

PART X

FINA FACILITIES RULES
2021– 2025

PREAMBLE

FR 1 GENERAL

FR 2 SWIMMING

FR 2.1 Swimming Facilities

FR 2.2 Swimming Facilities for Olympic Games and World Championships

FR 2.3 Automatic Officiating Equipment for Swimming

FR 3 DIVING

FR 3.1 Diving Facilities

FR 3.2 Diving Facilities for Olympic Games and World Championships

FR 3.3 Automatic Officiating Equipment for Diving

FR 3.4 Dry Land Facilities

FR 4 WATER POLO

FR 4.1 Water Polo Facilities

FR 4.2 Water Polo Facilities for Olympic Games and World Championships

FR 4.3 Equipment for Water Polo Facilities

FR 5 ARTISTIC SWIMMING

FR 5.1 Artistic Swimming Facilities

FR 5.2 Artistic Swimming Facilities for Olympic Games and World Championships

FR 5.3 Automatic Officiating Equipment for Artistic Swimming

FR 5.4 Sound Equipment and Presentation Standards for Artistic Swimming

FR 6 HIGH DIVING

FR 6.1 High Diving Facilities

FR 6.2 High Diving Facilities for World Championships

FR 6.3 Automatic Officiating Equipment for High Diving

FR 6.4 Dry Land Facilities

FR 7 OPEN WATER SWIMMING

FR 7.1 Open Water Swimming Facilities

FR 7.2 Open Water Swimming Facilities for Olympic Games and World Championships

FR 7.3 Equipment for Open Water Facilities

PREAMBLE

The Facilities Rules are intended to provide the best possible environment for *competitive use and training*. These Rules are not intended to govern issues related to the general public. It is the responsibility of the owner or controller of a facility to provide supervision for activities undertaken by the general public.

FR 1 GENERAL

FR 1.1 FINA Olympic Standard Pools.

All World Championships (except the Masters World Championships) and Olympic Games must be held in pools that comply with Rules FR 2.2, 3.2, 4.2, 5.2, 6.2 and 7.2.

FR 1.2 FINA General Standard Pools.

Other FINA events should be held in FINA Olympic Standard Pools, but the Bureau may waive certain standards for existing pools if they do not materially interfere with the competitions.

FR 1.3 FINA Minimum Standard Pools.

All other events held under FINA Rules should be conducted in pools that comply with all of the minimum standards contained within these Facilities Rules.

FR 1.4 In order to protect the health and safety of persons using swimming facilities for the purposes of recreation, training and competition, owners of public pools or pools restricted only to training and competition must comply with the requirements established by law and the health authorities in the country where the pool is situated.

FR 1.5 New competition equipment (e.g. Starting blocks, lane-ropes, etc.) must be available by 1st January in the year of the Olympic Games and FINA World Championships.

FR 2 SWIMMING

FR 2.1 SWIMMING FACILITIES

FR 2.1.1 Length

FR 2.1.1.1 50.000 metres. When touch panels of Automatic Officiating Equipment are used on the starting end, or additionally on the turning end, the pool must be of such length that ensures the required distance of 50.000 metres between the two panels. **See *Swimming Diagrams, Annex SW 1, SW 2, SW 3 and SW 4***

FR 2.1.1.2 25.000 metres. When touch panels of Automatic Officiating Equipment are used on the starting end, or additionally on the turning end, the pool must be of such length that ensures the required distance of 25.000 metres between the two panels. **See *Swimming Diagrams, Annex SW 5, SW 6, SW 7, SW 8 and SW 9***

FR 2.1.2 Dimensional Tolerances

FR 2.1.2.1 50m swimming pools.

The admissible tolerance in 50.00 m swimming pools will be +0.010, -0.000 metre when touch panels are installed.

Tolerances will be measured as follows:

For swimming pools with touch panels of Automatic Officiating Equipment on both ends the Wall to Wall distance shall be: Minimum 50.020 metre / Maximum 50.030 metre.

Tolerances have to be consistent 0.300 metre above to 0.800 metre bellow the water surface.

These measurements should be certified by a surveyor or other qualified official, appointed or approved by the Member in the country in which the pool is situated.

See *Swimming Diagrams, Annex SW 1, SW 2, SW 3 and SW4*

FR 2.1.2.2 25m swimming pools.

The admissible tolerance in 25.00 m swimming pools will be +0.010, -0.000 metre when touch panels are installed.

Tolerances will be measured as follows:

For swimming pools with touch panels of Automatic Officiating Equipment on both ends the Wall to Wall distance shall be: Minimum 25.020 metre / Maximum 25.030 metre.

For swimming pools with a touch panel of Automatic Officiating Equipment on one end the Wall to Wall distance shall be: Minimum 25.010 metre / Maximum 25.020 metre.

Tolerances have to be consistent 0.300 metre above to 0.800 metre bellow the water surface.

These measurements should be certified by a surveyor or other qualified official, appointed or approved by the Member in the country in which the pool is situated.
See *Swimming Diagrams, Annex SW 5, SW 6, SW 7, SW 8 and SW 9*

FR 2.1.3 Width

There is no minimum width requirement. However, the width of the pool has to comply with the FR 2.1.6 Lanes.

FR 2.1.4 Depth

A minimum depth of 1.35 metres, extending from 1.0 metre to at least 6.0 metres from the end wall is required for pools with starting blocks. A minimum depth of 1.0 metre is required elsewhere.

FR 2.1.5 Walls

FR 2.1.5.1 End walls shall be vertical, parallel and form 90 degree right angles to the swimming course and to the surface of the water. They shall be constructed of solid material, with a slip-resistant surface extending 0.8 metre below the water surface, so as to enable the competitor to touch and push off in turning without hazard.

The admissible tolerance in walls verticality will be ± 0.3 degrees

FR 2.1.5.2 Rest ledges along the pool walls are permitted; they must be not less than 1.2 metres below the water surface, and may be 0.1 metre to 0.15 metre wide. Both internal and external ledges are acceptable, however internal ledges are preferred.

FR 2.1.5.3 Gutters may be placed on all four walls of the pool. If end wall gutters are installed, they must allow for attachment of touch panels to the required 0.3 metre above the water surface. They must be covered with a suitable grill or screen.

FR 2.1.6 Lanes

There is no minimum number of lanes. Lanes shall be at least 2.5 metres wide, first and last lane may be 2.4 metres wide with 2 spaces of at least 0.1 metres wide outside of the first and the last lanes.

FR 2.1.7 Lane Ropes

FR 2.1.7.1 The main function of a lane rope is not only to separate swimming lanes, but to reduce the pool waves. A lane rope should have the properties to reduce the waves going through to the other side of rope or bouncing back into the swimming lane.

Lane ropes shall extend the full length of the course and components not contributing to its wave reduction function, such as tension spring and take-up reel, shall measure less than 200mm each end of rope.

Lane rope should be secured at each end wall to anchor brackets recessed into the end walls. If anchor placement is on pool deck, an extender, firm and non-elastic, should be in place. The installed lane rope should stay in the pool water. The anchor, including extender, shall not extend more than 10mm into the pool. The anchor shall not influence the length of the lane rope by more than ± 10 mm each end of rope.

The anchor shall be positioned so that the wave reducing components at each end wall of the pool shall be 50% below the surface of the water. Anchors should be installed to withstand 20kN. Each lane rope will consist of wave reducing components placed end-to-end having a minimum diameter of 0,10 metre. The design of discs and floats should be so that the floats, by themselves, do not influence the length of the lane rope. A float should be an integral part in between two discs. The lane rope length of the course shall have a negative buoyancy in such a way that at least one half to maximum two thirds of the height of the wave reducing components should be beneath the water surface.

The take-up reel of the lane rope should require a tool to lock tensioning into position and to prevent non- authorized tampering. The lane rope shall be equipped with a tension spring, absorbing sudden high point loads and a wire withstanding a tensile force of 12kN.

In an 8 lane swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 1 and 8
- Four (4) BLUE ropes for lanes 2, 3, 6 and 7
- Three (3) YELLOW ropes for lanes 4 and 5

The components extending for a distance of 5.0 metres from each end of the pool shall be of RED colour.

There shall not be more than one lane rope between each lane. The lane ropes shall be firmly stretched and the tensions should be 1-1,2kN.

See *Swimming Diagrams, Annex SW 1, SW 6, SW 7*

FR 2.1.7.2 At the 15-metre mark from each end wall of the pool the components shall be distinct in colour from the surrounding components.

FR 2.1.7.3 In 50 metre pools the components shall be distinct to mark 25 metres.

FR 2.1.7.4 Lane numbers of soft material may be placed on the lane ropes at the start and turning end of the pool.

FR 2.1.8 Starting Platforms

Starting Platforms shall be firm and give no springing effect. The height of the platform above the water surface shall be from 0.5 metre to 0.75 metre. The surface area shall be at least 0.5 metre x 0.5 metre and covered with a slip-resistant material.

Maximum slope shall not be more than 10 degrees. The starting platform may have an adjustable setting back plate. The platform shall be constructed so as to permit the gripping of the platform by the swimmer in the forward start at the front and the sides; it is recommended that, if the thickness of the starting platform exceeds 0.04 metre, grips of at least 0.1 metre width on each side and 0.4 metre width in the front be cut out to 0.03 metre from the surface of the platform.

Handgrips for the forward start may be installed on the sides of the starting platforms. Handgrips for backstroke starts shall be placed within 0.3 metre to 0.6 metre above the water surface both horizontally and vertically. They shall be parallel to the surface of the end wall and must not protrude beyond the end wall.

A minimum depth of 1.35 metres, extending from 1.0 metre to at least 6.0 metres from the end wall is required for pools with starting blocks. Electronic read-out boards may be installed under the blocks. Flashing is not allowed. Figures must not move during a backstroke start.

FR 2.1.9 Numbering

Each starting block must be distinctly numbered on all four sides, clearly visible. It is recommended that lane number 0 shall be on the right-hand side when facing the course from the starting end with exception of 50m events, which may start from the opposite end. Touch panels may be numbered on the top part.

FR 2.1.10 Backstroke Turn Indicators

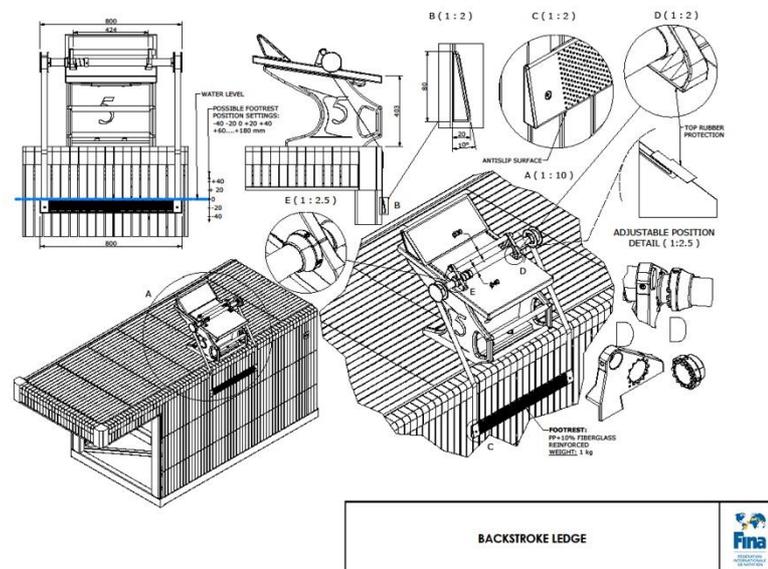
Flagged ropes shall be suspended across the pool, 1.8 metres above the water surface, from fixed standards placed 5.0 metres from each end wall. Distinctive marks must be placed on both sides of the pool, and where possible on each lane rope, 15.0 metres from each end wall.

FR 2.1.11 Backstroke Ledge

A backstroke ledge may be used:

- The ledge may be adjustable to 4 cm above or 4 cm below the water level.
- The ledge is a minimum of 65 cm in length.
- The ledge must be 8 cm in height, 2 cm at the width with 10 degrees of slope

See Diagram



FR 2.1.12 False Start Rope

False Start Rope may be suspended across the pool not less than 1.2 metres above the water level from fixed standards placed 15.0 metres in front of the starting end. It shall be attached to the standards by a quick release mechanism. The rope must effectively cover all lanes when activated.

See *Swimming Diagrams, Annex SW 1, SW 2, SW 3, SW 4, SW 5, SW 6, SW 7, SW 8, SW 9*

FR 2.1.13 Water conditions

FR 2.1.13.1 Water Temperature

Water temperature shall be 25° to 28°.

FR 2.1.13.2 Water Movement

During competition, the water in the pool must be at a constant level, with no appreciable movement.

In order to keep the water level, preserve the transparency of water and take into consideration the health regulations in force in most countries, inflow and outflow has to be regulated as follows:

- 220 to 250 m³/h for 50.00 m pools
- 150 to 180 m³/h for 33.33 m pools
- 120 to 150 m³/h for 25.00 m pools

In daily use, inflow and outflow has to follow the health regulation of each country.

At these turnover rates, the water distribution has to be such that no appreciable current or turbulence is created.

“Appreciable current” is defined as water movement that can move a floating basketball (filled with 6 litres of water to obtain the right buoyancy) in one direction for more than 1,25m in 60 seconds.

The practical way to test this is to install two floating lines crosswise in a swim lane (to obtain a square with 2,5m size, ref. Image 1) and then to leave the basketball in the central point of the square. If the ball does not touch any of the four lane ropes within 60 seconds, the turbulence test is successful.

Test should be repeated in lanes 1,3,6,8 on two sides, at 5m from each headwall.



FR 2.1.13.3 Salinity of the water

World Records and World Junior Records can be established only in water with less than 3 gr/litre of salt.

No World Records will be recognized in any kind of sea or ocean water.

FR 2.1.14 Lighting

Light intensity over starting platforms and turning ends shall not be less than 600 lux.

FR 2.1.15 Lane Markings

Lane Markings shall be of a dark contrasting colour, placed on the floor of the pool in the centre of each lane.

Width: minimum 0.2 metre, maximum 0.3 metre.

Length: 46.0 metres for 50 metre long pools;
21.0 metres for 25 metre long pools.

Each lane line shall end 2.0* metres from the end wall of the pool with a distinctive cross line 1.0 metre long and of the same width as the lane line. The distance between the centre points of each lane shall be 2.5 metres. **Pool length tolerances must be considered.*

Target lines shall be placed on the end walls or on the touch panels, in the centre of each lane, of the same width as the lane lines.

They shall extend without interruption from the deck edge (curb), to the floor of the pool to a maximum of 3 metres. A cross line 0.5 metre long shall be placed 0.3 metre below the water surface, measured to the centre point of the cross line.

For 50m and 25m pools constructed after 1st January 2006, cross lines 0.5 metre long shall be placed at the 15 metre mark from each end of the pool. After October 2013 this shall be measured from the end wall to the centre point of the cross line.

See *Swimming Diagrams: Annex SW 10, SW 11*

For swimming pools with bulkheads, lane markings shall be as shown on ***Swimming Diagrams: Annex SW 4, SW 5.***

FR 2.1.16 Bulkheads

When a bulkhead serves as an end wall, it must extend the full width of the course and present a solid smooth, non-slippery stable vertical surface on which touch pads may be mounted extending not less than 0.8m below and 0.3m above the surface of the water, and must be free of hazardous openings above or below the waterline which may be penetrated by a swimmer's hands, feet, toes or fingers. A bulkhead must be of a design that provides for the free movement of officials along its length without such movement creating any appreciable current or water turbulence.

FR 2.1.17 World Records Application

For the Homologation of the Swimming World Records, the pools must have a valid Certificate (*) and fulfil the requirements established in the following FR:

- FR 2.1.1 Length
- FR 2.1.2 Dimensional Tolerances
- FR 2.1.4 Depth
- FR 2.1.8 Starting Platforms
- FR 2.1.13.2 Water Movement
- FR 2.1.13.3 Salinity of water
- FR 2.1.15 Lane Markings

(*) Certificate issued by FINA or National Federation.

The pools that must obtain the FINA Swimming Pool Certificate are the following:

1. Pools that do not have a valid Certificate and new pools
2. Pools that already have the FINA Certificate but have undergone renovation
3. Pools built before 1st January 2000
4. Pools to which a bulkhead has been installed

FR 2.2 SWIMMING FACILITIES FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS

FR 2.2.1 Length

Length: 50.0 metres between the Automatic Officiating Equipment touch panels, except for the World Swimming Championships (25m), which shall be 25.0 metres between the Automatic Officiating Equipment touch panels at the starting end and the wall or touch panels at the turning end.

FR 2.2.2 Dimensional Tolerances

FR 2.2.2.1 50m swimming pools.

The admissible tolerance in 50.00 m swimming pools will be +0.010, -0.000 metre when touch panels are installed.

Tolerances will be measured as follows:

For swimming pools with touch panels of Automatic Officiating Equipment on both ends the Wall to Wall distance shall be: Minimum 50.020 metre / Maximum 50.030 metre.

Tolerances have to be consistent 0.300 metre above to 0.800 metre below the water surface.

These measurements should be certified by a surveyor or other qualified official, appointed or approved by the Member in the country in which the pool is situated.
See Swimming Diagrams: Annex SW 1, SW 2, SW 3 and SW4

FR 2.2.2.2 25m swimming pools.

The admissible tolerance in 25.00 m swimming pools will be +0.010, -0.000 metre when touch panels are installed.

Tolerances will be measured as follows:

For swimming pools with touch panels of Automatic Officiating Equipment on both ends the Wall to Wall distance shall be: Minimum 25.020 metre / Maximum 25.030 metre.

For swimming pools with a touch panel of Automatic Officiating Equipment on one end the Wall to Wall distance shall be: Minimum 25.010 metre / Maximum 25.020 metre.

Tolerances have to be consistent 0.300 metre above to 0.800 metre below the water surface.

These measurements should be certified by a surveyor or other qualified official, appointed or approved by the Member in the country in which the pool is situated.
See *Swimming Diagrams: Annex SW 5, SW 6, SW 7, SW 8 and SW 9*

FR 2.2.3 Width

OLYMPIC GAMES

- Permanent Swimming Pools: 25.00 meter
- Temporary Swimming Pools: 25.00 meter

WORLD CHAMPIONSHIPS

- Permanent Swimming Pools: 25.00 meter
- Temporary Swimming Pools: 26.00 meter

FR 2.2.4 Depth

Depth: 2 Metres (minimum); 3 metres recommended, when using the pool for multi disciplines i.e. Artistic Swimming

FR 2.2.5 Walls

FR 2.2.5.1 End walls shall be vertical, parallel and form 90 degree right angles to the swimming course and to the surface of the water. They shall be constructed of solid material, with a slip-resistant surface extending 0.8 metre below the water surface, so as to enable the competitor to touch and push off in turning without hazard.

The admissible tolerance in walls verticality will be ± 0.3 degrees

FR 2.2.5.2 Rest ledges along the pool walls are permitted; they must be not less than 1.2 metres below the water surface, and may be 0.1 metre to 0.15 metre wide. Both internal and external ledges are acceptable, however internal ledges are preferred.

FR 2.2.5.3 Gutters may be placed on all four walls of the pool. If end wall gutters are installed, they must allow for attachment of touch panels to the required 0.3 metre above the water surface. They must be covered with a suitable grill or screen.

FR 2.2.6 Lanes

FR 2.2.6.1 Number of lanes:

- 8 lanes for OLYMPIC GAMES
- 10 lanes for WORLD CHAMPIONSHIPS

FR 2.2.6.2 Olympic Games

Lanes shall be 2.5 metres wide with 2 spaces 2.5 metres wide outside of lanes 1 and 8. There must be a lane rope separating these spaces from lanes 1 and 8. **See *Swimming Diagram: Annex SW 1***

FR 2.2.6.3 World Championships

For permanent swimming pools, lanes from 1 to 8 shall be 2.5 metres wide and lanes 0 and 9 shall be 2.4 metres wide with 2 spaces 0.1 metres wide outside of lanes 0 and 9. There must be a lane rope separating these spaces from lanes 0 and 9 for World Championships. **See *Diagrams: Annex SW 2 and SW 8***

For temporary swimming pools, lanes shall be 2.5 metres wide with 2 spaces 0.5 metres wide outside of lanes 0 and 9. There must be a lane rope separating these spaces from lanes 0 and 9. **See *Diagrams: Annex SW 3 and SW 9***

FR 2.2.7 Lane Ropes

FR 2.2.7.1 The main function of a lane rope is not only to separate swimming lanes, but to reduce the pool waves. A lane rope should have the properties to reduce the waves going through to the other side of rope or bouncing back into the swimming lane.

Lane ropes shall extend the full length of the course and components not contributing to its wave reduction function, such as tension spring and take-up reel, shall measure less than 200mm each end of rope.

Lane rope should be secured at each end wall to anchor brackets recessed into the end walls. If anchor placement is on pool deck, an extender, firm and non-elastic, should be in place.

The installed lane rope should stay in the pool water. The anchor, including extender, shall not extend more than 10mm into the pool. The anchor shall not influence the length of the lane rope by more than ± 10 mm each end of rope.

The anchor shall be positioned so that the wave reducing components at each end wall of the pool shall be 50% below the surface of the water. Anchors should be installed to withstand 20kN. Each lane rope will consist of wave reducing components placed end-to-end having a diameter of 0, 15 metre. The design of discs and floats should be so that the floats, by themselves, do not influence the length of the lane rope. A float should be an integral part in between two discs. The lane rope length of the course shall have a negative buoyancy in such a way that at least one half to maximum two thirds of the height of the wave reducing components should be beneath the water surface.

The take-up reel of the lane rope should require a tool to lock tensioning into position and to prevent non- authorized tampering. The lane rope shall be equipped with a tension spring, absorbing sudden high point loads and a wire withstanding a tensile force of 12kN.

The components extending for a distance of 5.0 metres from each end of the pool shall be of RED colour.

There shall not be more than one lane rope between each lane. The lane ropes shall be firmly stretched and the tensions should be 1-1,2kN.

In a swimming pool the colour of the lane ropes should be as follows:

OLYMPIC GAMES

In an 8 (eight) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 1 and 8
- Four (4) BLUE ropes for lanes 2, 3, 6 and 7
- Three (3) YELLOW ropes for lanes 4 and 5

See Swimming Diagram, Annex SW 1

1	GREEN
2	BLUE
3	BLUE
4	YELLOW
5	YELLOW
6	YELLOW
7	BLUE
8	BLUE
	GREEN

WORLD CHAMPIONSHIPS

In a 10 (ten) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 0 and 9
- Six (6) BLUE ropes for lanes 1, 2, 3, 6, 7 and 8
- Three (3) YELLOW ropes for lanes 4, 5

See *Swimming Diagrams, Annex SW 2, SW 3, SW8, SW9*

0	GREEN
1	BLUE
2	BLUE
3	BLUE
4	YELLOW
5	YELLOW
6	YELLOW
7	BLUE
8	BLUE
9	BLUE
	GREEN

FR 2.2.7.2 At the 15-metre mark from each end wall of the pool the components shall be distinct in colour from the surrounding components.

FR 2.2.7.3 In 50 metre pools the components shall be distinct to mark 25 metres.

FR 2.2.7.4 Lane numbers of soft material may be placed on the lane ropes at the start and turning end of the pool.

FR 2.2.7.5 Lane marking measurements, please read in conjunction with pool diagrams. **See *Swimming Diagrams: Annex SW 5, SW 10, SW11***

FR 2.2.8 Starting Platforms

Starting Platforms shall be firm and give no springing effect. The height of the platform above the water surface shall be from 0.5 metre to 0.75 metre. The surface area shall be at least 0.5 metre x 0.6 metre and covered with a slip-resistant material.

Maximum slope shall not be more than 10 degrees. The starting platform may have an adjustable setting back plate. The platform shall be constructed so as to permit the gripping of the platform by the swimmer in the forward start at the front and the sides; it is recommended that, if the thickness of the starting platform exceeds 0.04 metre, grips of at least 0.1 metre width on each side and 0.4 metre width in the front be cut out to 0.03 metre from the surface of the platform.

Handgrips for the forward start may be installed on the sides of the starting platforms. Handgrips for backstroke starts shall be placed within 0.3 metre to 0.6 metre above the water surface both horizontally and vertically. They shall be parallel to the surface of the end wall and must not protrude beyond the end wall.

FR 2.2.12 False Start Rope

False Start Rope may be suspended across the pool not less than 1.2 metres above the water level from fixed standards placed 15.0 metres in front of the starting end. It shall be attached to the standards by a quick release mechanism. The rope must effectively cover all lanes when activated.

FR 2.2.13 Water conditions

FR 2.2.13.1 Water Temperature

Water temperature shall be 25° to 28°.

FR 2.2.13.2 Water Movement

During competition, the water in the pool must be at a constant level, with no appreciable movement.

In order to keep the water level, preserve the transparency of water and take into consideration the health regulations in force in most countries, inflow and outflow has to be regulated as follows:

- 220 to 250 m³/h for 50.00 m pools
- 150 to 180 m³/h for 33.33 m pools
- 120 to 150 m³/h for 25.00 m pools

In daily use, inflow and outflow has to follow the health regulation of each country.

At these turnover rates, the water distribution has to be such that no appreciable current or turbulence is created.

“Appreciable current” is defined as water movement that can move a floating basketball (filled with 6 litres of water to obtain the right buoyancy) in one direction for more than 1,25m in 60 seconds.

The practical way to test this is to install two floating lines crosswise in a swim lane (to obtain a square with 2,5m size, ref. Image 1) and then to leave the basketball in the central point of the square. If the ball does not touch any of the four lane ropes within 60 seconds, the turbulence test is successful.

Test should be repeated in lanes 1,3,6,8 on two sides, at 5m from each headwall.



FR 2.2.13.3 Salinity of the water

World Records and World Junior Records can be established only in water with less than 3 gr/litre of salt.

No World Records will be recognized in any kind of sea or ocean water.

FR 2.2.14 Lighting

Light intensity over the whole pool shall not be less than 1500 lux.

FR 2.2.15 Lane Markings

Lane Markings shall be of a dark contrasting colour, placed on the floor of the pool in the centre of each lane.

Width: minimum 0.2 metre, maximum 0.3 metre.

Length: 46.0 metres for 50 metre long pools;
21.0 metres for 25 metre long pools.

Each lane line shall end 2.0* metres from the end wall of the pool with a distinctive cross line 1.0 metre long and of the same width as the lane line. The distance between the centre points of each lane shall be 2.5 metres. **Pool length tolerances must be considered.*

Target lines shall be placed on the end walls or on the touch panels, in the centre of each lane, of the same width as the lane lines. They shall extend without interruption from the deck edge (curb), to the floor of the pool to a maximum of 3 metres. A cross line 0.5 metre long shall be placed 0.3 metre below the water surface, measured to the centre point of the cross line.

For 50m and 25m pools constructed after 1 January 2006, cross lines 0.5 metre long shall be placed at the 15 metre mark from each end of the pool. After October 2013 this shall be measured from the end wall to the centre point of the cross line.

See *Swimming Diagrams, Annex SW 10 and SW 11*

For swimming pools with bulkheads, lane markings shall be as shown on

Swimming Diagrams, Annex SW 4 and SW 5

FR 2.2.16 Bulkheads

When a bulkhead serves as an end wall, it must extend the full width of the course and present a solid smooth, non-slippery stable vertical surface on which touch pads may be mounted extending not less than 0.8m below and 0.3m above the surface of the water, and must be free of hazardous openings above or below the waterline which may be penetrated by a swimmer's hands, feet, toes or fingers. A bulkhead must be of a design that provides for the free movement of officials along its length without such movement creating any appreciable current or water turbulence.

FR 2.2.17 Minimum distance separating the pools

If the swimming pool and the diving well are in the same area the minimum distance separating the pools shall be 5.0 metres. For pools constructed from 1st January 2014 the minimum distance separating the pool shall be a minimum of 8 metres however 10 metres is preferred.

FR 2.3 AUTOMATIC OFFICIATING EQUIPMENT FOR SWIMMING

FR 2.3.1 General description

Automatic and Semi-Automatic Officiating Equipment records the elapsed time of each swimmer and determines the relative place in a race. Judging and timing shall be to 2 decimal places (1/100 of a second). Equipment that is installed shall not interfere with the swimmers' starts, turns, or the function of the overflow system.

FR 2.3.2 Equipment requirements

The Equipment must:

FR 2.3.2.1 Be activated by the starter.

FR 2.3.2.2 Have no exposed wires on the pool deck, if possible.

FR 2.3.2.3 Be able to display all recorded information for each lane by place and by lane.

FR 2.3.2.4 Provide easy digital reading of a swimmer's time.

FR 2.3.3 Starting devices

FR 2.3.3.1 The starter shall have a microphone for oral commands.

FR 2.3.3.2 If a pistol is used, it shall be used with a transducer.

FR 2.3.3.3 Both the microphone and the transducer shall be connected to loudspeakers at each starting block where both the starter's commands and the starting signal can be heard equally and simultaneously by each swimmer.

FR 2.3.4 Touch panels for Automatic Equipment

FR 2.3.4.1 The minimum measurement of the touch panels shall be 2.4 metres wide and 0.9 metre high, and the thickness shall be 0.01m when the contact is closed (and the time is stopped).

They shall extend 0.3 metre above and 0.6 metre below the surface of the water. The equipment in each lane shall be electronically connected independently, so it may be controlled and maintained individually. The surface of the panels shall be of a bright colour and shall bear the line markings approved for the end walls.

FR 2.3.4.2 Installation - The touch panels shall be installed in a fixed position in the centre of the lanes. The panels may be portable, allowing the pool operator to remove them when there are no competitors.

FR 2.3.4.3 Sensitivity - The sensitivity of the panels shall be such that they cannot be activated by water turbulence, but will be activated by a light hand touch. The panels shall be sensitive on the top edge.

FR 2.3.4.4 Markings - The markings on the panels shall conform with and superimpose on the existing markings of the pool. The perimeter and edges of the panels shall be defined by a 0.025 metre black border.

FR 2.3.4.5 Safety - The panels shall be safe from the possibility of electrical shock and shall not have sharp edges.

FR 2.3.5 Semi-Automatic Equipment

With Semi-Automatic Equipment, the finish shall be recorded by buttons pushed by timekeepers at the finish touch of the swimmer.

FR 2.3.5.1 Semi-Automatic Equipment may be used as a backup to the Automatic Officiating Equipment at FINA or other major events if there are three buttons per lane, each operated by a separate official (in which case other finish judges shall not be required). An inspector of turns may operate one of the buttons

FR 2.3.6 Automatic Equipment – Essential Accessories

The following accessories are essential for a minimum installation of Automatic Equipment:

FR 2.3.6.1 Printout of all information, which can be regenerated during a succeeding race.

FR 2.3.6.2 Spectator readout board.

FR 2.3.6.3 Relay take-off judging to 1/100 of a second. Where overhead video cameras are installed they may be reviewed as a supplement to the automatic system's judgement of relay take-off. For the differential in the relays take-off the manufacturer of the device shall be consulted.

FR 2.3.6.4 Automatic lap counter.

FR 2.3.6.5 Readout of splits.

FR 2.3.6.6 Computer summaries.

FR 2.3.6.7 Correction of erroneous touch.

FR 2.3.6.8 Automatic rechargeable battery operation possibility.

FR 2.3.7 Automatic Equipment – Accessories for Olympic Games and World Championships

For Olympic Games and World Championships the following accessories are also essential:

FR 2.3.7.1 The spectator electronic read-out board shall contain at least twelve (12) lines of thirty-two (32) characters, each capable of displaying both letters and numbers. Each character shall have a minimum height of 360 mm. Each line – matrix scoreboard shall be able to scroll up or down, with blink function, and each full matrix scoreboard shall be programmable, and capable of showing animation. The board must have a minimum size of 7.5 m width by 4.5m height.

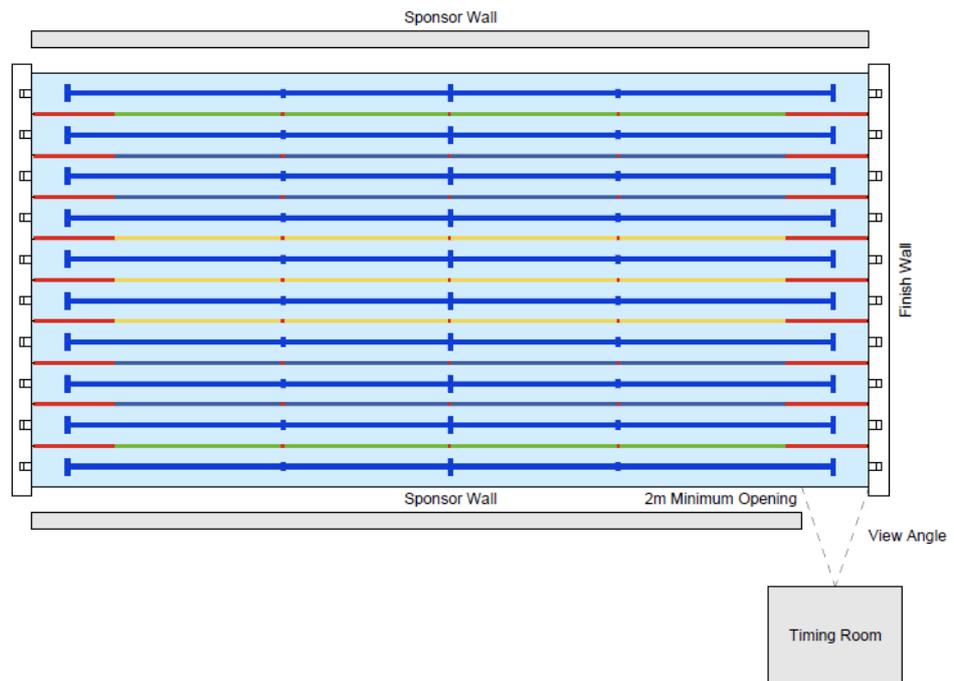
FR 2.3.7.2 There shall be an air-conditioned control centre, with dimensions of at least 6.0 metres x 3.0 metres, located between 3.0 metres and 5.0 metres from the finish wall, with an unobstructed view of the finish wall at all times during the race. The referee must have easy access to the control centre during the competition. At all other times the control centre shall be able to be secured.

FR 2.3.7.3 Video timing

FR 2.3.8 Timing room

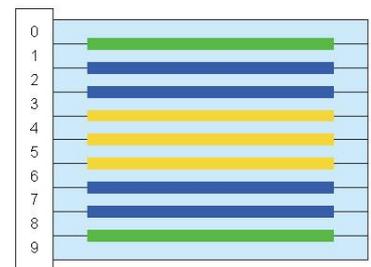
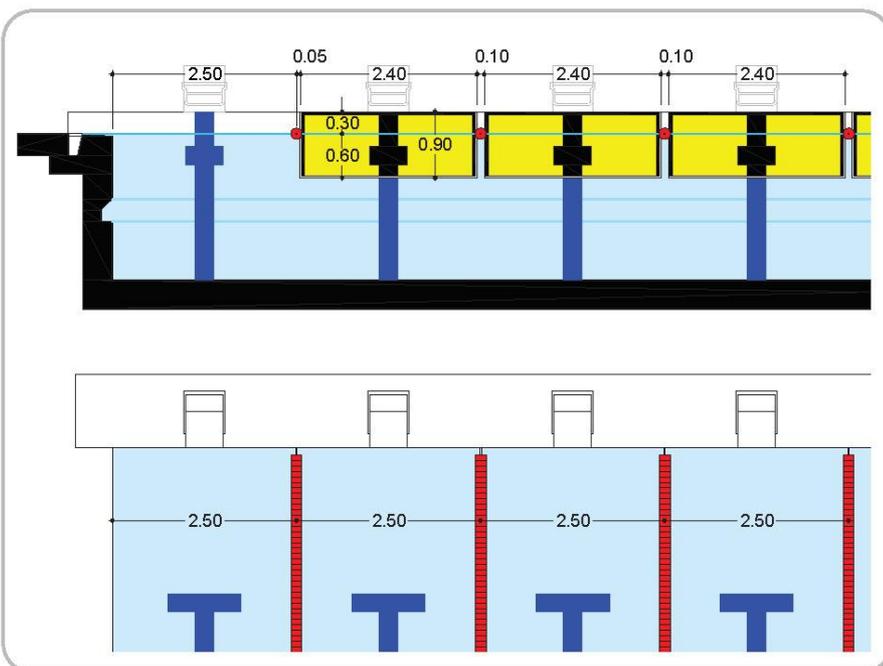
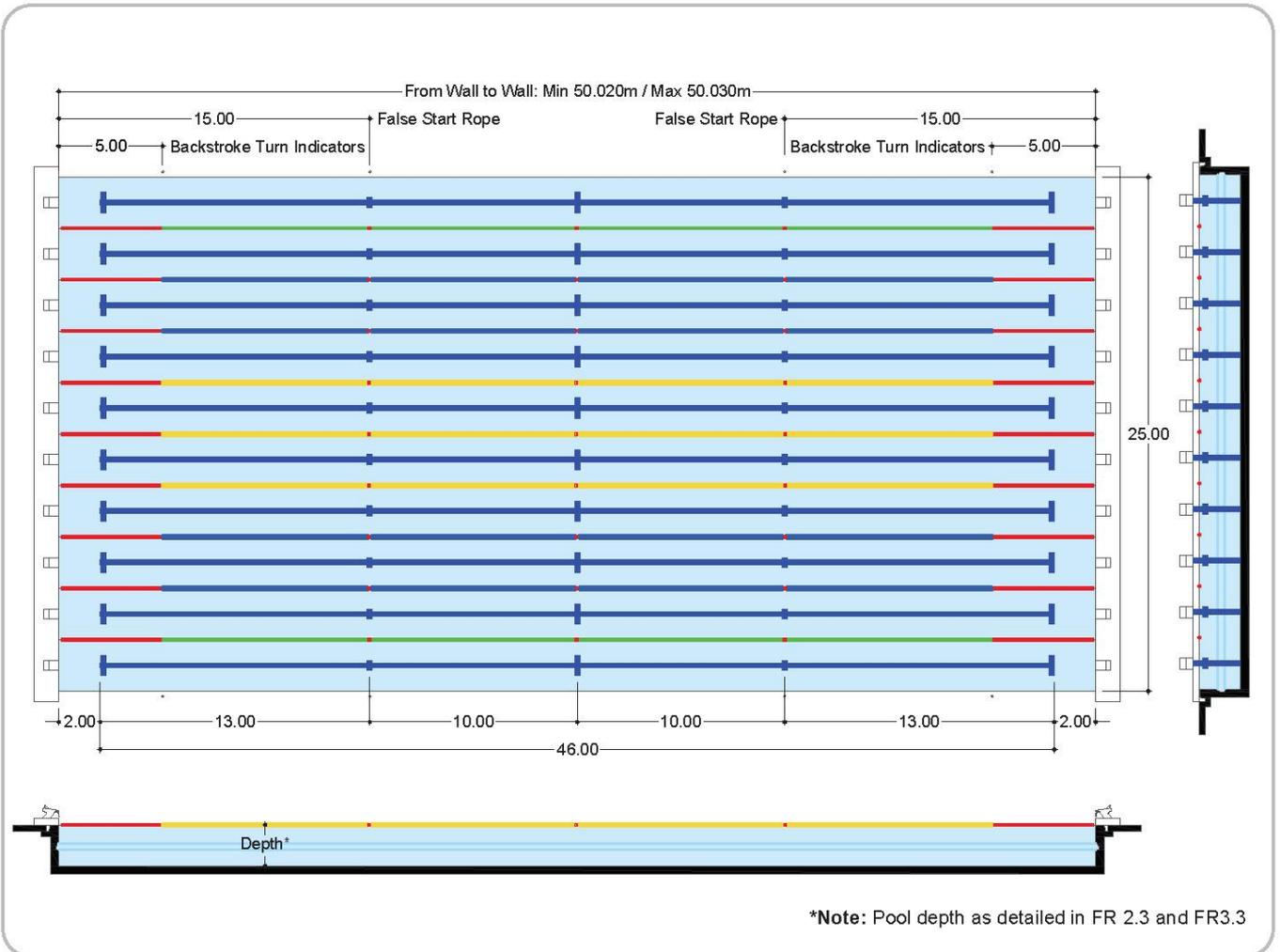
Timekeepers shall have a clear view on the finish pool side from the Timing room. Sponsor panels or LED wall shall stat at a minimum of 2m distance from the finish wall Timing room side.

See Diagram



FR 2.3.9 Underwater video

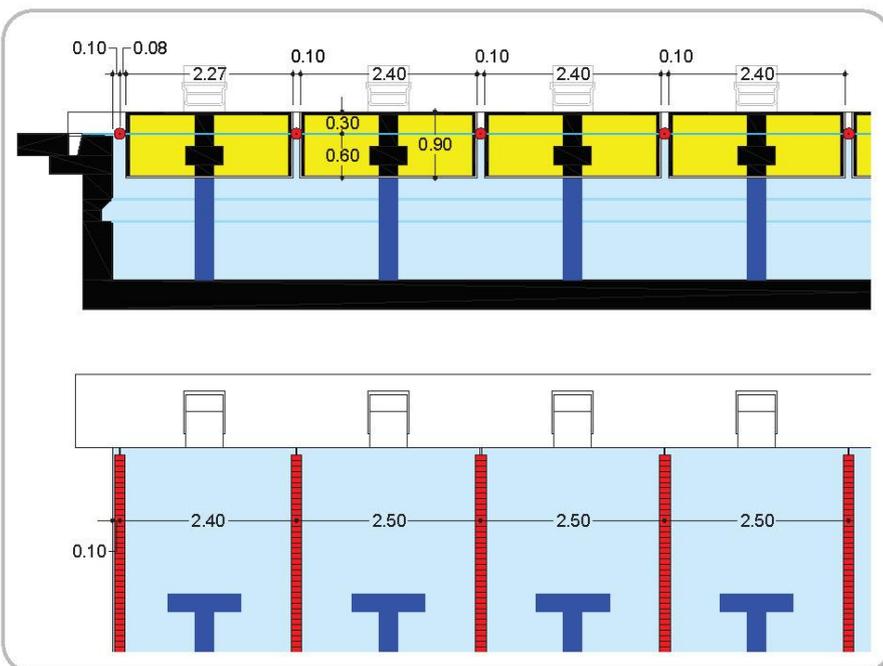
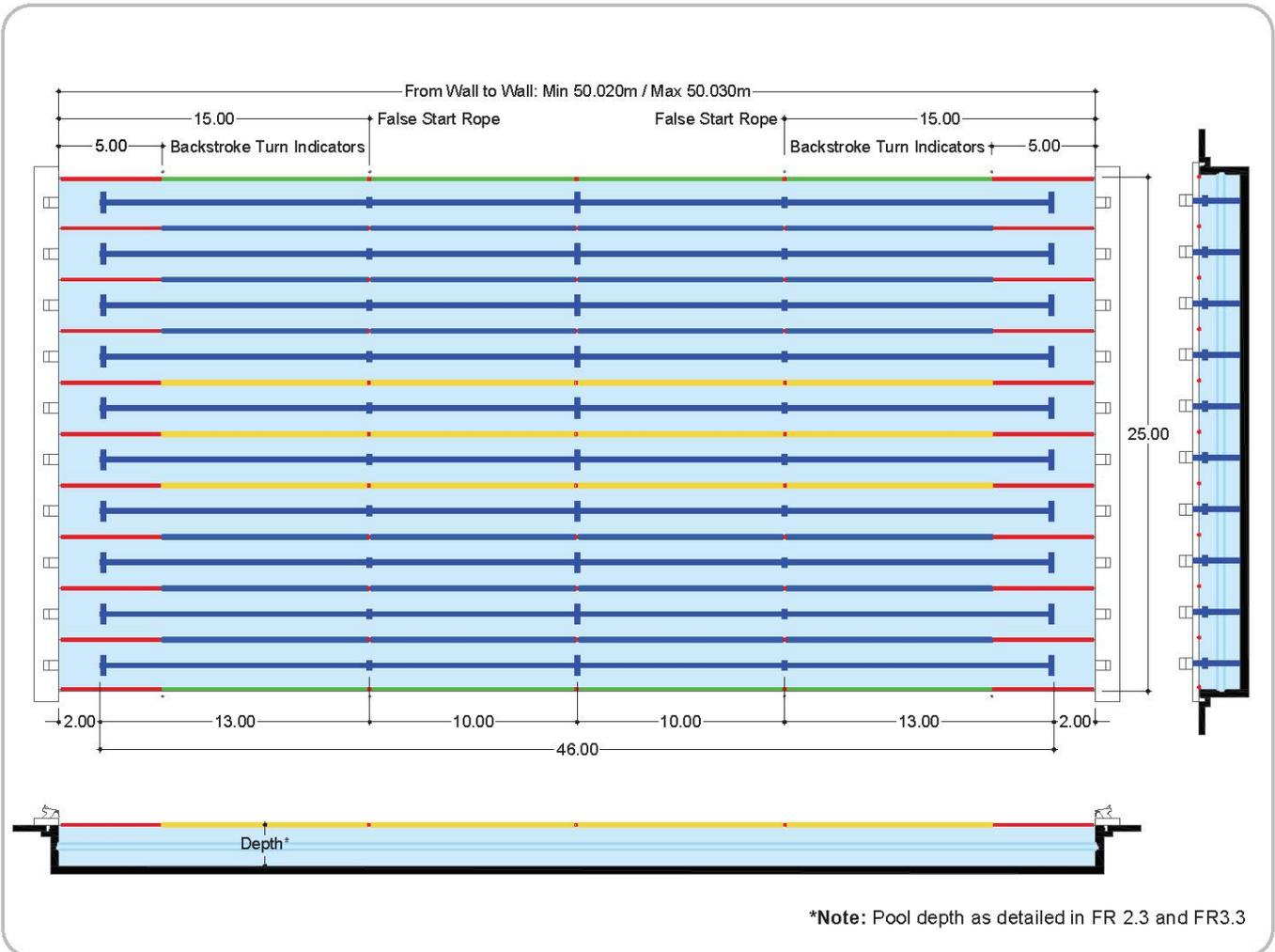
At Olympic Games and World Championships approved Automatic Officiating Equipment, including Underwater Video Judging Equipment shall be provided and used. The approved Underwater Video Judging Equipment shall be used to initiate stroke infraction calls, confirm stroke infraction calls or assist the Referee to overturn calls made on the pool deck.



Lane Ropes

In a 8 (eight) lanes swimming pool the colour of the lane ropes should be as follows:

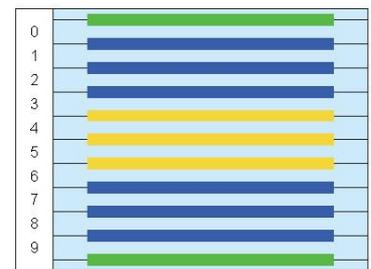
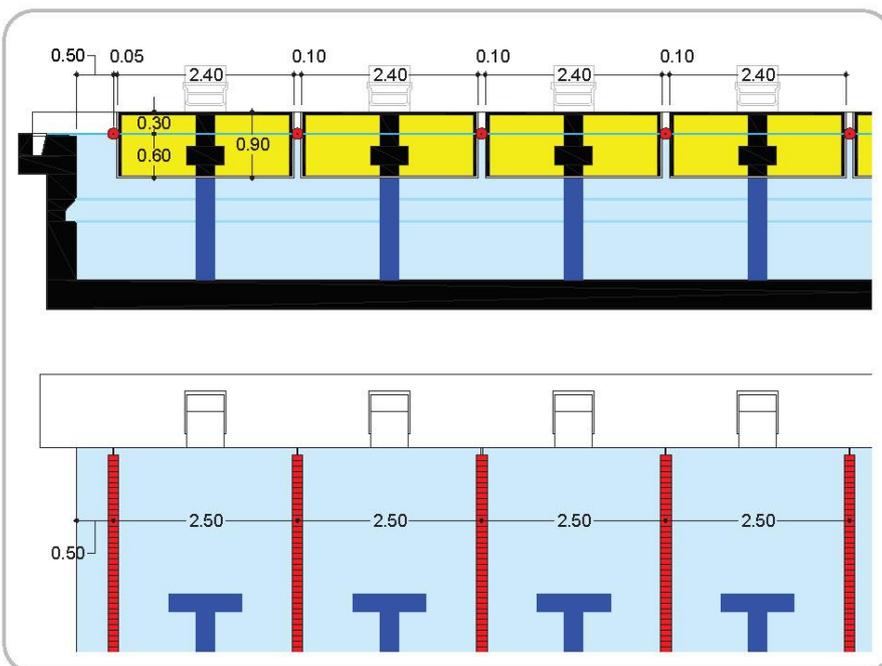
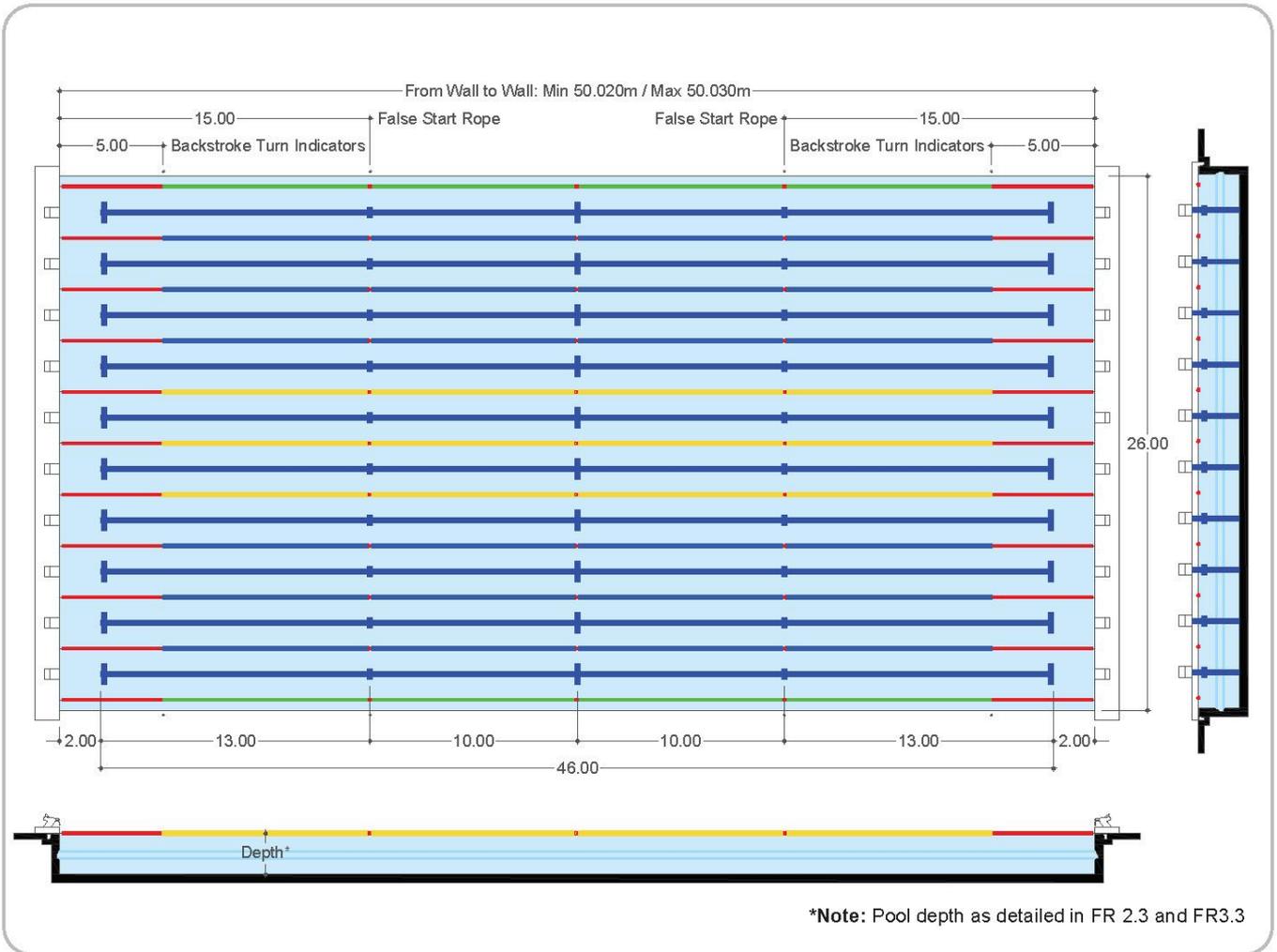
- Two (2) GREEN ropes for lanes 1 and 8.
- Four (4) BLUE ropes for lanes 2, 3, 6 and 7.
- Three (3) YELLOW ropes for lanes 4, 5.



Lane Ropes

In a 10 (ten) lanes swimming pool the colour of the lane ropes should be as follows:

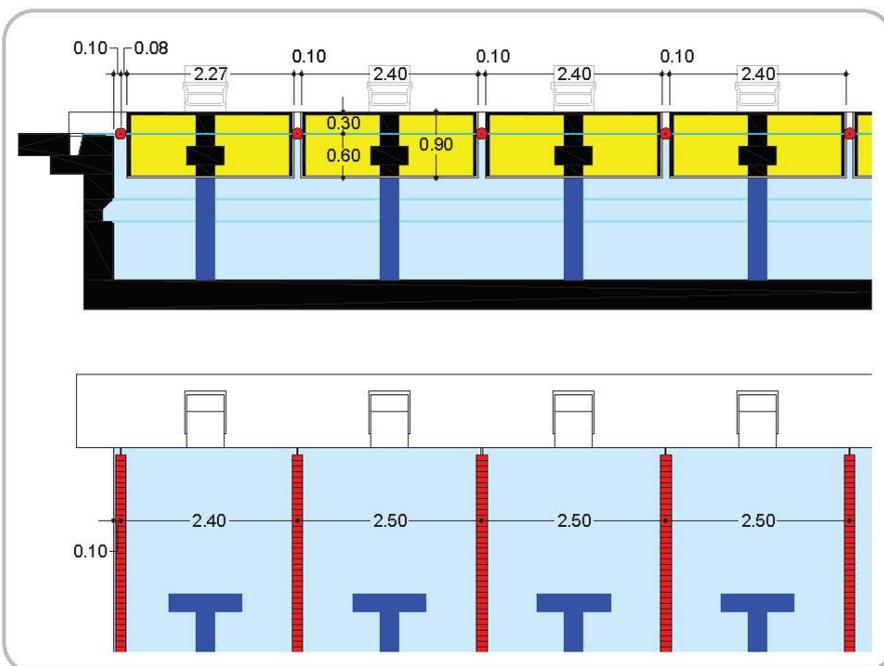
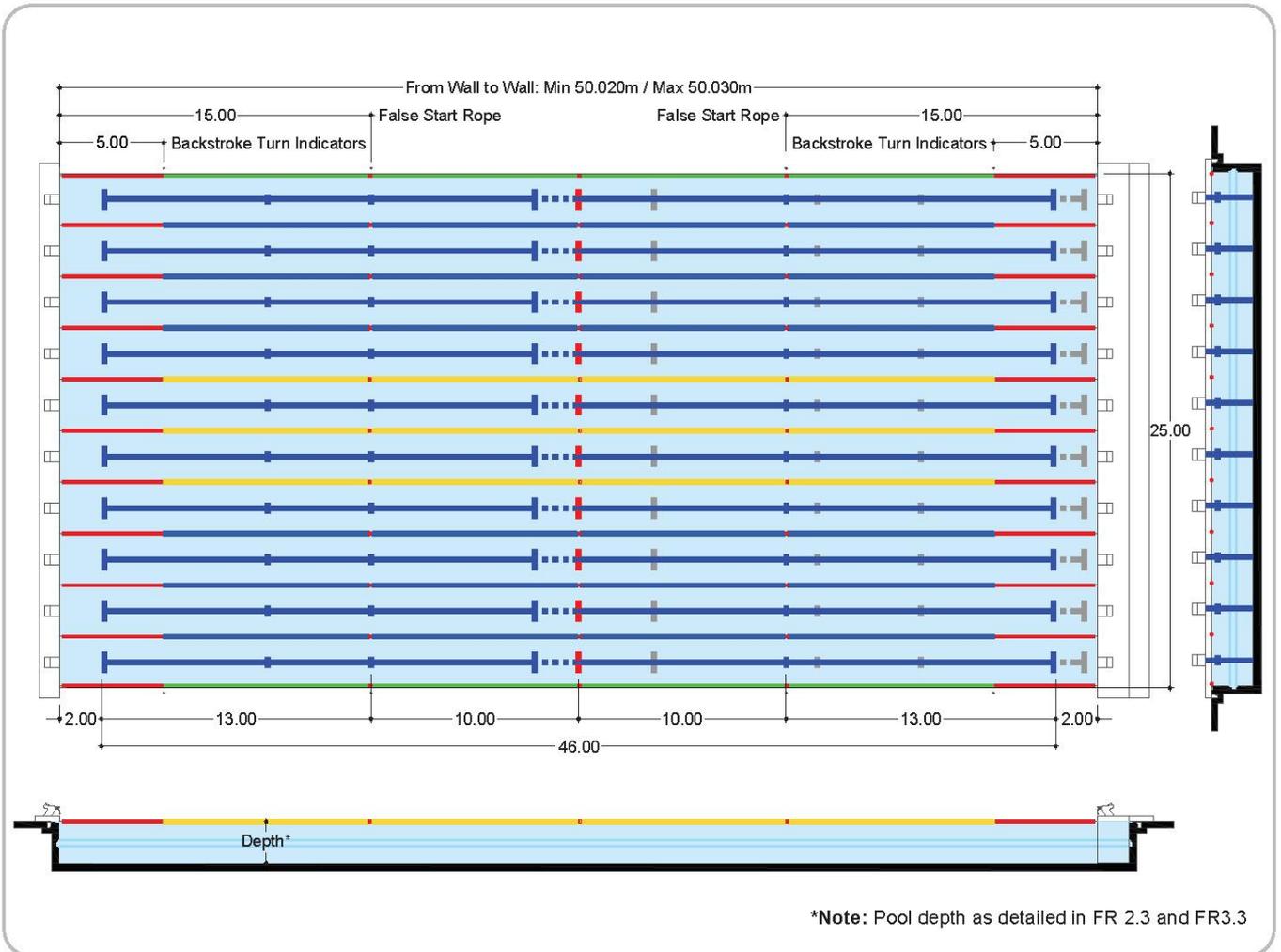
- Two (2) GREEN ropes for lanes 0 and 9.
- Six (6) BLUE ropes for lanes 1, 2, 3, 6, 7 and 8.
- Three (3) YELLOW ropes for lanes 4, 5.



Lane Ropes

In a 10 (ten) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 0 and 9.
- Six (6) BLUE ropes for lanes 1, 2, 3, 6, 7 and 8.
- Three (3) YELLOW ropes for lanes 4, 5.



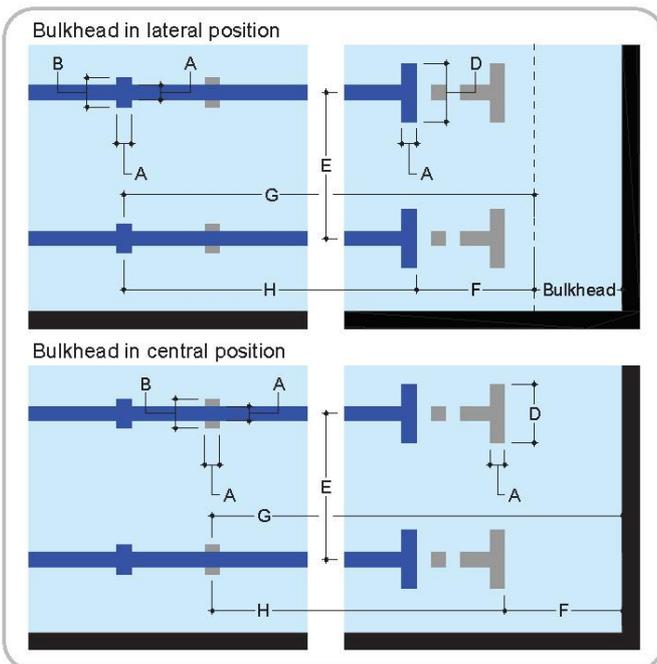
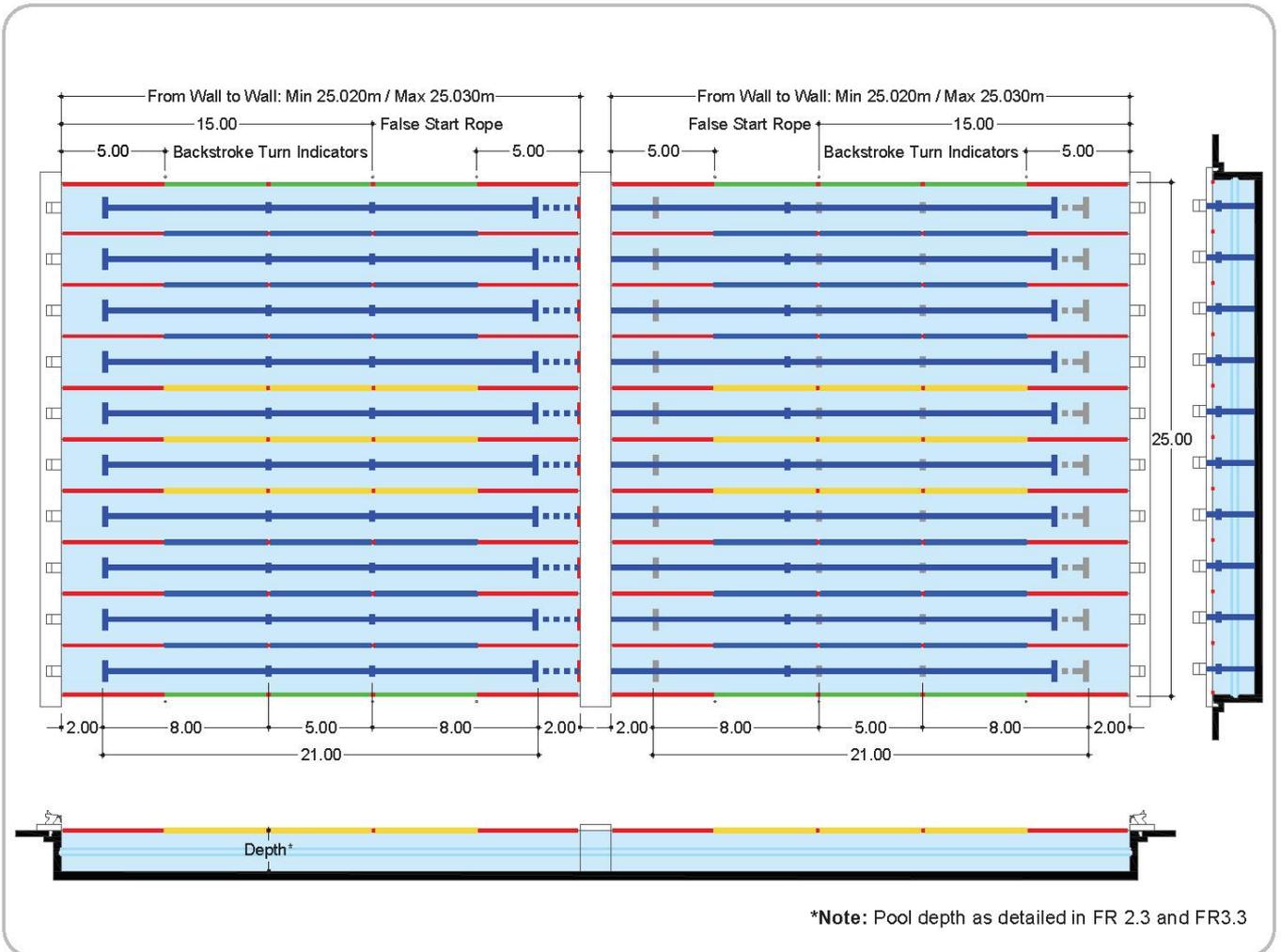
Lane Ropes

In a 10 (ten) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 0 and 9.
- Six (6) BLUE ropes for lanes 1, 2, 3, 6, 7 and 8.
- Three (3) YELLOW ropes for lanes 4, 5.

Annex SW4 - Diagram

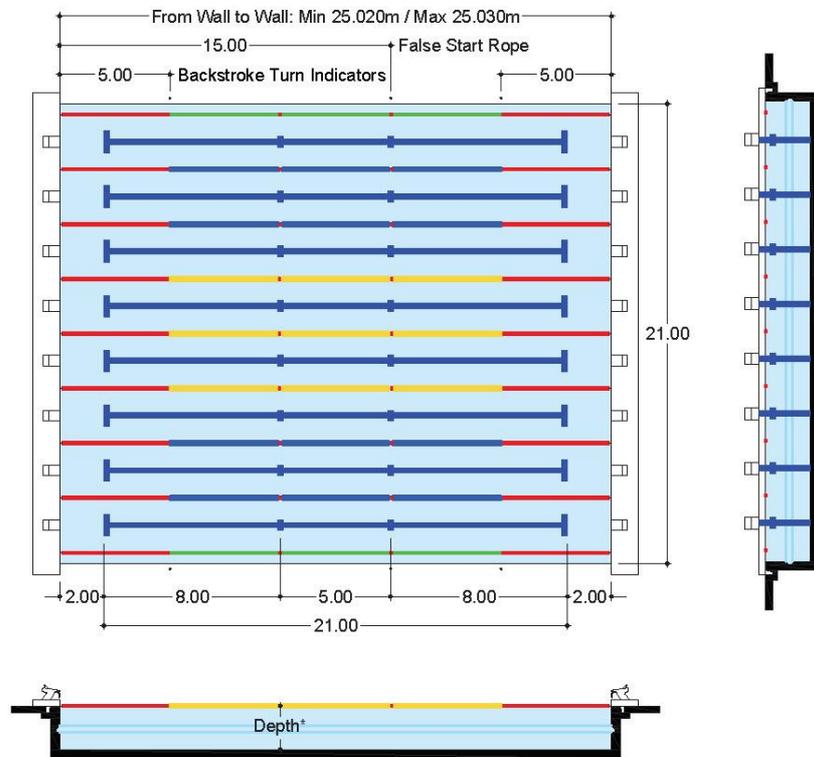
Swimming Pool 50x25m with one Bulkhead - Bulkhead in lateral position



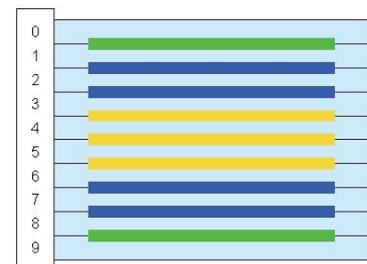
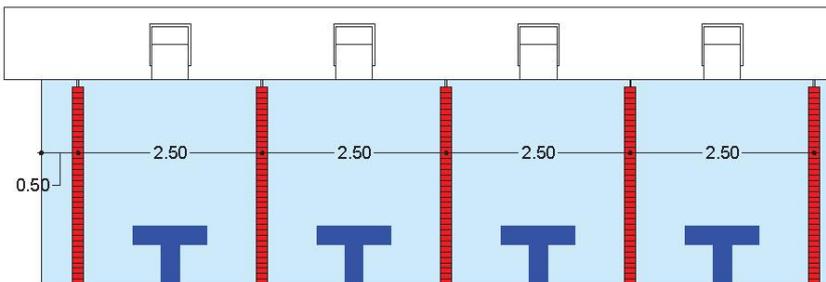
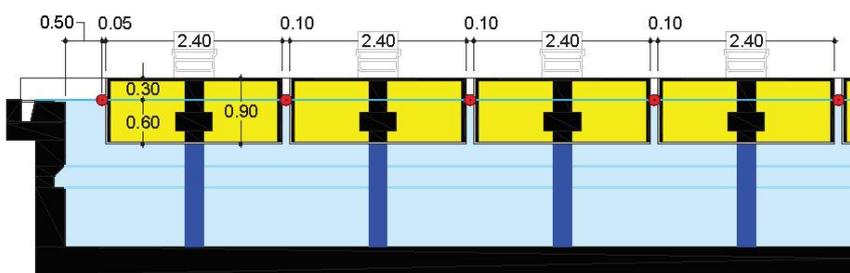
Lane Markings

Width of lane markings, end, lines targets	A	0.25m ± 0.05m
Length of end wall targets	B	0.50m
Depth to centre of end wall targets	C	0.30m
Length of lane marker cross line	D	1.00m
Width of racing lanes	E	2.50m
Distance from end of lane line to end wall	F	2.00m*
Distance from centre of cross line to end wall	G	15.00m*
Distance from end of lane line to centre of cross line	H	13.00m
Distance from centre of cross line to end wall	I	25.00m*

** Pool tolerance has to be considered*



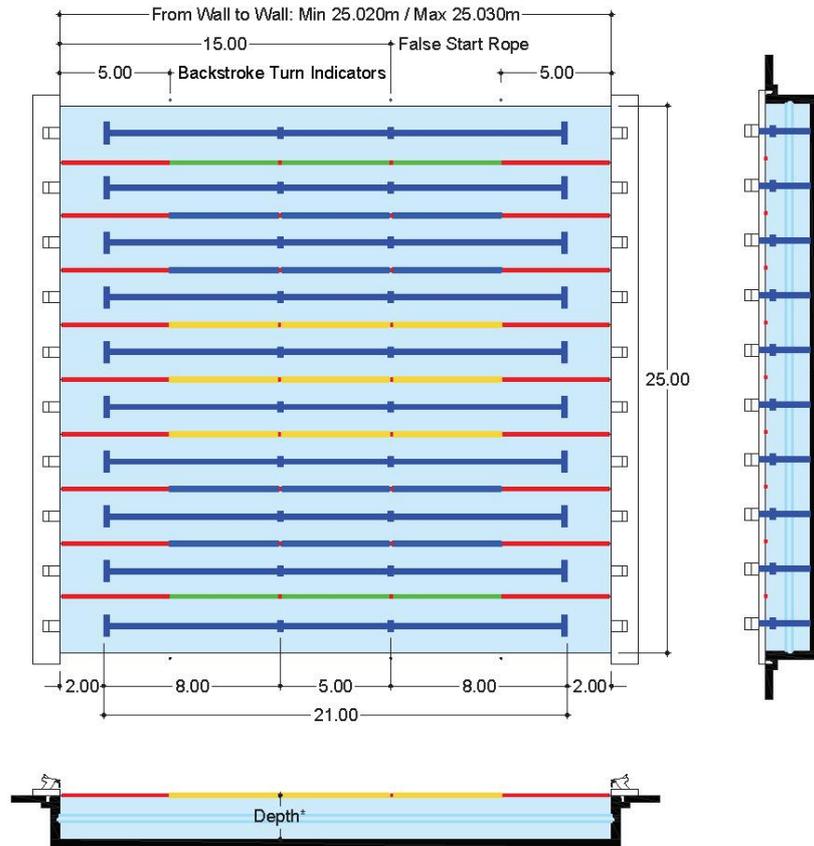
*Note: Pool depth as detailed in FR 2.3 and FR3.3



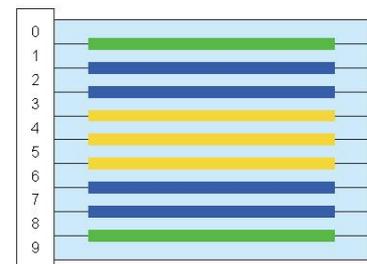
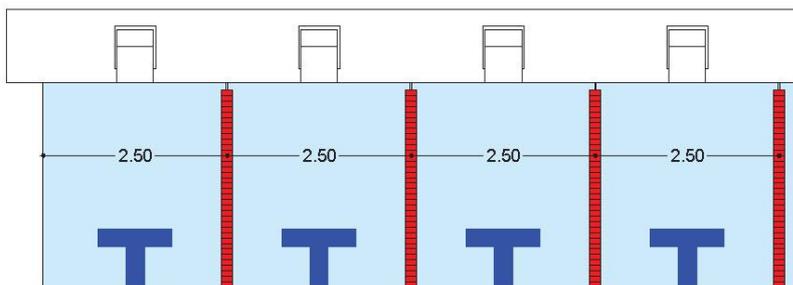
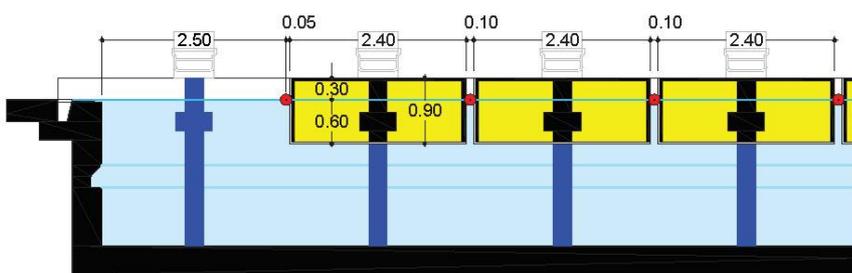
Lane Ropes

In a 8 (eight) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 1 and 8.
- Four (4) BLUE ropes for lanes 2, 3, 6 and 7.
- Three (3) YELLOW ropes for lanes 4, 5.



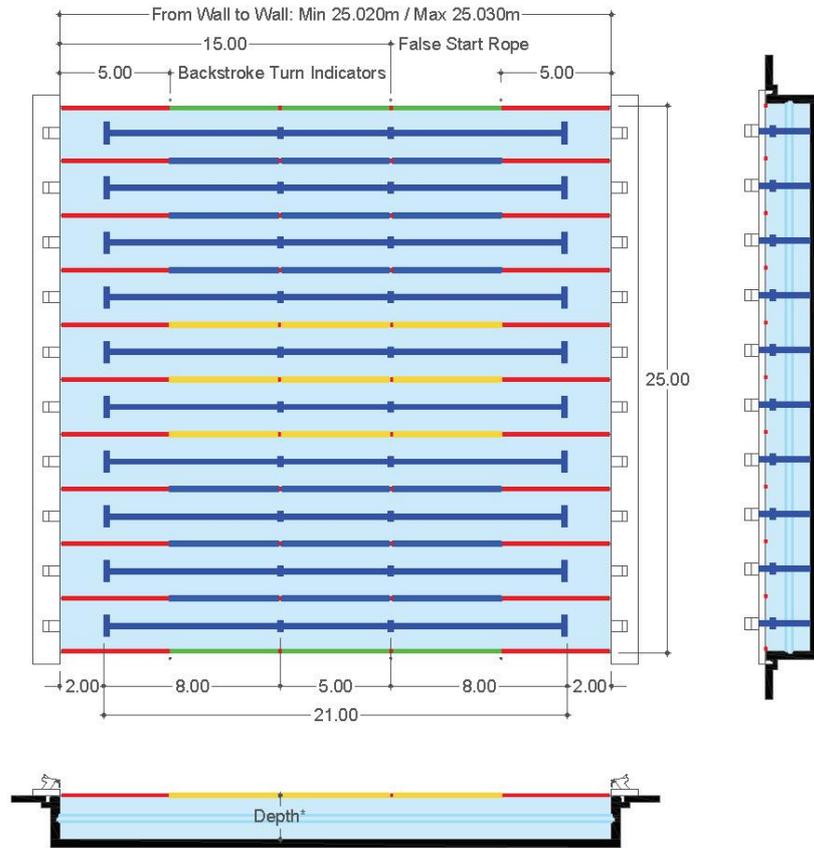
*Note: Pool depth as detailed in FR 2.3 and FR3.3



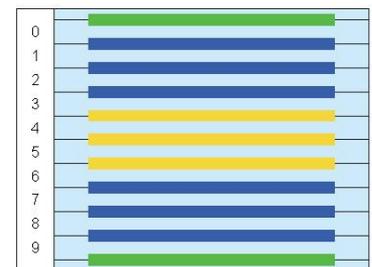
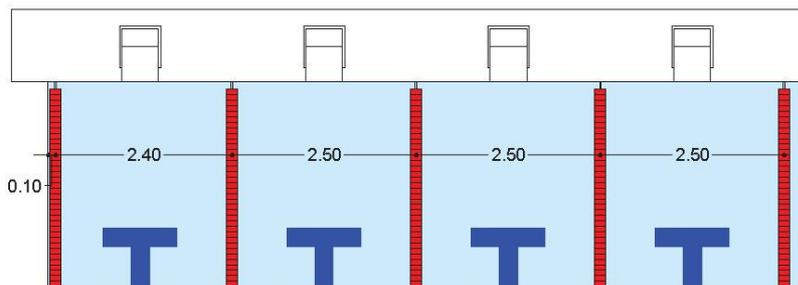
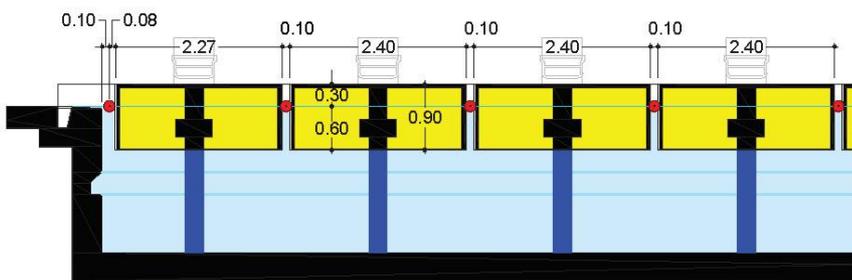
Lane Ropes

In a 8 (eight) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 1 and 8.
- Four (4) BLUE ropes for lanes 2, 3, 6 and 7.
- Three (3) YELLOW ropes for lanes 4, 5.



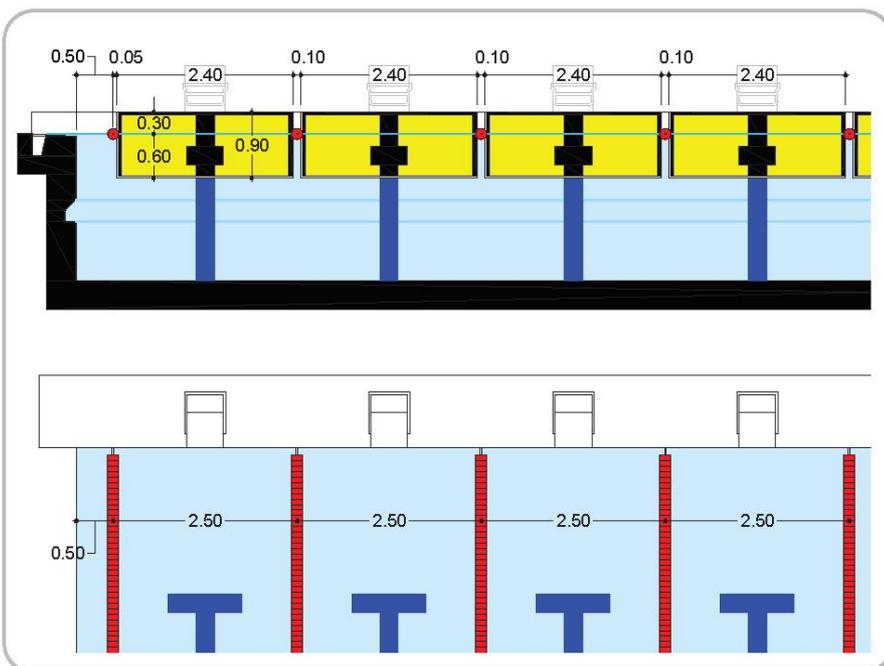
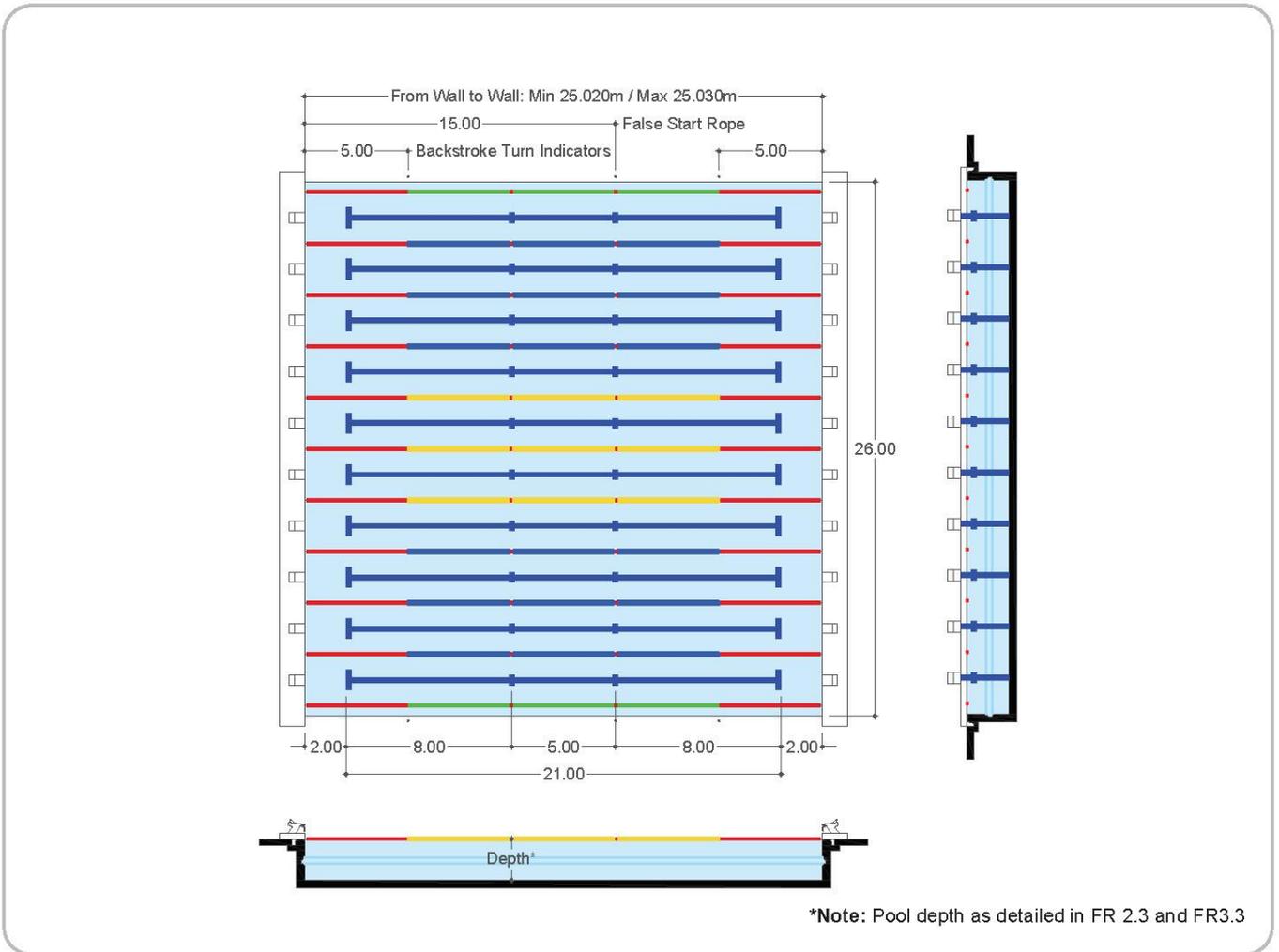
*Note: Pool depth as detailed in FR 2.3 and FR3.3

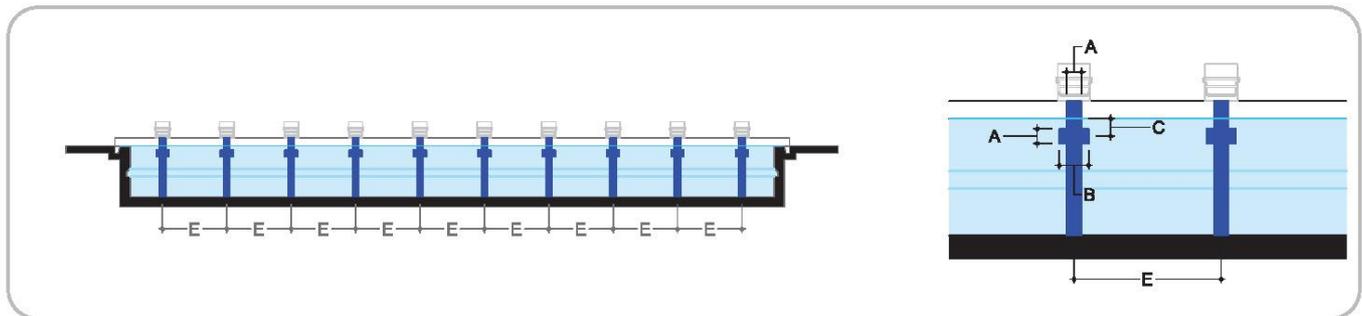
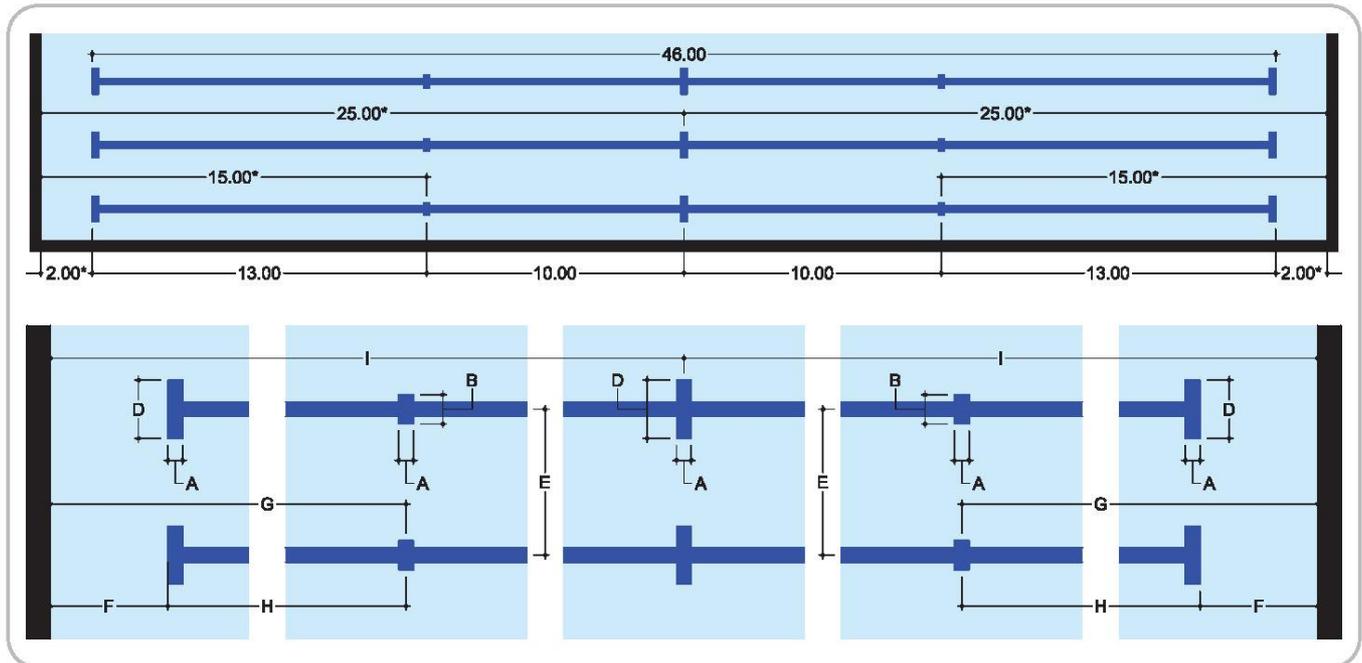


Lane Ropes

In a 10 (ten) lanes swimming pool the colour of the lane ropes should be as follows:

- Two (2) GREEN ropes for lanes 0 and 9.
- Six (6) BLUE ropes for lanes 1, 2, 3, 6, 7 and 8.
- Three (3) YELLOW ropes for lanes 4, 5.

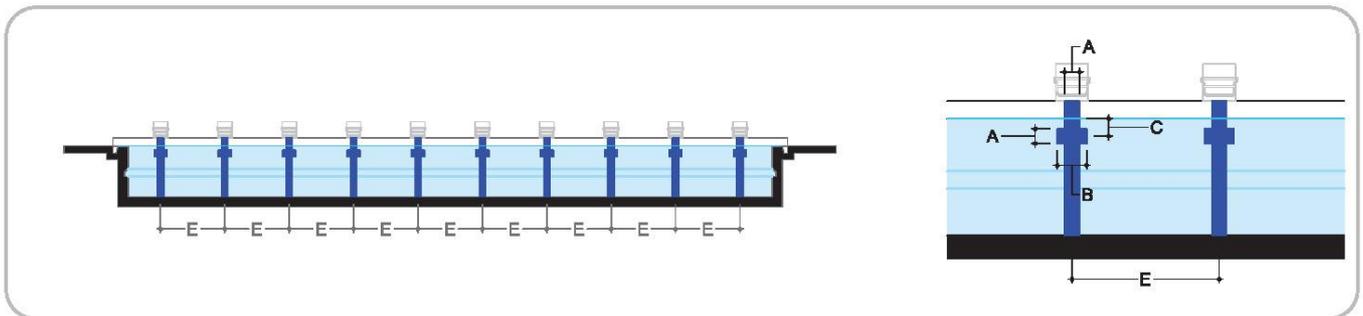
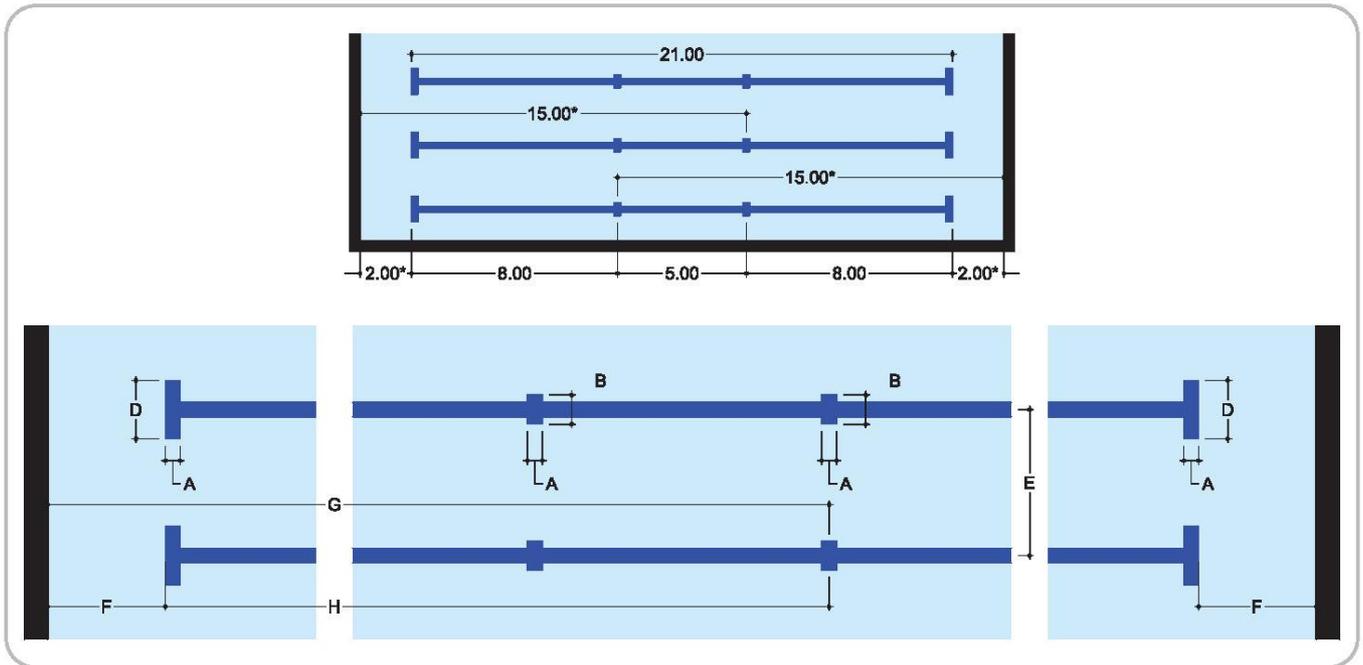




Lane Markings

Width of lane markings, end, lines targets	A	0.25m ± 0.05m
Length of end wall targets	B	0.50m
Depth to centre of end wall targets	C	0.30m
Length of lane marker cross line	D	1.00m
Width of racing lanes	E	2.50m
Distance from end of lane line to end wall	F*	2.00m*
Distance from centre of cross line to end wall	G	15.00m*
Distance from end of lane line to centre of cross line	H	13.00m
Distance from centre of cross line to end wall	I	25.00m*

* Pool tolerance has to be considered



Lane Markings

Width of lane markings, end, lines targets	A	0.25m ± 0.05m
Length of end wall targets	B	0.50m
Depth to centre of end wall targets	C	0.30m
Length of lane marker cross line	D	1.00m
Width of racing lanes	E	2.50m
Distance from end of lane line to end wall	F*	2.00m*
Distance from centre of cross line to end wall	G	15.00m*
Distance from end of lane line to centre of cross line	H	13.00m
Distance from centre of cross line to end wall	I	25.00m*

* Pool tolerance has to be considered

FR 3 DIVING

FR 3.1 DIVING FACILITIES

FR 3.1.1 Springboard Diving

General requirements: Dimensions in metres for all diving facilities as detailed in *Diving Diagrams, Annex DV 1 and DV 2*, shall be observed.

FR 3.1.1.1 The springboards shall be 4.88 metres long and 0.5 metre wide. At all FINA Events, the type of springboard which must have a slip-resistant surface shall be approved by FINA.

FR 3.1.1.2 The springboards shall be provided with movable fulcrums easily adjustable by the diver.

FR 3.1.1.3 For springboard diving facilities modified or constructed on concrete platforms after 1 October 2013, the following shall be observed

FR 3.1.1.3.1 The vertical distance from the level of the platform, which supports the fulcrum assembly, to the level of the top of the springboard, shall be 0.35 metre.

FR 3.1.1.3.2 The distance from the front edge of the fulcrum assembly (which is 0.741 metres in length) to the front edge of the supporting platform, shall be a maximum of 0.44 metre.

FR 3.1.1.3.3 If the front edge of the platform projects past this point then the fulcrum assembly and the rear hinge assembly must be moved forward so as to provide for a maximum of 0.44 metres from the front edge of the platform to the front of the fulcrum assembly.

FR 3.1.1.3.4 The concrete platform which supports the springboard shall be aligned with the pool wall or project over the pool.

FR 3.1.1.4 The minimum distance recommended from the rear to the centre line of the fulcrum shall be in accordance with the recommendation or specification of the springboard manufacturer.

FR 3.1.1.5 The springboards shall be installed dead level at the leading edge when the movable fulcrum is in all positions.

FR 3.1.1.6 The springboards should be placed on either one or both sides of the platform. For Synchronised Diving, it is required that at least two springboards at the same height shall be placed side by side and no objects should obstruct the visibility in any part of the dive between the divers.

See *Diving Diagrams, Annex DV 1 and DV 2*

FR 3.1.1.7 The back and sides of 3m springboards shall be surrounded by handrails with a minimum clearance of 1.0 metres between vertical pairs. The minimum height shall be 1.0 metre, measured from the level of the springboard, and they shall be with at least two horizontal crossbars placed outside the platform.

A solid transparent barrier is also permitted instead of a crossbar.

See Diagram: Annex DV 1

FR 3.1.2 Platform Diving

FR 3.1.2.1 Each platform shall be rigid and horizontal.

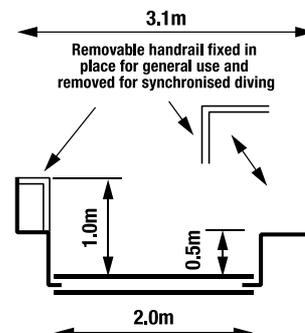
FR 3.1.2.2 The minimum dimensions of the platform shall be:

PLATFORM	WIDTH	LENGTH
0.6m to 1.0m	1.00m (2.90m preferred)	5.00m
2.6m to 3.0m	1.00m (2.00m preferred)	5.00m
5.0m	2.90m	6.00m
7.5m	2.00m	6.00m
10.0m	3.00m	6.00m

On 10m platforms, with a width of less than 3m, only the handrails on each side for a distance of at least 3.0m back from the front edge of the platform may be shaped as detailed next (see drawing).

It is recommended that an easily removable section of handrail be included for general use, which can be removed for synchronised diving.

See Diagram



FR 3.1.2.3 The thickness of the front edge of the platform shall be 0.2 metre but not exceeding 0.3 metre, and can be vertical or inclined at an angle not greater than 10° to the vertical inside the plummet line.

FR 3.1.2.4 The surface and the front edge of the platform shall be covered throughout with a resilient slip-resistant material. The two surfaces shall be covered separately in order to achieve a clean 90° angle or as described in FR 3.1.2.3. The front surface is to be applied first and then the top surface.

The platforms shall be covered in a slip-resistant material that shall have a tread pattern that provides sufficient traction in wet and dry conditions such that the divers are prevented from slipping when performing dives in all directions. The minimum thickness must be 6mm and the colour should give a contrast to the surrounding décor. The material shall be easily cleaned to maintain the slip-resistant feature of the product.

FR 3.1.2.5 The front edge of the 10 metre platform shall project at least 1.50 metres, the 7.5 metre, 5 metre and 2.6 – 3.0 metre platforms 1.25 metres, and the 0.6 – 1 metre platform 0.75 metre beyond the edge of the pool.

FR 3.1.2.6 Where a platform is directly underneath another platform the platform above shall project a minimum of 0.75 metre (preferred 1.25 metres) beyond the platform below.

FR 3.1.2.7 The back and sides of each platform (except 1.0 metre or lower platforms) shall be surrounded by handrails up to 1m from the edge of the platform with a minimum clearance of 1.0 metres between vertical pairs. The minimum height shall be 1.0 metre and they shall be with at least two horizontal crossbars placed outside the platform beginning 1.0 metre from the front edge of the platform.

A solid transparent barrier is also permitted instead of a crossbar.

FR 3.1.2.8 Each platform shall be accessible by suitable stairs (not ladders) as required by the countries building regulations and or health and safety standards that are applicable.

FR 3.1.2.9 It is preferable that a platform is not constructed directly under any other platform however in circumstance where this cannot be avoided then you must refer to ***Diving Diagrams, Annex DV 1 and DV 2.***

FR 3.1.2.10 Requirements for the supporting structure. For platforms and supporting structure of the springboards the design load is $p = 350$ kiloponds (kilograms force) per lineal metre.

In addition to the static requirements and for the comfort and safety of the user with respect to the movement of the towers, the following limits shall be observed, with respect to the platforms and springboard supports.

Fundamental frequency of platforms 10.0 Hz

TOLERANCES:

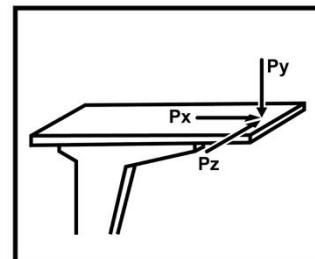
PLATFORM	MINIMUM	MAXIMUM
10m	10 Hz	20 Hz
7.5m, 5m, 3m and 1m	10 Hz	30 Hz

Fundamental frequency of tower 3.5 Hz

Total oscillation of total structure ± 2 mm

The spatial deformation of the front edge of the platforms as a result of $P_x = P_y = P_z = 100$ kiloponds (kilograms force) shall be a maximum of 1 mm.

See Drawing



These requirements can be met most adequately by a reinforced concrete structure. Proof of the dynamic behavior is to be obtained together with the static calculations for the whole structure.

FR 3.1.3 General Requirements

FR 3.1.3.1 For pools designed and constructed after 26th September 2013 the minimum dimensions in metres for diving facilities as detailed on the **Diving Diagrams, Annex DV 1 and DV 2** shall prevail, using, as a basic measuring point of reference, the plummet line, which is a vertical line extending through the centre of the front edge of the springboard or platform. It is recommended that the preferred dimensions be used for projects considered to have an important status.

FR 3.1.3.2 The dimensions C from plummet to adjacent plummet in the **Diving Diagrams, Annex DV 1 and DV 2** table apply to platforms with widths as detailed in FR 5.2.2. If platform widths are increased then the dimensions B and C shall be increased by half the additional widths.

FR 3.1.3.3 With regard to dimensions for diving facilities a combination of preferred and minimum measurements found in the **Diving Diagrams, Annex DV 1 and DV 2** shall be used. However, measurements less than minimum are not acceptable.

FR 3.1.3.4 The vertical height from the plummet of the diving board and or springboard at rest to the water surface at rest and before water sprays or bubbles are set in motion shall be specified in the Diving Facilities Dimensions table. These measurements should be certified by a surveyor or other qualified officials, appointed or approved by or the member of the country in which the pool is situated.

FR 3.1.3.5 The height of the springboards and each platform above the water level may vary by plus 0.05 metre and minus 0.00 metre from the heights prescribed in the Rules.

FR 3.1.3.6 The end of 5, 3, and 1 metre platforms must not project beyond the ends of the 3 and 1 metre springboards when they are adjacent to each other.

FR 3.1.3.7 In the area of full water depth, the bottom of the pool may rise up to 2%. In the diving pool, the depth of water shall not be less than 1.8 metres at any point.

FR 3.1.3.8 In outdoor pools, best practice suggests that springboards and platforms are recommended to face north in the northern hemisphere and south in the southern hemisphere.

FR 3.1.3.9 Pool walls shall be vertical and form 90 degree right angles to the surface of the water. They shall be constructed of solid material, with a slip-resistant surface.

The admissible tolerance in walls verticality will be ± 0.3 degrees.

Rest ledges along the pool walls are permitted; they must be not less than 1.2 metres below the water surface, and may be 0.1 metre to 0.15 metre wide. Only internal rest ledges are permitted.

FR 3.1.3.10 Mechanical surface agitation shall be installed under the diving facilities to aid the divers in their visual perception of the surface of the water. In pools equipped with an underwater bubble machine, the machine shall only be used for the purpose if it creates sufficient water agitation when working with a very low pressure; otherwise a horizontal water sprinkler system shall only be used.

FR 3.1.4 Lighting

FR 3.1.3.11.1 The minimum illumination at a level of 1 metre above the water surface shall not be less than 600 lux.

FR 3.1.3.11.2 Sources of natural and artificial illumination shall be provided with controls to prevent glare.

FR 3.1.5 Water temperature

The water temperature shall be not less than 28° Celsius.

FR 3.1.6 Lane markings

For Diving pools that will also be used for swimming, lane markings for Diving pools shall be of a dark contrasting colour, placed on the floor of the pool in the centre of each lane.

Width: minimum 0.2 metre, maximum 0.3 metre.

Length: 21.0 metres for 25 metre long pools.

Each lane line shall end 2.0 metres from the end wall of the pool with a distinctive cross line 1.0 metre long and of the same width as the lane line.

Target line shall be placed on the end of the walls or on the touch panels, in the centre of each lane, of the same width as the lane lines. A cross line 0.5 metre long shall be placed 0.3 metre below the water surface, measured to the centre point of the cross line. They shall extend without interruption from the deck edge (curb) to the floor or to a maximum of 3 metres.

FR 3.1.7 Placement and seating of diving judges

FR 3.1.7.1 Individual diving

FR 3.1.7.1.1 The judges will be placed side by side in a straight line on both sides of the diving pool by the Referee.

FR 3.1.7.1.2 When seven (7) judges are officiating, four (4) will be on the side of the pool closest to where the springboard or platform event is being contested. When five (5) judges are officiating, (3) will be on the side of the pool closest to where the springboard or platform event is being contested.

Note: The Referee may decide to place the majority of judges (i.e. four (4) / three (3) as outlined above) on the side of the pool farthest from the springboard or platform event being contested if reasonable to do so for logistical or situational purposes.

FR 3.1.7.1.3 No judge shall be seated inside or behind the direct line of the front edge of the springboards or platforms.

FR 3.1.7.1.4 The chairs used by judges will be numbered clockwise in consecutive order when facing the springboards / platforms.

FR 3.1.7.1.5 In 1 metre springboard competitions, chairs suitable for use placed directly on poolside shall be used.

FR 3.1.7.1.6 In 3 metre springboard competitions, the judges shall be seated at a height of not lower than two (2) metres above the water level.

FR 3.1.7.1.7 Three (3) or two (2) execution judges will be placed on both sides of the diving pool by the Referee.

FR 3.1.7.1.8 To assist the judges in the 3 metre springboard and platform competitions, the judges chairs must be positioned as far back from the edge of the pool as is practical.

FR 3.1.7.1.9 The above recommendations are shown in ***Diving Diagram, Annex DV 3.***

FR 3.1.7.2 Synchronised diving and mixed synchronized diving

FR 3.1.7.2.1 Three (3) or two (2) execution judges will be placed on both sides of the diving pool by the Referee.

FR 3.1.7.2.2 The chairs used by execution judges in a synchronised event will be numbered clockwise in consecutive order when facing the springboard / platform, for example E 1, E 2 and E 3 (or E 1, E 2) on the left side and E 4, E 5 and E 6 (or E 3, E 4) on the right side.

FR 3.1.7.2.3 The synchronised judges will be placed in a straight line in between the execution judges on both sides of the pool. All synchronised judges on both sides of the pool must be placed at the same horizontal distance from the springboards or platforms (not side-to-side) but will be positioned at different heights to ensure that no judge's view is obstructed.

FR 3.1.7.2.4 Three (3) synchronised judges will be on the side of the pool closest to where the springboard or platform event is being contested, and the other two (2) synchronised judges on the opposite side.

FR 3.1.7.2.5 The chairs used by synchronised judges in a synchronised event will be numbered clockwise in consecutive order when facing the springboard or platform. Numbering will start at S1 with lowest chair on the left side of the pool, through to S5 for the highest chair on the right side of the pool.

FR 3.1.7.2.6 In synchronised competitions, the synchronised judges closest to the pool edge, shall ideally be seated at a height of not lower than 2 (two) metres above the water level.

FR 3.1.7.2.7 The subsequent chair heights for the remaining synchronised judges (or additional execution judge) must increase by at least 50 cm per seat.

FR 3.1.7.2.8 There shall be no interference or movement by any person in front of the judge chairs during a competition event.

FR 3.1.7.2.9 The above recommendations are shown in ***Diving Diagram, Annex DV 3.***

FR 3.2 DIVING FACILITIES FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS

FR 3.2.1 Springboard Diving

For Olympic Games and World Championships FR 3.1.1 in total shall apply.

FR 3.2.2 Platform Diving

For Olympic Games and World Championships FR 3.1.2 in total shall apply.

FR 3.2.3 General Requirements

For Olympic Games and World Championships FR 3.1.3 in total shall apply.

FR 3.2.4 Lighting

The light intensity at the level of 1 metre above the water surface shall not be less than 1500 lux.

FR 3.2.5 Water temperature

The water temperature shall be not less than 26° Celsius.

FR 3.2.6 Lane markings

Lane markings for the diving well will consist of 3 lines running the width of the diving well 90 degree angle to the diver facing forward on the springboard or platform. These lines shall be as follows:

Width: minimum 0.2 metre, maximum 0.3 metres

Length: 21.0 metre for 25 metre wide diving well

The distance between the centre points of each lane shall be 2.5 metres.

The centre of the first line shall be directly under the plummet of the 3 metre springboard.
See *Diving Diagram, Annex DV 3.*

FR 3.2.7 Placement and seating of diving judges

For Olympic Games and World Championships FR 3.1.7 in total shall apply.

FR 3.2.8 Dry Land Facilities

The host facility must provide a trampoline with spotting equipment and a hot tub. It is preferred that there be two trampolines and a dry land area with a springboard and a platform take-off into foam landing pits as detailed in ***Diving Dry Land Facilities Diagrams, Annex DV 4, DV 5, DV 6 and DV 7.***

FR 3.2.9 Field of play

Field of Play for Olympic Games and World Championships as detailed in ***Diving Diagram, Annex DV 3.***

If the swimming pool and diving well are in the same area, the minimum distance separating the pools shall be of 8 metres, however 10 metres is preferred (see FR 3.17).

FR 3.3 ELECTRONIC OFFICIATING EQUIPMENT FOR DIVING

FR 3.3.1 General description

Electronic Officiating equipment records the judges awards for each diver and determines the final score for each dive as required by Rule D 7.

FR 3.3.2 Preferred Equipment must be able to;

FR 3.3.2.1 Record judges awards by whole and half points

FR 3.3.2.2 Be able to display all recorded and calculated information for each diver both before and after each dive

FR 3.3.2.3 Be able to display the scores for all divers before and after each dive

FR 3.3.2.4 Be able to display the rank order and scores for all divers after each round of dives

FR 3.3.2.5 The equipment must provide each judge with an electronic judging device that will permit each judge to enter their award and to see their award on a window on the device. After the referee has accepted the judges awards, all awards shall be displayed on each electronic judging device

FR 3.3.2.6 Judges analysis is to be provided at the conclusion of each event or series

FR 3.3.2.7 The referee must be provided with a monitor on which he/ she will be able to view the awards of all the judges prior to the awards then being displayed on the score board

FR 3.3.2.8 There is a requirement for a print out of the following information;

1. The draw for the diving order
2. A start list for each session or event
3. A ranking of dives at the end of each round
4. A ranking of dives at the end of each event
5. Judges awards and scores for each diver at the end of each session and event

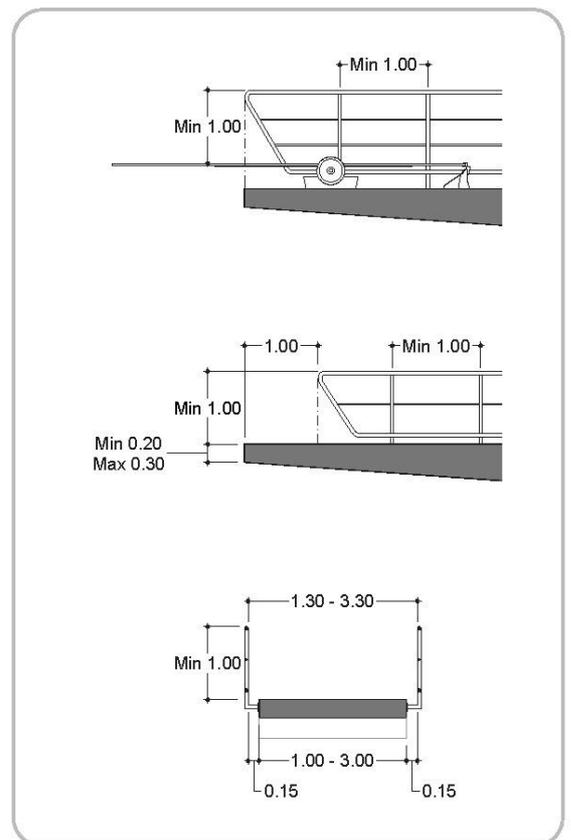
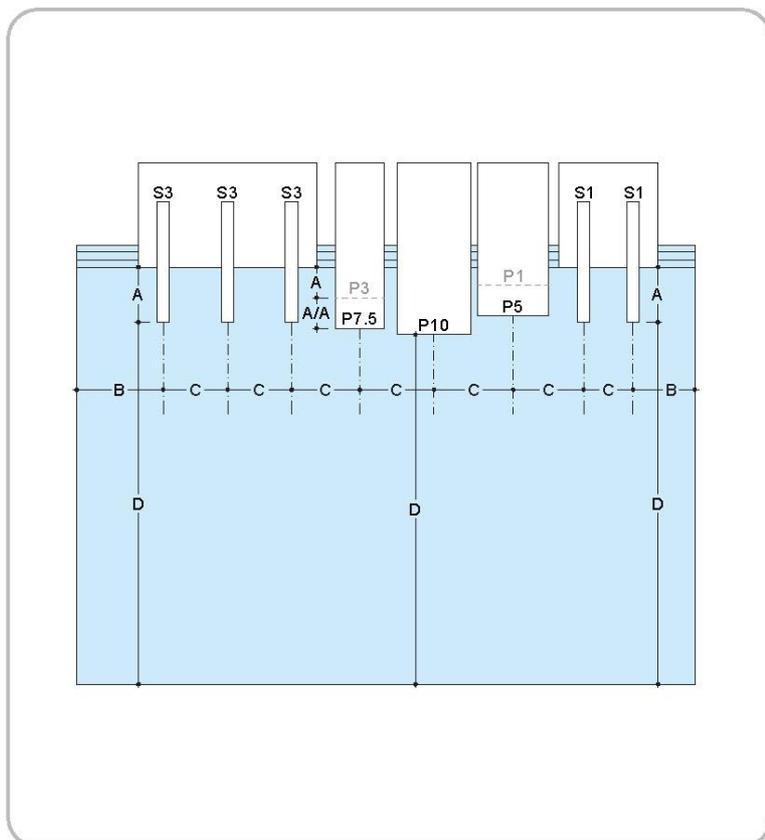
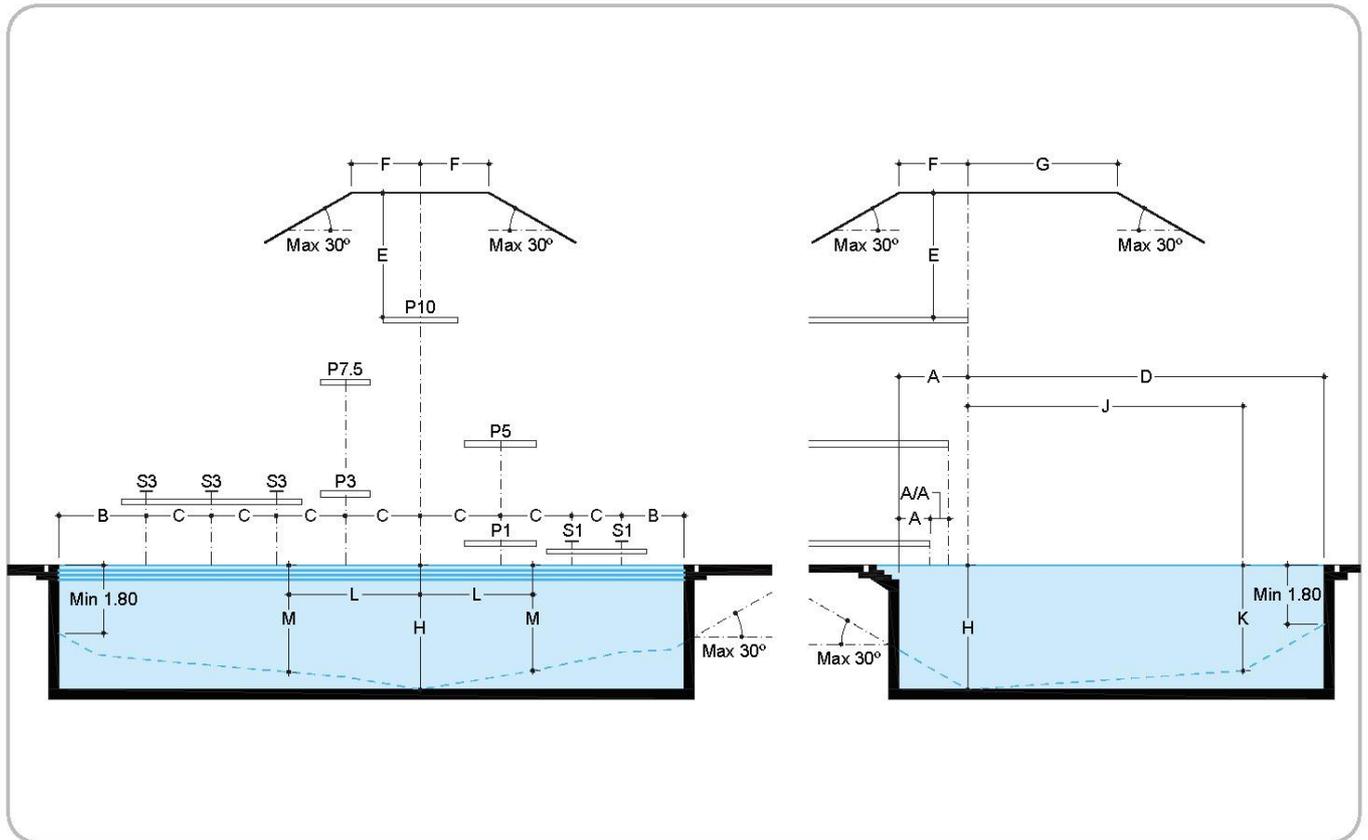
FR 3.4 DRY LAND FACILITIES

FR 3.4.1 General Requirements

Dimensions in metres for Dry Land Facilities as detailed in *Diving Dry Land Facilities, Diagram, Annex DV 4, DV 5 and DV 6 and Diving Dry Land Facilities - Recommended Equipment, Diagram, Annex DV 7.*

FR 3.4.2 For the safety, practise and development of divers and competitions, it is strongly recommended that the guidelines presented below be incorporated into the facility and placed adjacent to the competitive diving area /facilities.

FR 3.4.3 When minimum dimensions are used in B and C a vertical mat or other protective surface should be attached to the appropriate forward and side walls.



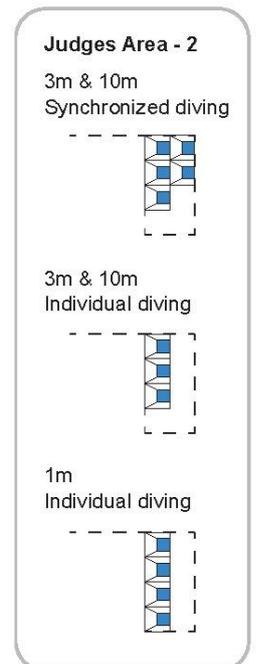
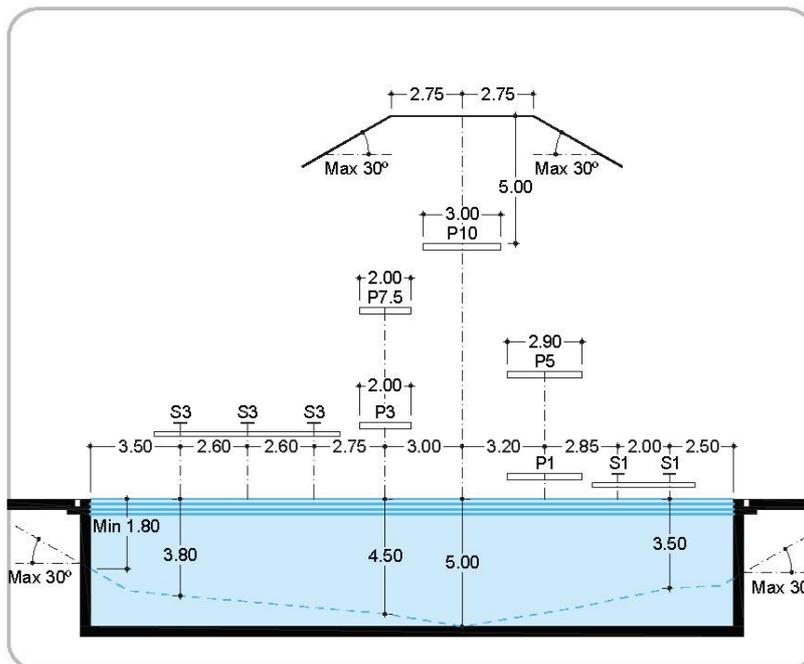
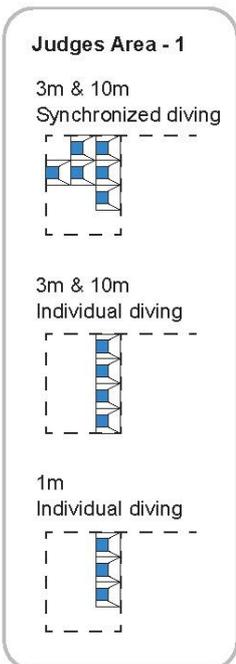
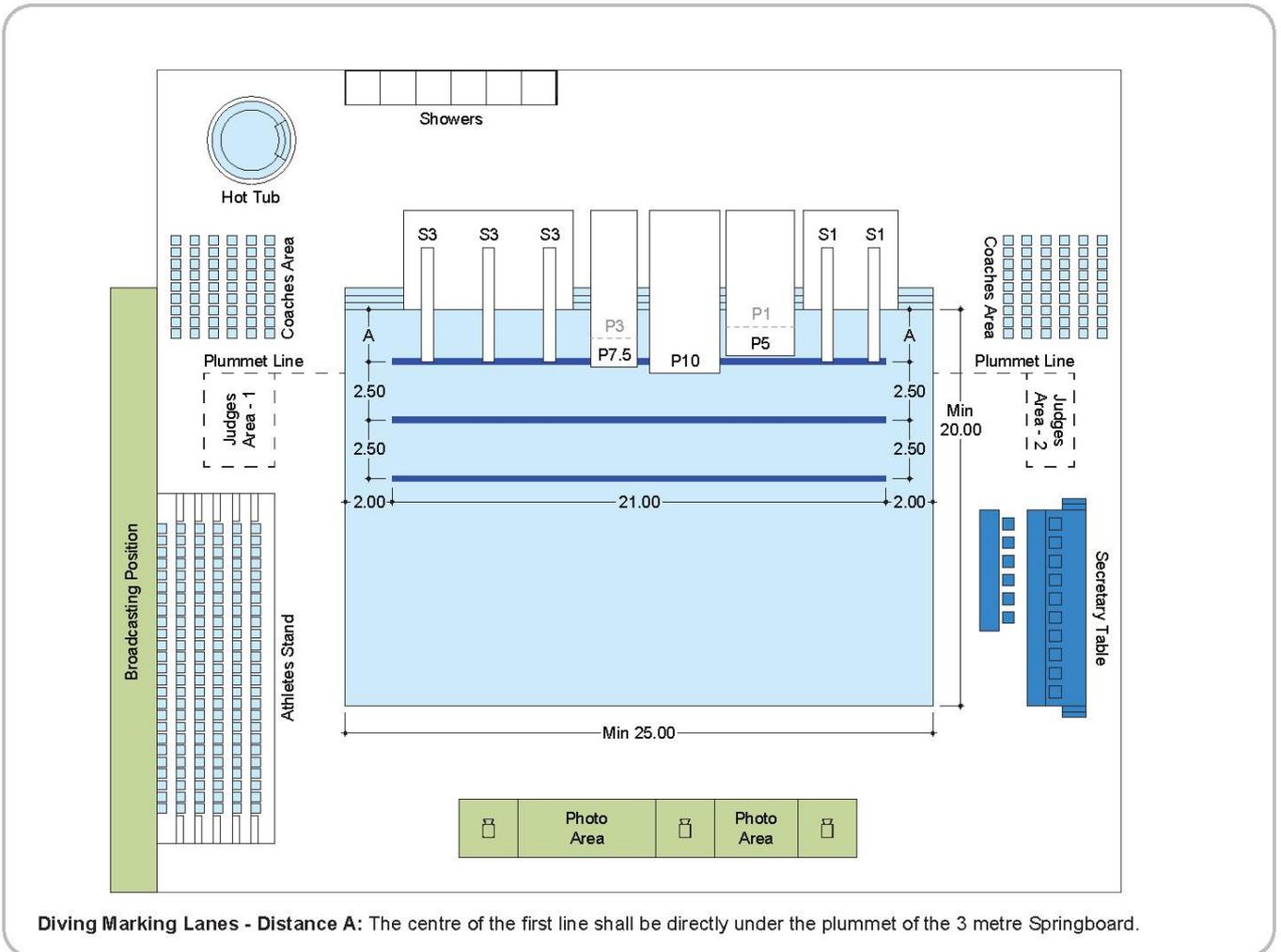
Annex DV1 - Diagram

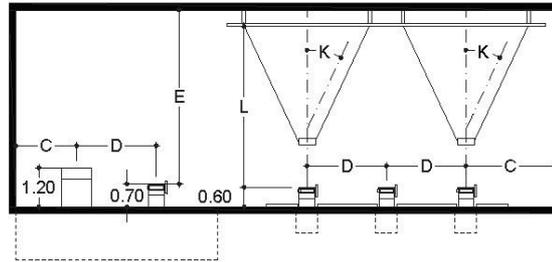
Diving Facilities

FINA Dimensions for Diving Facilities		SPRINGBOARD				PLATFORM											
		1 metre		3 metres		1 metre		3 metres		5 metres		7.5 metres		10 metres			
	Length	4.88		4.88		5.00		5.00		6.00		6.00		6.00			
	Width	0.50		0.50		1.00 min 2.90 pref		1.00 min 2.00 pref		2.90		2.00		3.00			
	Height	1.00		3.00		0.60 min 1.00 pref		2.60 min 3.00 pref		5.00		7.50		10.00			
		Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert		
A	From plumbet back to pool wall platform edge for Concrete Platform	Designation	A-1		A-3		A-1P		A-3P		A-5		A-7.5		A-10		
		Minimum	2.22		2.22		0.75		1.25		1.25		1.25		1.50		
		Preferred	2.22		2.22		0.75		1.25		1.25		1.25		1.50		
	From plumbet back to pool wall for Pedestals and Metal Stands	Minimum	1.50		1.50												
Preferred		1.83		1.83													
A/A	From plumbet Back to Platform Plumbet directly below	Designation									A/A 5/1		A/A 7.5/3,1		A/A 10/5,3,1		
		Minimum									0.75		0.75		0.75		
		Preferred									1.25		1.25		1.25		
B	From plumbet to Pool Wall at Side	Designation	B-1		B-3		B-1P		B-3P		B-5		B-7.5		B-10		
		Minimum	2.50		3.50		2.50		3.00		4.00		4.50		5.75		
		Preferred	2.50		3.50		2.50		3.60		4.50		4.75		5.75		
C	From plumbet to Adjacent Plumbet	Designation	C1-1		C3-3,3-1		C1-1P		C3-3P,1P		C5-3,5-1		C7.5-5,3,1		C10-7.5,5,3,1		
		Minimum	2.00		2.20		1.85		2.20*		2.85*		2.75*		3.00*		
		Preferred	2.00		2.60		2.15		2.35*		2.85*		2.75*		3.00*		
D	From plumbet to Pool Wall Ahead	Designation	D-1		D-3		D-1P		D-3P		D-5		D-7.5		D-10		
		Minimum	9.00		10.25		8.00		9.50		10.25		11.00		13.50		
		Preferred	9.00		10.25		8.00		9.50		10.25		11.00		13.50		
E	On plumbet from Board to Ceiling	Designation	E-1		E-3		E-1P		E-3P		E-5		E-7.5		E-10		
		Minimum	5.00		5.00		3.25		3.25		3.25		3.25		4.00		
		Preferred	5.00		5.00		3.50		3.50		3.50		3.50		5.00		
F	Clear Overhead behind and each side of plumbet	Designation	F-1	E-1	F-3	E-3	F-1P	E-1P	F-3P	E-3P	F-5	E-5	F-7.5	E-7.5	F-10	E-10	
		Minimum	2.50	5.00	2.50	5.00	2.75	3.25	2.75	3.25	2.75	3.25	2.75	3.25	2.75	3.25	4.00
		Preferred	2.50	5.00	2.50	5.00	2.75	3.50	2.75	3.50	2.75	3.50	2.75	3.50	2.75	3.50	5.00
G	Clear Overhead ahead of plumbet	Designation	G-1	E-1	G-3	E-3	G-1P	E-1P	G-3P	E-3P	G-5	E-5	G-7.5	E-7.5	G-10	E-10	
		Minimum	5.00	5.00	5.00	5.00	5.00	3.25	5.00	3.25	5.00	3.25	5.00	3.25	6.00	4.00	
		Preferred	5.00	5.00	5.00	5.00	5.00	3.50	5.00	3.50	5.00	3.50	5.00	3.50	6.00	5.00	
H	Depth of Water at plumbet	Designation	H-1		H-3		H-1P		H-3P		H-5		H-7.5		H-10		
		Minimum	3.40		3.70		3.20		3.50		3.70		4.10		4.50		
		Preferred	3.50		3.80		3.30		3.60		3.80		4.50		5.00		
J K	Distance and Depth ahead of plumbet for all stands	Designation	J-1	K-1	J-3	K-3	J-1P	K-1P	J-3P	K-3P	J-5	K-5	J-7.5	K-7.5	J-10	K-10	
		Minimum	5.00	3.30	6.00	3.60	4.50	3.10	5.50	3.40	6.00	3.60	8.00	4.00	11.00	4.25	
		Preferred	5.00	3.40	6.00	3.70	4.50	3.20	5.50	3.50	6.00	3.70	8.00	4.40	11.00	4.75	
L M	Distance and Depth each side of plumbet	Designation	L-1	M-1	L-3	M-3	L-1P	M-1P	L-3P	M-3P	L-5	M-5	L-7.5	M-7.5	L-10	M-10	
		Minimum	1.50	3.30	2.00	3.60	1.40	3.10	1.80	3.40	3.00	3.60	3.75	4.00	4.50	4.25	
		Preferred	2.00	3.40	2.50	3.70	1.90	3.20	2.30	3.50	3.50	3.70	4.50	4.40	5.25	4.75	
N	Maximum slope to reduce dimensions beyond full requirements for pool depth and ceiling height = 30 Degrees																

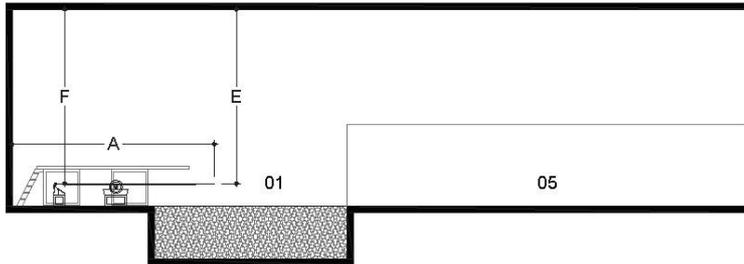
Notes

- The minimum distance between adjacent platforms must be at least 0.25 metres.
- Dimensions B (plumbet to pool wall at side) and C (plumbet to adjacent plumbet) apply to Platforms with widths as detailed in FR.5.2.2. If Platform widths are increased then B and C shall be increased by half the additional width(s).
- The 10 Metre Platform must project 0.25 metres beyond any adjacent platform.
- All platforms must project 0.75 metres beyond any platform directly below.
- The leading edge of the concrete platforms for springboards must be at least constructed to be directly above the pool wall or beyond.
- FR 5.3.4 The end of 5, 3 and 1m platforms must not project beyond the ends of the 3 and 1m springboards when they are adjacent to each other.

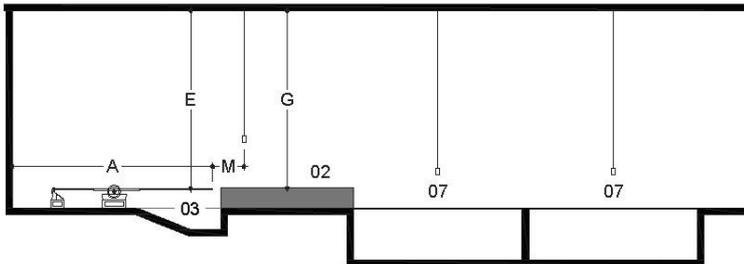




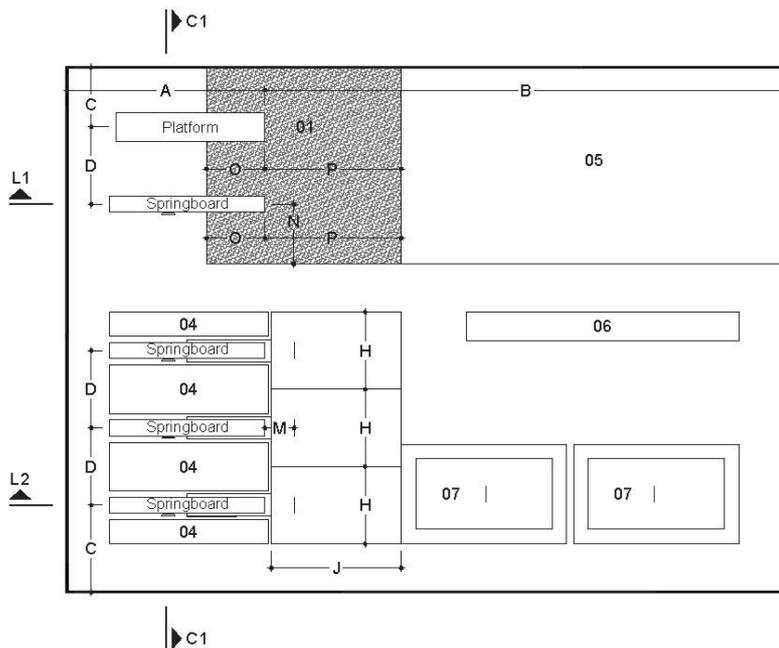
Cross Section - C1



Longitudinal Section - L1



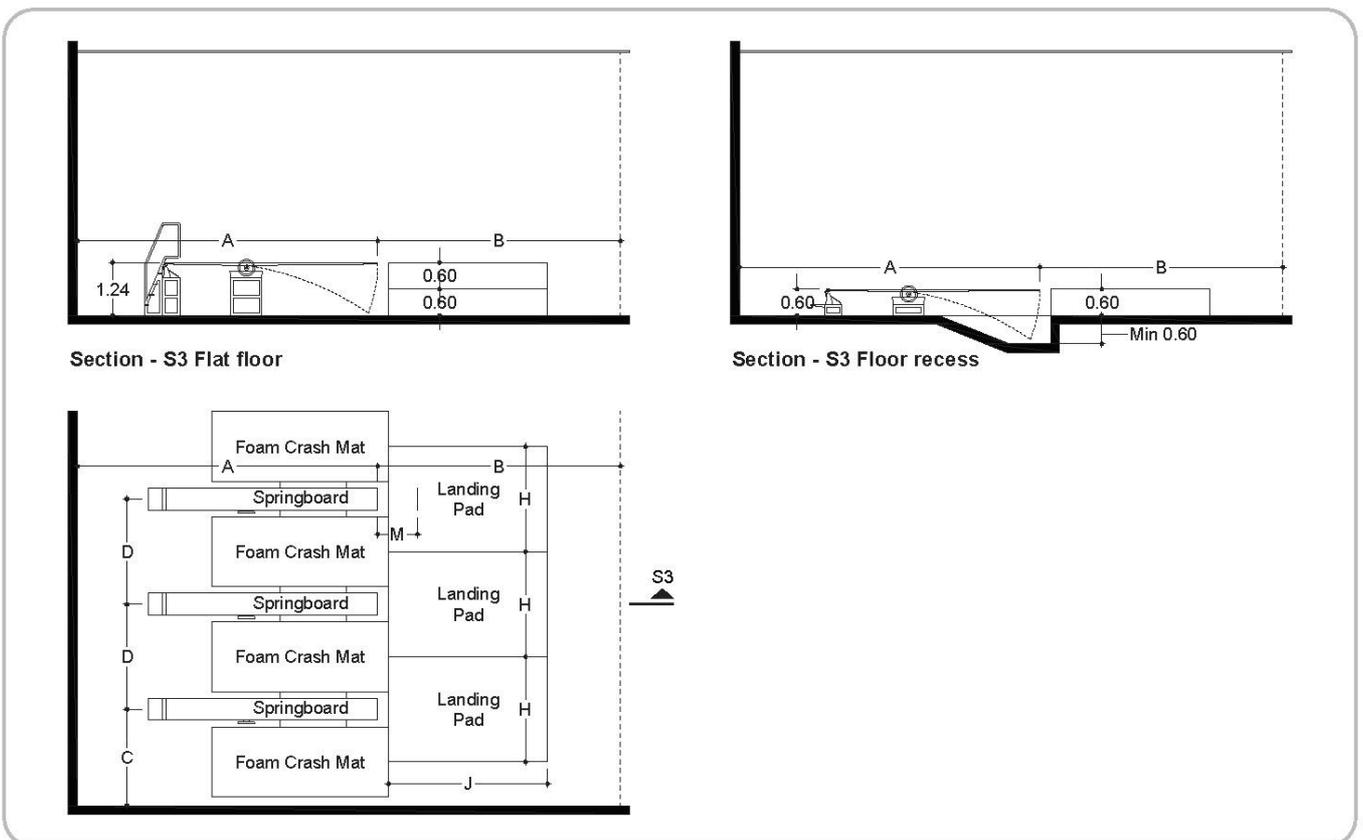
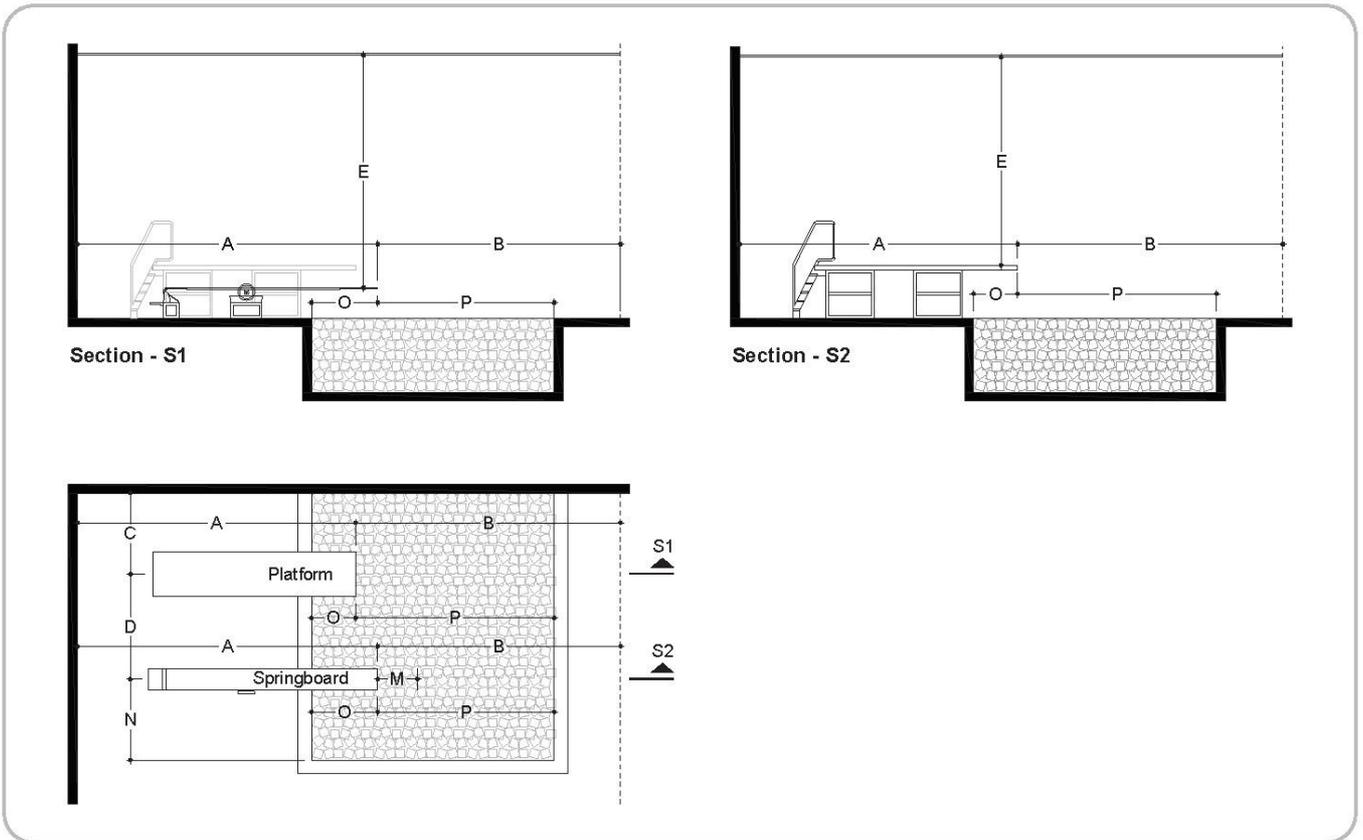
Longitudinal Section - L2



Diving Dry Land Equipment

1. Block Foam Land Pit
2. Landing Foam Pit
3. Pit*
4. Mat
5. Gymnastics Spring Floor
6. Padded Platform Bench
7. Trampoline Bed

*Minimum Pit Depth= 0.60m
(Depends on Springboard Supplier)



Diving Dry Land Facilities Design Guidelines		Springboard		Platform	
		Length	4.88	Varies	
		Width	0.50	Varies	
		Height	1.24	Varies	
		Horizontal	Vertical	Horizontal	Vertical
A	From plumbet Back to Building Wall	Designation	A-1		A-PL
		Minimum	4.88		Varies
		Preferred	6.10		Infinity
B	From plumbet to Building Wall at Ahead	Designation	B-1		B-PL
		Minimum	3.66		3.66
		Preferred	Infinity		Infinity
C	From plumbet to Building Wall at Side	Designation	C-1		C-PL
		Minimum	1.83		1.83
		Preferred	Infinity		Infinity
D	From plumbet to Adjacent Plumbet	Designation	D-1		D-PL
		Minimum	2.00		2.00
		Preferred	2.40		2.40
E	On plumbet from Board to Ceiling	Designation		E-1	E-PL
		Minimum		5.00	2.70
		Preferred		6.40	6.40
F	Clear Overhead behind and each side of plumbet	Designation	F-1	F-1	F-PL
		Minimum	2.50	4.50	1.50
		Preferred	Varies	6.40	Varies
G	Clear Overhead ahead of plumbet	Designation	G-1	G-1	G-PL
		Minimum	5.00	4.50	1.50
		Preferred	Varies	6.40	Varies
H	Width of Landing Pit in front of plumbet	Designation	H-1		H-PL
		Minimum	1.83		1.50
		Preferred	Varies		Varies
J	Length of Landing Pit in front of plumbet	Designation	J-1		J-PL
		Minimum	3.66		1.50
		Preferred	Varies		Varies
K	Angle of Spotting Rig Ropes	Designation		K-1	K-PL
		Minimum		30°	30°
		Preferred		30° ±	30° ±
L	Height of Spotting Rig above diving board or platform	Designation		L-1	L-PL
		Minimum		4.50	4.50
		Preferred		6.40	6.40
M	Distance in front of Plumbet to Spotting Rig	Designation	M-1		M-PL
		Minimum	0.76		0.76
		Preferred	0.91		0.91
N	From plumbet to Pit Wall at Side	Designation	N-1		N-PL
		Minimum	1.83		1.83
		Preferred	Infinity		Infinity
O	Overhanging	Designation	O-1		O-PL
		Minimum	1.50		1.00
		Preferred	1.50		1.00
P	From Plumbet to Pit Wall at Ahead	Designation	P-1		P-PL
		Minimum	3.66		3.66
		Preferred	Infinity		Infinity

Use and installation guidelines for dry land facilities with in ground and above ground trampolines

Installation and use instructions for trampolines and related equipment, such as frame pads, mats, end decks, and spotting systems, shall be provided by the manufacturer and shall specify the minimum safe area dimensions required for each trampoline type and relating their products to centre or edge of the trampoline.

Clearance (trampolines): users should refer to the manufacturer's specifications for all clearance, which may vary depending upon the manufacturer, the size of the trampoline, the type of bed in place, the type of spotting system in place, if any, and other variables. In any event, adequate space should be provided so that intended users and equipment* will not come into contact with any obstacles during their anticipated use of the equipment.
*i.e., bottoming out a trampoline or dry land diving board.

Clearance (platforms): these specifications apply to facilities used by FINA level international athletes. Other specifications may be appropriate for junior or development programs, so long as adequate space is provided so that intended users and equipment will not come into contact with any obstacle during their anticipated use of the equipment.

Recommended Equipment in Dry Land Facility							
			Number		Suggested dimensions		
1	Diving Boards	Springboard as FR 5.1.1 mounted on diving stands with movable fulcrums.	Minimum	2			
			Preferred	4			
2	Diving Board Landing Pads	Foam landing pads for Dry land diving boards are located in front of the diving boards	Minimum	2	Floor	Width	Length
			Preferred	4	120 cm	1.50 m min.	1.50 m min.
3	Trampolines		Minimum	1			
			Preferred	3			
4	Foam Crash Mats		Minimum	2	Height	Width	Length
			Preferred	4	22 cm	2 m	3 m
5	Somersault Boxes		Minimum	2	Height	Width	Length
			Preferred	4	32 cm	1 m	1 m
6	Stretching Mats		Minimum	12	Height	Width	Length
			Preferred	24	12 cm	1 m	2 m
7	Large Mirrors	Should be placed on walls so divers can observe body movements while training on equipment.					
8	Video Replay System (Similar to TIVO)	With at least 2 cameras and 2 monitors. This allows divers to review acrobatic skills performed on springboard and trampoline.					
9	Weight Lifting Equipment	Combination of free weights and weight lifting machines.					
10	Cardio Conditioning Equipment	Treadmills and stationary bicycles.					
* Please note: Foam crash mats may be stacked to a height of 120 cm for the foam landing pads, or Foam pits maybe used instead of landing pads.							

FR 4 WATER POLO

FR 4.1 WATER POLO FACILITIES

FR 4.1.1 General requirements

Water Polo Dimensions and Equipment as detailed in Field of Play diagram. **See *Water Polo Diagram, Annex WP 1***

FR 4.1.2 Field of Play.

The overall Field of Play will be 30.60m x 20.00m for men and 25.60m x 20.00m for women.

The distance between the goal lines shall not be less than 20.00 metres and not more than 30.00 metres for games played by men. The distance between the goal lines shall not be less than 20.00 metres and not more than 25.00 metres for games played by women.

The anchor point at the edge of the Field of Play shall be placed 30cm behind the front of the goal line.

The width of the Field of Play shall be not less than 10 metres and not more than 20.00 metres.

Exception from FR 4.1.2 may be allowed on the discretion of the federation controlling the match.

FR 4.1.3 Depth

The depth of the water shall be consistently not less than 1.80 metres.

FR 4.1.4 Water Temperature

The water temperature shall be 26° plus 1° minus 1° Centigrade (25°C-27°C).

FR 4.1.5 Lighting

The light intensity shall not be less than 600 lux.

FR 4.1.6 Ceiling height for Indoor Pools

Minimum Ceiling height is not required.

FR 4.1.7 Lane Ropes

Each lane rope will have a minimum diameter of 0,06 metres and a maximum diameter of 0.12 metres.

Lane rope should be secured at each wall to anchor brackets recessed into the walls. If anchor placement is on pooldeck, an extender, firm and non-elastic, should be in place. The installed lane rope should stay in the pool water. The anchor, including extender, shall not extend more than 10mm into the pool. The anchor shall not influence the length of the lane rope by more than ± 10 mm each end of rope. Anchors should be installed to withstand 20kN. The lane rope shall be equipped with a tension spring, absorbing sudden high point loads and a wire withstanding a tensileforce of 12kN.

FR 4.1.8 Flying Substitution Area

An area for flying substitutions must be available on the lateral outer side of the field of play, on the side where the team benches are situated. The width of this area shall be not less than 0.50 metres.

The designated area for flying substitutions for each team will be between the goal line in front of the team bench and the centre of the field of play.

FR 4.2 WATER POLO FACILITIES FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS

FR 4.2.1 General Requirements

Water Polo Dimensions and Equipment as detailed in Field of Play diagram for Olympic Games and WorldChampionships. **See *Water Polo Diagram, Annex WP 2***

FR 4.2.2 Field of play

The overall Field of Play will be 30.60m x 20.00m for men and 25.60m x 20.00m for women.

The distance between respective goal lines shall be 30.00 metres for games played by men and 25.00 metres for games played by women.

The anchor point at the edge of the Field of Play shall be placed 30cm behind the front of the goal line. The width of the Field of Play shall be 20.00 metres.

Exceptions from the requirements in FR 4.2.2 are not allowed.

FR 4.2.3 Depth

The depth of the water shall be consistently not less than 2.00 metres.

FR 4.2.4 Water Temperature

The water temperature shall be 26° plus 1° minus 1° Centigrade (25°C-27°C).

FR 4.2.5 Lighting

The light intensity shall not be less than 1500 lux.

FR 4.2.6 Ceiling height for Indoor Pools

In indoor swimming pools the minimum height of the Field of Play shall be not less than 7.00 meter.

FR 4.2.7 Lane Ropes

Each lane rope will have a diameter of 0,10 metres.

Lane rope should be secured at each wall to anchor brackets recessed into the walls. If anchor placement is on pool deck, an extender, firm and non-elastic, should be in place. The installed lane rope should stay in the pool water. The anchor, including extender, shall not extend more than 10mm into the pool. The anchor shall not influence the length of the lane rope by more than ± 10 mm each end of rope.

Anchors should be installed to withstand 20kN. The lane rope shall be equipped with a tension spring, absorbing sudden high point loads and a wire withstanding a tensile force of 12kN.

FR 4.2.8 Flying Substitution Area

In indoor swimming pools the minimum height of the Field of Play shall be not less than 7.00 meter.

FR 4.2.9 Salinity of the water

An area for flying substitutions must be available on the lateral outer side of the field of play, on the side where the team benches are situated. The width of this area shall be not less than 0.50 metres.

The designated area for flying substitutions for each team will be between the goal line in front of the team bench and the centre of the field of play.

FR 4.3 EQUIPMENT FOR WATER POLO FACILITIES

FR 4.3.1 Markings

Distinctive marks shall be provided on both sides of the field of play to denote the goal lines, lines 2.0 metres and 6.0 metres from that line and half the distance between the goal lines. These markings shall be clearly visible throughout the game.

The white marker shall be measured from the anchor point and will be 0.3 metres to line up with the front of the edge of the goal line. This shall be consistent at both ends of the field.

The 2 metre red marker shall be measured from the front end of the goal line extending into the field of play. This shall be consistent at both ends of the field of play.

The yellow marker shall then extend 4 metre from the 2 metre marker into the field of play. There will be a red marker placed 5 metre from the front end of the goal line. This shall be consistent at both ends of the field of play.

The middle section of the field of play will be green and should be 18 metre for the men's game and 13 metre for the women's game. There will be a white marker placed in the middle of the green area to denote the centre of the field.

The exclusion zones shall be placed in the two corners on the opposite side of the pool to the official table. They shall be 2 metre in length and shall extend along the goal line.

FR 4.3.2 Referee platforms

Platforms must be provided on both sides of the field of play, which shall be 1 metre in width and 70 cm in height above the water level. These platforms enable the referees to have free way from end to end of the field of play. Sufficient space shall also be provided at the goal lines for the Goal Judges. The platforms must be colour coded to meet the specification as shown in the diagram of the field of play. **See *Water Polo Diagram, Annex WP 2***

FR 4.3.3 Goals

The goal posts and crossbar must be of wood, metal or synthetic (plastic) with rectangular sections of 80,0 millimetres, square with the goal line and painted white.

The goal posts must be fixed, rigid and perpendicular at each end of the playing space, equal distances from the sides and at least 0.3 metre in front of the ends of the field of play or of any obstruction. Any standing or resting place for the goalkeeper other than the floor of the pool is not permitted.

The inner sides of the goal posts must be 3.0 metre apart.

The underside of the cross bar must be 0.9 metre above the water surface.

FR 4.3.4 Re-entry area

The rectangular excluded players' re-entry area shall have the following dimensions: 2.0 metres by 1.08 metre.

FR 4.3.5 Nets

Limp nets must be attached to the goal fixtures to enclose the entire goal space securely fastened to the goal posts and crossbar, allowing not less than 0.3m of clear space behind the goal line everywhere within the goal area.

FR 4.3.6 Secretariat table

The game secretariat shall be placed at a table behind the referees and at the same height.

FR 4.3.7 Automatic Officiating Equipment for Water Polo.

FR 4.3.8 Requirements for VAR

See *Water Polo Diagram, Annex WP 3*

FR 4.3.8.1 Cameras

There are seven cameras used for the VAR.

1. Four cameras on the goal lines, two per goal.
The location of the cameras should be at the edge of the pool or under referee's catwalk at about 1 m above the water level
2. Two cameras shall be fixed on the same side of the jury table. Each camera should film each a half of the field of play accordingly.
The location of the cameras shall be that provide the best quality of video recording.
3. One camera is located at the side of the pool opposite to the benches.
This camera shall film the entire field of play including both benches.
This camera shall be capable to shoot at biggest possible angle (160 degrees is maximum today) with minimum resolution 2K pixels.

FR 4.3.8.2 Server & Monitors

All cameras shall be connected to the server. Capacity of the server shall be that to keep in memory all games played for the last 24 hours in HD quality, preferably with a memory of 4 TB.

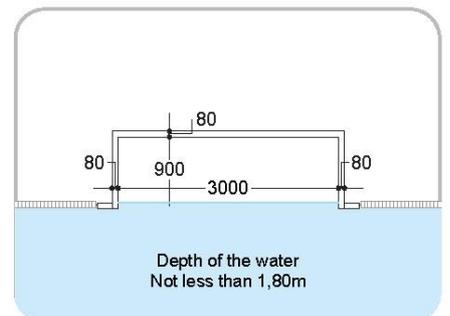
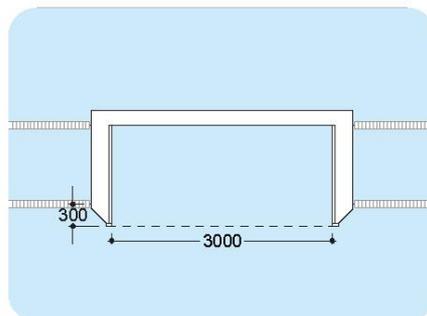
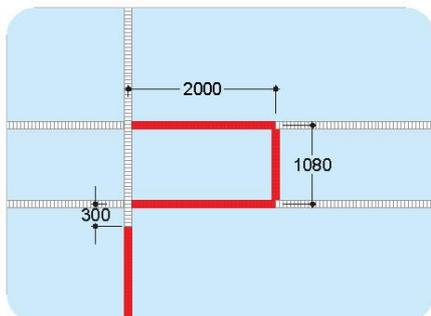
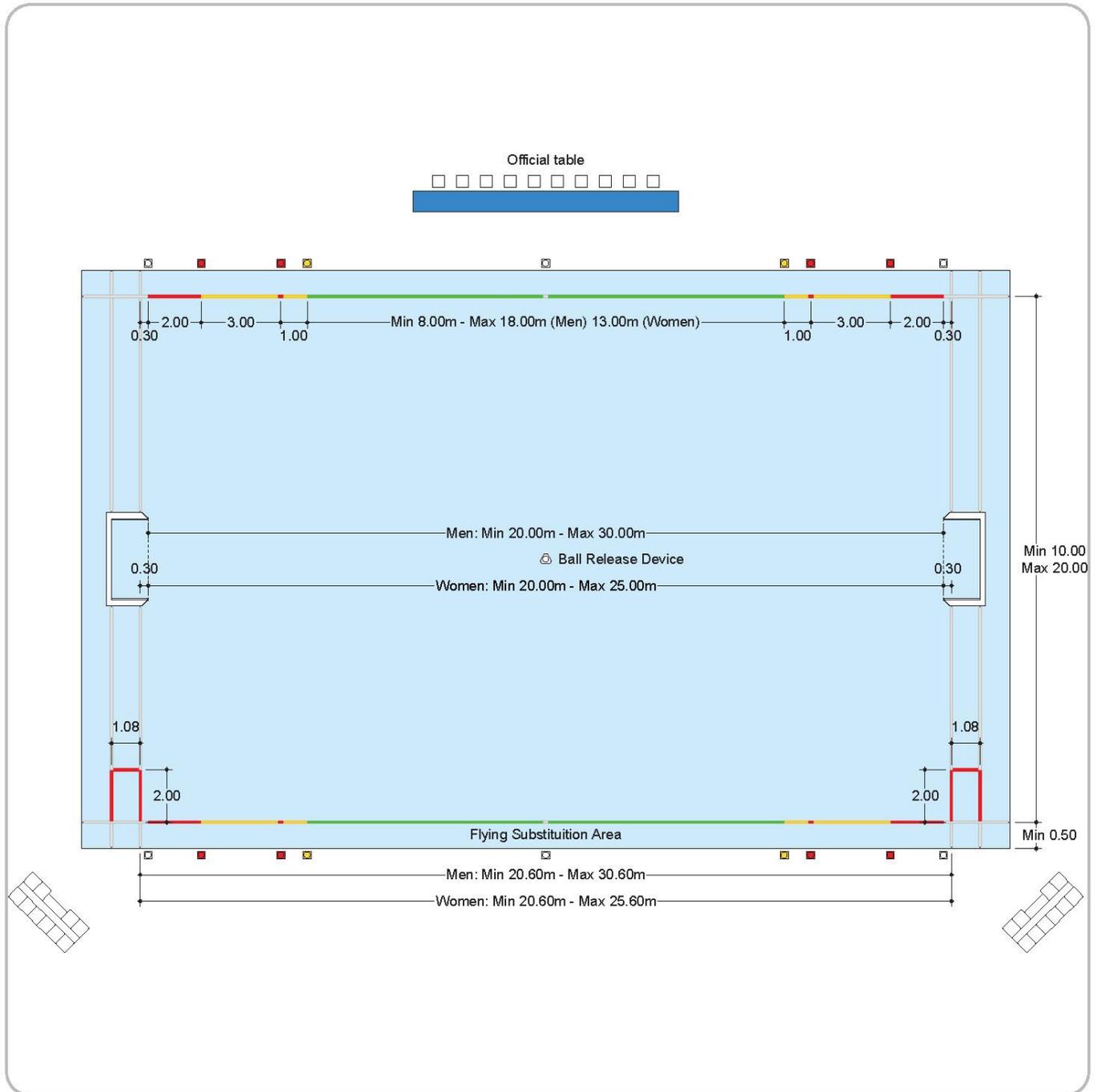
Two high resolution monitors shall be connected to the server. One monitor should be available for support of the technician and another one for the VAR official.

A joystick or "mouse" must be available for use by the VAR official.

FR 4.3.8.3 Review location (VAR's Room)

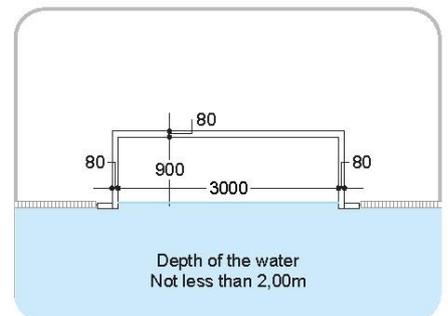
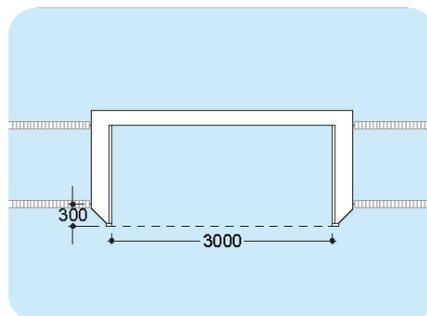
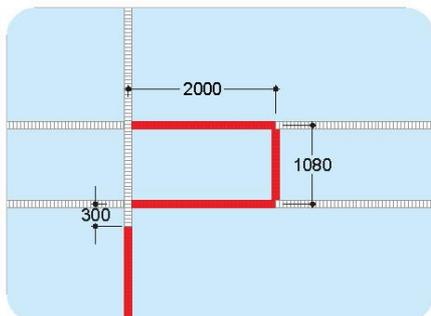
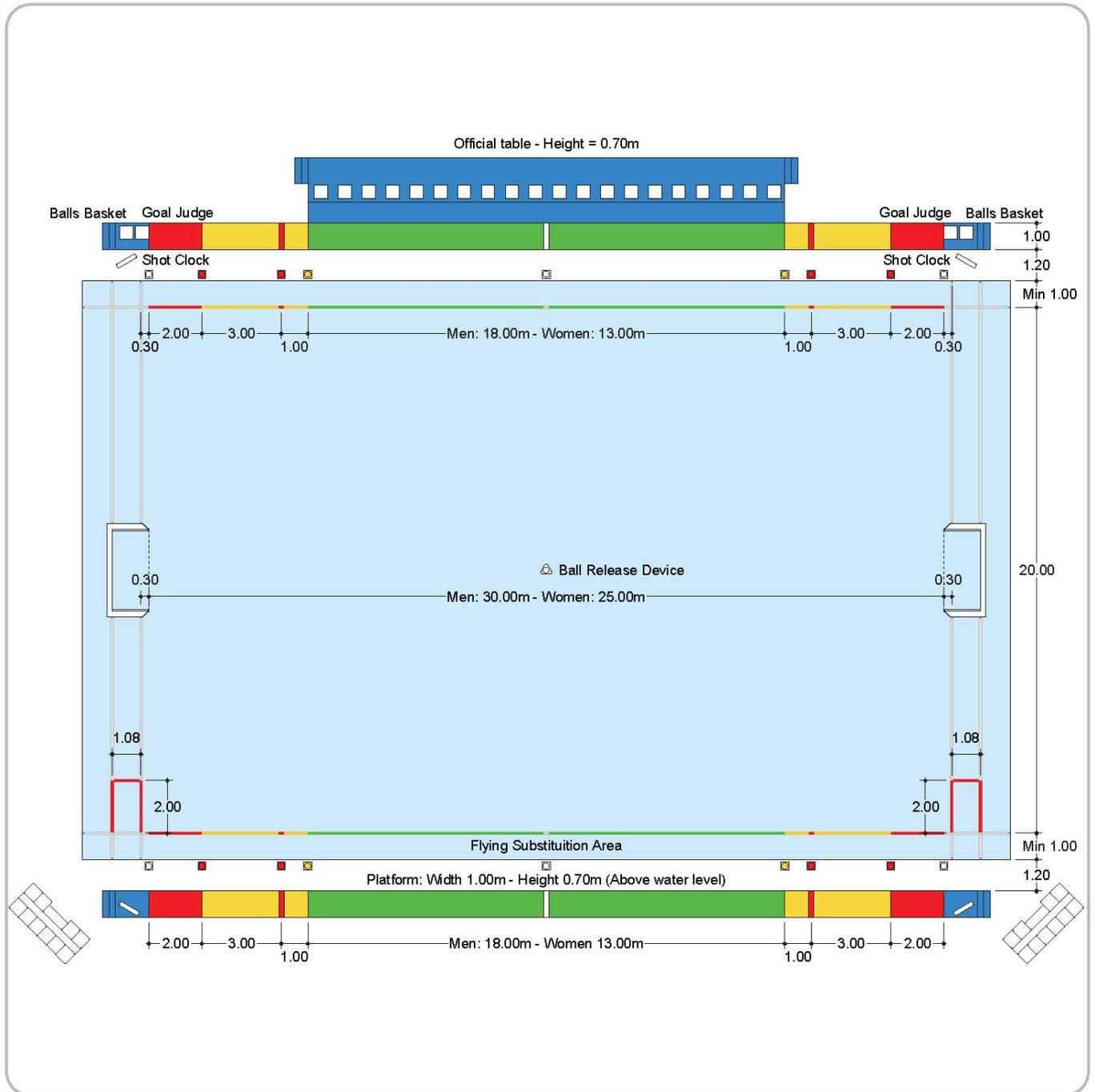
It is mandatory to have separate room (office or temporary boot cutoff for "other's eyes") for VAR review near to referee's catwalk.

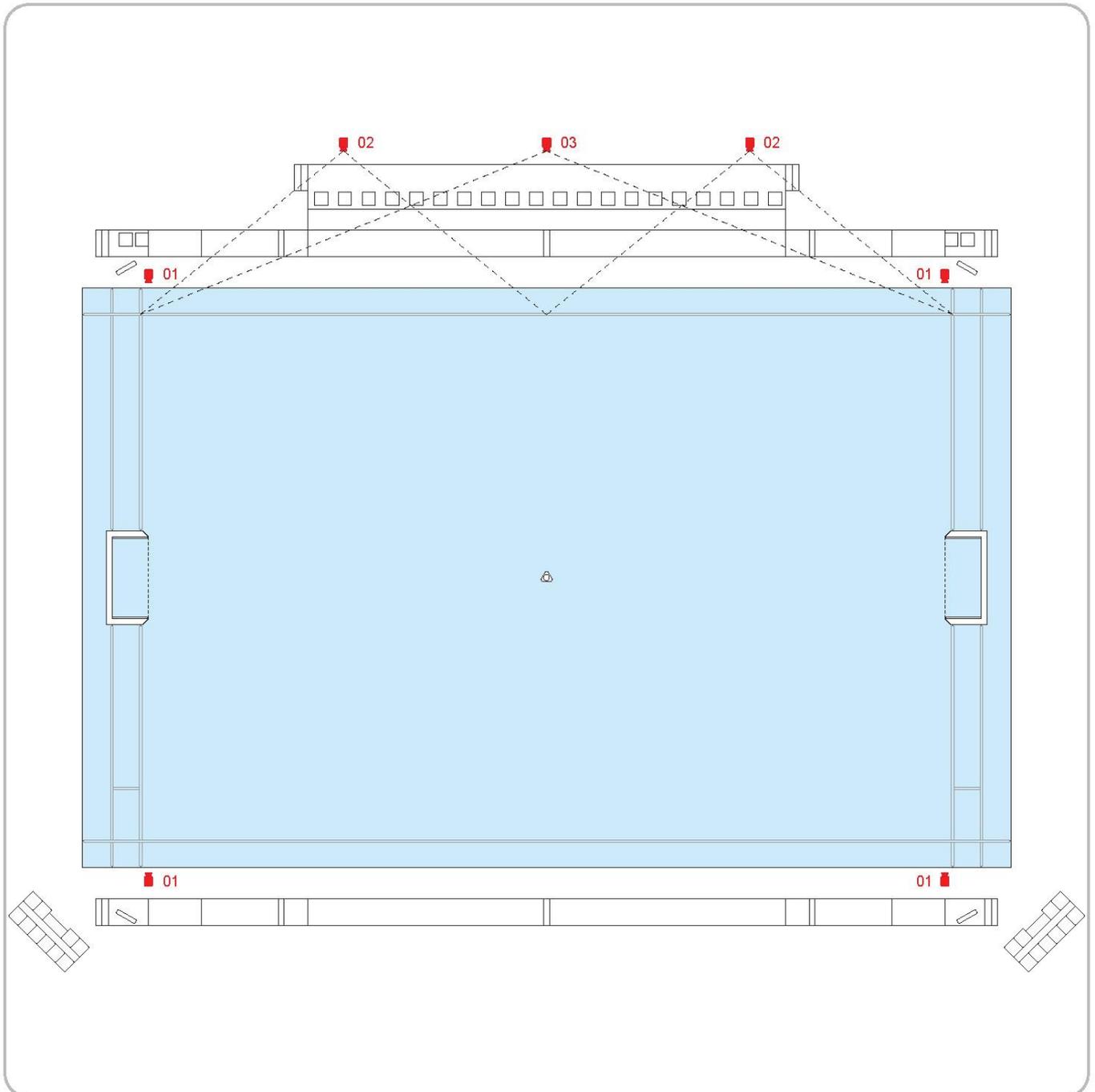
If this is not feasible, a boot secured from the public and table officials' view should be arranged at or near the jury table.



Annex WP1 - Diagram

Water Polo Facilities





Cameras

1. Four cameras on the goal lines, two per goal. The location of the cameras should be at the edge of the pool or under referee's catwalk at about 1 m above the water level
2. Two cameras shall be fixed on the same side of the jury table. Each camera should film each a half of the field of play accordingly. The location of the cameras shall be that provide the best quality of video recording.
3. One camera is located at the side of the pool opposite to the benches. This camera shall film the entire field of play including both benches. This camera shall be capable to shoot at biggest possible angle (160 degrees is maximum today) with minimum resolution 2K pixels.

FR 5 ARTISTIC SWIMMING

FR 5.1 ARTISTIC SWIMMING FACILITIES

FR 5.1.1 Figure Section

The areas for figure competition in FR 5.1.1 can occupy the same area of the pool as that used for routine competition in FR 5.1.2 approved by TASC.

FR 5.1.2 Routine Section

For the routine section of the competition a minimum area of 15 metres by 25 metres is required, within an area of which 12 metres by 12 metres must have a minimum depth of 3.0 metres. The depth of the remaining area shall be 2.0 metres minimum.

FR 5.1.3 Depth

The pool depth shall be as detailed in FR 5.1.2.

Where the water depth is more than 2.0 metres, the depth at the pool wall may be 2.0 metres and then sloped down to reach the general depth at 1.2 metres maximum from the pool wall.

FR 5.1.4 Lane markings

If there are no lane markings as described in **FR 2.13**, the floor of the pool must be marked with contrasting lines in one direction, following the length of the pool as detailed in: ***Artistic Swimming Diagram AS 1***.

FR 5.1.5 Water Conditions

FR 5.1.5.1 The water must be of sufficient clarity for the bottom of the pool to be visible.

FR 5.1.5.2 The water temperature shall not be less than 27° Centigrade.

FR 5.1.6 Lighting

The minimum light intensity at the level of 1 metre above the water surface shall not be less than 600 lux.

Sources of natural and artificial illumination shall be provided with controls to prevent glare for judges platforms and the starting platform.

FR 5.1.7 Starting Platform

Starting platform is recommended 0.7 metres in height but not less than 0.5 metres.

The surface of the platform should be covered in a slip-resistant material suggest a quick drying water proof carpet.

FR 5.2 ARTISTIC SWIMMING FACILITIES FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS

FR 5.2.1 General requirement

The Field of Play for Artistic Swimming in Olympic Games and World Championships as detailed in: **Artistic Swimming Diagrams, Annex AS 1 and AS 2**

FR 5.2.2 Routine Section

For the routine section of competition at Olympic Games and World Championships a minimum area of 30.0 metres by 20.0 metres is required.

FR 5.2.3 Depth

The depth of the water shall be consistently not less than 3.00 metres.

FR 5.2.4 Lane markings

If there are no lane markings as described in FR 2.2.15, the floor of the pool must be marked with contrasting lines in one direction, following the length of the pool as detailed in: **Artistic Swimming Diagram, Annex AS 1.**

FR 5.2.5 Water Conditions

FR 5.2.5.1 The water must be of sufficient clarity for the bottom of the pool to be visible.

FR 5.2.5.2 The water temperature shall not be less than 27° Centigrade.

FR 5.2.6 Lighting

The light intensity at the level of 1 metre above the water surface shall not be less than 1500lux.

Sources of natural and artificial illumination shall be provided with controls to prevent glare for judges platforms and the starting platform.

FR 5.2.7 Starting Platform

Starting platform shall be 0.7 metres in height with a tolerance of ± 1 cm.

The surface of the platform should be covered in a slip-resistant material suggest a quick drying water proof carpet. **See Artistic Swimming Diagrams, Annex AS 1 and AS 2.**

FR 5.2.8 Judges Platform

The Judges Platform must have tables and chairs and be of a minimum height of 0.6 metres. *The platforms should be no more than 2 metres from the edge of the pool.*

See Artistic Swimming Diagrams, Annex AS 1 and AS 2.

FR 5.2.9 Practice warm up pool

Practice warm up pool shall have a minimum area of 25 metres by 25metres or 30metres by 20 metres with a depth of 3 metres.

A sound reproduction system meeting the requirements set in FR 5.4.2 shall be available.

FR 5.2.10 Dry Land Training

A Dry land training stretch area must be provided for the athletes with mats.

FR 5.3 AUTOMATIC OFFICIATING EQUIPMENT FOR ARTISTIC SWIMMING

The minimum installation consists of:

FR 5.3.1 same number of score recorder units as judges (figure: 5 up to 28; routine 5 up to 15)

FR 5.3.2 the results may only be transferred after confirmation by the referee or appointed official

FR 5.3.3 result unit (computer) with result recording and backup system. Only FINA approved programmes and systems are allowed.

FR 5.3.4 print out system for all recorded information, start lists and result lists;

FR 5.3.5 A judge's evaluation system based on the recorded results (FR 5.3.3). The FINA TASC approved evaluation programme is required.

FR 5.3.6 scoreboard control unit with a scoreboard; of a minimum of 10 lines containing 32 digits (or scoreboard as described in Rule FR 2.3.7.1). The scoreboard must be able to display all recorded information and the running time;

FR 5.3.7 for each judge flash cards in case of failure of the electronic system.

FR 5.3.8 Timing System

An automated timing system with 3 independent timers timing walk-on time, deck movement time and overall time. The timers should be placed close to the result secretariat.

FR 5.3.9 Under water review system

Underwater camera is required with mounting and harness to the wall or bottom depending on the type. The system must have video server or a computer control centre with data storage with the capacity for immediate slow motion replay. A monitor for the TASC to perform immediate reviews must be available.

FR 5.3.10 Routine and Figure review system

2 to 4 cameras in defined positions with mounting and harness video server or computer control centre and data storage with the capacity for slow motion instant replay must be available.

FR 5.4 SOUND EQUIPMENT AND PRESENTATION STANDARDS FOR ARTISTIC SWIMMING

The sound equipment should include, at minimum:

FR 5.4.1 Amplifier-mixer system

Mixer should have at least 16 inputs and 6 outputs (LR (Left-Right channels) PA, LR Speaker system on the field of competition, 2 outputs Spare/or for Broadcasting). Amplifiers should be suitable for used speakers.

FR 5.4.2 A sound reproduction system

FR 5.4.2.1 High quality microphones and microphone stations for announcements and ceremonies.

FR 5.4.2.2 High quality air speakers (AS) of size, number and placement to obtain uniform clear sound to the field of competition area. And should be able to produce 105 dB SPL (sound pressure level) A without distortion. The maximum SPL shall not exceed 125 dB SPL A. Speakers frequency response should be at least 40Hz-16kHz.

FR 5.4.2.3 High quality air speakers (AS) of size, number and placement to obtain uniform clear sound to the start podium of competition area. And should be able to produce 105 dB SPL A without distortion. The maximum SPL shall not exceed 125 dB SPL A. Speakers frequency response should be at least 40Hz-16kHz.

FR 5.4.2.4 All air speaker (AS) in the field of competition should be «passive» (without built-in amplifier) to avoid risk of electrical shock.

FR 5.4.2.5 UWS (Under Water Speaker) for clear and uniform underwater sound above. UWS should be able to produce 98dB A without distortion. The maximum SPL shall not exceed 110 dB SPL A. UWS frequency response should be at least 200Hz-10kHz. Isolation and impedance matching transformer systems for the UW speakers.

FR 5.4.2.6 DSP (Digital Sound Processor) to make amplitude frequency characteristic and delay corrections in between AS and UWS. DSP should have at least 2 inputs and independent 6 outputs (or 3 Stereo independent outputs). Each output should have HPF (High Pass Filter), LPF (Low Pass Filter), GEQ (Graphic equalizer) and/or Parametric equalizer, compressor/limiter, Delay (minimum 5 seconds).

FR 5.4.3 PA (Public Address) System (Sound reproducing system for spectators)

FR 5.4.3.1 The sound system shall be capable to cover spectators seats at least with 110 dB A with deviations in overall direct sound levels across the spectator seating area not exceeding +/- 3 dB A. The maximum SPL shall not exceed 125 dB SPL A.

FR 5.4.3.2 STI PA (speech transmission index for PA systems) should be in 0,5-1.0 STI.

FR 5.4.3.3 The PA system shall provide enough headroom to compensate for the atmospheric loss of high frequencies.

FR 5.4.3.4 The PA system should have a minimal impact to the field of competition to avoid sound delay problems.

FR 5.4.4 Sound volume (decibel) meter for monitoring music sound levels both above and under water.

FR 5.4.5 Patch cords for interconnecting equipment properly, speaker extension lines adequate for placing speakers for optimal sound distribution.

FR 5.4.6 Fusing systems as needed to protect speakers and other equipment.

FR 5.4.7 Grounding lines to ensure safe grounding of all equipment.

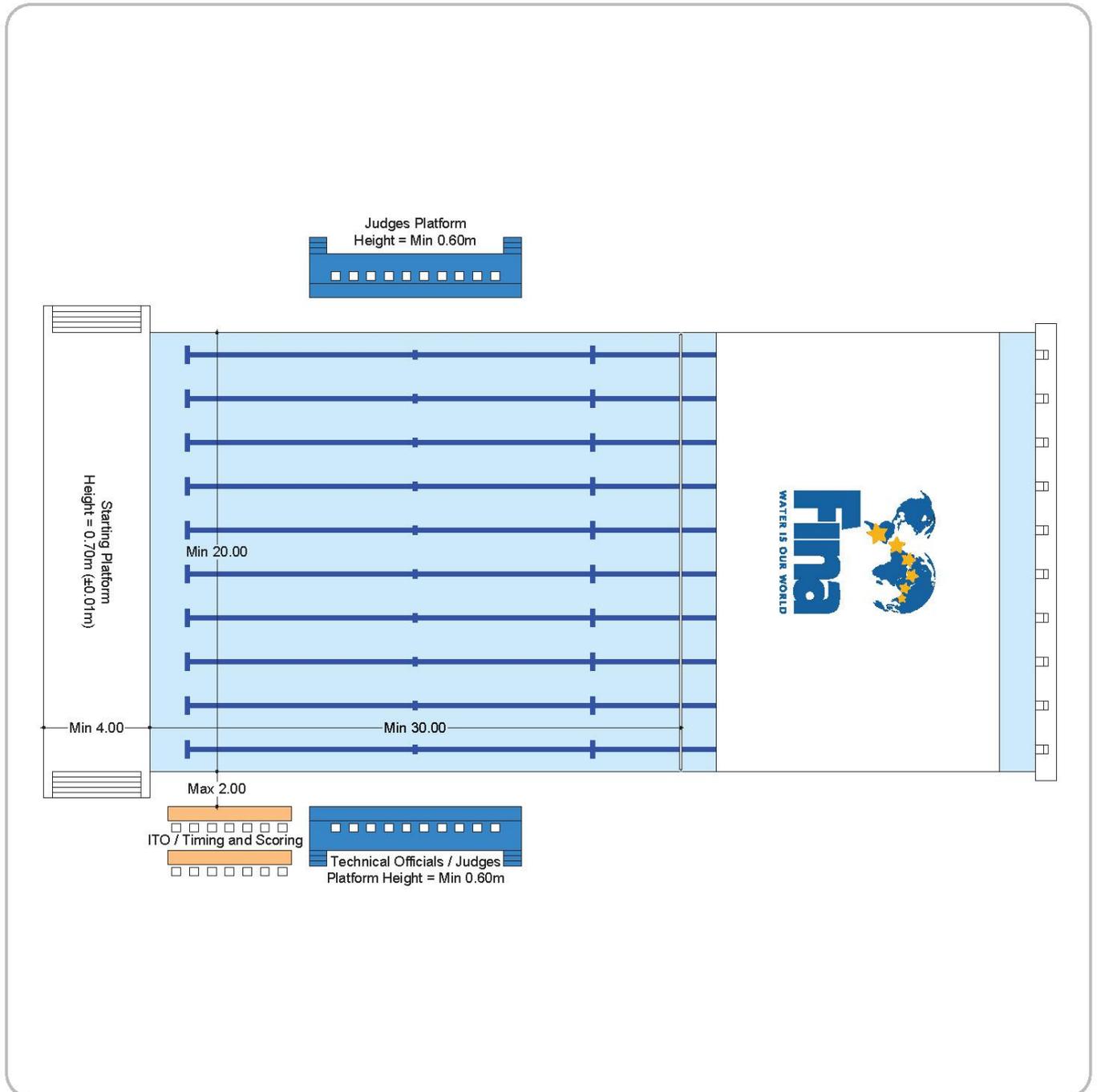
FR 5.4.8 Safety materials to minimize potential of injury to person or equipment from stepping on or tripping over electrical or speaker lines.

FR 5.4.9 A stopwatch.

FR 5.4.10 Tools and meters as needed for initial special hookups and emergency repairs.

FR 5.4.11 Systems for communication between officials and sound desk.

FR 5.4.12 A system for monitoring and recording underwater sound continuously.



FR 6 HIGH DIVING

FR 6.1 HIGH DIVING FACILITIES

General requirements and definitions:

FINA High Diving is preferably performed in controlled environments with customised from fabricated diving towers in conjunction with fabricated pools. Rectangular dimensions are the preferred option for or permanent artificial pools. Temporary round pools can be used in special circumstances.

High Diving can also be performed from fabricated platforms on existing buildings or natural cliff faces into open water (sea, lakes or rivers etc). Special permission and guidance is required from FINA under these circumstances.

Dimensions in metres for all high diving facilities as detailed in **High Diving Facilities Table, HD 2 and HD 4**, shall be observed. The HD 1, HD 2, HD 3, HD 4 and HD 5 are established by the FINA Facilities Committee in cooperation with the FINA Technical High Diving Committee and approved by the FINA Bureau.

In special surroundings the dimensions and requirements can be adjusted to the local situation upon recommendation by the FINA Facilities Committee and the FINA THDC and approved by the FINA Bureau.

Security: The dimensions of these facilities are only for the use of expert athletes and they are not suitable for public use. It is required by the local organising committees and local authorities to provide security guards and / or lockable structures or gates to prevent any unauthorised persons to climb the diving towers.

FR 6.1.1 Platform High Diving

FR 6.1.1.1 Each platform shall be rigid and horizontal.

FR 6.1.1.2 The dimensions of the platform shall be:

Platform	Width	Length
3 m	2.00 m (1.50 m *)	5.00 m (2.0 m *)
5 m	2.00 m (1.50 m *)	5.00 m (2.0 m *)
7.5 m	2.00 m (1.50 m *)	5.00 m (2.0 m *)
10 m	2.00 m (1.50 m *)	5.00 m (2.0 m *)
15 m (11 m – 19 m)	2.00 m (1.50 m *)	5.00 m (2.0 m *)
20 m	2.00 m	5.00 m
21 m – 26 m	2.00 m (1.50 m *)	5.00 m (2.0 m *)
27 m	2.00 m	5.00 m

* Accepted for events other than FINA World Championships and World Cups

FR 6.1.1.3 The thickness of the front edge of the platform shall not exceed 0.20 metre and can be vertical or inclined at an angle not greater than 10° to the vertical inside the plummet line.

FR 6.1.1.4 The entire surface of all platforms shall be covered with slip-resistant material that shall have a tread pattern that provides sufficient traction in wet and dry conditions such that the divers are prevented from slipping when performing dives in all directions.

FR 6.1.1.4.1 If an unknown surface material is proposed, a physical sample must be sent to the FINA THDC for testing and approval before it can be used.

FR 6.1.1.4.2 Terracotta is the preferred colour of the platform surface material. Black, white and blue coloured surface material is not permitted.

FR 6.1.1.4.3 The colour of the carpet on the pool deck must not be blue. Grey is the preferred option.

FR 6.1.1.5 The back and sides of each platform shall be surrounded by handrails up to 1m from the edge of the platform with a minimum clearance of 1.8 metres between vertical pairs. The minimum height shall be 1.0 metre and they shall be with at least two horizontal crossbars placed outside the platform beginning 1.00 metre from the front edge of the platform.

FR 6.1.1.6 Each platform shall be accessible by suitable slip-resistant stairs (not ladders) as required by the country's building regulations and or health and safety standards that are applicable.

FR 6.1.1.7 It is preferable that a platform is not constructed directly under any other platform however in circumstances where this cannot be avoided then the dimensions in **High Diving Table, HD 2** must be observed.

FR 6.1.1.8 The platform shall be a concrete, steel or other rigid material construction as approved by FINA. The longitude and latitude movement/oscillation allowance for the entire 27 metres high tower structure shall be 2.7 cm (1/1000 from 27m). The maximum wind speed for the tower oscillation stability is 54km/hour (banners will affect the stability). The downward flex at the diving end of the platform shall not exceed 2-3mm and approved by the local authority of the area.

FR 6.1.2 General Requirements

FR 6.1.2.1 For High Diving platforms designed and constructed after 31st December 2017 the minimum dimensions in metres for high diving facilities as detailed on the "**High Diving Facilities Table**" (**HD 2 and HD 4**) shall prevail, using, as a basic measuring point of reference, the plummet line, which is a vertical line extending through the centre of the front edge of the platforms.

FR 6.1.2.2 The platforms shall face north in the northern hemisphere and south in the southern hemisphere where possible.

FR 6.1.2.3 The water temperature should be not less than 18° Celsius in open water venues and preferable not less than 26 degrees in venues with an artificial pool.

FR 6.1.2.4 A certificate of suitability for use of the venue shall be issued by the appropriate local health and safety authorities. In general terms the certification must also relate to the general water quality for human use.

FR 6.1.2.5 The surface agitation shall be done by a strong horizontal water spray and the scuba divers must also provide additional splash when necessary. The water spray must not be mounted higher than 1.50m above the water level. The water spray should be strong and provide foamy white water for better visibility for the athletes. The spray or the foam must be strong enough to cover the landing area.

FR 6.1.2.6 If the wind speed exceeds 40kph then the Referee shall decide if the competition can continue or must be interrupted until the wind speed is below 40kph. A transportable air speed indicator must be available for use on the 20m and 27m platforms.

If lightning strikes are within 3km of the dive site then the training or the competition must be suspended until the storm distance is greater than 3km. If lightning is within 3km of the site then the competition is to be postponed until the lightning subsides or moves away from the venue.

FR 6.1.3 Security and Emergency Rescue Requirements

FR 6.1.3.1 For all High Diving competitions and training from 20m or higher medical staff, scuba teams and rescue equipment must be on duty and in position at the venue.

FR 6.1.3.2 The minimum medical staff shall consist of two (2) doctors, with knowledge in trauma injuries, two to three (2-3) staffed ambulances on site and a designated hospital with an Orthopaedic surgery unit on alert.

FR 6.1.3.3 The water safety team consists of two (2) apnea safety swimmers, one or two (1-2) reserve apnea safety swimmers, one (1) scuba safety diver and one (1) water safety captain. In venues with an artificial pool, the scuba safety diver is not required, unless specified by the water safety captain.

FR 6.1.3.4 The rescue equipment comprises:

- 2 rescue boats (in natural surroundings)
- 2 spinal boards ...
- 5 stiff neck collars
- 2 defibrillators
- 2 oxygen tanks
- Blankets
- General first aid kit

FR 6.1.3.5 For recovery

2 x Ice baths (minimum width 0.8 m, length 1.2 m, depth 1.0 m) or 14° C water tubs.

FR 6.1.4 Judges Seating

FR 6.1.4.1 The judges shall be placed side by side in two lines on one side of the platform with the sunlight in the back or above the judges. In indoor facilities and special circumstances the Referee may decide that the judges are placed on both sides of the platforms.

FR 6.1.4.2 No judge shall be seated behind the front edge of the platform.

FR 6.1.4.3 The judges shall be seated at a distance of not less than 30 meters and not more than 40 meters from the entry point of the platforms, and in a position elevated between three (3) and six (6) metres above the water level. Special local circumstances may influence the position of the judges.

FR 6.2 HIGH DIVING FACILITIES FOR WORLD CHAMPIONSHIPS

Rules FR 6.1 to FR 6.1.4.3 apply to the World Championships.

FR 6.3 AUTOMATIC OFFICIATING EQUIPMENT FOR HIGH DIVING

FR 6.3.1 Electronic Officiating equipment records the judges awards for each diver and determines the final score for each dive as required by Rule HD 6.

FR 6.3.2 Preferred Equipment must be able to:

FR 6.3.2.1 Record judges awards by whole and half points

FR 6.3.2.2 Be able to display all recorded and calculated information for each diver both before and after each dive

FR 6.3.2.3 Be able to display the scores for all divers before and after each dive

FR 6.3.2.4 Be able to display the rank order and scores for all divers after each round of dives

FR 6.3.2.5 The equipment must provide each judge with an electronic judging device that will permit each judge to enter their award and to see their award on a window on the device. After the referee has accepted the judges awards, all awards shall be displayed on each electronic judging device

FR 6.3.2.6 Judges analysis is to be provided at the conclusion of each event or series

FR 6.3.2.7 The referee must be provided with a monitor on which he/she will be able to view the awards of all the judges prior to the awards then being displayed on the score board, and preferable with a video camera, to observe the divers performance if needed.

FR 6.3.2.8 There is a requirement for a print out of the following information:

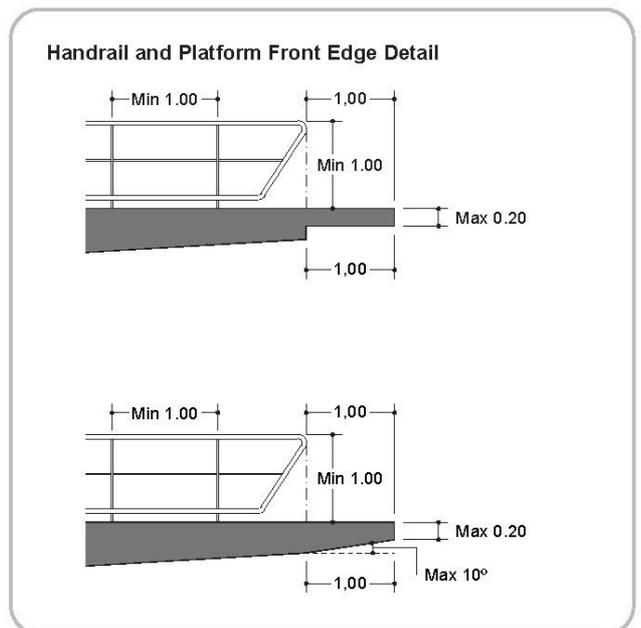
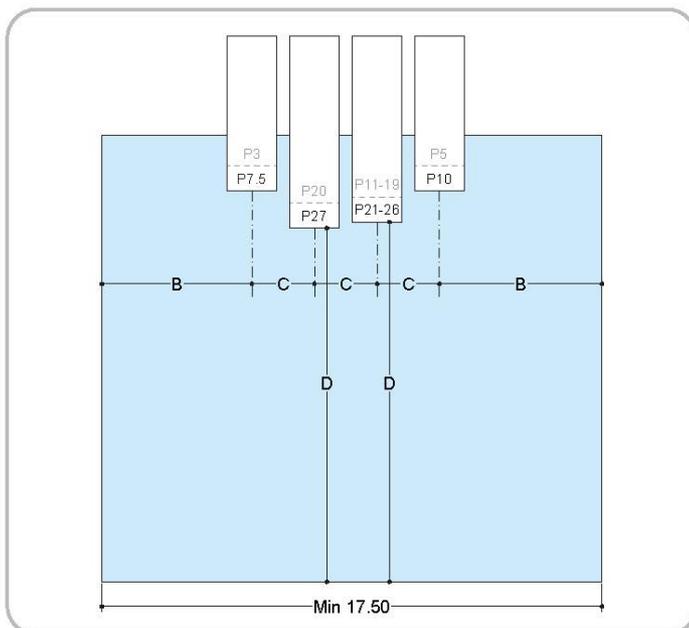
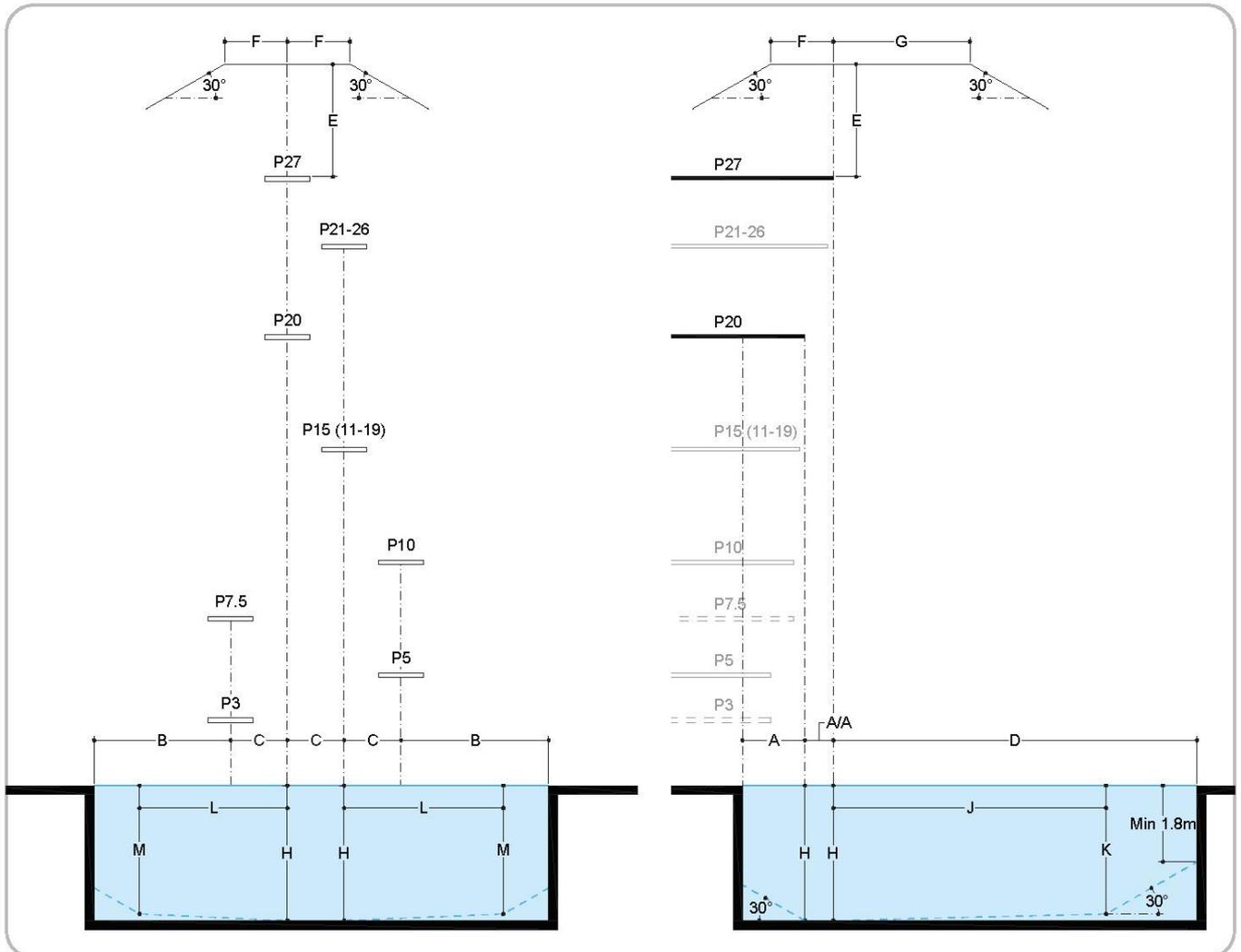
1. The draw for the diving order
2. A start list for each session or event
3. A ranking of dives at the end of each round
4. A ranking of dives at the end of each event
5. Judges awards and scores for each diver at the end of each session and event

FR 6.4 DRY LAND FACILITIES

FR 6.4.1 For the safety, practice and development of high divers and competitions, it is strongly recommended that the guidelines presented below be incorporated into the facility and placed adjacent to the competitive high diving area / facilities.

FR 6.4.2 Recommended equipment in dry land area

- 1 x Trampoline, Olympic standard, length 5.2 m, width 3.05 m, height 1.15 m
- 4 x Foam Crash Mats, minimum length 1.4 m, width 1.0 m, height 0.25 m
- 2 x Somersault Boxes, minimum length 1.0 m, width 1.0 m, height 0.3 m
- 25 x Exercise mats, length 1.8 m, width 0.5 m, height 0.02 m
- 5 x Spinning Bikes



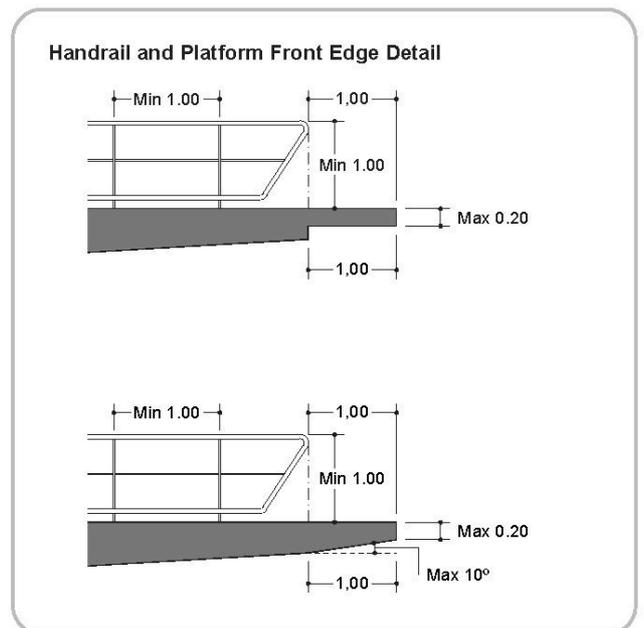
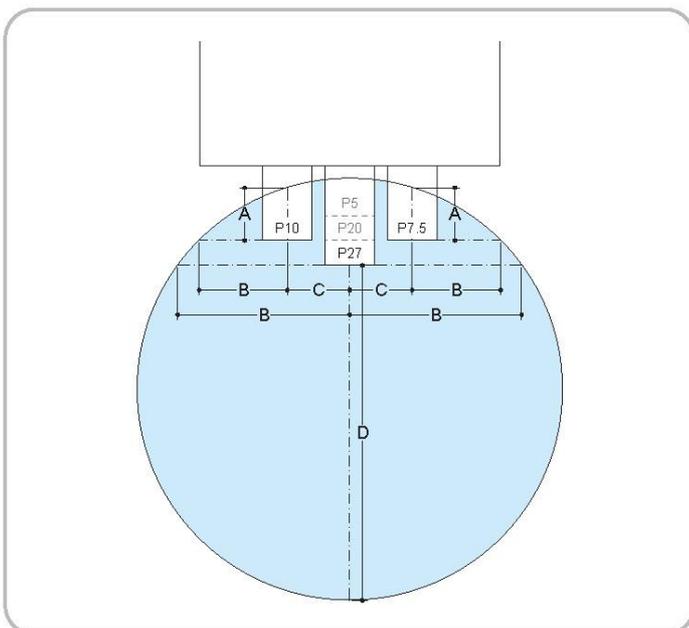
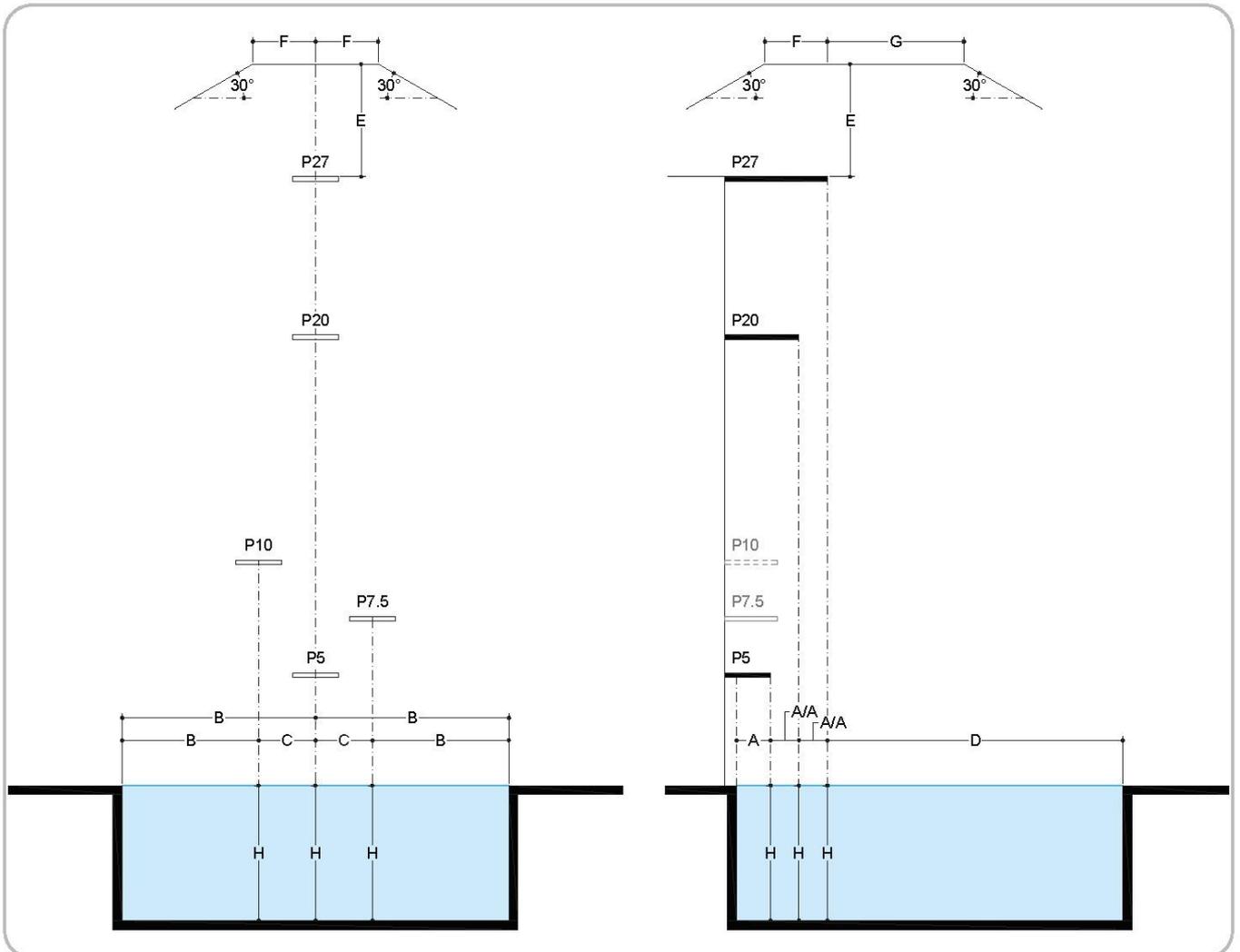
Annex HD1 - Diagram

General Standard Facilities

FINA Dimensions for High Diving Facilities			PLATFORM															
			P 3		P 5		P 7.5		P 10		P 15 (P 11-19) ⁵⁾		P 20		P 21-26		P 27	
	Length	Minimum ³⁾	5.00		5.00		5.00		5.00		5.00		5.00		5.00		5.00	
	Width	Minimum ³⁾	2.00		2.00		2.00		2.00		2.00		2.00		2.00		2.00	
	Height		3.00		5.00		7.50		10.00		15.00		20.00		21.00 - 26.00		27.00	
		Tolerance ⁴⁾	± 0.05		± 0.05		± 0.05		± 0.05		± 0.05		± 0.05		± 0.05		± 0.05	
			Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert	Horiz	Vert
A	From plumbet BACK TO POOL WALL or OBSTACLE	Designation	A-P3		A-P5		A-P7.5		A-P10		A-P15		A-P20		A-(P21-26)		A-P27	
		Minimum	1.25		1.25		1.25		1.50		1.75		2.00		2.00		2.00	
A/A	From plumbet BACK TO PLATFORM plumbet directly below	Designation	A/A-P5		A/A-P7.5		A/A-P10		A/A-P15		A/A-P20		A/A-(P21-26)		A/A-P27			
		Minimum	1.00		1.00		1.00		1.00		1.00		1.00		1.00			
B	From plumbet to POOL WALL or OBSTACLE AT SIDE	Designation	B-P3		B-P5		B-P7.5		B-P10		B-P15		B-P20		C-(P21-26)		B-P27	
		Minimum	3.50		3.75		4.50		5.50		5.50		6.00		6.50		7.00	
C	From plumbet to ADJACENT PLUMBET ¹⁾	Designation	C-P3		C-P5		C-P7.5		C-P10		C-P15		C-P20		C-(P21-26)		C-P27	
		Minimum	2.50		2.50		2.50		2.50		2.50		2.50		2.50		2.50	
D	From plumbet to POOL WALL or OBSTACLE AHEAD	Designation	D-P3		D-P5		D-P7.5		D-P10		D-P15		D-P20		D-(P21-26)		D-P27	
		Minimum	9.50		10.25		11.00		13.50		14.00		14.00		15.00		15.00	
E	On plumbet, from PLATFORM TO CEILING / PLATFORM ABOVE	Designation	E-P3		E-P5		E-P7.5		E-10		E-P15		E-P20		E-(P21-26)		E-P27	
		Minimum	4.00		4.00		4.00		4.00		4.00		4.00		4.00		4.00	
F	Clear Overhead BEHIND AND EACH SIDE of plumbet	Designation	F-P3	E-P3	F-P5	E-P5	F-P7.5	E-P7.5	F-P10	E-P10	F-P15	E-P15	F-P20	E-P20	F-(P21-26)	E-(P21-26)	F-P27	E-P27
		Minimum	2.75	3.50	2.75	4.00	2.75	4.00	2.75	4.00	2.75	4.00	2.75	4.00	2.75	4.00	2.75	4.00
G	Clear Overhead AHEAD of plumbet	Designation	G-P3	E-P3	G-P5	E-P5	G-P7.5	E-P7.5	G-P10	E-P10	G-P15	E-P15	G-P20	E-P20	G-(P21-26)	E-(P21-26)	G-P27	E-P27
		Minimum	5.00	4.00	5.00	4.00	5.00	4.00	6.00	4.00	6.00	4.00	6.00	4.00	6.00	4.00	6.00	4.00
H	DEPTH OF WATER at plumbet ²⁾	Designation	H-P3		H-P5		H-P7.5		H-P10		H-P15		H-20		H-(P21-26)		H-P27	
		Minimum	3.60		3.80		4.50		5.00		5.50		5.80		5.80		5.80	
J K	DISTANCE and DEPTH AHEAD of plumbet for all stands	Designation	J-P3	K-P3	J-P5	K-P5	J-P7.5	K-P7.5	J-P10	K-P10	J-P15	K-P15	J-P20	K-P20	J-(P21-26)	K-(P21-26)	J-P27	K-P27
		Minimum	5.50	3.40	6.00	3.60	8.00	4.30	11.00	4.80	11.50	5.30	12.00	5.60	12.00	5.60	12.00	5.60
L M	DISTANCE and DEPTH EACH SIDE of plumbet	Designation	L-P3	M-P3	L-P5	M-P5	L-7.5	M-7.5	L-P10	M-P10	L-P15	M-P15	L-P20	M-P20	L-(P21-26)	M-(P21-26)	L-P27	M-P27
		Minimum	2.30	3.40	3.50	3.60	4.50	4.30	5.25	4.80	5.50	5.30	6.00	5.60	6.50	5.60	7.00	5.60
N	Maximum Slope to reduce dimensions beyond full requirements for pool depth and ceiling height = 30 Degrees																	

Notes

- The appropriate local authorities must certify that the minimum requirements are observed.
- ¹⁾ The side distance between platforms must not be less than 0.50 metre.
- ²⁾ Legacy pools are pools built prior to December 31, 2017. They are permitted to have a minimum depth of 5 metres.
- ³⁾ For High Diving events other than FINA World Championships and FINA World Cups the following minimum platform dimensions are accepted: Length 2.0m / width 1.5m; adjacent platform distances between platforms to be adjusted accordingly with respect the 0.50 metre distance between the platforms
- ⁴⁾ in natural surroundings (sea, lakes, rivers etc.) height tolerance: ± 0.25 metre.
- ⁵⁾ 15.00m is an official height for Junior A competitions and dimensions valid for all heights between 11.00 - 19.00 metres.



Annex HD3 - Diagram

Temporary Round Pools

FINA Dimensions for High Diving temporary round pools			PLATFORM				
			P 5	P 7.5	P 10	P 20	P 27
Round pool diameter 17 m	Length	Minimum	5.00	5.00	5.00	5.00	5.00
	Width	Minimum	2.00	2.00	2.00	2.00	2.00
	Height		5.00	7.50	10.00	20.00	27.00
		Tolerance		± 0.05	± 0.05	± 0.05	± 0.05
A	From plummet BACK TO POOL WALL		1.50	1.85	1.85	2.25	3.00
A/A	From plummet BACK TO PLATFORM plummet direct below					0.75	0.75
B	From plummet to POOL WALL AT SIDE		4.80	3.20	3.20	5.70	6.40
C	From plummet to ADJACENT PLUMMET ¹⁾		2.50	2.50	2.50	2.50	2.50
D	From plummet to POOL WALL AHEAD		14.00	14.00	14.00	14.00	14.00
H	DEPTH OF WATER at plummet		5.80	5.80	5.80	5.80	5.80

Notes

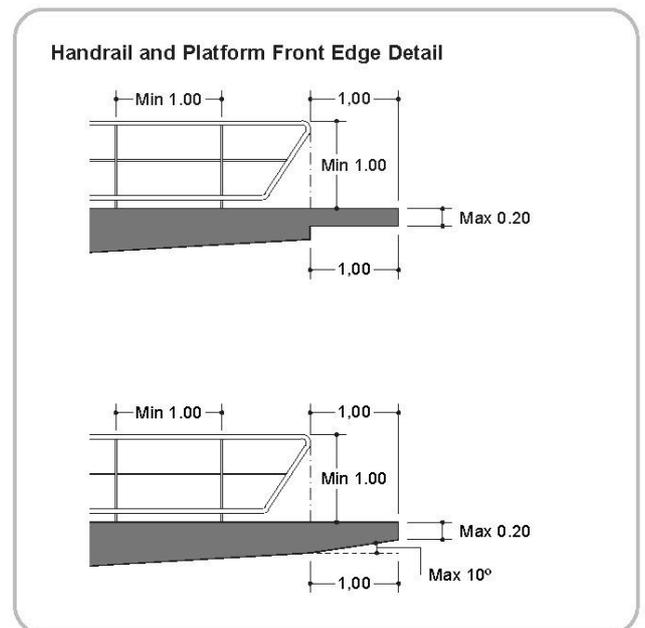
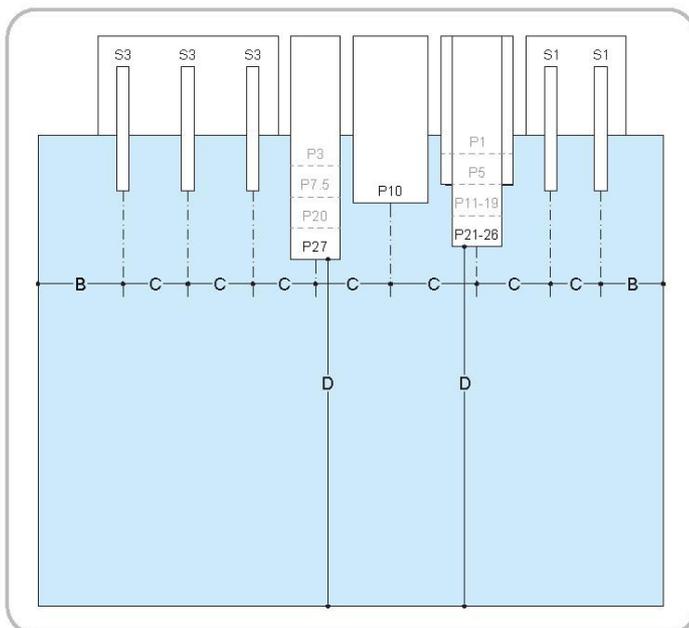
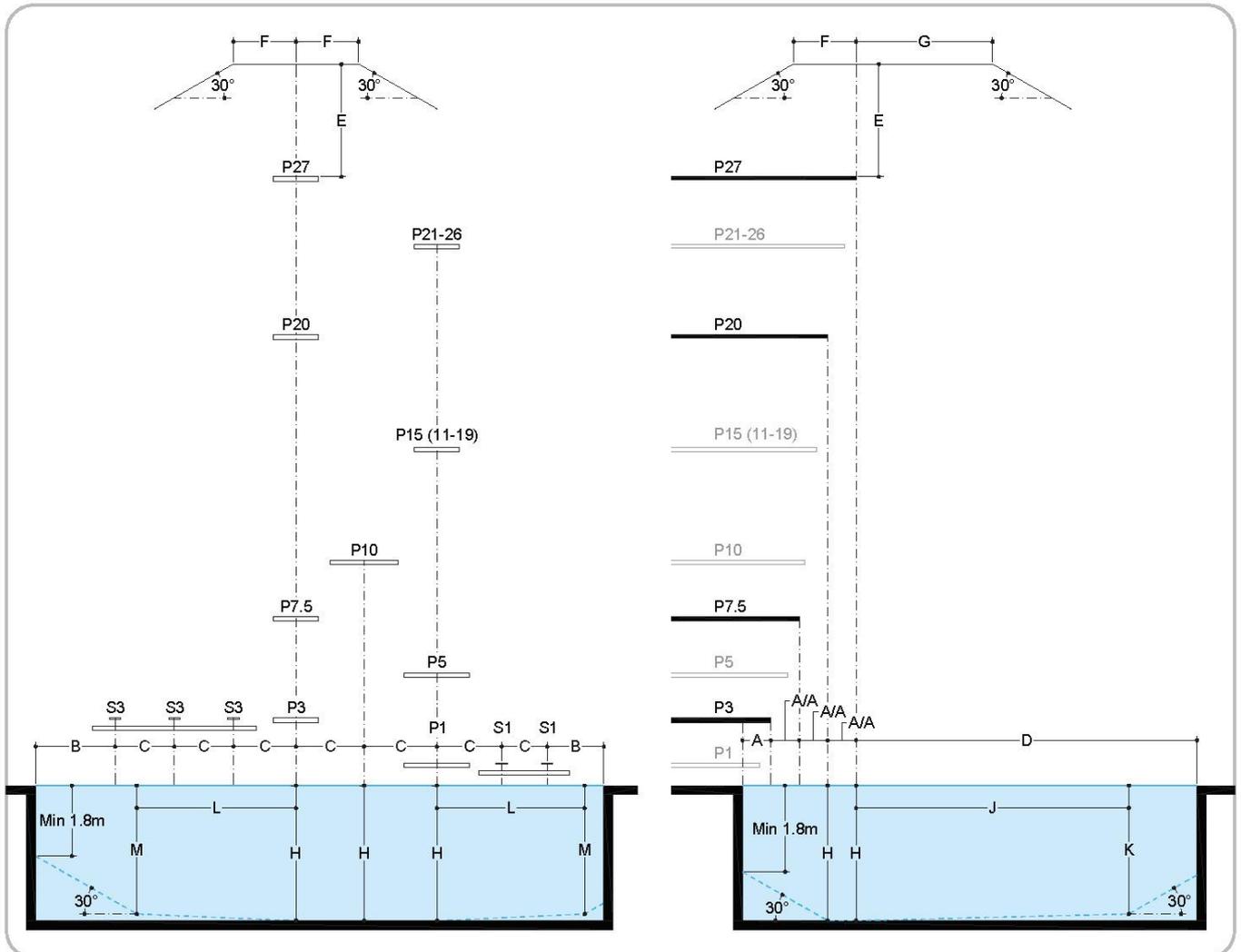
- The appropriate local authorities must certify that the minimum requirements are observed.
- ¹⁾ The side distance between platforms must not be less than 0.50 metre.
- The use of temporary round pools (TRP) is restricted to sanctioned FINA competitions.

Comment

The same dimensions and configuration of the platforms can be achieved in a rectangular pool with the following dimensions: 14.00 x 17.00 metres.

Annex HD 4 - Table

Temporary Round Pools – Dimensions



Annex HD5 - Diagram

General Standard Facilities combined with Diving

FR 7 OPEN WATER SWIMMING

FR 7.1 OPEN WATER SWIMMING FACILITIES

FR 7.1.1 Start Platforms

Start Platforms shall be of sufficient size to allow 60cm space per competitor plus an additional 5m. Each competitor space should be identified and numbered with number 1 farthest from the entry to the platform. They shall be of sufficient width to allow for the necessary activities prior to the start and to support the weight of the competitors and officials at the start.

FR 7.1.2 Finish

FR 7.1.2.1 The final approach to the finish shall be clearly defined with markers of a distinctive colour, and shall comprise the boundary of the course.

FR 7.1.2.2 The area leading to the finish apparatus should be clearly marked by rows of buoys which narrow as they get closer to the finish wall.

FR 7.1.2.3 The finish shall be clearly defined and marked by a vertical face.

FR 7.1.2.4 The finish apparatus should, where possible, be a vertical wall at least 5 metres wide fixed if necessary to floatation devices, securely fastened in place so as not to be moved by wind, tide or the force of a swimmer striking the wall. The finish should be filmed and recorded from each side and above by a video system with slow motion and recall facilities including timing equipment.

FR 7.1.3 Turns / Alterations

FR 7.1.3.1 All turns/alterations of the course shall be clearly indicated. Directional Buoys which are alterations of the course shall be of a different colour to guidance buoys.

FR 7.1.2.2 A clearly marked craft or platform, containing a Turn Judge, shall be positioned at all alterations of course in such a manner as not to obstruct a swimmer's visibility of the turn.

FR 7.1.4 Feeding Platforms

Feeding platforms shall be of sufficient size and buoyancy for the safe operation of the platform and the feeders and officials operating thereon. A minimum of 60cm of linear space per feeder plus 5m shall be required and of sufficient width to allow storage a preparation for swimmer feeding. There needs to be sufficient space on one or more platforms to accommodate all feeders. Access to the platform shall be outside of the race course wherever possible.

FR 7.1.5 All Platforms

All Starting Platforms, Feeding Platforms, turning apparatus and Turn Judges craft/platforms shall be securely fixed in position and not be subject to tidal, wind or other movements.

FR 7.1.6 Water Conditions

FR 7.1.6.1 The final approach to the finish shall be clearly defined with markers of a distinctive colour, and shall comprise the boundary of the course.

FR 7.1.6.2 A certificate of suitability for use of the venue shall be issued by the appropriate local health and safety authorities. In general terms the certification must relate to water purity and to physical safety from other considerations.

FR 7.1.6.3 The minimum depth of water at any point on the course shall be 1.40 meter.

FR 7.1.6.4 The water temperature should be a minimum of 16°C and a maximum of 31°C. It should be checked the day of the race, 2 hours before the start, in the middle of the course at a depth of 40 cm. This control should be done in the presence of a Commission made up of the following persons present: a Referee, a member of the Organising Committee and one coach from the teams present designated during the Technical Meeting.

FR 7.2 OPEN WATER SWIMMING FACILITIES FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS

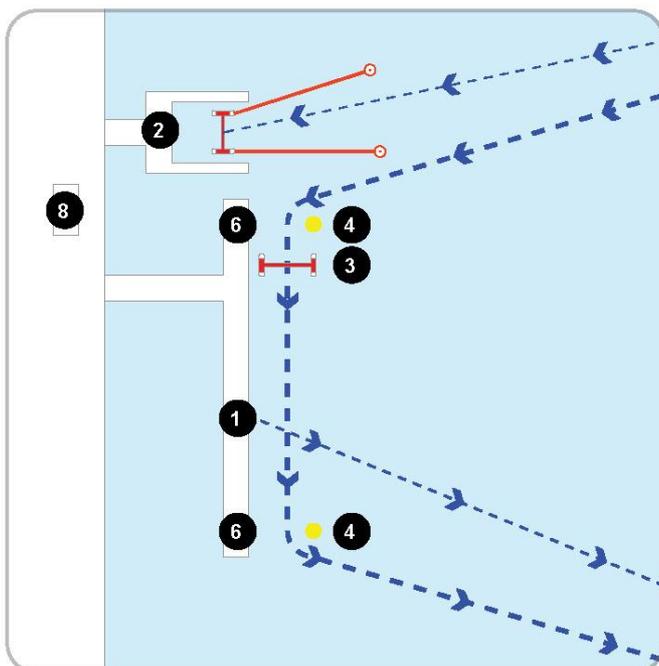
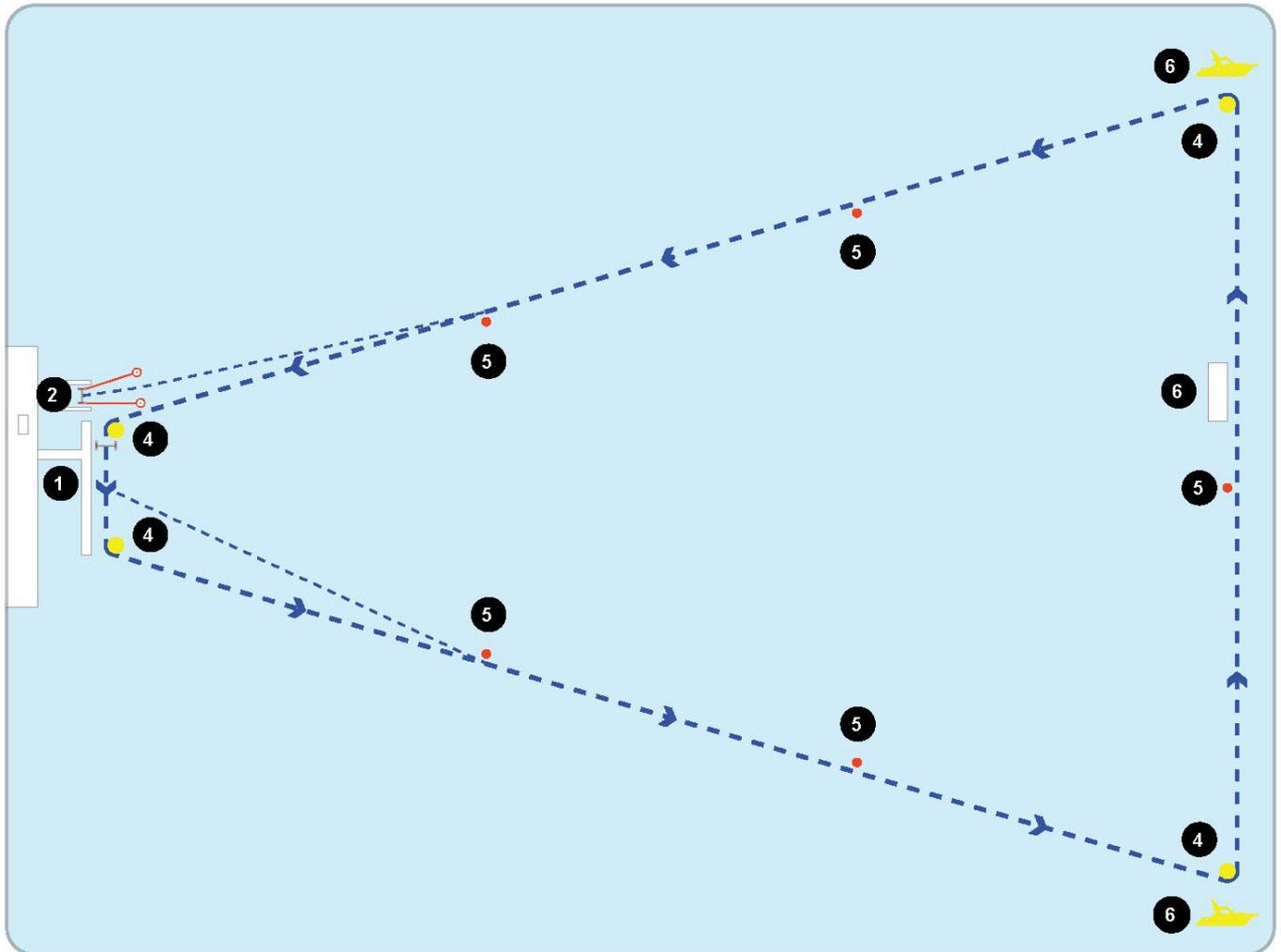
Rules FR 7.1 to FR 7.1.6.4 apply to the Olympic Games and World Championships.

FR 7.3 AUTOMATIC OFFICIATING EQUIPMENT FOR OPEN WATER SWIMMING

FR 7.3.1 Start Platforms

When automatic Officiating Equipment is used for timing of competitions in accordance with rule SW 11, microchip transponder technology capable of providing split times is mandatory and should be added to the Equipment. Use of microchip transponder technology is mandatory for competitions at the World Championships and Olympic Games. Microchip transponder timing technology will be recorded officially in tenths of seconds.

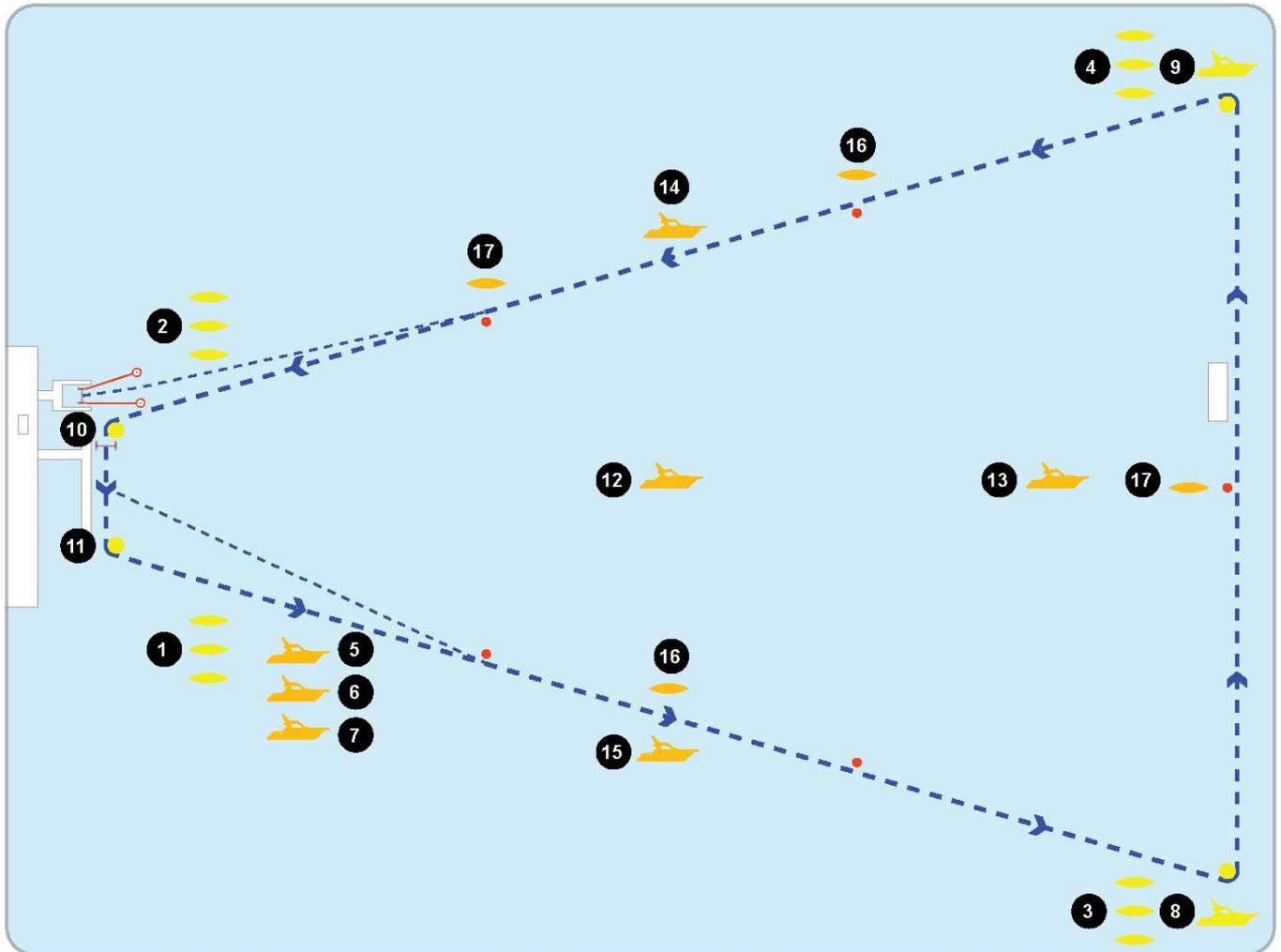
DIAGRAMS FOR OPEN WATER SWIMMING (TOTAL 5)



- | | |
|--------------------------------|--------------------|
| 1 Start Platform | 7 Feeding Platform |
| 2 Finish Gate | 8 Timing Room |
| 3 Intermediate Gate | |
| 4 Directional Buoy | |
| 5 Guidance Buoy | |
| 6 Turn Judge platform or craft | |

Water Conditions

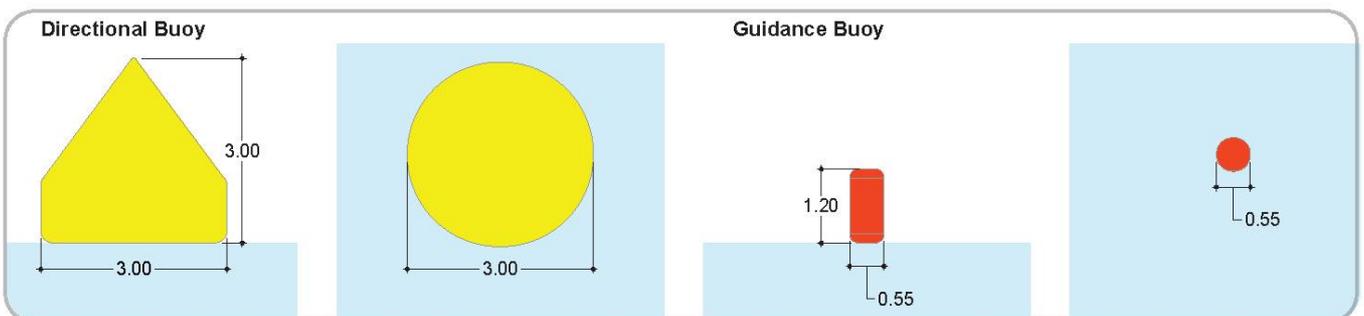
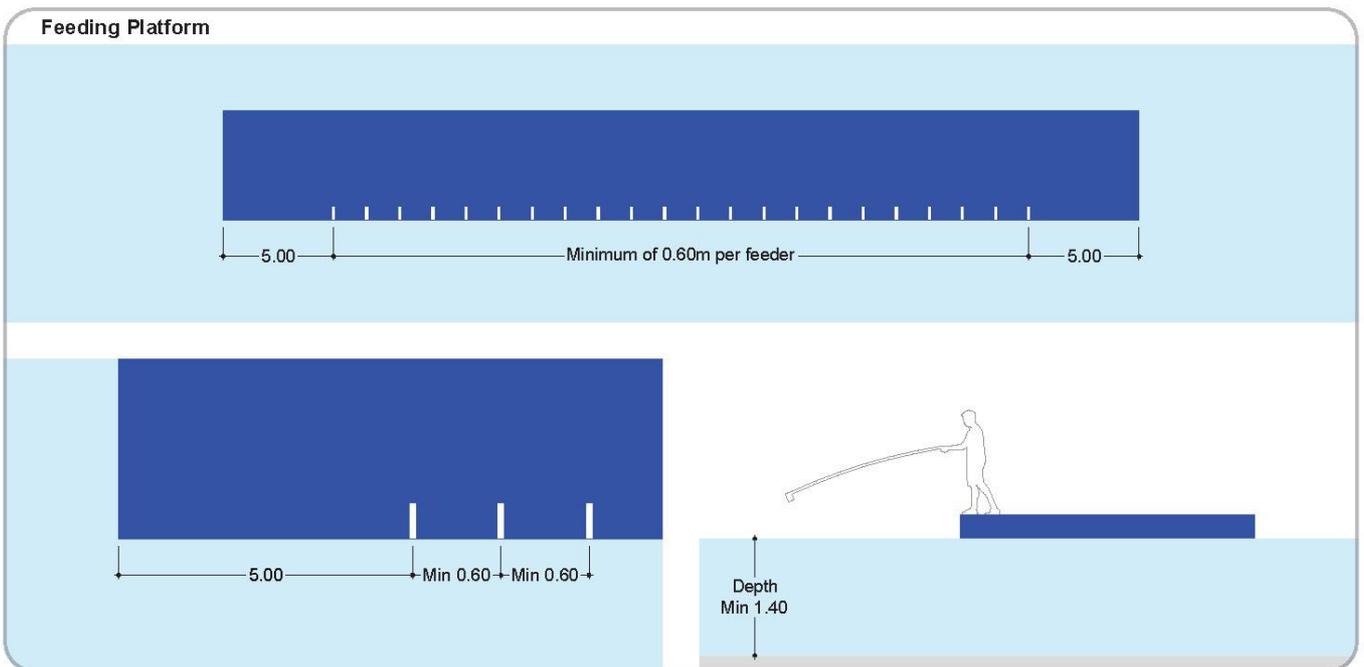
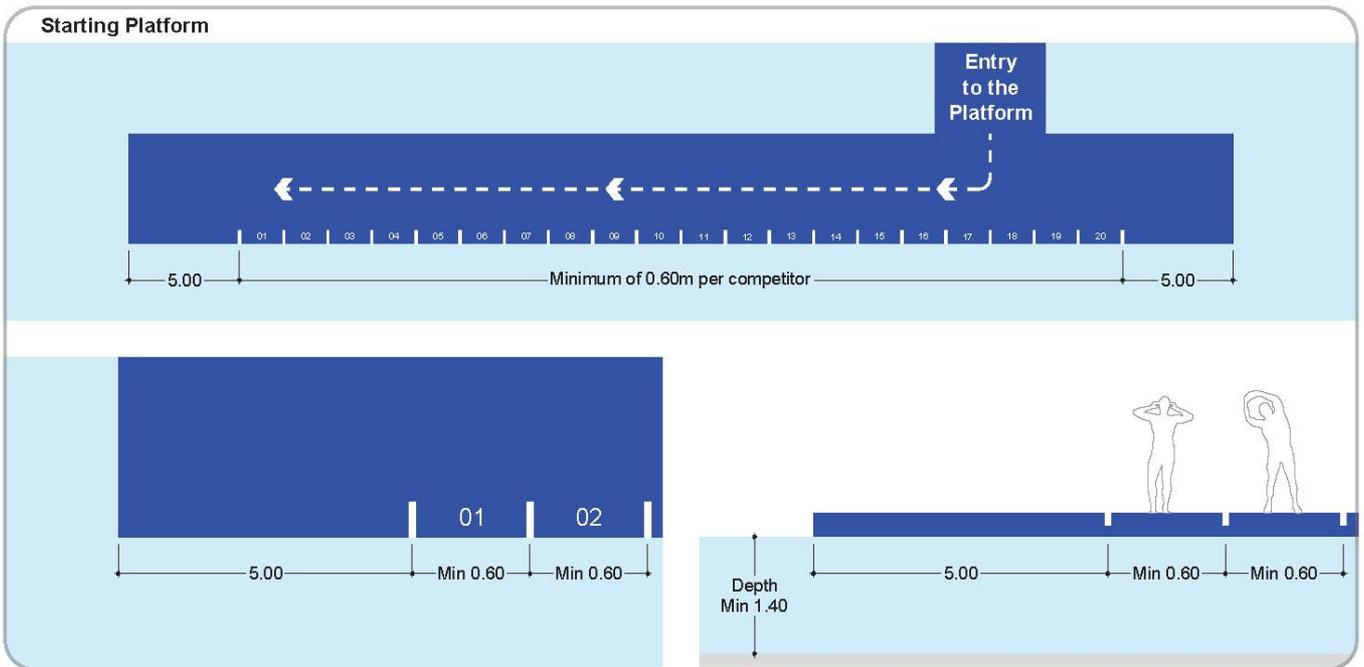
- The course shall be in water that is subject to only minor currents or tide and may be salt or fresh water.
- The minimum depth of water at any point on the course shall be 1.40 meter
- The water temperature should be a minimum of 16°C and a maximum of 31°C. It should be checked the day of the race, 2 hours before the start, in the middle of the course at a depth of 40 cm. This control should be done in the presence of a Commission.

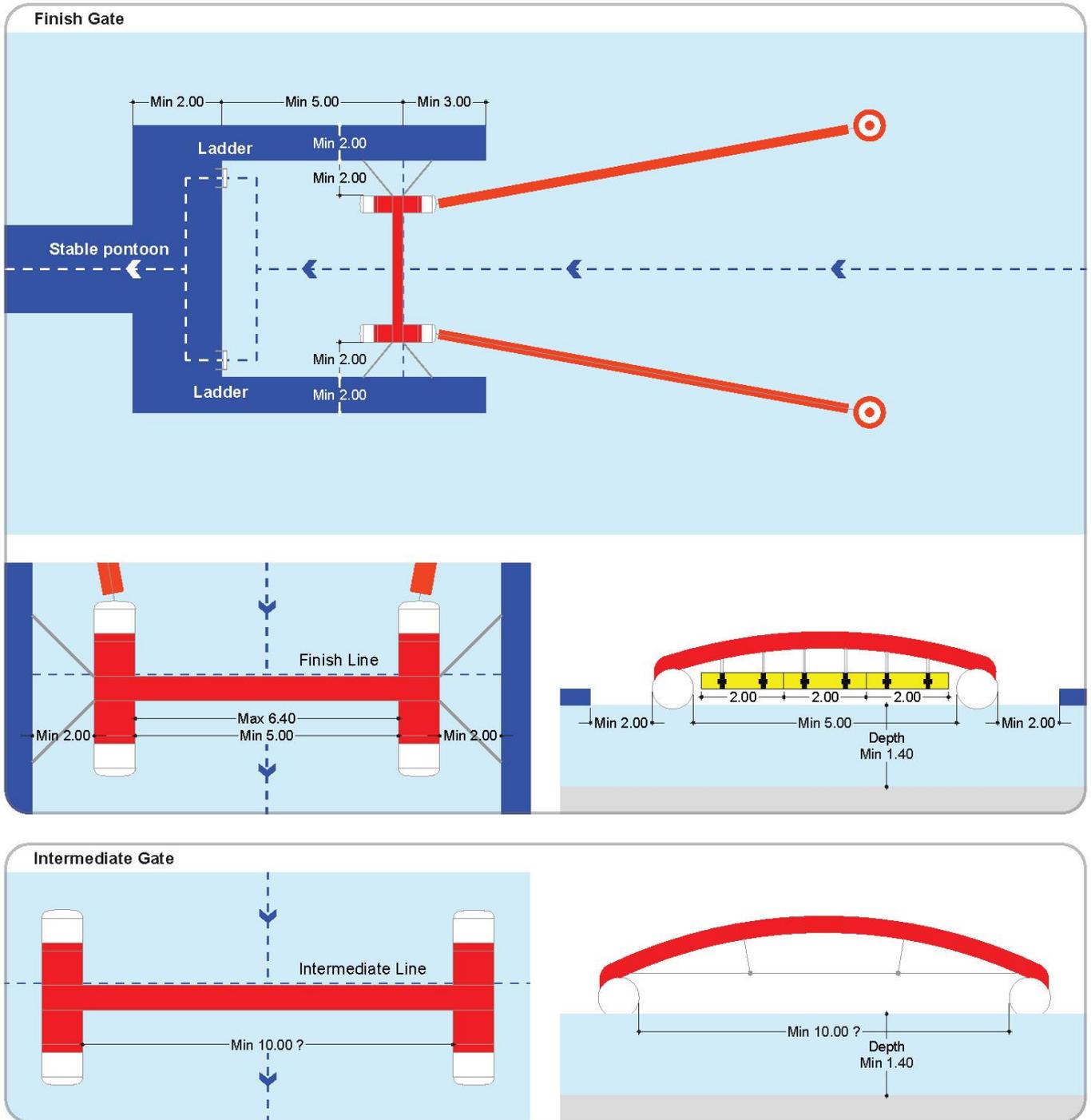


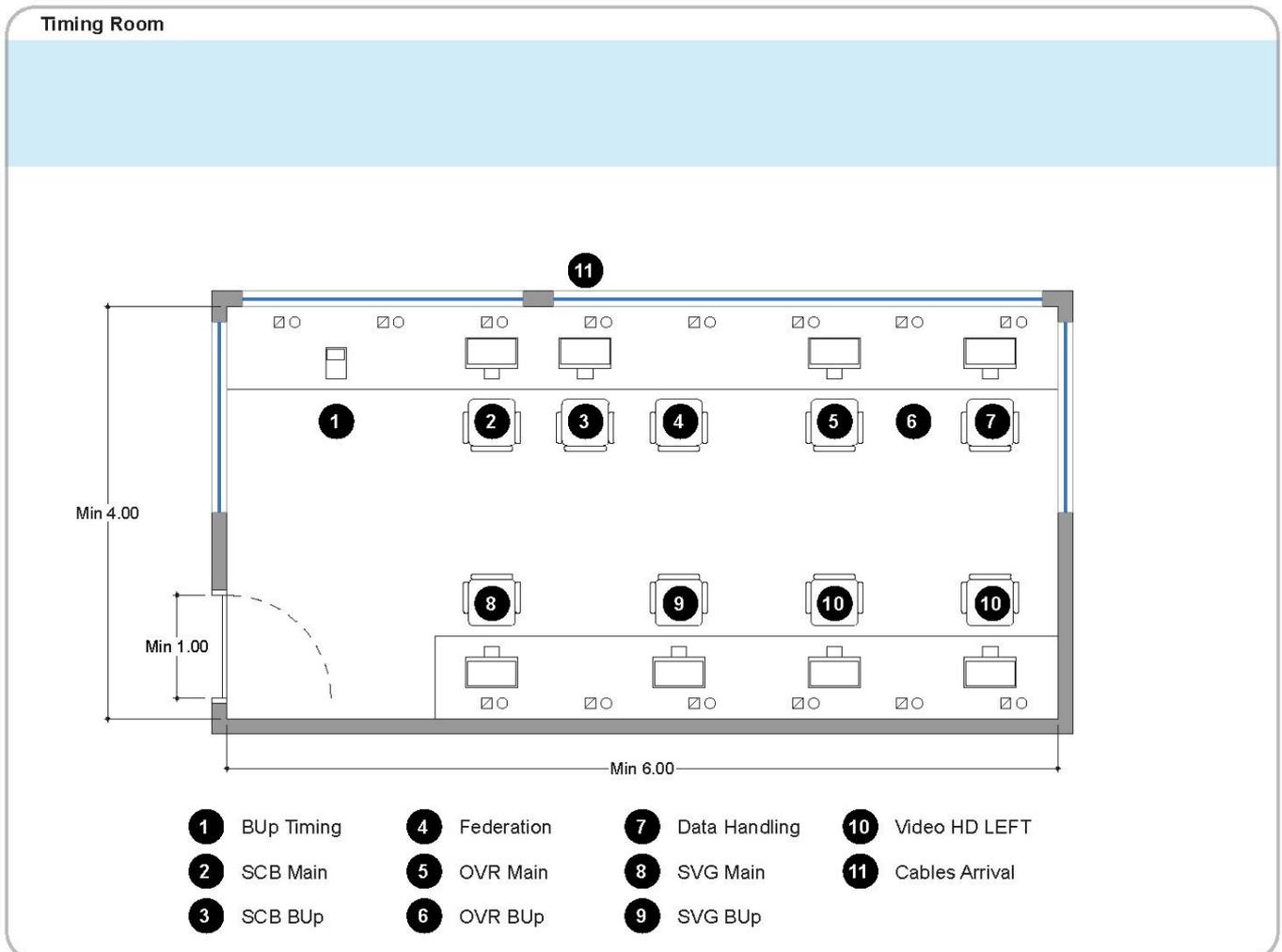
Operational Plan - Crafts position

- | | |
|--|--|
| 1 Kayak - Left side of the pontoon | 12 Boat - Swim Course Manager / Tracking Manager |
| 2 Kayak - Right side of the pontoon | 13 Boat - Medical 1 + 1 Driver + 1 Lifeguard + 1 NTO |
| 3 Kayak - Right side of Turn 1 | 14 Boat - Swim Course Coordinator + 1 Driver + 1 Lifeguard |
| 4 Kayak - Left side of Turn 2 | 15 Boat - Media + 1 Driver + 1 NTO |
| 5 Boat - Chief referee 1 + 1 Driver + 1 Lifeguard | 16 Jetski - 1 Coastal guard + 1 Driver |
| 6 Boat - Referee 1 + 1 Driver + 1 Lifeguard | 17 Jetski - 1 Paramedic + 1 Driver |
| 7 Boat - Referee 2 + 1 Driver + 1 Lifeguard | |
| 8 Platform or Craft* - Turn Judge 1 + 1 Lifeguard | |
| 9 Platform or Craft* - Turn Judge 2 + 1 Lifeguard | |
| 10 Platform or Craft* - Turn Judge 3 + 1 Lifeguard | |
| 11 Platform or Craft* - Turn Judge 4 + 1 Lifeguard | |

*Craft requires a driver







General Requirements

- Wireless transmitting devices that are not part of Timing/ Judging equipment are not allowed around the finish area.
- The athletes must wear the microchip with the provided wristband. No modification on the wristband is allowed.
- At the finish, the Chief Referee must go to the Timing room for video judging as soon as possible.
- Timing room must have good visibility on the finish gate. The maximum distance between the finish and the Timing Room shall be 40m.

Requirements to be provided by OC

- Rainproof room
- Air Conditioning 18-20°C. Air Conditioning must be adjusted for about 10 people and the equipment.
- Minimum room area: 25m²
- Minimum room height: 2.20m
- Power: Each socket 208-240V / 50-60Hz / 2kVA
- View to the FOP
- High speed internet connection
- TV Monitor
- Cables arrival hole
- Tables (Height: Min 70cm, Width: Min 80cm)
- Chairs