

Building and Construction: Concrete Finisher (Road Construction) – MQF  
Level 3

**National Occupational Standards**

**Sector:** Building and Construction

**Occupation:** Concrete Finisher (Road Construction)

**MQF Level:** 3

**Units:**

- CFRC301: Apply Occupational Health and Safety during Work-Practices
- CFRC302: Identify Systems, Equipment and Components

**Last updated:** 29/10/2021

**CFRC301: Apply Occupational Health and Safety during Work-Practices**

This unit is about being able to use safe procedures and safe work practices. The persons carrying out this work must possess the necessary knowledge and skills to ensure that their actions do not create health and safety risks to themselves and others, identify risks and hazards associated within the working environment, tools and equipment and materials and substances used.

**Performance Criteria**

The candidate must have the necessary knowledge and skills to:

1. Carry out safe working practices to prevent hazards and to ensure the safety of oneself, workers, and members of the public.
2. Carry out safe working practices when using appropriate equipment and materials to prevent damages to work areas and injuries to oneself and 3<sup>rd</sup> parties.
3. Ensure that any formwork and/or scaffolding is safe to use and certified if necessary.
4. Ensure the correct setting up safety barriers around a work environment hazard to protect site workers and members of the public.
5. Ensure that all personnel use protective clothing and safety equipment according to specifications issued by manufacturers and know the whereabouts of first-aid equipment.
6. Ensure the usage, handling, and storage of materials hazardous to health is done in a safe manner.
7. Assist in the visual risk assessment of the working area to assess for any potential danger for workers and third parties.
8. Ensure that all fire safety systems are in place.
9. Ensure that any electrical systems have been secured/disabled.
10. Ensure that all detection has been carried out and marked by the service entities.
11. Issue notices of safety violations and follows-up on remedial measures required in case of safety violations reported.
12. Evaluate sites for cleanliness including waste disposal and vermin control.

**Required Knowledge**

The Level 3 Concrete Finisher (Road Construction) must know and explain:

1. The roles and responsibilities of themselves and others under the Health and Safety Act.
2. The health and safety risks associated with their role which includes tools, construction vehicles, materials, and equipment used and working practices and procedures.
3. The regulations, standards, and systems for safety requirement of electrical, water, drainage and mechanical installations, equipment, and systems.
4. The environmental risks such as deficient air and water quality.
5. The fire safety system requirements and the risks associated with them.
6. The potential hazardous material commonly found at the workplace.
7. The procedures for dealing with potential hazardous material in the place of work.
8. The health concerns associated with the workplace and safe practices for different ongoing work practices on site.
9. The hazards and potential hazards at the place of work (such as electricity, slippery and uneven surfaces, dust and fumes, handling and transporting, contaminants and irritants, fire, heights, improper use of tools and equipment).
10. The importance of being alert to the presence of hazards in the place of work.

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11. The responsible persons to whom to report health and safety matters or any other occurring hazards.
12. The emergency procedures in the place of work.
13. The first aid facilities that exist within the work area.
14. The correct procedure to make use of barricades, industrial hurdles, and warning signs including specific temporary traffic management arrangements to contain the work sites.
15. The safety procedures when using scaffold platforms and/or formwork.
16. The necessary safety precautions including the use of protective clothing and equipment for a range of applications including situations when helping other sector trade persons.
17. The methods used for protecting customers' property.
18. When it is required to close domestic water services from the main water supply; switch off electrical supply.
19. Any toxic effect from materials commonly used at construction sites.
20. The preventative and remedial actions to be taken in the case of exposure to materials hazardous to health.
21. The waste disposal and vermin control procedures.

**Required Skills**

The Level 3 Concrete Finisher (Road Construction) should be able to:

1. Identify which health and safety procedures are relevant to the working environment.
2. Seek expert assistance when help is needed.
3. Ensure compliance with duties and obligations as defined by the Occupational Health and Safety Act 2000 and recent amendments.
4. Follow workplace policies and employers' instructions for the safe use and maintenance of tools and equipment.
5. Control health and safety hazards within the job responsibility.
6. Report any hazards which may present risk to relevant persons.
7. Follow correct procedures in the event of injuries to themselves or others.
8. Take remedial action where work methods are not in line with control measures noted and identified from risk assessment.
9. Ensure adherence to work production and installation processes as agreed with the employer.
10. Ensure that the necessary skills to erect, use and dismantle access equipment are applied.
11. Read, interpret, and install warning signs and set up safety barriers around working areas.
12. Equip oneself with the appropriate protective clothing and safety equipment.
13. Use and store materials hazardous to health in a safe manner.
14. Monitor the workplace and maintain good housekeeping whilst keeping it free from hazards.
15. Communicate complex information regarding unfamiliar and unpredictable situations to colleagues and supervisors.
16. Advocate appropriate health and safety procedures.
17. Have the skills to observe and monitor site situations and materials to determine compliance with safety standards.

**CFRC302: Identify Systems, Equipment and Components**

This unit is about identifying and understanding the roles and responsibilities for interpreting the building plans, the responsibility of pouring, smoothing, levelling, and finishing surfaces made from poured concrete using hand and power tools as per requirements.

**Performance Criteria**

The candidate must have the necessary knowledge and skills to:

1. Read and interpret plans, construction methods and specifications and check for discrepancies.
2. Read and interpret road design and construction drawings and written instructions.
3. Verify alignments, levels, measurement of dimensions and elevation of roads, structures, and fixtures
4. Review of cost estimates, scheduling, and materials listing.
5. Develop a good knowledge of project scope and requirements.
6. Prepare a plan for concrete quality controls.
7. Inspect and report any faults in the plant equipment.
8. Manage corrective actions.
9. Ensure that equipment is calibrated and assist in the use of equipment.
10. Assisting in the calibration of equipment.
11. Resolve quality nonconformance.
12. Prepare punch lists and coordinate punch list completion.
13. Verify documentation and certificates for materials purchased/supplied.
14. Create and set wood or plastic formwork to hold concrete in place or install rebar.
15. Clean and inspect surface for pouring concrete.
16. Direct and cast concrete with the truck drivers.
17. Pour, smooth, and level concrete using handheld tool and power tools on floors, walls, ceilings, traffic islands, central strips, hard shoulders, parking bays, driveways, roadways, bridges, and footways.
18. Make concrete beams, columns, and panels.
19. Apply latex and epoxy to floors.
20. Install masonry according to requirements.
21. Pour sand as filler.
22. Monitor the impact of the weather on the curing process.
23. Apply sealing and hardening components and other additives as directed.
24. Safely use of the power vibrator to ensure good compaction of the concrete.
25. Mould and construct expansion joints using joiners and edging tools.
26. Polish surface using power surfacing machine.
27. Finish top surface of concrete using tools and water to create the desired texture including inspecting finished concrete, patch holes and remove imperfections after concrete has finished setting.
28. Assist in moving the discharge chute on a concrete truck to control where concrete is being poured.

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29. Carry out repairs on old concrete by replacing damaged areas, refinishing surfaces, and filling cracks.
30. Ensure that materials are broken or cut to the required size.
31. Clean excess mortar with appropriate tools.
32. Construct corners with a corner pole, edging tools, jointers, straightedge or by building a corner pyramid.
33. Fill up expansion joints with the appropriate and necessary caulking materials
34. Waterproof, damp-proof, finish, and repair concrete in new and existing structures
35. Facilitate concrete pouring.
36. Produce rough concrete surface using broom.
37. Prepare surface with hammer and chise.
38. Rub cement in with sponge-rubber float or burlap.

**Required Knowledge**

The Level 3 Concrete Finisher (Road Construction) must know and explain:

1. Be versant with project quality controls.
2. know the different phases of quality control.
3. The range of materials, additives, products, testing required, sampling procedures and work procedures applicable to the concrete in road construction process.
4. Methods and techniques to minimise wastage and to protect the environment.
5. Safeguard the quality of work.
6. Legislation relation to road construction in Chapter 499.
7. Testing and sampling equipment used.
8. Knowledge of road and civil building construction, civil engineering principles, techniques. and practices and the standard specifications used in concrete and related materials.
9. Knowledge regarding calibration of equipment and adherence to maintenance schedules.
10. Read scale working drawings from plans.
11. Design, setting up, aligning and check formwork.
12. Knowledge to inspect finished work.
13. Directing equipment drivers/trucks.
14. Concrete tool operations.

**Required Skills**

The Level 3 Concrete Finisher (Road Construction) should be able to:

1. Distinguish between and apply the different testing for the different types of concrete according to standard practices and procedures.
2. Distinguish between the different types of testing and sampling equipment for concrete.
3. Apply procedures to minimise construction material waste and dispose construction waste as stipulated in the environmental protection act.
4. Use all related equipment, plant, and tools.
5. Coordinate between different parties and stakeholders.
6. Be versant with engineering terminology.
7. Understand contract documents, project drawings and contractual obligations.
8. Be versant with legislation, construction methods and material specifications.
9. Have an understanding of construction laboratory functions and testing.
10. Have sound judgement and decision-making skills.
11. Operate within test scheduling and priorities.
12. Operate simple machinery and measuring equipment including handheld tools and power tools.
13. Familiar with manufacturing and construction methods and processes.

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14. Translate drawing details to setting out of work.
15. Check with specialised levelling equipment for accuracy.
16. Measure and comprehend calculations using metric units.
17. Read, analyze, and interpret plans and specifications and comparing them with construction in progress and for construction control purposes.
18. Read and interpret plans and specifications for construction control purposes.
19. Have the skills for making decisions in accordance with construction plans and specifications.
20. Have the skills for detecting discrepancies in layout plans, materials, construction methods and processes and implementing appropriate remedial actions.
21. Have mechanical aptitude.
22. Match concrete floors and identify imperfections in concrete.