

MODEL 1
Commissioning of Water Feature
Method Statement

1. DESCRIPTION OF WORK

The works consist of commissioning the water feature at the _____. The water features shall be commissioned under the supervision of the Water Feature Specialist and CM in conjunction with the project design team. There will be three phases of commissioning:

- A. Final Inspection of all water features
- B. Commissioning of all water features
- C. Operations and Maintenance training for all water features

2. RISK ASSESSMENT

The commissioning of water features carries a minimum of risk. Ensure workers practice all safety measures.

3. CONTROL MEASURES TO BE USED

Installers in the pool shall wear proper attire and non-slip footwear to prevent injury. Ensure all areas are clean and free of debris. Ensure ladders and lighting are fully operational prior to commissioning.

4. WHEN EACH ACTIVITY IS TO TAKE PLACE

- A. Upon notice of completion of the water features the design project team, water feature specialist and CM will conduct a final inspection of the entire water features including the mechanical and electrical installation. Upon completion of the inspection a written report of deficiencies will be issued to the project team. Water Feature Specialist shall return to site in approximately two (2) weeks or upon completion of remedial work to start the commissioning of the water features.
- B. The commissioning of the water features will commence upon completion of all works relating to the water features.
- C. The operations and maintenance training will take place after the commissioning of the water features.

5. DURATION OF ACTIVITY

- A. Final Inspection – x working day
- B. Commissioning of water features – x working days
- C. Operations and Maintenance Training – x working day

6. LOCATION OF ACTIVITY

The final inspection and commissioning will occur at each water feature and associated plant room. The operations and maintenance training will be conducted at the water feature and associated plant room. A meeting room will also be required for training purposes.

7. ACCESS SYSTEMS

The plant room is provided with an access. The access must be completed with all associated safety devices in place.

8. SEQUENCING OF WORKS

- A. Trade contractor's completion of water features and plant room, and associated services by others.
- B. Written notification to Water Feature Specialist and CM indicating requested date for final inspection.
- C. Final Inspection by Water Feature Specialist and CM
- D. Water Feature Specialist and CM will produce a written report to project design team listing any deficiencies.
- E. Trade contractor will complete any deficiencies and propose a commissioning date.
- F. Water Feature Specialist in conjunction with the CM and design project team will commence the commissioning of the water features.
- G. Water feature specialist will provide Operations and Maintenance training to the maintenance staff.

9. STATEMENT OF WHAT WORKS WILL BE UNDERTAKEN

Prior to Final Inspection

Prior to the water feature final inspection ensure the following has been completed:

- a) Each pool shall be leakage tested. It shall be the responsibility of the water proofing installer to provide written reports to the design project team and Water Feature Specialist and CM ensuring the water tightness of the pools.
- b) All pool finishes are to have been completed and inspected by Water Feature Specialist and CM and the design project team to ensure conformity to the design and construction documents. Once the finishes are completed each water feature will be leakage tested again ensuring the water tightness of each pool.
- c) The trade contractor's on-site engineers shall provide written reports that all piping systems have been pressure tested as per specification. The Water Feature Specialist and CM shall inspect all piping systems to ensure conformity to the specification and design drawings.
- d) The Water Feature Specialist and CM shall ensure that all basics services are completed:
- e) Power supplies are installed and operational to each control and lighting panel.
- f) Fresh water supplies have been installed and operational to each fountain equipment room.
- g) Drainage connections have been installed and operational to each equipment room.
- h) Floor levels shall be positively sloping towards drainage points.
- i) Drainage pumps and level floats shall have been installed.
- j) Ventilation equipment has been installed by others and is operational to each equipment room.
- k) The project team shall ensure that all works in the fountain equipment room are completed and operational, such as socket outlets, lighting, access and ladders.
- l) The project team shall ensure that all plant rooms, pools and accesses are clear and clean and free of all debris.
- m) All valves shall be tagged and flow directional arrows in place.
- n) All pool equipment is in place.
- o) All electrical connections are completed, and water tight including submersible junction boxes and submersible light fixture rings.

The final inspection shall take place after receipt of the written confirmation that the water features are completed and the above items have been confirmed. The Water Feature specialist shall conduct the final inspection of pools, plant rooms, electrical, and mechanical systems.

Final Inspection

The Water Feature specialist shall inspect and test the following items prior to full commissioning of the water features:

a) In-pool items

- Nozzles are correctly positioned and installed
- Suction and inlet fittings are clear and installed correctly
- Eyeball fittings and position are installed correctly
- Overflows and weirs are at the correct heights
- Control valves are fully opened and in the proper position
- Lights are installed and aimed correctly
- Junction boxes and cord seals are tight and wired correctly
- Level sensors are positioned correctly and are operational

b) Fountain Plant Room Items

- Inspect all control panel terminations
- Inspect all Lighting panel terminations
- Inspect all disconnects and ground fault devices
- Inspect all wiring to pumping equipment
- Inspect all wiring to sequencing equipment
- Inspect all wiring to filling equipment
- Inspect all wiring to ionization equipment
- Inspect all wiring to sequencing sensors
- Inspect wiring to drainage pump level sensors
- All valve tags are correct and flow directional arrows are in place.
- All pumping equipment shall be bumped to ensure proper rotation
- All strainers shall be inspected
- All piping, valves and pressure gauges shall be inspected

The Water Feature Specialist upon completion of the final inspection will issue a final inspection report to the CM.

Upon completion of all or any deficiencies the trade contractor can pot all junction boxes with removable type potting compound.

Upon completion of all or any deficiencies, the commissioning process can commence.

Commissioning

The Water Feature Specialists on-site technicians shall direct the trade contractor staff in the proper sequence to commission the water features. The trade contractor shall have staff available to provide mechanical and electrical adjustments to equipment. The trade contractor will also be required to make in-pool adjustments to nozzles, flow control valves, lighting etc. The trade contractor shall ensure that staff is provided with the necessary clothing and protection to carryout these adjustments.

The following is a typical sequence of events for the commissioning of a water feature

- a) Manually fill pools to operating depth.
- b) Ensure low water protection and automatic water replenishment is operational.
- c) Ensure all suction fittings and strainers are clear and clean.
- d) Ensure that all fine particle strainers are clear and clean.
- e) Ensure all required valving is in the correct open or closed position in plant room and pool.
- f) Bleed all lines of air where possible on the following:
 - Suction strainers
 - Fine particle discharge filters
 - Sequence devices
- g) Ensure all nozzles and inlet fittings are in the correct position for proper performance and are clean and clear.
- h) Check and ensure proper pump rotation by bumping each pump using hand switches on control panels.
- i) Ensure all submersible lighting is operational.
- j) Check water level sensors and floats for proper operation under The Water Feature Specialists supervision.
- k) Ensure drainage pumps are operational.
- l) Turn on sand filtration, check inlets/ eyeballs for position and performance.
- m) Turn on Main Pumps as per The Water Feature Specialists directions and desire sequence (if more than one). Make the necessary valve and nozzle adjustments as per The Water Feature Specialists direction in the plant room and pool.
- n) For all features sequenced events, The Water Feature Specialist shall load programs and make any adjustments to programs as necessary.

Upon completion of commissioning of each feature, the owner or owner's representative shall be required to sign-off on the appearance and general operation of the water feature.

Upon acceptance of each feature, The Water Feature Specialist shall record critical pressures, settings and amp readings for insertion into the O & M manuals.

Operations and Maintenance Training

The Water Feature Specialist shall then instruct the appointed maintenance staff on the operation and maintenance requirements for each water feature.

10.STATEMENT OF WHO WILL CARRY OUT THE WORKS

The Water Feature Specialist will oversee the commissioning of the water features. The Water Feature Specialist shall provide on-site engineers to verify and supervise the commissioning work. The Water Feature Specialist shall also provide programmers to load and modify programs as required. The trade contractor shall provide labor and any necessary tools.

11. SPECIAL CONSIDERATIONS

During the commissioning of the water feature some areas in the vicinity of the pools may get wet. Ensure maintenance personnel are available to dry areas that get wet during commissioning. The trade contractor shall be responsible for maintaining the water features until hand-over to the maintenance personnel.

12.PROTECTION SYSTEMS FOR THE PUBLIC

Areas around the water feature being commissioned should be provided with the appropriate signage, and barriers indicating a wet surface or danger of slipping on wet floors.

13. NUMBER OF HUMAN RESOURCES

The Water Feature Specialist shall provide the required staff to verify, supervise and program the water features. The trade contractor shall provide personnel as required.

14. SECURITY SYSTEMS

The trade contractor shall provide portable radio systems to relay information between plant room and pools during the commissioning of the water features.

15. STATEMENT OF WHAT INFORMATION HAS BEEN GIVEN

The trade contractor has been provided with design drawings and the water features technical specification.