FÉDÉRATION
INTERNATIONALE
DE NATATION

DIVING FACILITIES CERTIFICATE

FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS
FEBRUARY 2020

NATIONAL FEDERATION	
BUILDING NAME	
OWNER	
CONTRACTOR	
DESIGN TEAM	
DATE	

FINA	
APPROVED BY	
DATE	
SIGNATURE	

FR 5 - DIVING FACILITIES

BUILDING DRAWING - KEY PLAN

DIVING FACILITY DRAWINGS

Longitudinal Section

Cross Section

Floor Plan

BUILDING NAME

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FR 5 - DIVING FACILITIES

MEASUREMENT CRITERIA

1.- The measurements shall be done by an official surveyor approved by FINA.

2.- The surveying equipment shall be a Total Station. The minimum requirements of the Total Station are the following:
- Angle Measurement Accuracy Hz and V: 1" (0.3 mgon)
- Distance Measurement Accuracy: 1mm + 1.5ppm

3.- The surveyor shall provide a Calibration Certificate confirming the measurement quality of surveying equipment. The certificate will have a maximum validity of 1 year.

4.- All dimensions shall be measured using a mini prism or targets.

5.- Diving tower measurements shall be taken with the pool full of water..

6.- Diving pool measurements shall be taken with the empty pool.

7.- The temperature of the water shall be between 26 - 28 ºC

8.- The horizontality of the platforms edge shall be measured at least in 3 points. A tolerance of 1mm per metre is allowed, providing that all the points are complying with FR 5.3.3 *"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."*

ORTHOGONALITY OF THE POOL

The sides of the pool shall be orthogonal and form 90 degrees right angle. The tolerance of the angle is ±0.20º.
The 2 diagonals shall be the same length. The tolerance of the diagonal is 10mm.

ORTHOGONALITY OF THE POOL	DEGREES / m
Angle 1	
Angle 2	
Angle 3	
Angle 4	
Diagonal 1	
Diagonal 2	

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FR 5 - DIVING FACILITIES

FR 5.1 - SPRINGBOARD DIVING

FR 5.1 General requirements: Dimensions in metres for all diving facilities as detailed in Diving Diagram, Annex DV1 & DV2, shall be observed.

FINA RULE	COMPLIANT	NONCOMPLIANT
FR 5.1.1 The springboards shall be at least 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 5.1.2 The springboards shall be provided with movable fulcrums easily adjustable by the diver.	☐	☐
FR 5.1.3 For springboard diving facilities modified or constructed on concrete platforms after 1 October 2013, the following shall be observed		
FR 5.1.3.1 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 0.35metre.	☐	☐
FR 5.1.3.2 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 5.1.3.3 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 5.1.3.4 The concrete platform which supports the springboard shall be aligned with the pool wall or project over the pool.	☐	☐
FR 5.1.6 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.	☐	☐
FR 5.1.7 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.	☐	☐

FR 5.2 - PLATFORM DIVING

FINA RULE	COMPLIANT	NONCOMPLIANT
FR 5.2.1 Each platform shall be rigid and horizontal.	☐	☐

FR 5.2.2 The minimum dimensions of the platform shall be:

Platform	Required width	Required length	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		

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FR 5 - DIVING FACILITIES

FR 5.2 - PLATFORM DIVING

FINA RULE	COMPLIANT	NONCOMPLIANT
FR 5.2.3 The preferred 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 5.2.4 The surface and the front edge of the platform shall be covered throughout with a resilient slip-resistant surface. The two surfaces shall be covered separately in order to achieve a clean 90° angle or as described in FR 5.2.3. The front surface is to be applied first and then the top surface.	☐	☐
FR 5.2.5 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 (- 0 / + 1mm) and the colour should give a contrast to the surrounding décor. The material shall be easily cleaned to maintain the anti-slip feature of the product. The installation of the slip-resistant platform covering shall respect FINA Rule FR 5.2.4.	☐	☐
FR 5.2.6 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 5.2.7 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 5.2.8 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 metre 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 crossbar.	☐	☐
FR 5.2.11 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 : 10m Platforms ... Minimum ... 10 Hz ... Maximum ... 20 Hz 7.5 m, 5m,3m and 1m Platforms ... Minimum ... 10 Hz ... Maximum ... 30 Hz Fundamental frequency of tower 3.5 Hz Oscillation of total structure ±2mm The spatial deformation of the front edge of the platforms as a result of Px = Py = Pz = 100 kiloponds (kilograms force) shall be a maximum of 1 mm. These requirements can be met most adequately by a reinforced concrete structure. Proof of the dynamic behaviour is to be obtained together with the static calculations for the whole structure. *Structural report shall be issued*	☐	☐

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FR 5 - DIVING FACILITIES

FR 5.3 - GENERAL REQUIREMENTS

FR 5.3.1 For pools designed and constructed after 26th September 2013 the minimum dimensions in metres for diving facilities as detailed on the “Diving Facilities Diagram” (Annex DV2) 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 5.3.2 The dimensions C from plummet to adjacent plummet in the “FINA Dimensions for Diving”, Annex DV2 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.

FINA RULE	COMPLIANT	NONCOMPLIANT
FR 5.3.3 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 5.3.4 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 5.3.5 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 5.3.6 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 5.3.7 The minimum illumination at a level of 1 metre above the water surface shall not be less than 600 lux. *A lighting report shall be issued.*	☐	☐
FR 5.3.8 Sources of natural and artificial illumination shall be provided with controls to prevent glare.	☐	☐
FR 5.3.9 The water temperature shall be not less than 26° Celsius.	☐	☐
FR 5.3.10 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 non-slip surface. The admissible tolerance in walls verticality will be ±0.3 degrees.	☐	☐
FR 5.3.11 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 should only be used for this purpose if it creates sufficient water agitation when working with a very low pressure; otherwise a horizontal water sprinkler system should only be used.	☐	☐

FR 6 DIVING FACILITIES FOR OLYMPIC GAMES AND WORLD CHAMPIONSHIPS

FR 6.1 General requirements - Dimensions in Metres for Diving Facilities as detailed in Diving Diagram, Annex DV1 & DV2 and 'Field of Play for Olympic Games and World Championships: Diving Diagram, Annex DV3 & DV4.

FR 6.2 With regard to dimensions for diving facilities a combination of preferred and minimum measurements found in the “FINA Dimensions for Diving Facilities, Annex DV1 & DV2 table may be used. However measurements less than minimum are not acceptable and may not be used. 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).

FINA RULE	COMPLIANT	NONCOMPLIANT	N/A
FR 6.1.1 The light intensity at the level of 1m above the water surface shall not be less than 1500 lux.	☐	☐	☐
FR 6.3 Line 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 2.5m The centre of the first line shall be directly under the plummet of the 3 m springboard.	☐	☐	☐

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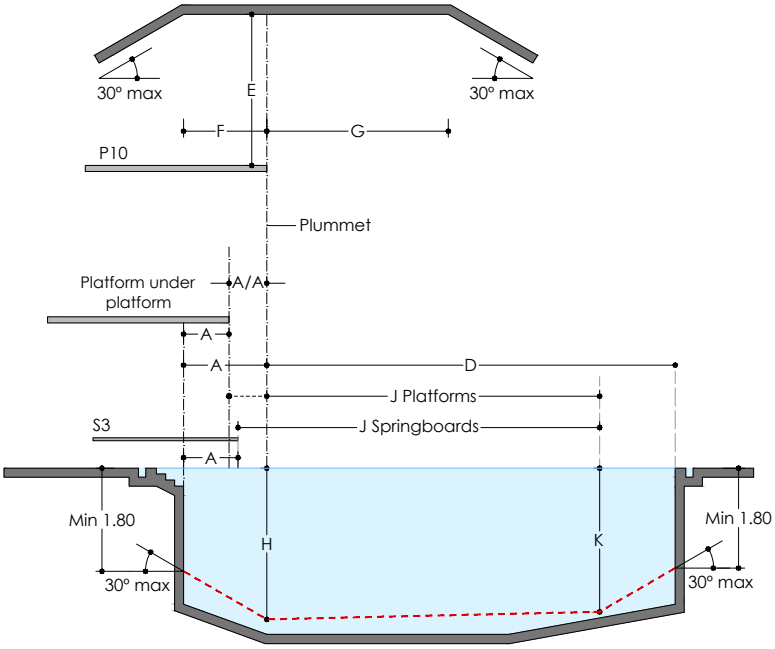
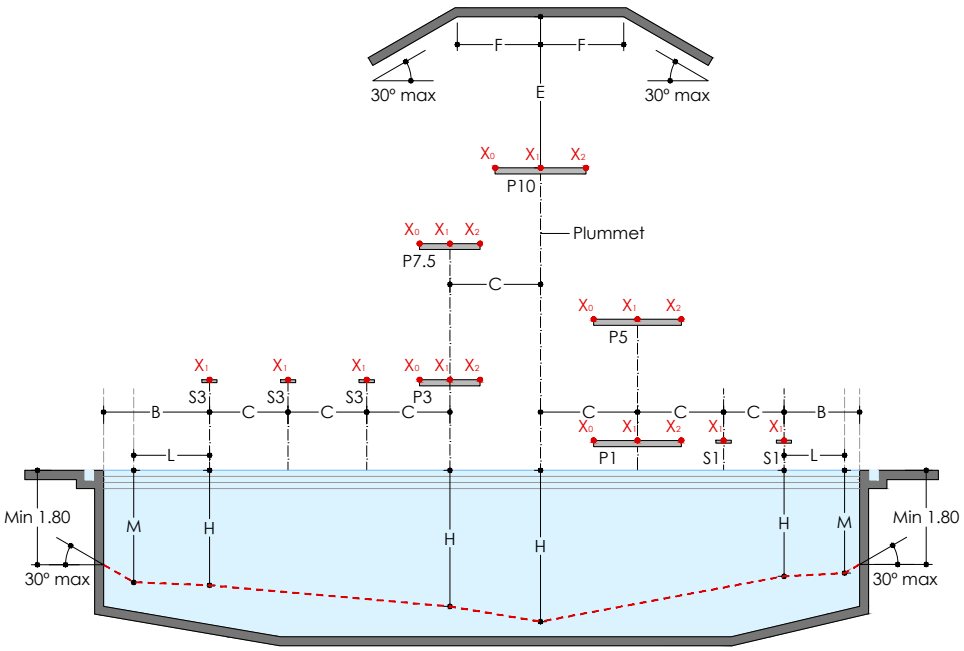
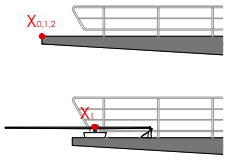
FR 5 - DIVING FACILITIES

FR 5.3 - GENERAL REQUIREMENTS





	X_0	X_1	X_2
S1	-		-
S1	-		-
P1			
S3	-		-
S3	-		-
S3	-		-
P3			
P5			
P7.5			
P10			



A tolerance of 1mm per metre is alowed, providing that all the points are complying with FR 5.3.3 *"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."*

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FR 5 - DIVING FACILITIES

FR 5.3 - GENERAL REQUIREMENTS

FINA Dimensions for Diving facilities			SPRINGBOARD					
			1 metre			3 metre		
For pools constructed after September, 26th, 2013 (see FR 5.3.1)		Lenght	4.80			4.80		
		Width	0.50			0.50		
		Height	1.00			3.00		
			Horiz	Vert		Horiz	Vert	
A	From plummet back to pool wall for **CONCRETE PLAFORM**	Des	A-1			A-3		
		Min	2.22			2.22		
		Pref	2.22			2.22		
	From plummet back to pool wall for **PEDESTALS AND METAL STANDS**	Min	1.50			1.50		
		Pref	1.80			1.80		
A/A	From plummet **BACK TO PLATFORM** Plummet directly below	Des						
		Min						
		Pref						
B	From plummet to **POOL WALL AT SIDE**	Des	B-1			B-3		
		Min	2.50			3.50		
		Pref	2.50			3.50		
C	From plummet to **ADJACENT PLUMMET**	Des	C-1-1			C3-3,3-1		
		Min	2.00			2.20		
		Pref	2.00			2.60		
D	From plummet to **POOL WALL AHEAD**	Des	D-1			D-3		
		Min	9.00			10.25		
		Pref	9.00			10.25		
E	On plummet, from **BOARD TO CEILING**	Des		E-1			E-3	
		Min		5.00			5.00	
		Pref		5.00			5.00	
F	**CLEAR OVERHEAD** behind and each side of plummet	Des	F-1	E-1		F-3	E-3	
		Min	2.50	5.00		2.50	5.00	
		Pref	2.50	5.00		2.50	5.00	
G	**CLEAR OVERHEAD** ahead of plummet	Des	G-1	E-1		G-3	E-3	
		Min	5.00	5.00		5.00	5.00	
		Pref	5.00	5.00		5.00	5.00	
H	**DEPTH OF WATER** At plummet	Des		H-1			H-3	
		Min		3.40			3.70	
		Pref		3.50			3.80	
J K	**DISTANCE AND DEPTH** ahead of plummet for all stands	Des	J-1	K-1		J-3	K-3	
		Min	5.00	3.30		6.00	3.60	
		Pref	5.00	3.40		6.00	3.70	
L M	**DISTANCE AND DEPTH** each side of plummet	Des	L-1	M-1		L-3	M-3	
		Min	1.50	3.30		2.00	3.60	
		Pref	2.00	3.40		2.50	3.70	
N	**MAXIMUM SLOPE TO REDUCE DIMENSIONS BEYOND FULL REQUIREMENTS FOR POOL DEPTH and CEILING HEIGHT**						**30 DEGREES**	

*** Note:** The minimum distance between adjacent plaforms must be at least 0.25 m.

Note: Dimensions B (plummet to pool wall at side) and C (plummet to adjacent plummet) apply to Platforms with widths as detailed in FR.5.2.5. If Platform widths are increased then B and C shall be increased by half the additional width(s).

Note: The 10m Platform must project 0.25m beyond any adjacent platform.

Note: All platforms must project 0.75m beyond any platform directly below.

Note: The leading edge of the concrete platforms for springboards must be at least constructed to be directly above the pool wall or beyond.

Note: FR 5.3.4 The end of 5m, 3m and 1m platforms must not project beyond the ends of the 3m and 1m springboards when they are adjacent to each other.

Fill in the empty fields.

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FR 5 - DIVING FACILITIES

FR 5.3 - GENERAL REQUIREMENTS

FINA Dimensions for Diving facilities			PLATFORM																	
			1 metre			3 metre			5 metre			7.5 metre			10 metre					
For pools constructed after September, 26th, 2013 (see FR 5.3.1)		Lenght	5.00			5.00			6.00			6.00			6.00					
		Width	1.00 min. 2.90 preferred			1.00 min. 2.00 preferred			2.90			2.00			3.00					
		Height	0.60 min. 1.00 preferred			2.60 min. 3.00 preferred			5.00			7.50			10.00					
			Horiz	Vert		Horiz	Vert		Horiz	Vert		Horiz	Vert		Horiz	Vert				
A	From plummet back to pool wall for **CONCRETE PLAFORM**	Des	A-1 pl			A-3 pl			A-5			A-7.5			A-10					
		Min	0.75			1.25			1.25			1.25			1.50					
		Pref	0.75			1.25			1.25			1.25			1.50					
	From plummet back to pool wall for **PEDESTALS AND METAL STANDS**	Min																		
		Pref																		
A/A	From plummet **BACK TO PLATFORM** Plummet directly below	Des							A/A 5/1			A/A 7.5/3,1			A/A 10/5,3,1					
		Min							0.75			0.75			0.75					
		Pref							1.25			1.25			1.25					
B	From plummet to **POOL WALL AT SIDE**	Des	B-1 pl			B-3 pl			B-5			B-7.5			B-10					
		Min	2.50			3.00			4.00			4.50			5.75					
		Pref	2.50			3.60			4.50			4.75			5.75					
C	From plummet to **ADJACENT PLUMMET**	Des	C-1-1 pl			C3-3pl,1pl			C5-3, 5-1			C7.5-5,3,1			C10-7.5,5,3,1					
		Min	1.85			2.20*			2.85*			2.75*			3.00*					
		Pref	2.15			2.35*			2.85*			2.75*			3.00*					
D	From plummet to **POOL WALL AHEAD**	Des	D-1 pl			D-3 pl			D-5			D-7.5			D-10					
		Min	8.00			9.50			10.25			11.00			13.50					
		Pref	8.00			9.50			10.25			11.00			13.50					
E	On plummet, from **BOARD TO CEILING**	Des		E-1 pl			E-3 pl			E-5			E-7.5			E-10				
		Min		3.25			3.25			3.25			3.25			4.00				
		Pref		3.50			3.50			3.50			3.50			5.00				
F	**CLEAR OVERHEAD** behind and each side of plummet	Des	F-1 pl	E-1 pl		F-3 pl	E-3 pl		F-5	E-5		F-7.5	E-7.5		F-10	E-10				
		Min	2.75	3.25		2.75	3.25		2.75	3.25		2.75	3.25		2.75	4.00				
		Pref	2.75	3.50		2.75	3.50		2.75	3.50		2.75	3.50		2.75	5.00				
G	**CLEAR OVERHEAD** ahead of plummet	Des	G-1 pl	E-1 pl		G-3 pl	E-3 pl		G-5	E-5		G-7.5	E-7.5		G-10	E-10				
		Min	5.00	3.25		5.00	3.25		5.00	3.25		5.00	3.25		6.00	4.00				
		Pref	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 plummet	Des		H-1 pl			H-3 pl			H-5			H-7.5			H-10				
		Min		3.20			3.50			3.70			4.10			4.50				
		Pref		3.30			3.60			3.80			4.50			5.00				
J K	**DISTANCE AND DEPTH** ahead of plummet for all stands	Des	J-1 pl	K-1 pl		J-3 pl	K-3 pl		J-5	K-5		J-7.5	K-7.5		J-10	K-10				
		Min	4.50	3.10		5.50	3.40		6.00	3.60		8.00	4.00		11.00	4.25				
		Pref	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 plummet	Des	L-1 pl	M-1 pl		L-3 pl	M-3 pl		L-5	M-5		L-7.5	M-7.5		L-10	M-10				
		Min	1.40	3.10		1.80	3.40		3.00	3.60		3.75	4.00		4.50	4.25				
		Pref	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**											

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COMMENTS

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