



Chargehand - Precast Erection

QP Code: CON/Q0706

Version: 2.0

NSQF Level: 4

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CON/Q0706: Chargehand - Precast Erection

Brief Job Description

The job role is responsible for lifting heavy RCC Precast units using cranes or suitable equipment and erecting them at appropriate locations as per drawings. Individuals in this job role also supervise grouting and caulking works as applicable to the precast erection operations at construction sites.

Personal Attributes

The Chargehand - precast erection is expected to be physically fit to work across various locations with varied environmental conditions. The person should be organized, diligent, methodical, safety-conscious, and a prompt decision-maker. In addition to being a team player, the individual should have good communication skills.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [CON/N0718: Lift heavy RCC precast components at construction sites](#)
2. [CON/N0719: Erect the RCC precast components at construction sites](#)
3. [CON/N0720: Conduct the activities of grouting and caulking as per specifications and requirements](#)
4. [CON/N8001: Work effectively in a team to deliver desired results at the workplace](#)
5. [CON/N8002: Plan and organize work to meet expected outcomes](#)
6. [CON/N9001: Work according to personal health, safety and environment protocols at construction site](#)

Qualification Pack (QP) Parameters

Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
Country	India
NSQF Level	4
Credits	NA



Qualification Pack



Aligned to NCO/ISCO/ISIC Code	NCO-2015/7215.0100
Minimum Educational Qualification & Experience	10th Class/I.T.I with 3 Years of experience as a NSQF Level 4 certified Rigger Precast Erection at construction site OR 10th Class/I.T.I with 9 Years of experience for a non-trained worker in rigging occupation at construction site
Minimum Level of Education for Training in School	
Pre-Requisite License or Training	NIL
Minimum Job Entry Age	18 Years
Last Reviewed On	21/09/2021
Next Review Date	21/09/2025
NSQC Approval Date	
Version	2.0



CON/N0718: Lift heavy RCC precast components at construction sites

Description

This unit describes the skills and knowledge required to lift heavy RCC precast components at construction sites

Scope

The scope covers the following :

- Ensure the completion of preparatory work
- Lifting the heavy RCC precast components
- Carry out tandem lifting procedures

Elements and Performance Criteria

Ensure the completion of preparatory work

To be competent, the user/individual on the job must be able to:

- PC1.** ensure the lifting route is free from obstacles such as live overhead electrical cables, service lines, close vicinity to existing structures or persons
- PC2.** ensure that the areas of operation (lifting, loading and unloading) are safely marked and barricaded, and have safe access
- PC3.** ensure that the lifting area is adequately illuminated and clear visibility is maintained from lifting point to erection location
- PC4.** ensure loads to be lifted are placed appropriately at the point of lifting
- PC5.** confirm that the lifting equipment under operation and its accessories are in safe working condition

Lifting the heavy RCC precast components

To be competent, the user/individual on the job must be able to:

- PC6.** attach the load appropriately by using slings, belts or ropes to the lifting equipment as per standard procedure
- PC7.** use appropriate lifting gear considering weight, shape and size of the load
- PC8.** monitor angle between slings under tension and tightness of locks at attached points to ensure stability of the suspended load
- PC9.** ensure elements or assemblies do not get damaged during lifting operations
- PC10.** perform lifting of the load by using appropriate signals to guide the operator and other team members as per standard hand signaling guidelines
- PC11.** seek assistance for signaling if load or operator is not visible from own location
- PC12.** coordinate with the team to control the movement of suspended loads using tag line or guy rope
- PC13.** maintain clear line of vision with the equipment operator
- PC14.** report to superior promptly and clearly in case of unsafe conditions, safety violations

Carry out tandem lifting procedures

To be competent, the user/individual on the job must be able to:



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- PC15.** brief workmen about lifting plan and safe working methods prior to commencing heavy lifting operations
- PC16.** ensure safe distance of equipment and objects as per agreed work plan from human and other nearby objects while carrying out lifting activity
- PC17.** ensure the correct position of crane and load it in accordance with load lifting plan and safety norms for the tandem lifting operations
- PC18.** confirm full functional tests have been carried out for all power transmission, control and safety systems of the equipment by competent personnel prior to the commencement of the lifting operation
- PC19.** confirm that the weather condition is favourable for heavy lifting activities
- PC20.** prioritize and sequence activities related to tandem lifting operations
- PC21.** monitor and control speed of lifting when multiple lifting equipment are engaged simultaneously
- PC22.** coordinate with equipment operators and maintain synchronization throughout lifting activity
- PC23.** maintain stable position of objects under suspension (while being lifted) as per standard practice by providing signals to the equipment operators
- PC24.** guide objects to the desired locations and ensure their safe lowering to the specified positions
- PC25.** execute task as per considerations, assumptions, limit of tolerance specified in applicable work methodology and safety control measures during heavy lifting work, report concerned personnel if otherwise

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for rigging works
- KU2.** safety rules and regulations for handling and storing relevant tools and equipment and materials for rigging works
- KU3.** importance of personal protection including the use of the related safety gears and equipment
- KU4.** precautions and measures required during the lifting and movement of heavy components and materials
- KU5.** service request procedures for tools, materials and equipments
- KU6.** statutory compliance requirements related to working at height
- KU7.** basic sketches / schematic working drawing relevant to rigging works
- KU8.** basic principles of measurement, geometry and arithmetic calculation
- KU9.** conversion of units of linear, areal and volumetric measurements
- KU10.** how to read and interpret drawings, sketches related to precast erection works
- KU11.** how to develop sketches and what details to be covered in the sketches
- KU12.** lifting plans and schedules
- KU13.** how to select lifting gears considering weight, size and shape of loads to be lifted
- KU14.** ideal weather and environment condition to carry out lifting
- KU15.** factors affecting lifting operations such as presence of electrical cable, movement of vehicle or person, slope and compaction of base of lifting equipments



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- KU16.** working mechanism and capacity (safe working load- SWL) of different kind of cranes such as mobile, crawler, telescopic, tower or gantry cranes
- KU17.** operational details of different types of cranes including load lifting posture of the equipment, angle of outrigger to be kept during lifting and maximum reach of the equipment
- KU18.** working mechanism and SWL of winch machines
- KU19.** preventive actions to be taken to the cranes under adverse weather condition like thunder-storm, heavy wind flow
- KU20.** use of different kind of common lifting gears like hooks, shackles, wire rope slings, chain slings, belts, eye bolts, rings, links, swivels and spreader beams
- KU21.** load carrying capacity of each lifting gear and its specifications
- KU22.** different safety checks to be carried out for respective safety gears to determine safe usability of them for lifting
- KU23.** standard hand signaling procedures to be provided during lifting operations

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local languages at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates
- GS9.** evaluate the complexity of the tasks
- GS10.** identify any violation of safety norms during the work



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure the completion of preparatory work</i>	9	21	-	-
PC1. ensure the lifting route is free from obstacles such as live overhead electrical cables, service lines, close vicinity to existing structures or persons	-	-	-	-
PC2. ensure that the areas of operation (lifting, loading and unloading) are safely marked and barricaded, and have safe access	-	-	-	-
PC3. ensure that the lifting area is adequately illuminated and clear visibility is maintained from lifting point to erection location	-	-	-	-
PC4. ensure loads to be lifted are placed appropriately at the point of lifting	-	-	-	-
PC5. confirm that the lifting equipment under operation and its accessories are in safe working condition	-	-	-	-
<i>Lifting the heavy RCC precast components</i>	9	21	-	-
PC6. attach the load appropriately by using slings, belts or ropes to the lifting equipment as per standard procedure	-	-	-	-
PC7. use appropriate lifting gear considering weight, shape and size of the load	-	-	-	-
PC8. monitor angle between slings under tension and tightness of locks at attached points to ensure stability of the suspended load	-	-	-	-
PC9. ensure elements or assemblies do not get damaged during lifting operations	-	-	-	-
PC10. perform lifting of the load by using appropriate signals to guide the operator and other team members as per standard hand signaling guidelines	-	-	-	-
PC11. seek assistance for signaling if load or operator is not visible from own location	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. coordinate with the team to control the movement of suspended loads using tag line or guy rope	-	-	-	-
PC13. maintain clear line of vision with the equipment operator	-	-	-	-
PC14. report to superior promptly and clearly in case of unsafe conditions, safety violations	-	-	-	-
<i>Carry out tandem lifting procedures</i>	12	28	-	-
PC15. brief workmen about lifting plan and safe working methods prior to commencing heavy lifting operations	-	-	-	-
PC16. ensure safe distance of equipment and objects as per agreed work plan from human and other nearby objects while carrying out lifting activity	-	-	-	-
PC17. ensure the correct position of crane and load it in accordance with load lifting plan and safety norms for the tandem lifting operations	-	-	-	-
PC18. confirm full functional tests have been carried out for all power transmission, control and safety systems of the equipment by competent personnel prior to the commencement of the lifting operation	-	-	-	-
PC19. confirm that the weather condition is favourable for heavy lifting activities	-	-	-	-
PC20. prioritize and sequence activities related to tandem lifting operations	-	-	-	-
PC21. monitor and control speed of lifting when multiple lifting equipment are engaged simultaneously	-	-	-	-
PC22. coordinate with equipment operators and maintain synchronization throughout lifting activity	-	-	-	-
PC23. maintain stable position of objects under suspension (while being lifted) as per standard practice by providing signals to the equipment operators	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC24. guide objects to the desired locations and ensure their safe lowering to the specified positions	-	-	-	-
PC25. execute task as per considerations, assumptions, limit of tolerance specified in applicable work methodology and safety control measures during heavy lifting work, report concerned personnel if otherwise	-	-	-	-
NOS Total	30	70	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N0718
NOS Name	Lift heavy RCC precast components at construction sites
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	21/09/2021
Next Review Date	21/09/2025



CON/N0719: Erect the RCC precast components at construction sites

Description

This unit describes the skills and knowledge required to erect and align RCC Precast components at construction sites

Scope

The scope covers the following :

- Ensure the completion of preparatory work
- Erection of the RCC precast components

Elements and Performance Criteria

Ensure the completion of preparatory work

To be competent, the user/individual on the job must be able to:

- PC1.** ensure proper accessibility to the location of the erection site
- PC2.** ensure that all the required survey marks and reference points are provided
- PC3.** ensure the availability of all the materials and support equipment required for the work
- PC4.** check if the provisions of bolting, welding and post-tensioning connections are available as per the drawings
- PC5.** ensure the bearing area for the platform or supports are available as per the designs and drawings
- PC6.** ensure that the working area is suitable for the operation of load lifting equipment

Erection of the RCC precast components

To be competent, the user/individual on the job must be able to:

- PC7.** position the lifting equipment and load it as per the working plan and schedule
- PC8.** coordinate with the lifting equipment operator or signaller for precise movement of the components/ load to the accurate location
- PC9.** conduct the activities such as pull or push to hold the suspended load (precast units) to the exact location by using suitable means during the shifting and lowering operations
- PC10.** coordinate with subordinates in order to guide the units to their respective locations
- PC11.** place the object at its accurate location efficiently and make required adjustments
- PC12.** conduct activities to install and align the erected precast units as per the structural drawings
- PC13.** ensure installation of temporary connections and supports using appropriate tools prior to final positioning of precast units
- PC14.** tighten bolted connections to the specified tolerance and torque using appropriate torque wrench wherever required
- PC15.** check bolt tightness in case of units having slotted connections
- PC16.** install special steel washers to ensure that the specified tension has been developed in the bolt
- PC17.** check location of shims, bearing pads for their proper positioning



- PC18.** install expansion bolts using prescribed installation procedures and quality control specifications
- PC19.** install shoring, bracing and guying materials as directed by the foreman/ supervisor or specified by erection drawings and details considering local conditions
- PC20.** install erection hardware to the units, using appropriate hand tools as per instruction and specification of erection drawing
- PC21.** ensure that the safety practices are followed by subordinates at the workplace
- PC22.** report to the superior after the completion of the erection work for approval

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** standard procedure for rigging works
- KU2.** safety rules and regulations for handling and storing relevant tools and equipment and materials for rigging works
- KU3.** importance of personal protection including the use of the related safety gears and equipment
- KU4.** precautions and measures required in the lifting and movement of heavy components and materials
- KU5.** service request procedures for tools, materials and equipments
- KU6.** statutory compliance requirements related to working at height
- KU7.** basic sketches / schematic working drawing relevant to rigging works
- KU8.** basic principles of measurement, geometry and arithmetic calculation
- KU9.** conversion of units of linear, areal and volumetric measurements
- KU10.** lifting plans and schedules
- KU11.** applicable tolerance to respective erection job
- KU12.** sequence of erection works as per proposed work method statement
- KU13.** linear unit of measurement and their conversion
- KU14.** checks to be carried out to ensure readiness of base of erections
- KU15.** how to check alignment of erected elements using measuring tools and instrument
- KU16.** technique for positioning of elements to their locations within tolerance limits
- KU17.** use of barricading, safety signages at the location of erection
- KU18.** how to fill up check lists, permits applicable to erection operations
- KU19.** hazards related to precast erection activities, height work

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the construction site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site



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- GS3.** speak in one or more language, preferably one of the local languages at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates
- GS9.** evaluate the complexity of the tasks
- GS10.** identify any violation of safety norms during the work

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure the completion of preparatory work</i>	6	14	-	-
PC1. ensure proper accessibility to the location of the erection site	-	-	-	-
PC2. ensure that all the required survey marks and reference points are provided	-	-	-	-
PC3. ensure the availability of all the materials and support equipment required for the work	-	-	-	-
PC4. check if the provisions of bolting, welding and post-tensioning connections are available as per the drawings	-	-	-	-
PC5. ensure the bearing area for the platform or supports are available as per the designs and drawings	-	-	-	-
PC6. ensure that the working area is suitable for the operation of load lifting equipment	-	-	-	-
<i>Erection of the RCC precast components</i>	24	56	-	-
PC7. position the lifting equipment and load it as per the working plan and schedule	-	-	-	-
PC8. coordinate with the lifting equipment operator or signaller for precise movement of the components/ load to the accurate location	-	-	-	-
PC9. conduct the activities such as pull or push to hold the suspended load (precast units) to the exact location by using suitable means during the shifting and lowering operations	-	-	-	-
PC10. coordinate with subordinates in order to guide the units to their respective locations	-	-	-	-
PC11. place the object at its accurate location efficiently and make required adjustments	-	-	-	-
PC12. conduct activities to install and align the erected precast units as per the structural drawings	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. ensure installation of temporary connections and supports using appropriate tools prior to final positioning of precast units	-	-	-	-
PC14. tighten bolted connections to the specified tolerance and torque using appropriate torque wrench wherever required	-	-	-	-
PC15. check bolt tightness in case of units having slotted connections	-	-	-	-
PC16. install special steel washers to ensure that the specified tension has been developed in the bolt	-	-	-	-
PC17. check location of shims, bearing pads for their proper positioning	-	-	-	-
PC18. install expansion bolts using prescribed installation procedures and quality control specifications	-	-	-	-
PC19. install shoring, bracing and guying materials as directed by the foreman/ supervisor or specified by erection drawings and details considering local conditions	-	-	-	-
PC20. install erection hardware to the units, using appropriate hand tools as per instruction and specification of erection drawing	-	-	-	-
PC21. ensure that the safety practices are followed by subordinates at the workplace	-	-	-	-
PC22. report to the superior after the completion of the erection work for approval	-	-	-	-
NOS Total	30	70	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0719
NOS Name	Erect the RCC precast components at construction sites
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	21/09/2021
Next Review Date	21/09/2025



CON/N0720: Conduct the activities of grouting and caulking as per specifications and requirements

Description

This unit describes the skills and knowledge required to conduct grouting and caulking activities as per specification

Scope

The scope covers the following :

- Conduct the preparatory activities
- Conduct the activities for the application of grouting and caulking agents

Elements and Performance Criteria

Conduct the preparatory activities

To be competent, the user/individual on the job must be able to:

- PC1.** confirm to perform grouting or caulking work, or both on the precast units from the supervisors
- PC2.** ensure cleaning and surface preparation of the precast units prior to the application of bonding agents
- PC3.** conduct the installation of temporary arrangements surrounding the locations to be grouted/ caulked as per requirements
- PC4.** calculate tentative material requirement for grouting/ caulking works and report to concerned authority
- PC5.** ensure necessary materials and tools are present in order to carry out grouting/ caulking operations
- PC6.** confirm correct proportion of materials to be used to form grouting/ caulking agent from the manufacturer's guidelines/ superiors
- PC7.** ensure the use of safety signage and PPEs by subordinates during activities

Conduct the activities for the application of grouting and caulking agents

To be competent, the user/individual on the job must be able to:

- PC8.** conduct the activities to prepare grouting/ caulking agents/ sealant as per specifications
- PC9.** execute the grouting/ caulking operations as per manufacturers specification and within stipulated time
- PC10.** conduct the activities to apply primer on the RCC precast joints as per specification and requirements
- PC11.** control the use of the grouting/ caulking agents to minimize its wastage during the work
- PC12.** place and ensure proper positioning of sealing
- PC13.** apply caulking agents to complex locations precisely using appropriate hand tools
- PC15.** examine the completed work and take corrective actions in case of any faulty works as per instruction of concerned authority

Knowledge and Understanding (KU)



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The individual on the job needs to know and understand:

- KU1.** standard procedure for rigging works
- KU2.** safety rules and regulations for handling and storing relevant tools, equipment, and materials required for relevant works in accordance with organizational norms
- KU3.** importance of personal protection including the use of related safety gears and equipment in accordance with organizational norms
- KU4.** precautions and measures required in the lifting and movement of heavy components and materials
- KU5.** service request procedures for tools, materials and equipment as per organizational norms
- KU6.** statutory compliance requirements related to working at height
- KU7.** basic sketches / schematic working drawing relevant to rigging works
- KU8.** basic principles of measurement, geometry and arithmetic calculation
- KU9.** conversion of units of linear, areal and volumetric measurements
- KU10.** lifting plans and schedules
- KU11.** applicable tolerance to respective erection job
- KU12.** sequence of erection works as per proposed work method statement
- KU13.** specification related with grouting and caulking operations
- KU14.** materials used for grouting and caulking works and their physical properties
- KU15.** how to prepare mix for grouting and caulking work as per specification
- KU16.** correct technique of application of solution during grouting and caulking works
- KU17.** use of hand and power tools during grouting and caulking operations
- KU18.** how to fill up check lists, permits applicable to erection operations

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in local language of the construction site
- GS2.** read sketches, instructions provided for the work, and various signboards, safety rules, safety tags, exit route information in one or more languages, preferably in the local language of the site
- GS3.** speak in one or more language, preferably one of the local languages at the site
- GS4.** communicate orally and effectively with team members
- GS5.** analyze the safety aspect of the workplace
- GS6.** plan work and organize required resource effectively
- GS7.** complete work as per agreed time schedule and quality parameters
- GS8.** resolve any conflict within the teammates
- GS9.** evaluate the complexity of the tasks
- GS10.** identify any violation of safety norms during the work



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Conduct the preparatory activities</i>	18	42	-	-
PC1. confirm to perform grouting or caulking work, or both on the precast units from the supervisors	-	-	-	-
PC2. ensure cleaning and surface preparation of the precast units prior to the application of bonding agents	-	-	-	-
PC3. conduct the installation of temporary arrangements surrounding the locations to be grouted/ caulked as per requirements	-	-	-	-
PC4. calculate tentative material requirement for grouting/ caulking works and report to concerned authority	-	-	-	-
PC5. ensure necessary materials and tools are present in order to carry out grouting/ caulking operations	-	-	-	-
PC6. confirm correct proportion of materials to be used to form grouting/ caulking agent from the manufacturer's guidelines/ superiors	-	-	-	-
PC7. ensure the use of safety signage and PPEs by subordinates during activities	-	-	-	-
<i>Conduct the activities for the application of grouting and caulking agents</i>	12	28	-	-
PC8. conduct the activities to prepare grouting/ caulking agents/ sealant as per specifications	-	-	-	-
PC9. execute the grouting/ caulking operations as per manufacturers specification and within stipulated time	-	-	-	-
PC10. conduct the activities to apply primer on the RCC precast joints as per specification and requirements	-	-	-	-
PC11. control the use of the grouting/ caulking agents to minimize its wastage during the work	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. place and ensure proper positioning of sealing	-	-	-	-
PC13. apply caulking agents to complex locations precisely using appropriate hand tools	-	-	-	-
PC15. examine the completed work and take corrective actions in case of any faulty works as per instruction of concerned authority	-	-	-	-
NOS Total	30	70	-	-



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National Occupational Standards (NOS) Parameters

NOS Code	CON/N0720
NOS Name	Conduct the activities of grouting and caulking as per specifications and requirements
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Rigging
NSQF Level	4
Credits	TBD
Version	2.0
Last Reviewed Date	21/09/2021
Next Review Date	21/09/2025



CON/N8001: Work effectively in a team to deliver desired results at the workplace

Description

This unit describes the skills and knowledge required to work effectively within a team to achieve the desired results

Scope

The scope covers the following :

- Interact and communicate in an effective manner
- Support co-workers to execute the project requirements
- Practice inclusion

Elements and Performance Criteria

Interact and communicate in an effective manner

To be competent, the user/individual on the job must be able to:

- PC1.** pass on work related information/ requirement clearly to the team members
- PC2.** inform co-workers and superiors about any kind of deviations from work
- PC3.** report any unresolved problem to the supervisor immediately
- PC4.** obtain instructions from superiors and respond on the same
- PC5.** communicate to team members/subordinates for appropriate work technique and method
- PC6.** seek clarification and advice as per the requirement

Support co-workers to execute the project requirements

To be competent, the user/individual on the job must be able to:

- PC7.** hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams
- PC8.** work together with co-workers in a synchronized manner

Practice inclusion

To be competent, the user/individual on the job must be able to:

- PC9.** maintain cultural inclusivity at work place
- PC10.** maintain disability friendly work practices
- PC11.** follow gender neutral practices at workplace
- PC12.** address discriminatory and offensive behaviour in a professional manner as per organizational policy

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** own roles and responsibilities
- KU2.** importance of effective communication



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- KU3.** the consequence of poor teamwork on project outcomes, timelines, safety at the construction site, etc.
- KU4.** different modes of communication used at workplace
- KU5.** importance of creating healthy and cooperative work environment among the gangs of workers
- KU6.** different activities within the work area where interaction with other workers is required
- KU7.** applicable techniques of work, properties of materials used, tools and tackles used, safety standards that co-workers might need as per the requirement
- KU8.** importance of proper and effective communication and the expected adverse effects in case of failure relating to quality, timeliness, safety, risks at the construction project site
- KU9.** importance and need of supporting co-workers facing problems for the smooth functioning of work
- KU10.** the fundamental concept of gender equality
- KU11.** how to recognise and be sensitive to issues of disability, culture and gender
- KU12.** legislation, policies, and procedures relating to gender sensitivity and cultural diversity including their impact on the area of operation

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in at least one language, preferably in the local language of the site
- GS2.** read the communication regarding work completion, materials used, tools and tackles used, the resource required, etc,
- GS3.** speak in one or more languages, preferably in one of the local language of the site
- GS4.** listen and follow instructions / communication shared by superiors/ co-workers regarding team requirements or interfaces during work processes
- GS5.** communicate orally and effectively with co-workers considering their educational and social background
- GS6.** decide on what information is to be shared with co-workers within the team or to the interfacing gang of workers
- GS7.** plan work and organize the required resources in coordination with team members
- GS8.** complete all assigned task in coordination with team members
- GS9.** take initiative in resolving issues among co-workers or report the same to superiors
- GS10.** ensure best ways of coordination among team members
- GS11.** evaluate the complexity of task and determine if any guidance is required from superiors

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Interact and communicate in an effective manner</i>	18	42	-	-
PC1. pass on work related information/ requirement clearly to the team members	-	-	-	-
PC2. inform co-workers and superiors about any kind of deviations from work	-	-	-	-
PC3. report any unresolved problem to the supervisor immediately	-	-	-	-
PC4. obtain instructions from superiors and respond on the same	-	-	-	-
PC5. communicate to team members/subordinates for appropriate work technique and method	-	-	-	-
PC6. seek clarification and advice as per the requirement	-	-	-	-
<i>Support co-workers to execute the project requirements</i>	6	14	-	-
PC7. hand over the required material, tools, tackles, equipment and work fronts timely to interfacing teams	-	-	-	-
PC8. work together with co-workers in a synchronized manner	-	-	-	-
<i>Practice inclusion</i>	6	14	-	-
PC9. maintain cultural inclusivity at work place	-	-	-	-
PC10. maintain disability friendly work practices	-	-	-	-
PC11. follow gender neutral practices at workplace	-	-	-	-
PC12. address discriminatory and offensive behaviour in a professional manner as per organizational policy	-	-	-	-
NOS Total	30	70	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N8001
NOS Name	Work effectively in a team to deliver desired results at the workplace
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	TBD
Version	6.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



CON/N8002: Plan and organize work to meet expected outcomes

Description

This unit describes the knowledge and the skills required for an individual to plan and organize own work in order to meet expected outcome

Scope

The scope covers the following :

- Plan and prepare for work
- Organise required resources as per work plan
- Complete work as per the plan

Elements and Performance Criteria

Plan and prepare for work

To be competent, the user/individual on the job must be able to:

- PC1.** identify the targets and timelines set by superiors
- PC2.** determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task
- PC3.** plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities
- PC4.** prepare the work areas in coordination with team members
- PC5.** plan for waste collection and disposal prior to and after completion of work

Organise required resources as per work plan

To be competent, the user/individual on the job must be able to:

- PC6.** arrange the required manpower prior to commencement of work
- PC7.** organize the required materials, tools and tackles required for the task

Complete work as per the plan

To be competent, the user/individual on the job must be able to:

- PC8.** engage allocated manpower in an appropriate manner
- PC9.** employ correct tools, tackles and equipment for the desired work
- PC10.** provide guidance to the subordinates to obtain desired outcome
- PC11.** use resources in an optimum manner to avoid any unnecessary wastage
- PC12.** use tools, tackles and equipment carefully to avoid damage
- PC13.** ensure the work processes adopted are in line with the specified standards and instructions
- PC14.** complete the work with the allocated resources within specified time
- PC15.** clean and organise the workplace after completion of task

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:



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- KU1.** importance of proper housekeeping including safe waste disposal
- KU2.** policies, procedures and work targets set by superiors
- KU3.** how to identify work activities that need to be planned and organized
- KU4.** how to determine the task requirements
- KU5.** how to determine the quality requirements related to the task
- KU6.** how to undertake all aspect of planning and organizing the task, including interpretation of task, reading drawing/schedules, arranging resources, reporting problems etc.
- KU7.** how to implement the planned activities
- KU8.** how to use available resources in a judicious and appropriate manner to minimize wastages or damage

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** write in one or more language, preferably the local language at the site
- GS2.** read communication from co-workers, superiors and notices from other departments as per requirement of the level
- GS3.** speak in one or more language, preferably one of the local language at the site
- GS4.** follow communication shared by co-workers regarding standard work processes, resources available, timelines, etc.
- GS5.** communicate effectively with co-workers and subordinates
- GS6.** decide on what sequence is to be adopted for execution of work
- GS7.** plan and organize the materials, tools, tackles and equipment required to execute the work
- GS8.** complete all assigned task with proper planning and organizing
- GS9.** analyze areas of work which could result in a delay of work, wastage of material or damage to tools and tackles
- GS10.** evaluate potential solutions to minimize avoidable delays and wastages at the construction site



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Plan and prepare for work</i>	9	21	-	-
PC1. identify the targets and timelines set by superiors	-	-	-	-
PC2. determine the work requirements corresponding to task(drawings/schedules/instructions/methodology), safety, tools and equipment prior to commencement of task	-	-	-	-
PC3. plan the work by analyzing the required outcomes, work procedures, allotted time, resource availability and known priorities	-	-	-	-
PC4. prepare the work areas in coordination with team members	-	-	-	-
PC5. plan for waste collection and disposal prior to and after completion of work	-	-	-	-
<i>Organise required resources as per work plan</i>	6	14	-	-
PC6. arrange the required manpower prior to commencement of work	-	-	-	-
PC7. organize the required materials, tools and tackles required for the task	-	-	-	-
<i>Complete work as per the plan</i>	15	35	-	-
PC8. engage allocated manpower in an appropriate manner	-	-	-	-
PC9. employ correct tools, tackles and equipment for the desired work	-	-	-	-
PC10. provide guidance to the subordinates to obtain desired outcome	-	-	-	-
PC11. use resources in an optimum manner to avoid any unnecessary wastage	-	-	-	-
PC12. use tools, tackles and equipment carefully to avoid damage	-	-	-	-
PC13. ensure the work processes adopted are in line with the specified standards and instructions	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. complete the work with the allocated resources within specified time	-	-	-	-
PC15. clean and organise the workplace after completion of task	-	-	-	-
NOS Total	30	70	-	-



Qualification Pack



National Occupational Standards (NOS) Parameters

NOS Code	CON/N8002
NOS Name	Plan and organize work to meet expected outcomes
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic 2
NSQF Level	4
Credits	TBD
Version	5.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022



CON/N9001: Work according to personal health, safety and environment protocols at construction site

Description

This NOS covers the skill and knowledge required for an individual to work according to personal health, safety and environmental protocols at construction site

Scope

The scope covers the following :

- Follow safety norms as defined by organization
- Adopt healthy & safe work practices
- Implement good housekeeping and environment protection process and activities
- Follow infection control guidelines as per applicability

Elements and Performance Criteria

Follow safety norms as defined by the organization

To be competent, the user/individual on the job must be able to:

- PC1.** identify and report any hazards, risks or breaches in site safety to the appropriate authority
- PC2.** follow emergency and evacuation procedures in case of accidents, fires, natural calamities
- PC3.** follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable
- PC4.** follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site
- PC5.** select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline
- PC6.** identify near miss, unsafe condition and unsafe act

Adopt healthy & safe work practices

To be competent, the user/individual on the job must be able to:

- PC7.** use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)
- PC8.** handle all required tools, tackles, materials and equipment safely
- PC9.** follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines
- PC10.** check and install all safety equipment as per standard guidelines
- PC11.** follow safety protocols and practices as laid down by site EHS department
- PC12.** obtain "height pass" clearance for working at heights

Implement good housekeeping practices

To be competent, the user/individual on the job must be able to:

- PC13.** collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature
- PC14.** apply ergonomic principles wherever required



Follow infection control guidelines as per applicability

To be competent, the user/individual on the job must be able to:

PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices

PC16. clean and disinfect all materials, tools and supplies before and after use

PC17. report immediately to concerned authorities regarding signs and symptoms of illness of self and others

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

KU1. reporting procedures in cases of breaches or hazards for site safety, accidents, and emergency situations as per guidelines

KU2. types of safety hazards at construction sites

KU3. basic ergonomic principles as per applicability

KU4. the procedure for responding to accidents and other emergencies at site

KU5. use of appropriate personal protective equipment based on various working conditions

KU6. importance of handling tools, equipment, and materials as per applicable norms

KU7. effect of construction material on health and environments as per applicability

KU8. various environmental protection methods as per applicability

KU9. storage of waste including non-combustible scrap material and debris, combustible scrap material and debris, general construction waste and trash (non-toxic, non-hazardous), any other hazardous wastes and any other flammable wastes at the appropriate location

KU10. how to keep the workplace neat and tidy so as to be safe

KU11. how to use hazardous material in a safe and appropriate manner as per applicability

KU12. types of fire

KU13. procedure of operating different types of fire extinguishers

KU14. safety relevant to tools, tackles, and equipment as per applicability

KU15. housekeeping activities relevant to task

KU16. ways of transmission of infection

KU17. ways to manage infectious risks at the workplace

KU18. different methods of cleaning, disinfection, sterilization, and sanitization

KU19. symptoms of infection like fever, cough, redness, swelling, and inflammation

Generic Skills (GS)

User/individual on the job needs to know how to:

GS1. write in at least one language, preferably in the local language of the site

GS2. fill safety formats for near miss, unsafe conditions and safety suggestions

GS3. read in one or more language, preferably in the local language of the site

GS4. speak in one or more language, preferably in one of the local language of the site

GS5. listen to instructions/communication shared by site EHS and superiors regarding site safety, and conducting the toolbox talk



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- GS6.** identify potential safety risks and report to the appropriate authority
- GS7.** assess and analyze areas which may affect health, safety and environment protocol on the site



Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Follow safety norms as defined by the organization</i>	6	14	-	-
PC1. identify and report any hazards, risks or breaches in site safety to the appropriate authority	-	-	-	-
PC2. follow emergency and evacuation procedures in case of accidents, fires, natural calamities	-	-	-	-
PC3. follow recommended safe practices in handling construction materials, including chemical and hazardous material whenever applicable	-	-	-	-
PC4. follow all the protocols and safety techniques conveyed during safety awareness programs like Tool Box Talks, safety demonstrations and mock drills conducted at the site	-	-	-	-
PC5. select and operate different types of fire extinguishers corresponding to various types of fires as per EHS guideline	-	-	-	-
PC6. identify near miss, unsafe condition and unsafe act	-	-	-	-
<i>Adopt healthy & safe work practices</i>	15	35	-	-
PC7. use appropriate Personal Protective Equipment (PPE) as per work requirements for : Head Protection, Ear protection, Fall Protection ,Foot Protection, Face and Eye Protection, Hand and Body Protection , and Respiratory Protection (if required)	-	-	-	-
PC8. handle all required tools, tackles, materials and equipment safely	-	-	-	-
PC9. follow safe disposal of waste, harmful and hazardous materials as per EHS guidelines	-	-	-	-
PC10. check and install all safety equipment as per standard guidelines	-	-	-	-
PC11. follow safety protocols and practices as laid down by site EHS department	-	-	-	-



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Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. obtain "height pass" clearance for working at heights	-	-	-	-
<i>Implement good housekeeping practices</i>	6	14	-	-
PC13. collect, segregate and deposit construction waste into appropriate containers based on their toxicity or hazardous nature	-	-	-	-
PC14. apply ergonomic principles wherever required	-	-	-	-
<i>Follow infection control guidelines as per applicability</i>	3	7	-	-
PC15. follow recommended personal hygiene, workplace hygiene and sanitization practices	-	-	-	-
PC16. clean and disinfect all materials, tools and supplies before and after use	-	-	-	-
PC17. report immediately to concerned authorities regarding signs and symptoms of illness of self and others	-	-	-	-
NOS Total	30	70	-	-



National Occupational Standards (NOS) Parameters

NOS Code	CON/N9001
NOS Name	Work according to personal health, safety and environment protocols at construction site
Sector	Construction
Sub-Sector	Real Estate and Infrastructure construction
Occupation	Generic Safety
NSQF Level	4
Credits	TBD
Version	6.0
Last Reviewed Date	31/03/2022
Next Review Date	31/03/2025
NSQC Clearance Date	31/03/2022

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC)/ Element will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC/ Element.
2. The assessment for the knowledge part will be based on knowledge bank of questions created by Assessment Bodies subject to approval by SSC
3. Individual assessment agencies will create unique question papers for knowledge/theory part for assessment of candidates as per assessment criteria given below
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on assessment criteria.
5. The passing percentage for each QP will be 70%. To pass the Qualification Pack, every trainee should score a minimum of 70% individually in each NOS.
6. The Assessor shall check the final outcome of the practices while evaluating the steps performed to achieve the final outcome.



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7. The trainee shall be provided with a chance to repeat the test to correct his procedures in case of improper performance, with a deduction of marks for each iteration.
8. After the certain number of iteration as decided by SSC the trainee is marked as fail, scoring zero marks for the procedure for the practical activity .
9. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack within the specified timeframe set by SSC.
10. Minimum duration of Assessment of each QP shall be of 4hrs/trainee.

Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Minimum Passing % at NOS Level: 70

(Please note: A Trainee must score the minimum percentage for each NOS separately as well as on the QP as a whole.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N0718.Lift heavy RCC precast components at construction sites	30	70	-	-	100	15
CON/N0719.Erect the RCC precast components at construction sites	30	70	-	-	100	20
CON/N0720.Conduct the activities of grouting and caulking as per specifications and requirements	30	70	-	-	100	25
CON/N8001.Work effectively in a team to deliver desired results at the workplace	30	70	-	-	100	10
CON/N8002.Plan and organize work to meet expected outcomes	30	70	-	-	100	15



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National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
CON/N9001.Work according to personal health, safety and environment protocols at construction site	30	70	-	-	100	15
Total	180	420	-	-	600	100



Qualification Pack



Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training



Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.



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Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.