



**NATIONAL COMPETENCY STANDARDS  
FOR  
CONSTRUCTION ASSISTANT  
(NC1)**

**Department of Occupational Standards  
Ministry of Labour and Human Resources  
Thimphu, Bhutan.  
(February, 2016)**



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## FOREWORD

The Department of Occupational Standards of the Ministry of Labour and Human Resources is pleased to present the National Competency Standards (NCSs) for Construction Assistant. The standards represent the fruits of hard work and invaluable experiences gained by the department since its establishment in the latter half of 2003. The main aim of developing NCS is to set up a well-defined nationally recognized Vocational Qualification System that will help set a benchmark for the Technical Vocational Education and Training (TVET) System in our country aligned to international best practices.

NCS is one of the base pillars in the Bhutan Vocational Qualification Framework (BVQF) and is the first step in its implementation. The NCS are developed and revised to ensure that employees or vocational graduates possess and acquire the desired competencies required by industries and employers. In order to ensure this close match in supply and demand of competencies, NCS have been developed and revised in close consultation and partnership with industry experts and validated by the Technical Advisory Committees of the concerned economic sectors.

A vocational education and training system based on NCS shall ensure that delivered training is of a high quality and relevant to the needs of the labour market. As a result, future TVET graduates will be better equipped to meet the need and expectations of industries and employers. This positive impact on the employability of TVET graduates will enhance the reputation of vocational education and training and make it attractive to school leavers.

I gratefully acknowledge collaboration and the valuable contributions made by experts from industries during the consultation and validation processes of the standards. I look forward for continued engagement and participation of the industry and employers in the development of a quality assured demand driven TVET system and to build competent and productive national workforce that will contribute to the continued socio-economic progress of our country.

Director  
Department of Occupational Standards  
Ministry of Labour and Human Resources

## INTRODUCTION

### A. National Competency Standards (NCS)

The National Competency Standards specify the skill, knowledge and attitudes applied to a particular occupation. Standards also specify the standards or criteria of performance of a competent worker and the various contexts in which work may take place. Standards provide explicit advice to assessors regarding the skill and knowledge to be demonstrated by candidates seeking formal recognition either following training or through work experience.

#### **Purpose of National Competency Standards**

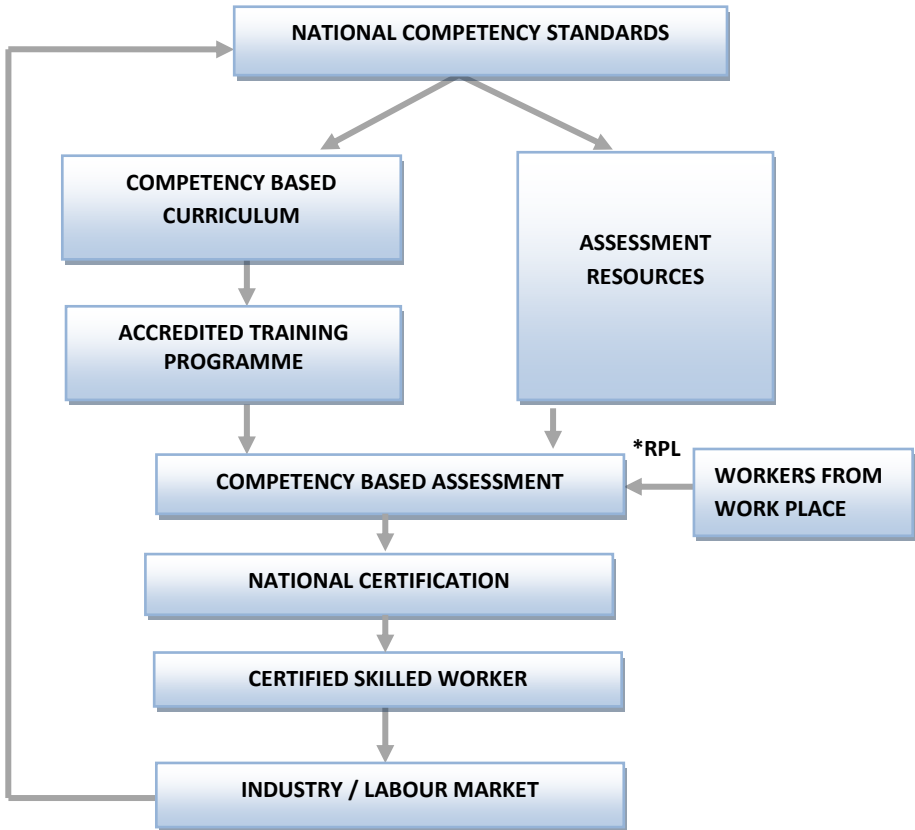
National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the competencies to be included in curriculum.
- Providing specifications to assessment resource developers about the competencies within an occupation to be demonstrated by candidates.
- Providing advice to industry/employers about job functions, which in turn can be used for the development of job descriptions, performance appraisal systems and work flow analysis.

## B. Bhutan Vocational Qualifications Framework (BVQF)

Bhutan Vocational Qualifications Framework is an agreed system of Assessing, Certifying and Monitoring nationally recognized qualifications for all learning in the TVET sector against national competency standards, in training institutions, in the workplace, in schools or anywhere where learning takes place.

### Components of the Bhutan Vocational Qualifications Framework (BVQF)



\* RPL = Recognition of Prior Learning

## BVQF Levels

The Bhutan Vocational Qualifications Framework has three levels classified based on the competency of the skilled workers. The three levels are:

- National Certificate Level 3 (NC III)
- National Certificate Level 2 (NC II)
- National Certificate Level 1 (NC I)

## BVQF Level Descriptors

The qualification levels are decided based on level descriptors. The detail of the qualification level descriptor is as follows:

### National Certificate Level 1

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"><li>• Are narrow in range.</li><li>• Are established and familiar.</li><li>• Offer a clear choice of routine responses.</li><li>• Involve some prioritizing of tasks from known solutions.</li></ul>	<ul style="list-style-type: none"><li>• Basic operational knowledge and skill.</li><li>• Utilization of basic available information.</li><li>• Known solutions to familiar problems.</li><li>• Little generation of new ideas.</li></ul>	<ul style="list-style-type: none"><li>• In directed activity.</li><li>• Under general supervision and quality control.</li><li>• With some responsibility for quantity and quality.</li><li>• With no responsibility for guiding others.</li></ul>

## National Certificate Level 2

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> <li>• Require a range of well-developed skills.</li> <li>• Offer a significant choice of procedures requiring prioritization.</li> <li>• Are employed within a range of familiar context.</li> </ul>	<ul style="list-style-type: none"> <li>• Some relevant theoretical knowledge.</li> <li>• Interpretation of available information.</li> <li>• Discretion and judgments.</li> <li>• A range of known responses to familiar problems</li> </ul>	<ul style="list-style-type: none"> <li>• In directed activity with some autonomy.</li> <li>• Under general supervision and quality checking.</li> <li>• With significant responsibility for the quantity and quality of output.</li> <li>• With some possible responsibility for the output of others.</li> </ul>

## National Certificate Level 3

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> <li>• Requires a wide range of technical or scholastic skills.</li> <li>• Offer a considerable choice of procedures requiring prioritization to achieve optimum outcomes.</li> <li>• Are employed in a variety of familiar and unfamiliar contexts.</li> </ul>	<ul style="list-style-type: none"> <li>• A broad knowledge base which incorporates some theoretical concepts.</li> <li>• Analytical interpretation of information.</li> <li>• Informed judgment.</li> <li>• A range of sometimes innovative responses to concrete but often unfamiliar problems.</li> </ul>	<ul style="list-style-type: none"> <li>• In self-directed activity.</li> <li>• Under broad guidance and evaluation.</li> <li>• With complete responsibility for quantity and quality of output.</li> <li>• With possible responsibility for the output of others.</li> </ul>



## **PURPOSE**

This suite of qualification is designed for people interested in a career as a Construction Assistant.

The first and only qualification is the National Certificate Level 1 Construction Assistant. The Level 1 qualification recognizes the skills and knowledge required for people working as a construction assistant at the workplace.

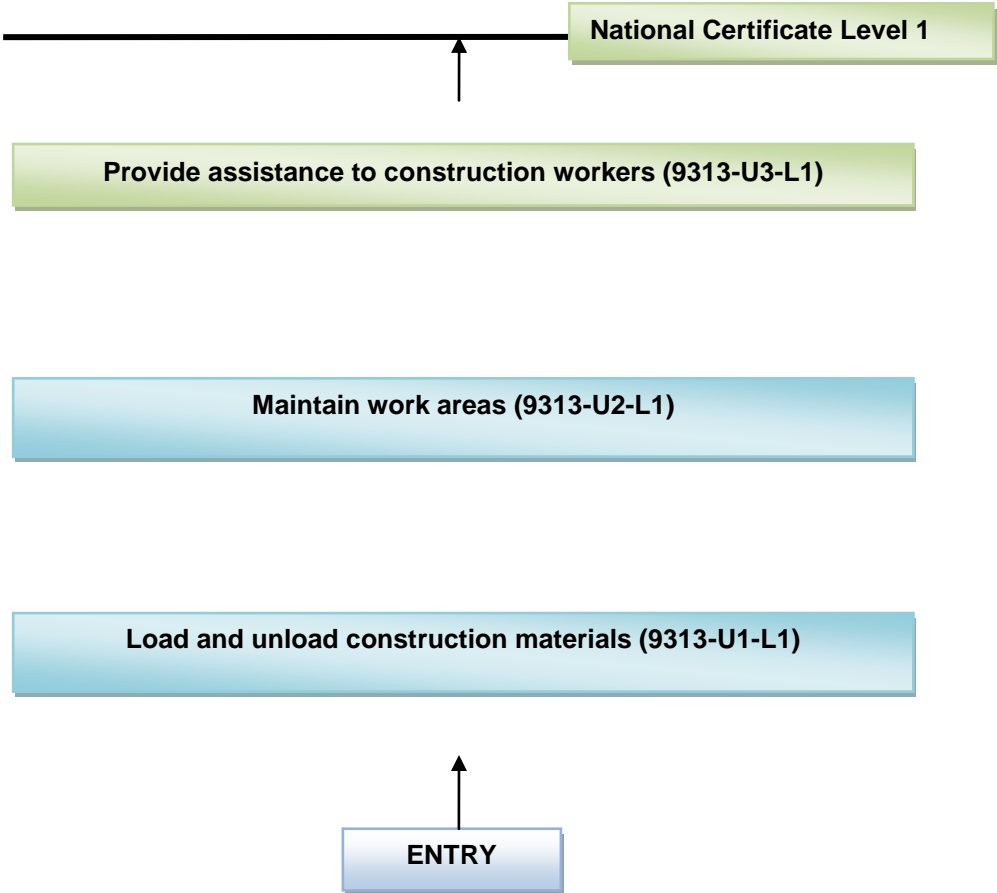
The qualification comprises of three units of Competency Standards that cover the essential knowledge and skills required in loading and unloading construction materials, maintaining work areas and providing assistance to construction workers.

The National Certificate Level 1 in construction assistant prepares workers for entry into further qualifications and can be a prerequisite for entry into the National Certificate Level 2 in Mason, Plumber, Construction carpenter or Electrician.

A diagram of the qualification pathway provided by this National Certificate is as follows.

# PACKAGING OF QUALIFICATION FOR CONSTRUCTION ASSISTANT

The National competency standard for the construction assistant comprises of three units of competencies, which are clustered into one qualification levels as shown below:



## **CODING USED FOR NATIONAL COMPETENCY STANDARDS**

The coding and classification system developed in Bhutan is logical, easy to use, and also aligned with international best practises. The Bhutanese coding and classification system is based on the International Standard Classification of Occupations, 2008 (ISCO-08) developed by the International Labour Organisation (ILO).

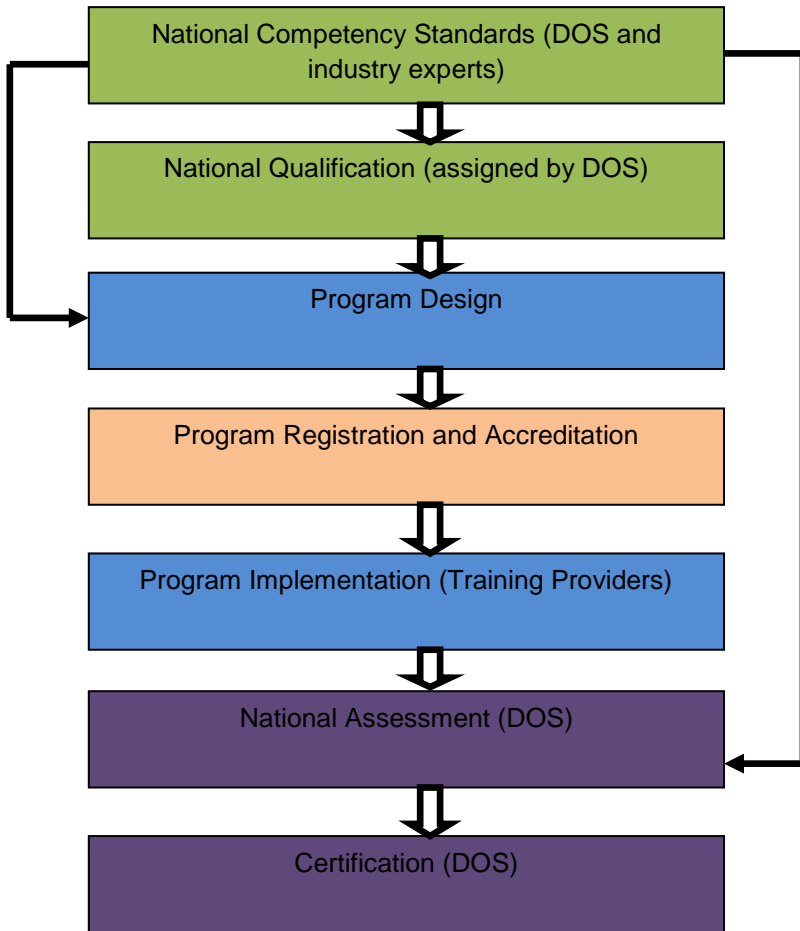
The coding of the national competency standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

Coding the individual units of competency standard is to identify the level in qualification packages to which it belongs.

While packaging, in order to follow a logical order, only competency standards related to each other and following a logical sequence in terms of training delivery, from the simple to the complex, are clustered into a qualification packages.

The ILO assigns the code 9313 to the occupation of building construction labourers. Therefore, in the Bhutan context, the occupation Construction Assistant has been assigned the code 9313 in the National Coding System. The first unit is assigned the code U1, the first Unit of Competency Standard clustered into the first qualification is designated the code 9313-U1. Levels are assigned the code L and follow a logical progression from the National Certificate Level 1 (NC 1) to the National Certificate Level 3 (NC 3). Therefore the National Certificate Level 1 is assigned the code L1. The complete unit code will be 9313-U1-L1.

## Implementation and Operational Procedures for National Competency Standards (MoLHR)



### Key:

MoLHR – Ministry of Labour and Human Resources  
DOS – Department of Occupational Standards

## **NATIONAL COMPETENCY STANDARDS FOR CONSTRUCTION ASSISTANT**

**Validation date** : 4<sup>th</sup> February 2016.

**Endorsement date** : 8<sup>th</sup> February 2016.

**Date of Review** : 8<sup>th</sup> February 2019 (Max. 3 years).

### **Technical Advisory Committee (TAC) members for the Construction Sector involved in the validation of the NCS:**

1. Tshering Wangdi 'B' (**TAC Chairperson**) Chief Engineer, Department of Roads, MoWHS, Thimphu.
2. T. R. Gurung, Executive Engineer, Construction Development Board, MoWHS, Thimphu.
3. Jamba Gyeltshen, Sr. PO, Construction Development Corporation Limited, Thimphu.
4. Karma Tshetrim, Deputy Executive Engineer, Bhutan Standards Bureau, Thimphu.
5. Ram Bdr. Rai, Info Officer, Construction Association of Bhutan, Thimphu.
6. Kinley Gyeltshen, Sr. Programme Officer, Training and Professional Services Division, Department of Human Resources, MoLHR, Thimphu.
7. Tshewang (**TAC Member Secretary**), Dy. Chief Programme Officer, Standards and Qualification Division, Department of Occupational Standards, MoLHR, Thimphu.

**Subject experts (Construction Assistants) involved during the consultation workshop to develop the NCS:**

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3. Dil Kumar Rai, CDCL, Pasakha
4. Yeshey Pema, CDCL, Pasakha
5. Dago Tshering, Chukha Construction, Chukha
6. Choeda Jamtsho, CDCL, Pasakha
7. Jigme Loday, Noryang Construction, Phuntsholing
8. Chencho Tshering, Taa Cho Construction, Phuntsholing
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Maintain work areas	<ol style="list-style-type: none"><li>1. Assist to arrange work area</li><li>2. Assist to secure work area</li></ol>	4
Provide assistance to construction workers	<ol style="list-style-type: none"><li>1. Assist mason</li><li>2. Assist plumber</li><li>3. Assist carpenter</li><li>4. Assist electrician</li></ol>	6

**CONSTRUCTION ASSISTANT  
COMPETENCY STANDARDS  
FOR  
NATIONAL CERTIFICATE LEVEL 1 (NC 1)**

<b>UNIT TITLE</b>	<b>ELEMENTS OF COMPETENCE</b>
Load and unload construction materials	<ol style="list-style-type: none"><li>1. Load construction materials</li><li>2. Unload construction materials</li></ol>
Maintain work areas	<ol style="list-style-type: none"><li>1. Clean work area</li><li>2. Secure work area</li></ol>
Provide assistance to construction workers	<ol style="list-style-type: none"><li>1. Assist mason</li><li>2. Assist plumber</li><li>3. Assist carpenter</li><li>4. Assist electrician</li></ol>



**UNIT TITLE : Load and unload construction materials**

**DESCRIPTOR :** This unit covers the competencies required to load and unload construction materials at construction sites following safety practices at all times of work operation.

**CODE : 9313-U1-L1**

<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Load construction materials	1.1 Select and use <b>personnel protective equipment</b> as per the job requirement following standard procedures. 1.2 Identify the <b>materials</b> to be loaded as per instruction following standard procedures. 1.3 Load the materials following standard procedures. 1.4 Secure the loads as per the job requirement following standard procedures. 1.5 Cover the loads as per the job requirement following standard procedures.
2. Unload construction materials	2.1 Locate the unloading location as per the instruction following standard procedures. 2.2 Arrange the unloading location as per the job requirements following standard procedures. 2.3 Unload and arrange the construction materials following standard procedures. 2.4 Cover / store the construction materials as per the job requirement following standard procedures. 2.5 Report to <b>concerned person</b> as per the establishment procedures.

## RANGE STATEMENT

### Personal protective equipment (PPE) may include but not limited to:

- Gloves
- Safety shoes
- Goggles
- Company dress
- Mask

### Materials may include but not limited to:

- Masonry materials
- Plumbing materials
- Carpentry materials
- Electrical materials

### Concerned person may include but not limited to:

- Site supervisor
- Store in charge
- Engineer

## ASSESSMENT GUIDE

### Form of assessment

- Continuous assessment together with collected evidence of performance will be used.
- Evidence of the performance shall be based on practical demonstration.
- Knowledge can be accessed through diagrams, in writing or orally (viva-voce).

### Assessment context

- Competency may be assessed in the actual work place or in a simulated workplace setting.

### Assessment condition

- The candidate shall have access to all required tools, equipment, materials and documents.
- The candidate must complete the assessment in industry accepted time frame.

### Critical aspects

- Demonstrating compliance with safety regulation applicable to work site operation.

- Securing the loads as per the job requirement following standard procedures.
- Reporting to concerned person as per the establishment procedures.

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> <li>• Occupational Health and Safety (OHS) Regulations</li> <li>• Establishment procedures</li> <li>• Basic first aid</li> <li>• Basic construction materials</li> <li>• Basic calculations</li> <li>• Positive work values</li> <li>• Loading methods</li> </ul>	<ul style="list-style-type: none"> <li>• Team Work</li> <li>• Communication</li> <li>• Interpersonal relationship</li> <li>• Problem solving</li> <li>• Safe handling of materials</li> <li>• Physical fitness</li> </ul>

**UNIT TITLE** : **Maintain work areas**

**DESCRIPTOR** : This unit covers the competencies required to arrange and secure work areas following safety practices at all times of work operation.

**CODE** : **9313-U2-L1**

<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Assist to arrange work area	1.1 Select and use <b><i>cleaning tools and materials</i></b> as per the job requirement following standard procedures. 1.2 Select and use <b><i>PPE</i></b> as per the job requirement following standard procedures. 1.3 Prepare work area following standard procedures. 1.4 Clean work area as per the job requirement following standard procedures.
2. Assist to secure work area	2.1 Place safety signs as per the instructions following standard procedures. 2.2 Barricade the work area as per the job requirements following standard procedures. 2.3 Direct traffic as per the job requirement following standard procedures.

<b>RANGE STATEMENT</b>
<b>Cleaning tools and materials may include but not limited to:</b> <ul style="list-style-type: none"><li>• Broom</li><li>• Water</li><li>• Mopping materials</li></ul>
<b>Personal protective equipment (PPE) may include but not limited to:</b> <ul style="list-style-type: none"><li>• Hand gloves</li><li>• Company dress</li><li>• Safety shoes</li><li>• Goggles</li></ul>

## ASSESSMENT GUIDE

### Form of assessment

- Continuous assessment together with collected evidence of performance will be used.
- Evidence of the performance shall be based on practical demonstration.
- Knowledge can be accessed through diagrams, in writing or orally (viva-voce).

### Assessment context

- Competency may be assessed in the actual work place or in a simulated workplace setting.

### Assessment condition

- The candidate shall have access to all required tools, equipment, materials and documents.
- The candidate must complete the assessment in industry accepted time frame.

### Critical aspects

- Following health and safety practices at workplace
- Arranging work area following standard procedures
- Placing safety signs as per the instructions following standard procedures

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"><li>• Establishment procedures</li><li>• Occupational health and safety</li><li>• Safety signs</li><li>• Types of barricades</li><li>• Positive work values</li></ul>	<ul style="list-style-type: none"><li>• Team work</li><li>• Communication</li><li>• Negotiation</li><li>• Handling of tools and equipment</li><li>• Problem solving</li></ul>

**UNIT TITLE : Provide assistance to construction workers**

**DESCRIPTOR :** This unit covers the competencies required to provide assistance in maintaining construction tools & equipment, assistance to mason, plumber, carpenter and electrician at work site following safety practices at all times of work operation.

**CODE : 9313-U3-L1**

<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Assist to maintain tools and equipment	1.1 Clean the tools as per the job requirement following standard procedures 1.2 Clean equipment as per the job requirement following standard procedures. 1.3 Lubricate / grease the tools & equipment as per the job requirement following standard procedures 1.4 Store tools as per the job requirement following establishment procedures.
2. Assist mason	2.1 Assist to erect scaffolding as per the job requirement 2.2 Assist to construct shuttering and form works as per the job requirement 2.3 Dismantle scaffolds / form works/shuttering as per the job requirement following standard procedures. 2.4 Transport construction materials to work site as per the job requirement following standard procedures 2.5 Prepare <b>mixtures</b> as per the instruction following standard procedures 2.6 <b>Prepare surfaces</b> for plastering and flooring work as per the job requirement following standard procedures

	2.7	Assist to bend and bind bar as per the job requirement.
	2.8	Cure concrete surfaces as per the job requirement following standard procedures
3. Assist plumber	3.1	Transport <b>plumbing materials</b> to work site as per the job requirement following standard procedures
	3.2	Prepare surfaces for plumbing work as per the job requirement following standard procedures
	3.3	Assist in laying, joining & fitting the pipes and fittings as per the job requirement following standard procedures
4. Assist carpenter	4.1	Transport carpentry materials to work site as per the job requirement following standard procedures.
	4.2	Assist in construction of wooden components as per the job requirements following standard procedures.
	4.3	Prepare surfaces for the installation of wooden components as per the job requirement following standard procedures.
	4.4	Assist in erecting / fixing the wooden components as per the job requirements following standard procedures
5. Assist electrician	5.1	Transport <b>electrical materials</b> to work site as per the job requirement following standard procedures
	5.2	Prepare surfaces for the electrical installation as per the job requirement following standard procedures.
	5.3	Assist in installing <b>electrical installation</b> work as per the job requirement following standard procedures

<b>RANGE STATEMENT</b>	
<b>Mixtures may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Concrete</li> </ul>	<ul style="list-style-type: none"> <li>• Motor</li> </ul>
<b>Prepare surfaces may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Chipping</li> <li>• Drilling</li> <li>• Cutting</li> </ul>	<ul style="list-style-type: none"> <li>• Cleaning</li> <li>• Trenching</li> </ul>
<b>Plumbing materials may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Pipes</li> </ul>	<ul style="list-style-type: none"> <li>• Fittings</li> </ul>
<b>Electrical materials may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Wires</li> </ul>	<ul style="list-style-type: none"> <li>• Pipes</li> </ul>
<b>Electrical installation may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Screw tightening</li> <li>• Installing fittings and fixtures</li> </ul>	<ul style="list-style-type: none"> <li>• Laying wires</li> </ul>

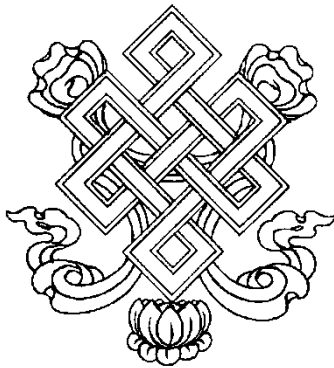
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**Critical aspects**

- Demonstrate compliance with safety regulation applicable to work site operation.
- Transporting construction materials to work site as per the job requirement following standard procedures.
- Preparing mixtures as per the instruction following standard procedures.

<b>UNDERPINNING KNOWLEDGE</b>	<b>UNDERPINNING SKILLS</b>
<ul style="list-style-type: none"><li>• Occupational Health and Safety (OHS) Regulations</li><li>• Basic First Aid</li><li>• Types and uses of personal protective equipment</li><li>• Types of materials</li><li>• Basic measurement units</li><li>• Basic calculations</li><li>• Work nature</li><li>• Positive work values</li></ul>	<ul style="list-style-type: none"><li>• Safe use of tools and equipment</li><li>• Team Work</li><li>• Communication</li><li>• Interpersonal relationship</li><li>• Problem solving</li></ul>



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