A collection of evidence that may be presented by the Candidate to an Assessor to prove the Candidate’s competence at a job or task.

What are some examples of Portfolio Evidence?

- Training results and certificates
- Training workbooks
- References from employers
- Job description and work experience
- Photos and videos
- Work journals
- Awards
- Work samples
- Letters and memos

Outline a 6-step method for preparing an evidence plan.

Steps in Preparing an Evidence Plan (Sequence of Steps to Follow)-

The Evidence Plan is the most important planning tool for an Assessor. A good evidence plan generates a list of the evidence that the Assessor must gather when conducting the assessment for a specific Unit of Competency. The following 6-Point Method for preparing an Evidence Plan provides a useful sequence of inter-related steps to follow:

1. Select Unit of Competency for assessment
2. Read full Unit of Competency
3. Identify evidence requirements based on:
 - a. Elements and Performance Criteria
 - b. Dimensions of Competence
 - c. Underpinning skills knowledge
 - d. Critical aspects of competency
4. Develop a list of evidence requirements
5. Identify best ways of collecting evidence (tools)
6. Document evidence plan

Outline the steps (sequence of activities) involved in developing an assessment tool.

Following are the steps (sequence of activities) involved in developing an assessment tool:

1. Select the Unit of Competency
2. Read the Unit of Competency

3. Identify the required evidence: critical aspects of competency
4. Identify the evidence gathering method
5. Complete the evidence plan
6. Select the appropriate template
7. Complete the template
8. Check the evidence gathering tools against the evidence plan and Unit of Competency
9. Check the tool with another Assessor for his opinion

Describe the four dimensions of competency.

Task Skills: the capacity to perform tasks in the workplace and demonstrate competence that meets the required Standard;

Task Management Skills: the ability to plan and integrate several tasks simultaneously that achieve a desired work outcome such as those skills involved in budgeting for a work operation, securing supplies and equipment for the work operation, completing the task in a timely, cost-effective manner, and ensuring safety practices are followed throughout;

Contingency Management Skills: the ability to respond to crises and breakdowns in the workplace, such as accidents and emergency situations that are unanticipated and require immediate action and resolution;

Job/Role Environment Skills: the capacity to own the responsibilities and expectations of the work environment that involves working with others effectively and participating in creating a work culture where all can contribute their best within the parameters of their job role

Assessment Guidelines

Section Two: Roles and Responsibilities

The Assessment System: Planning Guide for the Assessor

An Assessment System must be understood as a well-coordinated set of documented policies and procedures, including assessment materials and tools, that ensure assessments are consistently valid, reliable, flexible, fair, and safe.

Competency Assessment is a systematic process of collecting proof or evidence on whether or not a candidate has demonstrated competence in the performance of a work-related activity/task that is directly linked to a performance standard. The assessment confirms that the individual can perform to the standard expected in the workplace and/or the nationally approved competency standard.

Each **Unit of Competency** contained in a Standard describes a distinct part of a Mason's work and job profile. Within each Unit of Competency, the following components appear:

- Unit Title
- Unit Descriptor
- Elements of Competency
- Performance Criteria
- Range of Variables
- Evidence Guide

As a prelude to conducting assessments, the Assessor must be thoroughly familiar with all of the particulars and details of the Unit of Competency that is being assessed. This is a "must" for the role of the Assessor. He must be especially familiar with the Evidence Guide for gathering critical information.

The three sample assessment tools found below focus on the critical aspects of competency that can provide the required evidence to determine competency- the evidence guide. These sample assessment tools are as follows:

- Demonstration Checklist
- Observation Checklist
- Oral Questions Checklist

The duties of the Assessor include:

- Covering all of the key elements of the Unit of Competency under assessment
- Applying rigorously the Evidence Guide for the Unit of Competency as this contains the method and context of assessment, resources required for the assessment, the critical aspects of competency, and the required underpinning knowledge, skills, and attitudes
- Developing specifications (specs) for the task sheet for Demonstration as required
- Requiring the candidate to perform project tasks that cover interrelated units of competency- known as a “clustering.”
- Making what can be termed “reasonable adjustments” for candidates with disabilities or for example, those candidates with regional dialects that prove difficult to understand

Note: These “reasonable adjustments” may involve reconfiguring a simulated workplace site so that a candidate’s disability does not impede the assessment process, or for example, finding someone who can understand a regional dialect and assist the Assessor with essential communication skills.

Roles and Responsibilities of Assessor

Prior to any assessment, the Assessor should follow the specific instructions below to ensure a well-planned assessment event. In most cases s/he will be assisted by a Trainer. Nevertheless, s/he should make certain that good preparation has taken place for the assessment event.

1. Visit the assessment venue or workplace to ensure an adequate work area or platform containing:
 - Sufficient space for working- ensure square meters of work space enough for task to be carried out effectively and safely
 - Fire extinguisher and safety equipment within reach
 - Emergency procedures in place
 - All necessary tools, equipment, and materials ready at hand
 - All necessary machinery in good working order
2. Assessment is drawn and extracted from the relevant Unit of Competency based on an approved Standard and on an Evidence plan that clearly focuses on critical aspects of competency.
3. The duration of time to assess the demonstration is clearly indicated, for example, 3 hours. This information is shared with the Candidate along with other pertinent information such

as the sequence of tasks that he must follow, and the fact that he will be closely observed as the tasks are performed.

4. After the Candidate has performed the task, the Assessor will provide feedback to the Candidate on his performance.

5. The responsibility on finally deciding whether or not the Candidate was Competent or Not Yet Competent belongs to the accredited Assessor.

6. At the conclusion of the assessment, the Assessor will provide feedback on whether or not the Candidate was Competent or Not Yet Competent. S/He will also share information on next steps. These next steps include where to obtain the certificate related to the assessment or, if unsuccessful, how to re-try for competency within a specified period of time.

Roles and Responsibilities of Trainer

Prior to the assessment, you will have studied and become familiar with the Competency Standard for the industry occupation. You will also have met with or contacted the Assessor beforehand and discussed preparations and arrangements for the assessment. Your role will be to facilitate the assessment process and ensure all necessary resources are available, assisting the Assessor wherever possible. For example, once a draft spec has been produced by the Assessor, you will ensure it is fully consistent with the evidence plan and copied appropriately for use by both the Assessor and Candidate.

In addition to confirming a suitable training venue and time, you will ensure that:

- Sufficient space is allotted for task work- square meters of work space enough for demonstration tasks to be carried out effectively and safely
- Fire extinguisher and safety equipment within reach if necessary
- Emergency procedures in place
- All necessary tools, equipment, and materials ready at hand
- All necessary machinery in good working order

Your duties include:

- **notifying** the Assessor and candidates of planned assessment events and their location
- **advising and assisting** the Assessor on planned assessment events
- **collecting** admission slips and signature sheets for assessment events
- **ensuring** all required forms and reporting mechanisms are in place and ready for distribution to the Assessor and to the Candidate
- **ensuring** all requisite forms are duly signed and forwarded to the SEIP Office, or certifying body

- **responding** to candidate queries and concerns such as re-assessment procedures
- **reconfiguring** workplace simulations so that candidates with disabilities are able to participate fully and without impediment
- **working** closely with the SEIP contact to ensure a successful assessment event

Roles and Responsibilities of Candidate

Prior to the assessment, you will have studied and become familiar with the Competency Standard for your industry.

1. Initially, you will be given information on the task you are to perform, and the estimated time you will require to perform it. These tasks are based on the critical aspects of competency related to the performance criteria within the approved Competency Standard.

Given the necessary instructions, and/or a task-related spec and the necessary tools, materials, and equipment, you will carry out and complete a work task. You will observe that there is:

- Sufficient space for working- square meters of work space enough for task to be carried out effectively and safely
- Fire extinguisher and safety equipment within reach if necessary
- Emergency procedures in place
- All necessary tools, equipment, and materials ready at hand
- All necessary machinery in good working order

2. Assessment is drawn and extracted from the relevant Unit of Competency based on the approved Competency Standard and on an Evidence plan (proof of competence) developed by the Assessor that clearly focuses on critical aspects of competency. The Evidence plan will be based on critical assessment tools such as demonstration/task; observation; oral questions.

3. The duration of time to assess the demonstration should be clearly indicated, for example, 3 hours. This information will be given to you along with other pertinent information such as the procedure or sequence of tasks that you must follow. It is important to note that you will be closely observed and assessed throughout the duration of your demonstration. You will be given time to ask questions and request clarification. You will also be given 10 minutes to familiarize yourself with the resources to be used in the assessment.

4. Based on your performance in demonstrating the task, you will be assessed by the Assessor to be Competent or Not Yet Competent. Regardless of the result you will be given feedback from the Assessor on your performance and the next steps.

5. After you have performed the task, the Assessor will provide feedback to you on your performance.

6. The responsibility on finally deciding whether or not you are Competent or Not Yet Competent belongs to the accredited Assessor.

7. At the conclusion of the assessment, the Assessor will provide feedback on whether or not you have been assessed to be **Competent** or **Not Yet Competent**. Both your signatures will be required on the Assessment Form. You will also be allowed to make comments on the Assessor's decision. The Assessor will then share information on next steps. These next steps include where to obtain the certificate related to the successful assessment or, if unsuccessful, how to re-try for competency within a specified period of time.

Section Three: Tools and Templates

This toolbox of Tools and Templates offers a wide range of assessment tools that will facilitate evidence gathering and other assessment-related needs. Evidence gathering, however, should not be limited to these tools and templates alone. The toolbox should be revised or expanded as necessary, to include other tools and templates that are deemed relevant.

- Demonstration Checklist
- Observation Checklist
- Oral Questions Checklist
- Evidence Plan (Overall Summary)
- Assessor Job Sheet and Specifications (Spec) Form
- Competency Assessment Results
- Assessor Planning Checklist Tool
- All About Questioning Techniques for Use in Assessment
- Quick Guide to Conducting Competency Assessments
- Assessor's Quick Start

Demonstration Checklist

Candidate's name:			
Assessor's name:			
Qualification:			
Project-Based Assessment Title			
Units of competency covered:			
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
•	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observation Checklist

Candidate's name:		
Assessor's name:		
Date of Assessment:		
Unit of Competency:		
Code:		
Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist

Candidate's name:	
Assessor's name	
Date of Assessment:	
Assessment Venue:	
Unit of Competency:	
Reference Standard:	

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for competent/non yet competent.

List of Questions	Satisfactory Response
-------------------	-----------------------

Indicate Y or N in the box provided	YES	NO
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

Feedback to Candidate:

Candidate's overall performance was (circle):	Satisfactory	Not Satisfactory
The Candidate's underpinning knowledge was (circle):	Satisfactory	Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

EVIDENCE PLAN: Overall Summary

QUALIFICATION:				
Project-Based Assessment Title				
Units of competency covered				
Ways in which evidence will be collected: [tick the column]	Observation with Questioning	Demonstration with Questioning	Written Examination	Portfolio
The evidence must show that the candidate				
•				
•				
•				
•				
•				
•				
•				
•				
•				
•				
•				
•				
•				
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•				
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•				
•				

Assessor Job Sheet and Specifications (Spec) Form

This Spec is in reference to the _____ Standard, and has been developed by an Industry Representative/Assessor.

The Result* indicates either C for Competent, or NYC for Not Yet Competent.

Unit of Competency	Elements Reviewed	Critical Aspects of Competency Covered	Result*: C/NYC

JOB #1 Procedure for Developing Specification (Spec): List the steps involved in performing the task/spec successfully. It will cover, in logical order, the critical aspects of competency listed above that will determine if the candidate is **Competent** or **Not Yet Competent**.

1.	
2.	
3.	
4.	
5.	

Tools and Equipment Required for Spec completion: List all tools, equipment, and materials required in completing Job #1:

Tools	Equipment	Materials

Assessor Name:

Date:

Competency Assessment Results

Candidate's name:	
Assessor's name	
Qualification Title:	
Date of Assessment:	
Assessment Venue:	
Reference Standard:	
Unit of Competency:	

Assessment Unit	Competent	Not Yet Competent

Assessor's Recommendation and Comments:

Overall Assessment:

Yes: The Candidate successfully met the required evidence/standards and demonstrated all of the competencies necessary for certification in the Qualification and Units of Competency listed above.

No: The Candidate did not meet the evidence requirements. Re-assessment is recommended.

Assessor Signature:	Date:
Candidate Signature:	Date:
Assessment Center Manager Signature:	

ASSESSMENT PLANNING CHECKLIST TOOL

Assessor's name:	
Date:	

Directions: Circle the 'Yes' or 'No' response to each item.

1.	The Assessor is familiar with the unit(s) of competency being assessed	Yes	No
2.	The Assessor has verified that the workplace or training center has the correct equipment, machinery, tools, and materials necessary to complete all of the relevant aspects of the unit of competency	Yes	No
3.	The Assessor has ensured that all materials and equipment were assembled and arranged in advance.	Yes	No
4.	The Assessor has all the necessary tools, templates, and specifications needed to assess the trainee including a variety of assessment tools covering practical demonstration, observation, oral question, and (where necessary) written tests relevant to the competency specified in the standard	Yes	No
5.	The Assessor has met with the trainer prior to the assessment event to discuss his/her role.	Yes	No
6.	The Assessor will discuss the performance test with the trainee and address any concerns prior to giving the test	Yes	No
7.	The Assessor will discuss and record with the trainee the results of their performance	Yes	No

Action to be taken on "No" responses:

General Guidelines for Effective Questioning

- Keep questions short and focused on one key concept
- Ensure that questions are structured
- Test the questions to check that they are not ambiguous
- Use `open-ended questions such as `what if...?' and `why...?' questions, rather than closed questions
- Keep questions clear and straight forward and ask one at a time
- Use words that the candidate is able to understand
- Look at the candidate when asking questions
- Check to ensure that the candidate fully understands the questions
- Ask the candidate to clarify or re-phrase their answer if the assessor does not understand the initial response
- Confirm the candidate's response by repeating the answer back in his/her own words
- Encourage a conversational approach with the candidate when appropriate, to put him or her at ease
- Use questions or statements as prompts for keeping focused on the purpose of the questions and the kind of evidence being collected
- Use language at a suitable level for the candidate
- Listen carefully to the answers for opportunities to find unexpected evidence
- Follow up responses with further questions, if useful, to draw out more evidence or to make links between knowledge areas
- Compile a list of acceptable responses to ensure reliability of assessments

Recording responses

When using oral questioning, you may need a tool that has a structured approach (see below) and also enables you to record a candidate's responses. If the candidate's response is insufficient the assessor should record why on the recording sheet or checklist. This provides information that can be used later, if necessary, to explain to the candidate where he or she needs to develop their skills and/or knowledge to achieve the required competence.

Recording sheet for oral questioning (template)

Candidate's Name		
Assessor or Observer's Name		
Unit of Competency)		
Code		
Date of Assessment		
Location		
Task/Procedure		
Questions to be Answered by candidate	Response/Answer*	Satisfactory (Yes/No)
What would you do if ...		
What would you do if ...		
What would you do if ...		
How do you ...		
What are ...		
Why did you... (Clarification)		
Follow up Questions		
The candidate's knowledge was:	Satisfactory Unsatisfactory	
Feedback to candidate:		
Candidate signature:	Date:	
Assessor/Observer's Signature:	Date:	

ASSESSOR GUIDE TO CONDUCTING COMPETENCY ASSESSMENTS

1. BEFORE THE ASSESSMENT	2. DAY OF ASSESSMENT	3. DURING THE ASSESSMENT	4. POST ASSESSMENT
<p>- Review unit(s) of competency to be assessed especially evidence to be collected against performance criteria</p> <p>- Ensure the workplace or training center complies with all safety requirements and that high risk areas are clearly marked</p> <p>- Identify/request essential assessment resources:</p> <ul style="list-style-type: none"> • tools and equipment • supplies and materials • personal protective equipment • print resources and rating sheets • Have trainees contacted if they have to bring any resources for the assessment, e.g. logbook 	<p>-Verify attendance through signed attendance sheet</p> <p>- Provide overview of what is to happen throughout day</p> <p>Orient the trainees to:</p> <ul style="list-style-type: none"> • purpose of assessment • qualification to be assessed • assessment procedures to be followed • address needs of trainees and provide information on evidence requirements and assessment process • make all announcements just before start of assessment 	<p>Give clear instructions to trainees on what they are required to do:</p> <ul style="list-style-type: none"> • time limits and expectations • all equipment and tools must be of the same quality for all trainees • written and verbal instructions translated into local dialects as needed • encourage questions • avoid providing any assistance to trainees during assessment • stop process if accident imminent • keep focused on evidence being valid, reliable, fair, flexible, and safe • Record details of evidence collected 	<p>Provide feedback on outcome of assessment process re:</p> <ul style="list-style-type: none"> • give clear feedback on assessment decision • provide information on overcoming any gaps in competency assessment • provide opportunity to discuss assessment process and outcome <p>Prepare required assessment reports:</p> <ul style="list-style-type: none"> • all rating sheets signed by trainee as well as Assessor • maintain records of assessment procedures, evidence collected, and assessment outcome • verify assessment results/outcomes with training center <p>Prepare</p> <p>recommendations for issuance of national certificate</p>

Assessor's Quick Start

1. Identify the Unit(s) of Competency from the Program Standard that you are going to assess.

2. Review the Critical Aspects of Competency from the Unit of Competency that will be the basis of your Evidence Guide.
3. Select the Assessment Tools that you will use to gather evidence.
 - i. Demonstration Checklist
 - ii. Observation Checklist
 - iii. Oral Questions Checklist
4. Create spec sheet(s) for the Unit of Competency to be examined.
5. Review the assessment procedure with the Candidate and ask if there are any questions.
6. Complete the assessment using the assessment tools in the order above. You are free to use other tools as well if you wish.
7. Determine whether Candidate is **Competent** or **Not-Yet-Competent**
8. Complete all necessary record sheets.
9. Give feedback to the Candidate.

Demonstration Checklist: Perform Preparation Works

Candidate's name:	
Assessor's name:	
Qualification:	Steel Binding and Fabrication
Project-Based Assessment Title	

Units of competency covered:	Perform Preparation Works		
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
1. Obtain details of job assignment/spec	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Identify re-bar materials from design specifications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Arrange work area in accord with OH&S guidelines and work requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Remove unused/excess materials and debris in keeping with workplace procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Identify required hand tools, equipment, and gather in preparation for work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Check hand tools, equipment, and PPEs for usability as per Manufacturer's instruction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Maintain hand tools, equipment, and store in compliance with OH&S requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observation Checklist: Perform Preparation Works

Candidate's name:	
Assessor's name:	
Date of Assessment:	
Unit of Competency:	Perform Preparation Works
Code:	SEIP-CON-STE-1-0

Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1. Obtain details of job assignment/spec		
2. Identify re-bar materials from design specifications		
3. Arrange work area in accord with OH&S guidelines and work requirements		
4. Remove unused/excess materials and debris in keeping with workplace procedures		
5. Identify required hand tools, equipment, and gather in preparation for work		
6. Check hand tools, equipment, and PPEs for usability as per Manufacturer's instruction		
7. Maintain hand tools, equipment, and store in compliance with OH&S requirements		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist: Perform Preparation Works

Candidate's name:	
Assessor's name:	
Date of Assessment:	

Assessment Venue:	
Unit of Competency:	Perform Preparation Works
Reference Standard:	Steel Binding and Fabrication

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for Competent/Not Yet Competent designation.

List of Questions	Satisfactory Response
-------------------	-----------------------

Indicate Y or N in the box provided	YES	NO
1. What would happen if design specs were not available for re-bar materials?		
2. How important is it to be able to dispose of waste materials?		
3. Why is it important to read OH&S guidelines and procedures?		
4. How important are techniques for organizing the workplace?		
5. Is a commitment to health and safety important?		
6. What is involved in keeping tools well-maintained?		
7. What methods do you use to advise superiors of unsafe work conditions?		
8. What technique can you recommend to work well with others?		

Feedback to Candidate:

The Candidate's overall performance was (circle): Satisfactory/ Not Satisfactory

The Candidate's underpinning knowledge was (circle): Satisfactory/ Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

Demonstration Checklist: Perform Fabrication Works

Candidate's name:	
Assessor's name:	

Qualification:	Steel Binding and Fabrication		
Project-Based Assessment Title			
Units of competency covered:	Perform Fabrication Works		
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
1. Measure and mark steel re-bars precisely	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Cut steel re-bars using appropriate cutting tools/equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Install bending forms/jigs in accord with specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Bend main steel bars manually in accord with required bar shape/quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Bend main steel bars using bending machine in accord with required shape/quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Bend stirrups manually in accord with required shape/quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Bend stirrups using bending machine in accord with required shape/quantity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Clean tools and equipment in accord with workplace requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observation Checklist: Perform Fabrication Works

Candidate's name:	
Assessor's name:	
Date of Assessment:	

Unit of Competency:	Perform Fabrication Works	
Code:	SEIP-CON-STE-2-0	
Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1. Measure and mark steel re-bars precisely		
2. Cut steel re-bars using appropriate cutting tools/equipment		
3. Install bending forms/jigs in accord with specs		
4. Bend main steel bars manually in accord with required bar shape/quantity		
5. Bend main steel bars using bending machine in accord with required shape/quantity		
6. Bend stirrups man in accord with required shape/quantity		
7. Bend stirrups using bending machine in accord with required shape/quantity		
8. Clean tools and equipment in accord with workplace requirements		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist: Perform Fabrication Works

Candidate's name:	
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Assessor's name:	
Date of Assessment:	
Assessment Venue:	
Unit of Competency:	Perform Fabrication Works
Reference Standard:	Steel Binding and Fabrication

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for Competent/Not Yet Competent designation.

List of Questions	Satisfactory Response
-------------------	-----------------------

Indicate Y or N in the box provided	YES	NO
1. What would happen if the steel re-bars were not measured precisely?		
2. How important is it to be able to read specs well?		
3. Why is it important to select the proper method/equipment for bending steel bars?		
4. How important are techniques cutting steel bars?		
5. Is a commitment to health and safety important?		
6. What is involved in maintaining tools and equipment?		
7. What methods do you use to communicate with others on the job?		
8. What technique can you recommend to keep mindful of environmental requirements?		

Feedback to Candidate:

The Candidate's overall performance was (circle): Satisfactory/ Not Satisfactory

The Candidate's underpinning knowledge was (circle): Satisfactory/ Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

Demonstration Checklist: Perform Assembly of Prefabricated Steel Works

Candidate's name:			
Assessor's name:			
Qualification:	Steel Binding and Fabrication		
Project-Based Assessment Title			
Units of competency covered:	Perform Assembly of Prefabricated Steel Works		
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
1. Carry out assembly of re-bars in accord with OHS requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Prepare and assemble metal/wooden supports for main/vertical bars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Select size of main/vertical bars and lateral ties based on structural plan, design specs, and relevant local/international codes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Fix main/vertical bars in position by lateral ties in accord with column design plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Determine spacing of main/vertical bars and lateral ties in accord with design specs and relevant local/international codes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Affix welded lateral ties to hold main/vertical bars firmly to designated position	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Dispose of excess materials and debris properly and ensure work area is clean in compliance with OHS requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observation Checklist: Perform Assembly of Prefabricated Steel Works

Candidate's name:	
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Assessor's name:		
Date of Assessment:		
Unit of Competency:	Perform Assembly of Prefabricated Steel Works	
Code:	SEIP-CON-STE-3-0	
Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1. Carry out assembly of re-bars in accord with OHS requirements		
2. Prepare and assemble metal/wooden supports for main/vertical bars		
3. Select size of main/vertical bars and lateral ties based on structural plan, design specs, and relevant local/international codes		
4. Fix main/vertical bars in position by lateral ties in accord with column design plan		
5. Determine spacing of main/vertical bars and lateral ties in accord with design specs and relevant local/international codes		
6. Affix welded lateral ties to hold main/vertical bars firmly to designated position		
7. Dispose of excess materials and debris properly and ensure work area is clean and in compliance with OHS requirements		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist: Perform Assembly of Prefabricated Steel Works

Candidate's name:	
Assessor's name:	
Date of Assessment:	
Assessment Venue:	
Unit of Competency:	Perform Assembly of Prefabricated Steel Works
Reference Standard:	Steel Binding and Fabrication

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for Competent/Not Yet Competent designation.

List of Questions	Satisfactory Response	
	YES	NO
Indicate Y or N in the box provided		
1. What would happen if local and international construction codes were not followed?		
2. How important is it to be able to determine the appropriate spacing of main/vertical bars and lateral ties?		
3. Why is it important to keep a clean work area?		
4. How important are techniques for assembling re-bars?		
5. Is a commitment to health and safety important?		
6. What is involved in properly disposing of waste and debris?		
7. What methods do you use to ensure the main/vertical bars are held in position?		
8. What technique can you recommend when assembling metal/wooden supports for main/vertical bars?		

Feedback to Candidate:

The Candidate's overall performance was (circle): Satisfactory/ Not Satisfactory

The Candidate's underpinning knowledge was (circle): Satisfactory/ Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

Demonstration Checklist: Perform Steel Re-Bar Installation Works

Candidate's name:			
Assessor's name:			
Qualification:	Steel Binding and Fabrication		
Project-Based Assessment Title			
Units of competency covered:	Perform Steel Re-Bar Installation Works		
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
1. Correct misalignment of initial re-bar in accord with approved structural plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Select scaffolding components and inspect for damage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Assemble lifting device and install where specified	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Locate and position reinforcement bars in accord with structural drawings and specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Install and secure lateral ties/stirrups in place using proper method	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Join main re-bars using appropriate splicing method in accord with relevant code requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Bend steel reinforcements for slabs according to design drawings and specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Position slab reinforcements and fix in place in accord with design specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Check depth of coverage, clearance, spacing, and overlap of reinforcement materials in accord with structural drawings/job specs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Dismantle scaffolding in accord with workplace procedure and OHS requirements			

Observation Checklist: Perform Steel Re-Bar Installation Works

Candidate's name:	
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Assessor's name:		
Date of Assessment:		
Unit of Competency:	Perform Steel Re-Bar Installation Works	
Code:	SEIP-CON-STE-4-0	
Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1. Correct misalignment of initial re-bar in accord with approved structural plan		
2. Select scaffolding components and inspect for damage		
3. Assemble lifting device and install where specified		
4. Locate and position reinforcement bars in accord with structural drawings and specs		
5. Install and secure lateral ties/stirrups in place using proper method		
6. Join main re-bars using appropriate splicing method in accord with relevant code requirements		
7. Bend steel reinforcements for slabs according to design drawings and specs		
8. Position slab reinforcements and fix in place in accord with design specs		
9. Check depth of coverage, clearance, spacing, and overlap of reinforcement materials in accord with structural drawings/job specs		
10. Dismantle scaffolding in accord with workplace procedure and OHS requirements		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist: Perform Steel Re-Bar Installation Works

Candidate's name:	
Assessor's name:	
Date of Assessment:	
Assessment Venue:	
Unit of Competency:	Perform Steel Re-Bar Installation Works
Reference Standard:	Steel Binding and Fabrication

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for Competent/Not Yet Competent designation.

List of Questions	Satisfactory Response	
	YES	NO
Indicate Y or N in the box provided		
1. What could happen if scaffolding were dismantled haphazardly?		
2. How important is it to be able to read structural drawings and specs?		
3. Why is it important to use proper splicing methods?		
4. How important are bending steel reinforcement techniques?		
5. Is a commitment to health and safety important?		
6. What is involved in checking depth of coverage, clearance, spacing, and overlap of reinforcement materials?		
7. What methods do you use to assemble a lifting device?		
8. What technique can you recommend to install and secure lateral ties/stirrups in place?		

Feedback to Candidate:

The Candidate's overall performance was (circle): Satisfactory/ Not Satisfactory

The Candidate's underpinning knowledge was (circle): Satisfactory/ Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

Demonstration Checklist: Perform Basic Construction Levelling Procedures

Candidate's name:			
Assessor's name:			
Qualification:	Steel Binding and Fabrication		
Project-Based Assessment Title			
Units of competency covered:	Perform Basic Construction Levelling Procedures		
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
1. Select tools and equipment while checking for serviceability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Identify/apply environmental protection requirements according to proper regulations and protection plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify correct heights or levels to be established from project plans or instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Test and use levelling devices in accord with standard operating procedures and manufacturer's guidelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Measure levels and heights transferred to required location and record consistent with job requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Ensure tools and equipment properly stored in accord with manufacturer's specs and standard workplace practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observation Checklist: Perform Basic Construction Levelling Procedures

Candidate's name:	
Assessor's name:	

Date of Assessment:		
Unit of Competency:	Perform Basic Construction Levelling Procedures	
Code:	SEIP-CON-STE-5-0	
Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1. Select tools and equipment while checking for serviceability		
2. Identify/apply environmental protection requirements according to proper regulations and protection plans		
3. Identify correct heights or levels to be established from project plans or instructions		
4. Test and use levelling devices in accord with standard operating procedures and manufacturer's guidelines		
5. Measure levels and heights transferred to required location and record consistent with job requirements		
6. Ensure tools and equipment properly stored in accord with manufacturer's specs and standard workplace practices		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist: Perform Basic Construction Levelling Procedures

Candidate's name:	
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Assessor's name:	
Date of Assessment:	
Assessment Venue:	
Unit of Competency:	Perform Basic Construction Levelling Procedures
Reference Standard:	Steel Binding and Fabrication

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for Competent/Not Yet Competent designation.

List of Questions	Satisfactory Response	
	YES	NO
Indicate Y or N in the box provided		
1. What would happen if environmental protection requirements were ignored?		
2. How important is it to be able to have emergency procedures in place?		
3. Why is it important to store tools and equipment properly?		
4. How important is the ability to work as a team member?		
5. Is a commitment to health and safety important?		
6. What is involved in measuring levels and heights?		
7. What methods do you use to test levelling devices?		
8. What technique can you recommend to ensure tidiness and timeliness in your work crew?		

Feedback to Candidate:

The Candidate's overall performance was (circle): Satisfactory/ Not Satisfactory

The Candidate's underpinning knowledge was (circle): Satisfactory/ Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date:

Demonstration Checklist: Perform Formworks Installation

Candidate's name:	
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Assessor's name:			
Qualification:	Steel Binding and Fabrication		
Project-Based Assessment Title			
Units of competency covered:	Perform Formworks Installation		
Date of assessment:			
Time of assessment:			
Instructions for demonstration			
Please see attached Instruction for Demonstration (Candidate/Assessor)			
Supplies and Materials ▪ Please refer to attached specific instruction	Tools and equipment • Please refer to attached specific instruction		
	✓ to show if evidence is demonstrated		
During the demonstration of skills, did the candidate:	Yes	No	N/A
1. Identify/implement signage/barricade requirements in accord with safety and workplace regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Check tools and equipment for serviceability, notifying Superior if needing replacement prior to work commencement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Select formwork components and materials consistent with job requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Install formwork components and panels in accord with specified tolerance requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Secure proper connectors, braces, locks, bolts, and nuts for plastic forms as per job requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Repair and replace damaged formworks in accord with job requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Prepare work report in accord with company rules and regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Perform housekeeping duties consistent with OHS site safety regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Observation Checklist: Perform Formworks Installation

Candidate's name:	
Assessor's name:	

Date of Assessment:		
Unit of Competency:	Perform Formworks Installation	
Code:	SEIP-CON-STE-6-0	
Name of Workplace/Training Center		
Procedure to Follow:	Observe Candidate's performing the task, and following the spec- if a spec is provided	
During the demonstration of skills, did the Candidate do the following (List steps that reflect critical aspects of competency from performance criteria of Unit of Competency):		
	YES	NO
1. Identify/implement signage/barricade requirements in accord with safety and workplace regulations		
2. Check tools and equipment for serviceability, notifying Superior if needing replacement prior to work commencement		
3. Select formwork components and materials consistent with job requirements		
4. Install formwork components and panels in accord with specified tolerance requirements		
5. Secure proper connectors, braces, locks, bolts, and nuts for plastic forms as per job requirements		
6. Repair and replace damaged formworks in accord with job requirements		
7. Prepare work report in accord with company rules and regulations		
8. Perform housekeeping duties consistent with OHS site safety regulations		
Candidate's performance was:	COMPETENT	NOT YET COMPETENT
Feedback to Candidate:		
Candidate's Signature:		Date:
Assessor's Signature:		Date:

Oral Questions Checklist: Perform Formworks Installation

Candidate's name:	
Assessor's name:	

Date of Assessment:	
Assessment Venue:	
Unit of Competency:	Perform Formworks Installation
Reference Standard:	Steel Binding and Fabrication

The List of Questions below must be pegged to the competency demonstration test and may involve related specs for each Unit of Competency tested. Underpinning skills for Knowledge may also be reviewed for Competent/Not Yet Competent designation.

List of Questions	Satisfactory Response	
	YES	NO
Indicate Y or N in the box provided		
1. What could happen if damaged formworks were not replaced?		
2. Why is it important to be able to communicate well with others?		
3. Why is it important to conduct a worksite inspection?		
4. How important are housekeeping duties?		
5. Is a commitment to health and safety really that important given work deadlines?		
6. What is involved in preparing a work report?		
7. What methods do you use to ensure the specified tolerance requirements are met for formwork components?		
8. What technique can you recommend to install form panels?		

Feedback to Candidate:

The Candidate's overall performance was (circle): Satisfactory/ Not Satisfactory

The Candidate's underpinning knowledge was (circle): Satisfactory/ Not Satisfactory

Assessor Signature:	Date:
Candidate Signature:	Date: