

Technical Installations & Regatta Courses

**APPENDIX R4
BYE-LAWS TO RULES 31 TO 33 – REGATTA COURSES**

Technical Installations & Regatta Course

- Introduction
- Regatta Course
- Start Zone
- Between Start and Finish
- Finish
- Control Commission
- Other Requirements

Note: this presentation is focused on “classic rowing”

A course which meets the World Rowing Championship level requirements is a “Class A” course

All other courses are “Class B” courses.

A Class B course can be adequate for International Regattas

Regatta Course

Basic Characteristics

Length

- 2000 meters straight with 120 meter run out
 - World Rowing Championship, Rowing World Cup, Olympics, International Regattas
 - Men & Women
 - U19, U23, Lightweight,
 - Paralympics
- 1000 meters with 150 meter run out
 - Masters
- Other events may have a shorter or non-straight courses

Regatta Course Basic Characteristics

Depth

- 2 meters deep if the depth is uniform
- Minimum 3 meters (at the shallowest point) if the depth is irregular

Width

- Minimum 95 meter (standard international course)
- Minimum 110 meter (Olympic, Paralympic, World cup, world championship)
- Ideal 150 meter

Fair and Equal

- All lanes must have the same conditions
- No water current (or minimal current affecting all lanes equally)
- The course should be sheltered or have no natural or artificial obstacles to create unequal conditions
- The course must be sheltered from wind as far as possible

Fair and Equal (cont.)

- The course should not be influenced to natural or artificial waves
- Banks should be designed to absorb and not reflect waves

Wave arresters on the shore in Bled to reduce waves



Regatta Course

Number of Lanes / Buoys

Albano System

- 8 lanes 12.5 meters in width (12 meters in special cases)
- Course width

International Regattas: 6 lanes – 95 meters wide

(15 meters + (6*12.5 meters) + 5 meters)

World Rowing Championships: 8 lanes – 110 meters wide

(5 meters +(8*12.5 meters)+ 5 meters)

Provided a low level road along the course for media

Ideal for World Championship: 8 lanes – 150 meters

(25 meters +(8*12.5 meters)+ 25 meters)

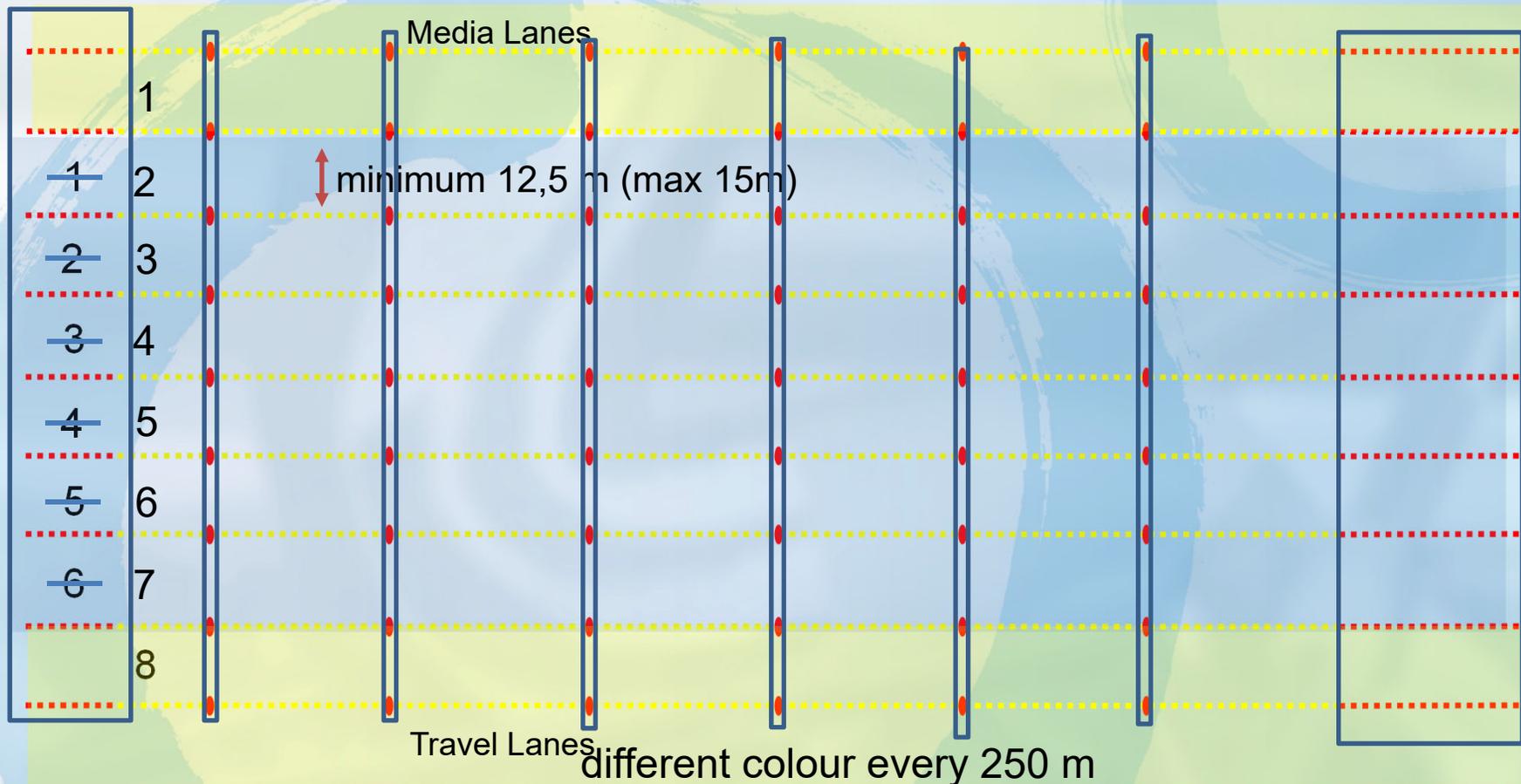
Accommodates competitor boat traffic and media

Regatta Course

Number of Lanes / Buoys

International Regattas – minimum numbered 6 lanes

World Rowing Championships, Rowing World Cups, Olympics (courses built after 2001) – minimum numbered 8 lanes and media and travel lanes



Regatta Course

Number of Lanes / Buoys

Albano System

- Lane lines made by buoys spaced a preferred 10 meters apart (no more than 12.5 meters)
 - First 100 meters – buoys spaced 5 meters (6,25 meters) apart
- Buoys soft (not hard) no larger than 15cm in diameter
- Color – all the same color except:
 - First 100 meters
 - 1 buoy at every 250meters
 - Last 250 meters
- No buoys on the start or finish lines

Distance

- Start = 0 meters
- Finish = 2000 meters
- Distance Markers –
 - 250m, 500m, 750m, 1000m, 1250m, 1500m and 1750m
 - Markers 2 meter x 1 meter on land or 1meter cube on the water.



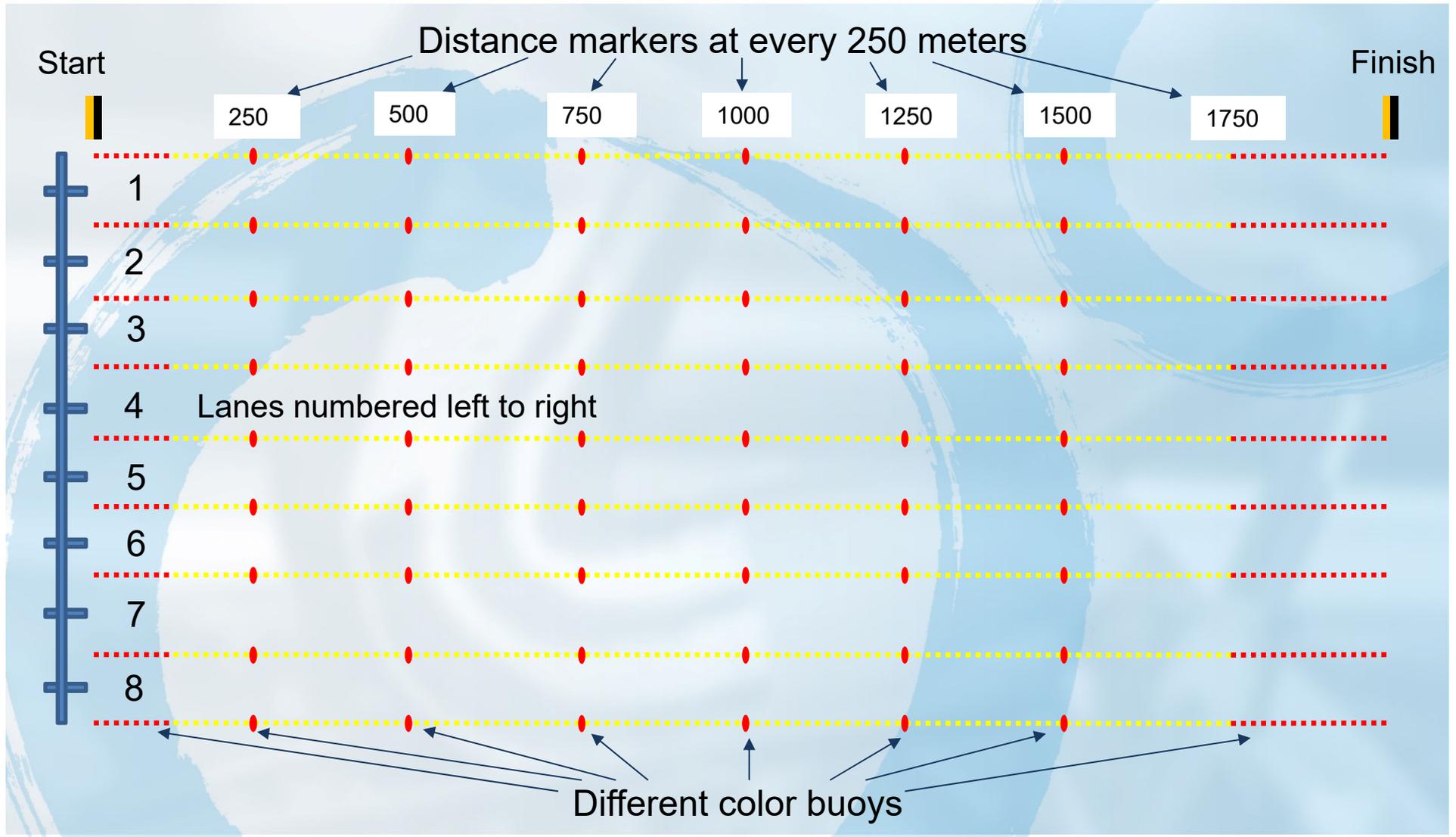
Regatta Course Start and Finish Lines

The Start and Finish Lines will be marked with

- A vertical line - yellow on one side and black on the other side (yellow on the starter side)
- A vertical wire 1mm thickness or two vertical wires 40-50 cm apart



Regatta Course

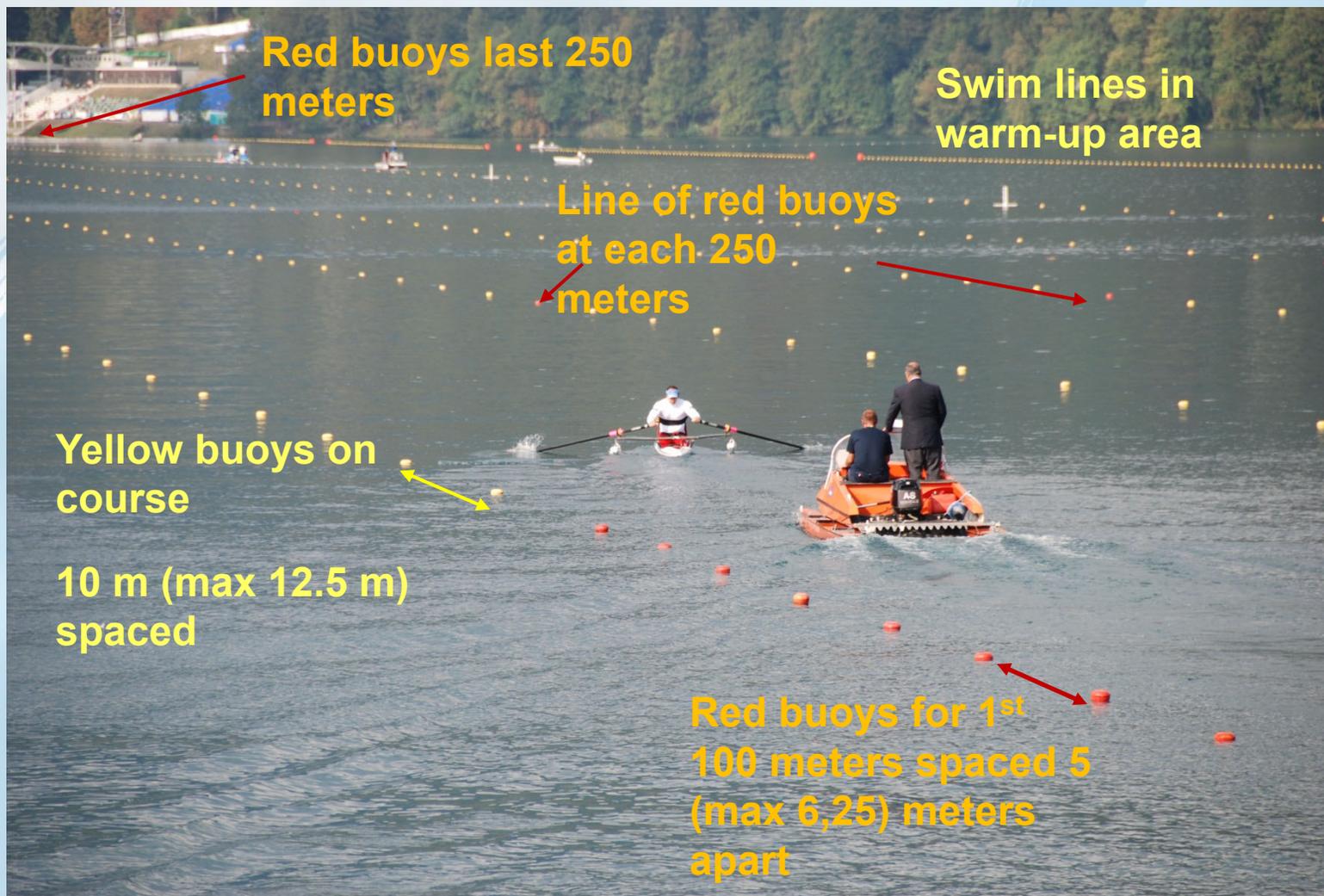


Regatta Course Steering Aids

The first 100 meters will be:

- A different color and
- Lane line buoys will be spaced 5 meters apart

No more 100 meter breakage zone (effective Feb. 2013)



Regatta Course

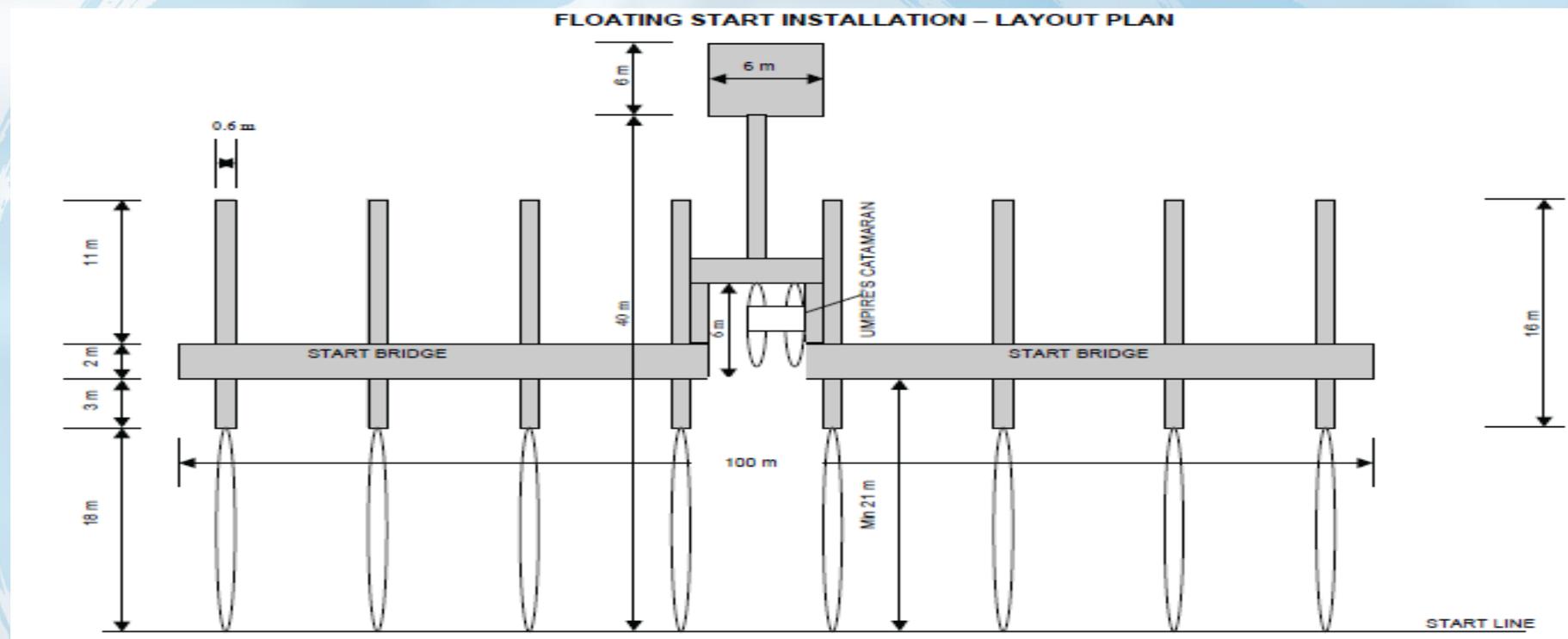
For artificial courses, World Rowing recommends a 2nd parallel channel for warm up/cool down areas



Start Zone Start Pontoons



- Start pontoons must be adjustable to allow bows of each length of boat to be aligned on start line
- Solid Construction so it can be firmly fixed in place



Start Zone

Start pontoon/ Start Bridge

- For World Rowing Championship, Olympic, Youth Olympic and Paralympic regattas and World Rowing Cup regattas the start pontoons must be connected by land or by a Start Bridge, minimum 2 m wide, allowing easy access for officials, technicians and media. The Start Bridge shall be connected to the land (or the Aligner's Hut) and to the start tower through a floating pontoon
- For regattas where Para events are included, the start pontoons must allow for the standard Para 1x boat (length 6.30m) to be aligned on the start line in addition to all other lengths of boat up to 8+.
- For a World Rowing Masters Regatta the start pontoons shall be of the type which allows crews to pass between them from behind.

- Lanes numbers clearly marked
- Yellow and red card markers must be available for every lane



Start Zone Start Tower

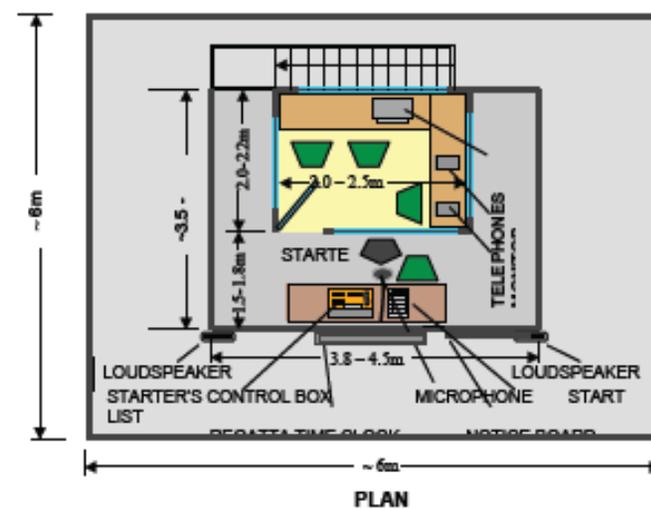
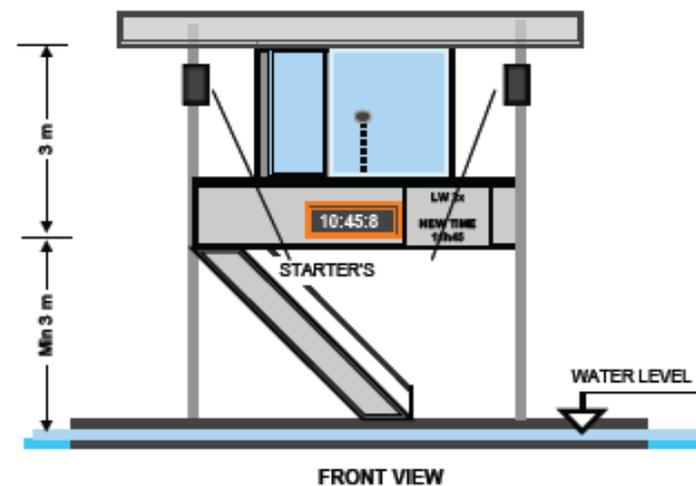


Start Zone Starter Tower

- 40-50 meters behind the start line
- Covered platform
- Starter should be 3-6 meters above water level
- Starter should have a clear and unobstructed view of entire start area including the aligner's hut



APPENDIX B.3.1. START TOWER



Start Zone Starter Equipment

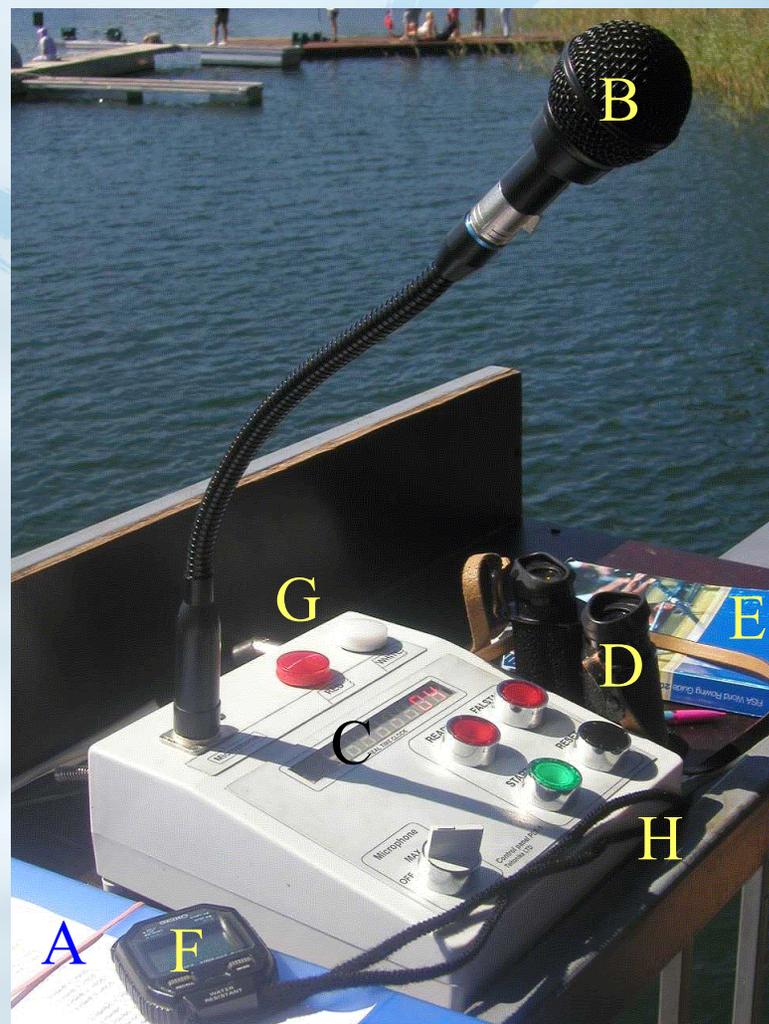


- A. Large clock visible min 100 meters on course and in warm-up area
- B. Yellow flashing light to mark 2 time minute zone
- C. Large board to display schedule changes
- D. Radio or telephone (communicate with Judge at Start, Judge at Finish, Control Commission, President of Jury)



Start Zone Starter Equipment

- A. Start lists
- B. Microphone
- C. Clock
- D. Binoculars
- E. Blade colours
- F. Spare watch
- G. Alignment indication
- H. Start buttons
- I. For emergency - Manual Loud speaker, red flag, bell

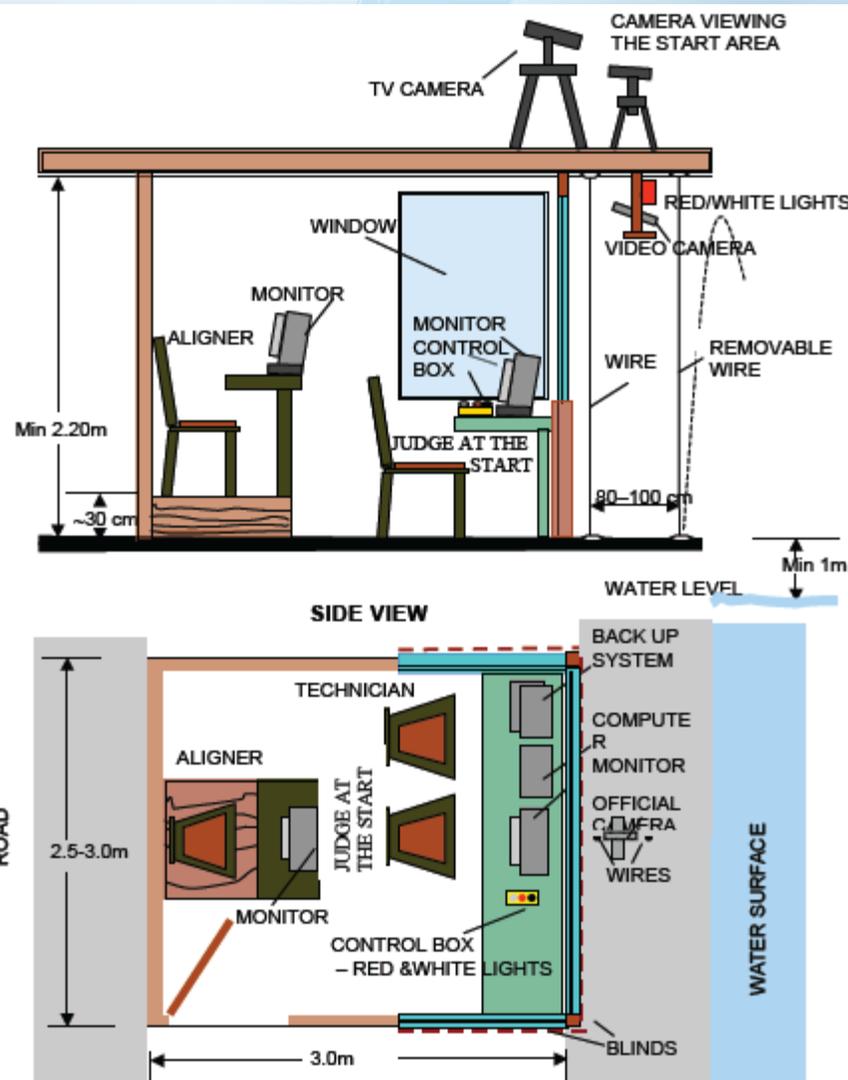


Start Zone Aligner



Start Zone Aligner

- Exactly on Start Line
- 15-40 meters from first lane
- Min 1 meters above water level
- Weather protection for 4 people
- Radio link between aligners and officials on start pontoons
 - Officials on Pontoons should have earphones

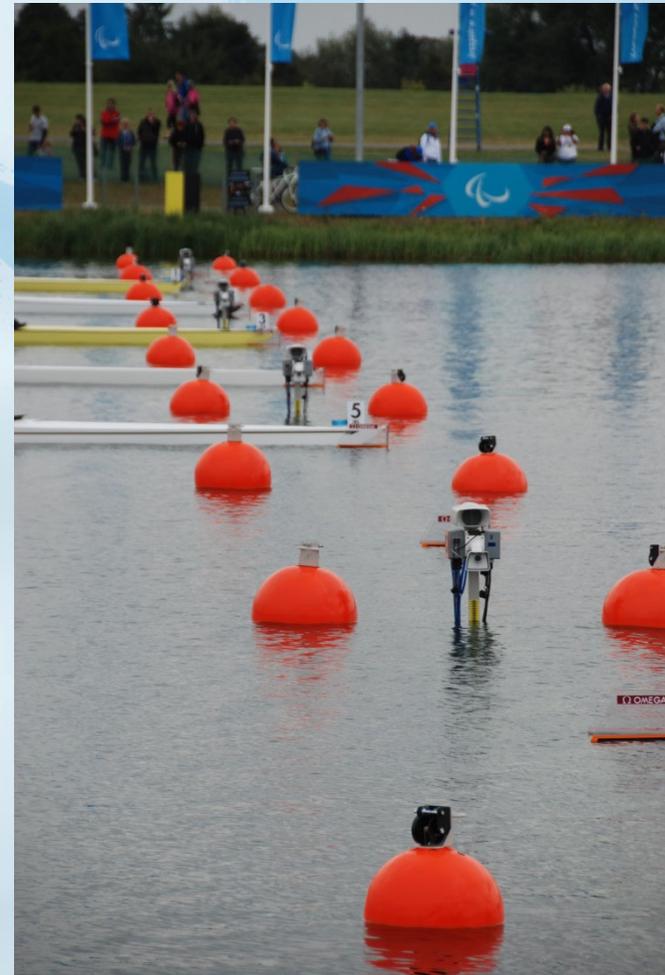


- The Judge at Start shall sit closer to the 1st lane
- The Judge at Start sits in front of the Aligner
- Screen showing the alignment with a freeze frame when start given
- With Alignment Control System (clogs) there is a special Screen for Aligner



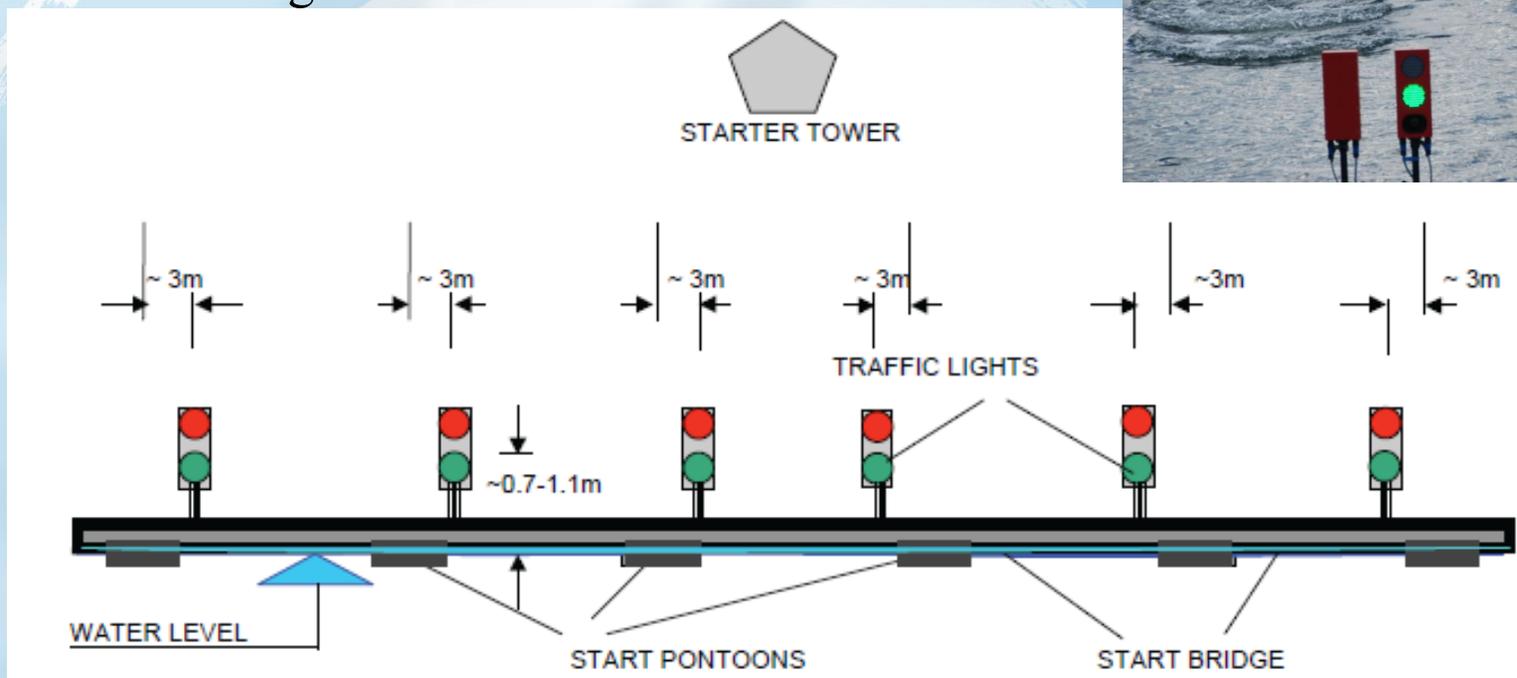
Start Zone Alignment Control System

- World Rowing Championship, Rowing World Cup and Olympic Regattas may use an alignment control system.
- The system holds the bows in place during alignment and drops on the start.
- Neutral position is down



A Start light system is used with the following states

- Neutral (no lights)
- Red Light
- Green Lights and Tone
- Able to go from Red to Neutral without Green



Start Zone

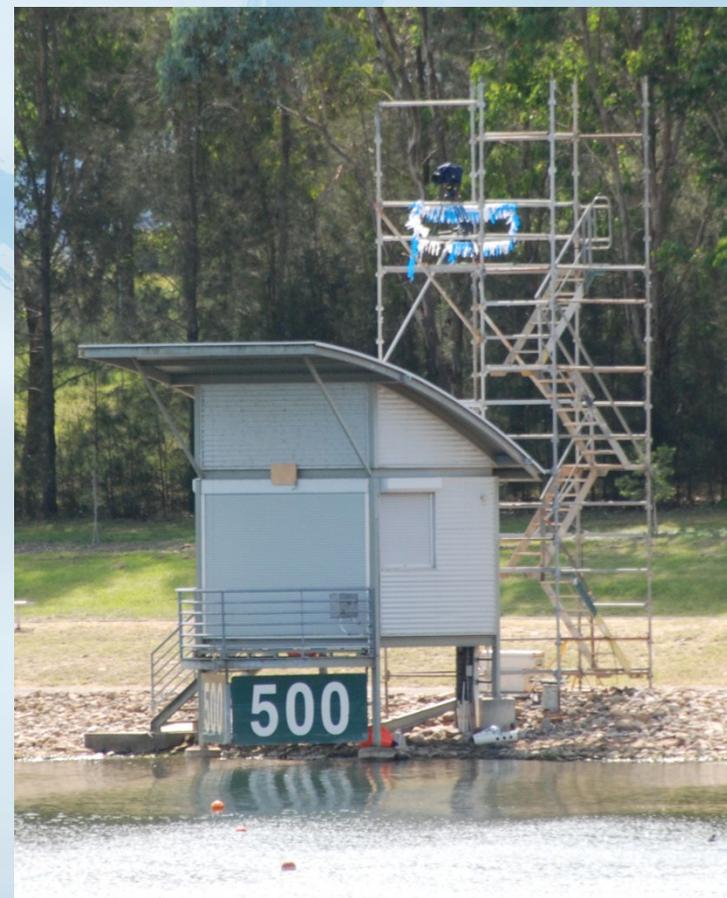
Other Start Requirements

- Repair pontoon to be used for urgent boat repairs: 3m*6m, 15cm above the water level near to the Aligner's Hut
- Spare numbers(2 sets)/GPS units
- Adequate toilet facilities
- Tents for volunteers, officials, media

Steering Controls

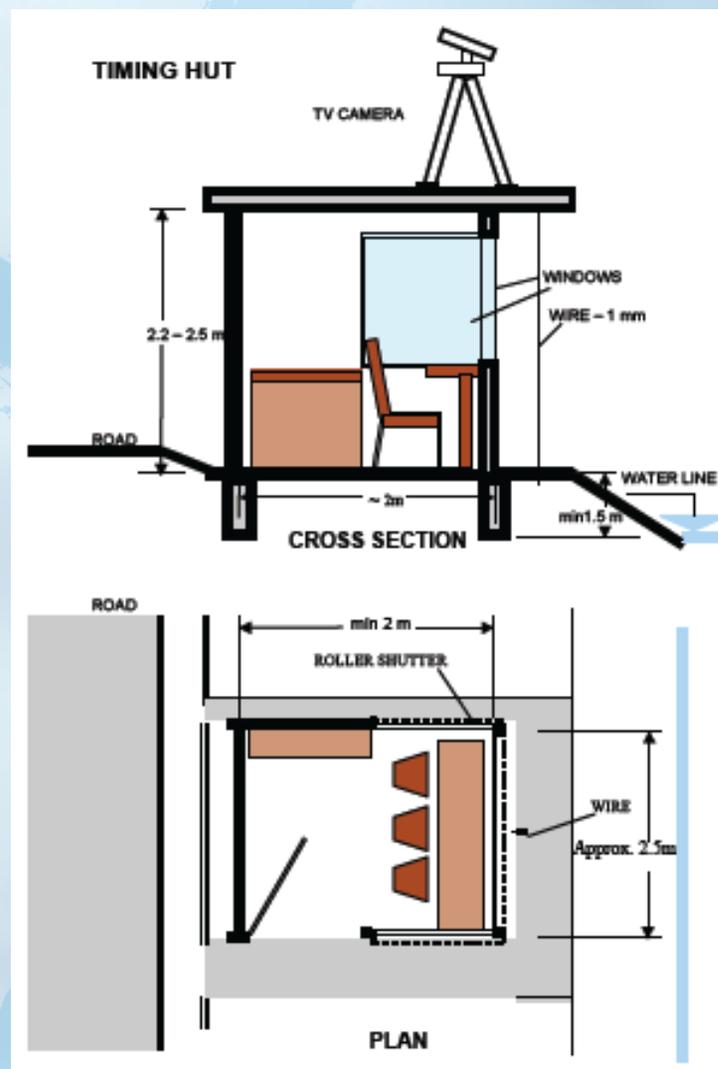
- The first 100 meters will be:
 - A different color and
 - Lane line buoys will be spaced 5 meters (6,25 meters max) apart

Between the Start and Finish Timing



Intermediate Timing

- Every 500 meters
(500 meters, 1000 meters,
1500 meters)
- Recording times and places
of competitors as they cross
the 500 meter mark
- Communication with timing
at Start and Finish.
- Video cameras are accepted
if they provide 100frames/sec



Between the Start and Finish Sponsor Banners (“Toblerones”)

Sponsor banners

- Can be on land or on the water (“Toblerones”)



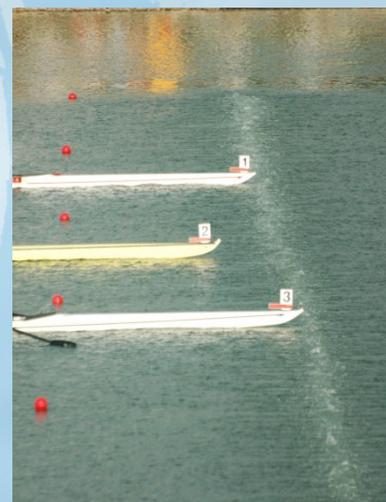
- Placed along the outside of the course
- Can not block the distance markers

Actual
Distance
Marker



Finish Finish Line

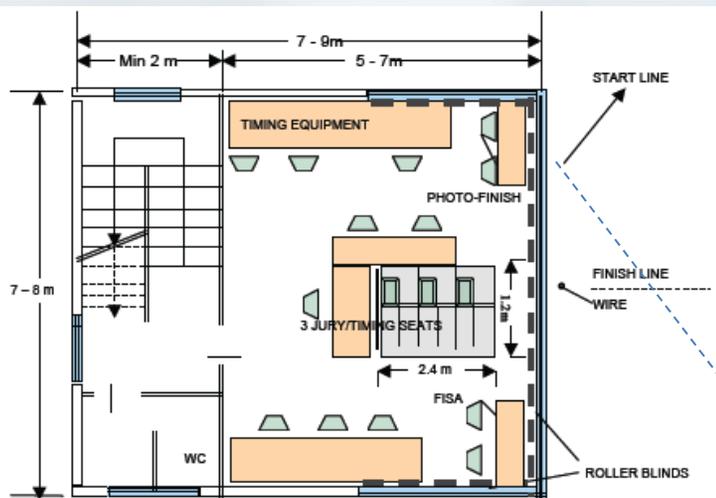
- The Finish Line is marked by
 - A vertical wire directly in front of the judges
 - A board with a vertical line with yellow on one side and black on the other
 - Red flags 5 meters outside the course (not blocking the view of the finish judges)
- Bubble line 80-100 cm beyond the finish line
- 120-200 meters beyond the Finish Line for boats to run out



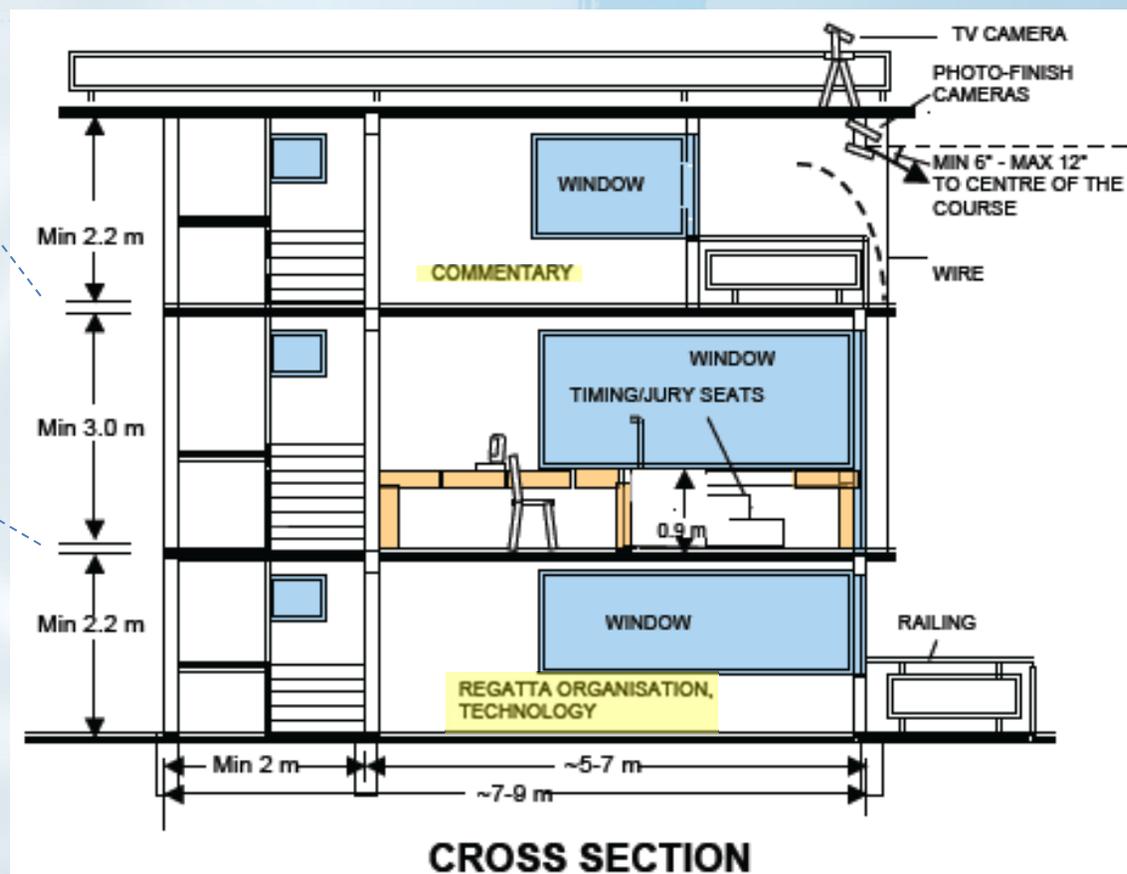
Finish Finish Tower



Finish Finish Tower



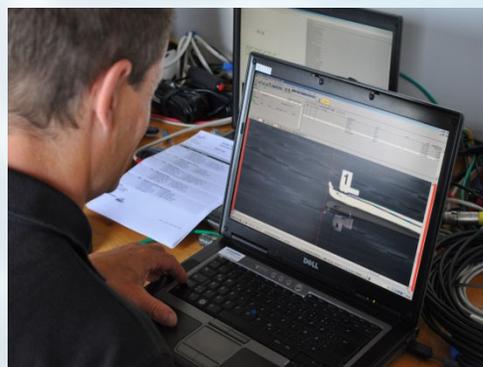
- Located 30 meters outside the course
- With 3 levels
- Umpires and timing/results on same floor



- The timing system
 - Accuracy to 1/100th of a second
 - Photo finish camera
 - World Rowing Championships require backup timing, results and photo finish systems
 - Timing starts with start system



Rowing World Cup III 2010, Lucerne						
Current Runs						
NO	Name	Start	1000m	1500m	Time	Ln
1	Canada	1:57.74 (0) 0:00	3:34.00 (0) 0:27			1
2	Spain	1:58.24 (0) 0:28	3:52.55 (0) 0:42			2
3	Germany 1	1:59.76 (2) 0:30	3:51.78 (2) 0:57			3
4	Austria	1:59.80 (0) 0:28	3:56.80 (0) 0:49			4
5	Great Britain	1:59.88 (1)	3:51.91 (0)			5
6	Netherlands	1:59.94 (0) 0:30	4:04.36 (0) 0:22			6



- The results/video board should be placed where spectators can view it
- If possible the board it should be positioned where athletes can see it at the end of the race



Finish Victory Pontoon

- A victory pontoon 3 meters wide by 18-20 meters long should be placed near the grandstand



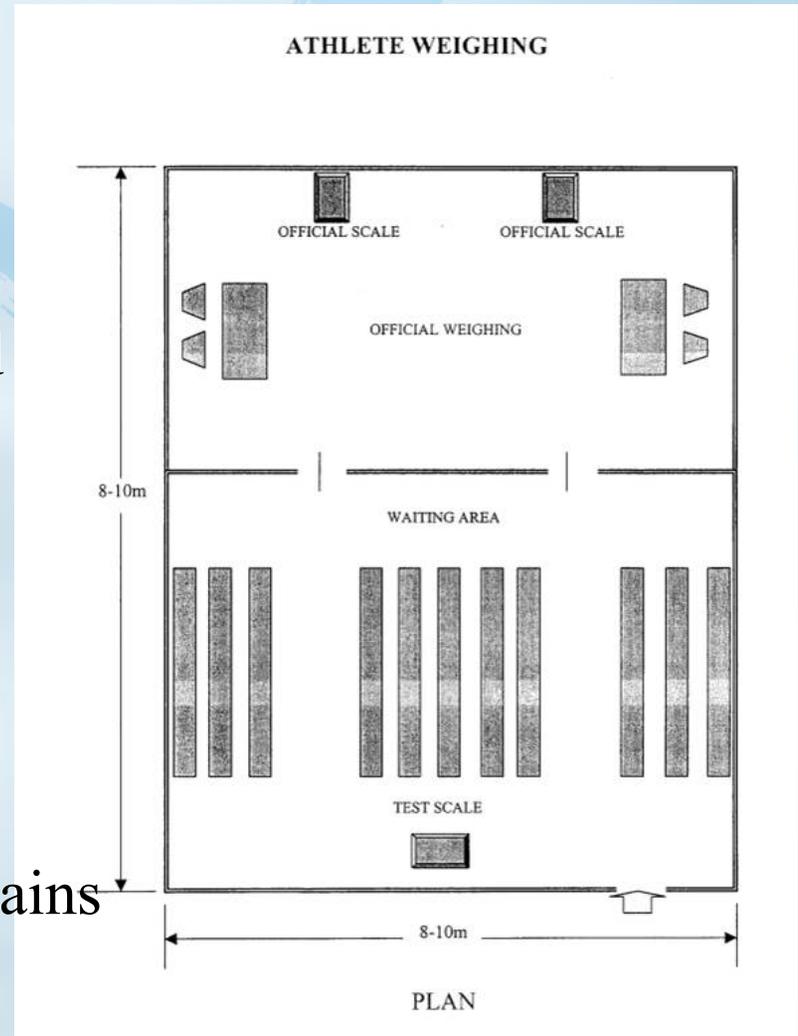
Boat weighing

- Area protected from the wind
- Level solid surface for scales
- Certified scale weighing to 0.1kg with a connected printer
- Certified test weights



Athlete weighing

- Located in boathouse or cabin (70 square meter area)
- Certified scales place on level solid ground
 - Actual scales
 - Test scales
- Two areas
 - Actual weighing area
 - Waiting area for athletes/coxswains



- Traffic Patterns:
 - The traffic patterns signs (0.7 meters x 1.5 meters) for both racing and training must be clearly posted near the Control Commission hut.
 - Directions signs for inbound, outbound and no use should be near pontoons
- Training Times should also be posted



- Control Commission Hut located near the launch/landing pontoons
- Launching and landing pontoons
 - Traffic signs showing inbound, outbound or closed



- Boat Storage area
 - Adequate storage facilities for the boats used in the regatta



- Umpires catamarans
 - 5 + 1 required for courses with a road alongside
 - 6 + 1 required for courses on a lake
- Rescue Launches
 - 5-6 during racing depending on the course and warm up areas
- Media Catamarans

- Copy and Distribution Service for programs and results
 - For the Teams & Officials
 - For Media & Spectators
- Changing and shower rooms for athletes
- Ergometers

