IAAF Road Running Manual

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OFFICIAL IAAF PARTNERS

OFFICIAL IAAF BROADCASTER

IAAF Road Running Manual

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Cover: Boston, Massachusetts (USA) : Runners make their way to the finish line during the 115th running of the Boston Marathon on April 18, 2011 in Boston, Massachusetts ©Getty Images

IAAF ROAD RUNNING MANUAL

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President's Message

On behalf of the International Association of Athletics Federations (IAAF) I am pleased to welcome the first edition of the new IAAF Road Running Manual.

This practical guide replaces the former IAAF Distance Running Manual and is designed to assist road race organisers who are staging events whether at either local, national or international level.

I would like to take this opportunity to formally thank British Athletics, the IAAF Member Federation for Great Britain and Northern Ireland, for providing the core information for this publication which has been adapted by the IAAF for worldwide use. I would also like to acknowledge the contributions of David Katz and Hugh Jones for their editorial assistance.

Road running is one of the most vibrant and diverse areas of the sport of Athletics incorporating the full array of mankind's sporting aspirations, talent and fitness whether in the form of a recreational jogger, club runner or elite athlete. The IAAF is pleased to embrace and assist with the activities of the road running community at all levels. The publication of the IAAF Road Running Manual indicates the association's commitment to best practise and offers an indispensable guide for race organisers.

Lamine Diack
IAAF President

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1. Introduction

Every week there are hundreds of road races held throughout the world. They range from small town events with only a few hundred runners to the "big city" marathons with tens of thousands of participants.

This race organisation manual is designed to assist road race organisers in getting started or to help produce quality events of an international standard. In addition to basic practical advice, it provides abstracts of applicable IAAF Rules and links to other useful sources of information.

Organising a road race of any distance is a complex undertaking. It requires a great deal of planning, coordination and consideration for a great many constituencies. A safe and fair competition for participants is paramount, but race organisers must also be cognisant of and responsive to the requirements of the local community, police and public safety officials, press, sponsors and more.

Why do you want to organise a road race?

- You may be organising a race on behalf of your club, school or company
- You may be organising a race to raise money for charity, or to give publicity to a cause
- You may be a professional race organiser
- You may want to organise a race purely for your own personal satisfaction
- You may be organising a race to host a National Championship

The reasons do not matter in themselves, but they may affect the kind of race that you should devise. You should consider this carefully, as many consequences may follow from your initial decisions.

What kind of runners do you want to attract to your race?

- Mass participation runners (any kind of runner)
- Walkers (those who will participate in a "running" event, but will actually walk)
- Charity runners (those runners who will raise funds for charity)
- Club runners (those of a good local standard)

- Competitive age group runners
- National-standard runners (among the best in your country)
- Elite runners (among the best in the world)
- Tourist runners (those who travel from other countries to take part)

Note: "Elite Runners" is a relative term that can be applied to all levels of road racing. In general these are the runners that would be competing for the top awards and are often given preferential treatment which may include travel and hotel accommodation, start line positioning, and placing personal drinks along the course.

All athletes that qualify for a National "Championship" should be considered as "Elite".

There are some basic decisions that you will have to make in the light of these initial ambitions.

Do you want to have a competitive race or a fun run?

The majority of road races can be considered as several races in one including varying combinations of the above categories.

Only the first three of the categories listed above may be satisfied with a fun run, where no prizes are offered and official times may not be given.

All other categories of runners will want to participate in a genuine race, where an accurately measured distance is covered, an official time is given, and prizes are awarded.

The value of the prizes given out in recognition of race winners can be quite modest. Any race organiser must remember that prize values are only a motivating factor for the fastest runners, including those within particular age categories that are attracted to the race. The higher the value of prizes offered, the closer you will get to attracting the world's best – but getting the world's top runners interested may not be a realistic or even an important priority.

Sanction, Permit & Certification

These are among the most misunderstood terms in road running. A "Sanction", or "Permit", refers to the athletic federation's approval of a competition, "Certification" refers to a certificate issued to attest that the road race course has been accurately measured.

Sanctioning of your event by the athletic federation

A Sanction, also known as a Permit, is an official designation issued by a national athletics federation, the Area Association in which the event is held or the IAAF, which approves the holding of a road race or other athletic competition. The sanction is also a contract, which requires the Local Organizing Committee (LOC) to follow national and international rules and regulations of the sport and to provide a safe environment for participants and spectators.

Benefits of a sanctioned/permitted event:

- **Increased prestige & quality control.** A sanction from the national athletic federation will help to reassure the public that it will be run to the required standards. A sanction tells athletes that an event is being run according to applicable competition rules.
- **Liability insurance**. Most governmental entities including cities, counties, highway departments, parks and community centres require general liability insurance for all events. You should ask your national federation whether they are able to provide insurance cover when applying for a permit. The cost of a sanction is very inexpensive compared to the prices of most event insurance policies. Events that are already insured may choose to waive the insurance coverage and pay a lower sanction fee.
- **Accident insurance for athletes**. Many federations can provide your event with insurance coverage negotiated to apply to sanctioned events held under their umbrella.
- **Calendar promotion**. Sanctioned events are usually included within the federation website calendar, and in their printed versions.

- **Records**. A sanction is required for the ratification of all national and World Records achieved in an event, as well as for approval of qualifying performances for World Championships and Olympic Games.
- **Competition Rules.** A sanction reassures everyone concerned that universally accepted rules will be applied in the conduct of the event.

The IAAF website can provide you with the contact information for your national athletic federation.

When should you hold your race?

In many parts of the world the climate dictates the best time of year to hold your race, so that conditions are most favorable for running. Ideal conditions for fast running would probably be between 5-15C. If the temperature does not fall as low as 15C you should try to run your race at a time when the temperature is at a seasonal low, and at a time of day that will minimise heat stress. This would normally be early morning, which is also when traffic conditions are likely to be most favorable.

There may be other factors which would influence the time of year that it is best to hold the race, including:

- the possibility of attracting visitors at a time when there **is the required hotel capacity available.**
- the desire to coincide the race with a particular national holiday or local festival.
- the need to avoid competing with other events in the road running calendar.
- the need to schedule the race at a time when TV coverage is possible

In particular, if you are seeking to attract elite athletes to compete in your race, you should avoid holding it at the same time as major international championships or big city races, so that you are not competing for runners against these established events.

To increase the possibility of attracting TV coverage, consider other sporting events that the local TV network features and avoid clashing with these.

Where should you hold your race?

You may well have firm ideas about the location of your race start and finish, but you will need to consider:

- the amount of space that will be required by the start and finish facilities
- the backdrop that is presented by the race start and finish (and throughout the route) and how you can use this to best project the image of your race.

[See also Chapter 3 - "Course design".]

Security

Security has become a major factor in any event where there are a large number of participants and spectators. Race Organisers need to interact with their local authorities to determine the appropriate level of security for the event. Many large events will also employ private security companies to assist with aspects of their event which would be out of the domain of municipality.

Liability

Most municipalities will require the organising committee to provide insurance to cover them as well as all other organisations. Above all, you should secure insurance coverage against general public liability. This should be readily available, possibly through your national athletic federation, in a pre-negotiated package that should suit the specific needs of a race organiser. You may also want to consider taking out insurance against the possibility of cancellation of the race.

Tax liability is another matter. If you are handling large sums on behalf of a benefiting charity you should seek professional advice on how this is best handled. In any kind of race you will face the problem of dealing with a large volume of small payments from race entrants, and you should seek advice to secure an efficient handling service at a favorable rate.

Race entries will consist of an entry form and a payment. Both must be handled with care. You should ensure that the specific purpose of collecting each item of information is clearly stated. You may have to demonstrate that

the information you seek is used only for stated purposes and this could involve registering with government authorities as part of your obligation under data protection legislation.

2. Organisation

Organising a race is a complex operation, and will almost certainly take up more of your time than you anticipate. You need to recruit help from others, and break the job down into component parts, each with its own Team Leader/Director and working staff. The following areas should be considered:

- **Start/Finish**. Setting up, including toilets, changing facilities, baggage handling, refreshments, crowd control barriers, timing system, public address systems, etc. Break down and removal after the finish.
- **Course**. Measurement, marshals, signage, water and medical stations. On-course entertainment.
- **Entries**. Handling race entries and issuing race numbers and instructions.
- **Officials**. Starter, timekeepers, recorders, race referee, results processing.
- **Medical**
- **Liaison**. Local civil authorities, police, ambulance service, Volunteer groups, public (including church-goers or commercial outlets along the course that open on race day)
- **Presentation & entertainment.** Event announcer(s), live entertainment, video boards, etc.
- **Instructional signage.** Essential for directing participants, spectators, and the public.
- **Volunteers**
- **Transportation & parking**
- **Security**
- **Race Expo**
- **Technology.** Internet, communications, electrical requirements
- **Clean up & re-cycling.** Often an essential preliminary before roads can be re-opened.
- **Procurement**. T-shirts, "giveaways", medals, awards, flowers, etc.
- **Finance**. Sponsor recruitment, income and expenditure control.

- **Promotion**. Press officer, advertising, liaison with charities, on-course branding.
- **Hospitality & Protocol**. Ceremonial start & finish award ceremonies; receptions involving sponsors and attending dignitaries.

Try to share out tasks among what staff you have available and maintain a "pyramidal" structure so that they are each responsible for guiding the activities of those working under them. They should be able to come together occasionally as a small group or race committee and together generate a comprehensive picture of how preparations stand as race day approaches. Prepare logistic documentation that will enable workers/volunteers to take over if the others become unavailable.

Volunteers

Road races are highly dependent on volunteers to assist with nearly every aspect of the event. Most of the smaller races are completely organised by volunteers and only use independent contractors for technical areas such as timing and sound.

A Volunteer Coordinator should be appointed early in the planning process. The Volunteer Coordinator should meet with all of the team leaders/directors to determine the number and type of volunteers required.

Volunteer training sessions are essential to the success of the event. If untrained volunteers are placed in critical positions this will jeopardise safe management of the event.

It is essential that a comprehensive staff/volunteer contact list be made available.

Rules

Rules of Competition are essential for any sport. The IAAF has developed rules over the last 100 years that are constantly re-evaluated and amended, and subject to acceptance by their 212 national member federations. Some federations have adopted their own set of rules to complement IAAF Rules.

It is important to incorporate the appropriate rules to your event. It should be noted that some rules are designed for elite runners and would be difficult to apply to the participants of a mass race. Race organisers need to work closely with federation officials so that everyone understands the rules and their application prior to the event. All events should publish the Rules of Competition prior to race.

An electronic copy of the full competition rules is available on the IAAF website. Printed copies may also be purchased from the IAAF.

Time-lines

Agreed time-lines are essential for the successful execution of the event. Detailed time lines are critical for the 24 hours prior to the event through to the event break down.

Set-up and infrastructure

A road race is like a circus coming to town. Both require setting up of a lot of temporary equipment – tents, staging, signage, toilets, etc.

Road races are usually held in locations that do not have the permanent infrastructure available to events held in stadiums or a permanent arena. Proper planning should be made for portable power, telephone, and internet connections. These elements are critical for timing, medical, event management, communication and presentation. Each logistical area of the event needs to be evaluated to access the requirements to prevent overloading the various systems. Site tests are recommended to avoid event day problems.

Registration of Participants

Depending on the size of the event, organisers may use a variety of methods for participants to register. This includes online as well as paper applications. There are many commercial online registration companies that offer easy-to-use services. Popular events sell out months in advance and may use a lottery system to determine who is eligible to enter. Small

and medium size races may allow race day registration, but if not properly planned, this can be overwhelming to a race organisation.

Most large events will have bib number distribution in conjunction with a Race Expo and not allow for race day pick up.

The method of distribution of race bibs and "giveaways" (mainly t-shirts) is dependent on the number of participants, the available space, time available, and staff. Careful planning is needed to prepare an adequate number of "pick up" stations to manage in the most efficient manner.

3. Course Planning

IAAF Rule 240.2

Course

The races shall be run on made-up roads. However, when traffic or similar circumstances make it unsuitable, the course, duly marked, may be on a bicycle path or footpath alongside the road, but not on soft ground such as grass verges or the like. The start and finish may be within an athletic arena.

Note (i): It is recommended that, for Road Races staged over standard distances, the start and finish points, measured along a theoretical straight line between them should not be further apart than 50% of the race distance. For approval of Records, see Rule 260.28 (b).

Note (ii): It is acceptable for the start and/or finish, and other segments of the race to be conducted on grass or other non-paved surfaces. These segments shall be kept to a minimum.

Course Design

Once you have decided to organise a race, and given some thought to what you want to achieve by doing so, you will need to decide where you will be able to stage it. Finding a suitable location for the start and finish is probably the first element to consider. Every effort should be made to incorporate scenic and historical features into the course.

You will need large spaces at both start and finish to accommodate the number of runners that you anticipate attracting and to provide all the necessary services that runners will require, such as changing tents, refreshment tents, medical services, toilets, etc.

You should anticipate how runners will arrive at the start and disperse from the finish. If you do not have extensive areas available that can be used for car parking, or if the race finishes in a different location to where it starts, then you may need to provide dedicated transport to the start (or from the finish) either to local transport hubs or as a "park and ride" plan.

You will also have to consider the attendance and movement of spectators and public, particularly at the finish, which will be in operation for several hours before all runners have completed the race. At both the start ('upstream' of the start line) and the finish ('downstream' of the finish line) you will need to create restricted areas where the general public is not admitted, for the greater convenience and safety of those running the race.

Spectators and supporters should be separated from runners before the runners approach the start line and enter any queuing or "corral" system for participants awaiting the starting signal. They should also be encouraged to wait for runners completing the race in a defined "reunion" area placed some way after the finish line. Runners should only reach such an area after they have had the opportunity of receiving medical attention, water, medals, goodie bags and have reclaimed any checked baggage. This reunion area needs to be as large as possible, as it is where maximum crowds will congregate.

A very common problem in such areas is that mobile telephone coverage collapses under the weight of demand. The local telecommunications provider or race partner should evaluate the area to ensure adequate service.

This may all seem very elaborate for the size of race you are planning, but successful races grow rapidly. A field of hundreds in the inaugural event may turn into thousands within a few years. Extra space should be available to accommodate this growth in the initial design of the course. Additional specialised facilities, such as those required for television coverage, may also have to be catered for as the race grows in size.

Both start and finish, but particularly the finish, should be in a location where there is an interesting scenic or historical backdrop. This adds to the attraction of the race for runners and spectators – particularly for tourist runners who are an important category because of the money that they are likely to spend on hotels, in restaurants and shopping.

Apart from making sure that the start and finish areas are suitable, you will also need to decide on the course that runners will follow between the two. There are several different types of course configurations that you should consider, and each has particular advantages and disadvantages. A basic decision you will have to make is whether the start and finish areas can be

in the same location, or whether they have to be separated. Even when start and finish line are in the same place, the assembly area at the start and the dispersal area at the finish – and therefore the disposition of facilities – can be separated. A lot depends on how much space you have available.

Course configurations

i) Point-to-point

Point to point races go from one place to another. If they are predominantly in one direction then the finish may be a long way from the start – such as in the Athens Classic Marathon or the BAA Boston Marathon. This may allow for an historic route to be traced (as in Athens, or in the Pharaonic 100km race in Egypt) or take best advantage of otherwise widely-separated touristic sites, but it stretches resources out into one long thin line and hampers race logistics. Officials will have to transfer from the start to the finish, and runners' baggage will also have to be transported. Apart from what may be fitted on a lead vehicle the rest will have to get to the finish by an alternative route.

Point-to-point races are more likely to exceed the IAAF Rule 260.28 on straight-line separation of start and finish (←50% of the race distance) and the allowable elevation change (→-1m/km). These limitations are not mandatory and you have a choice in such matters – but if they are not observed then performances set on the course will not be eligible as records. In the case of the Marathon, performances will be accepted as qualifying times for international championships even when the course separation exceeds 50%, but not where the allowable elevation change, the 'drop', exceeds -1m/km.

Example of a Point-to-Point Course
Boston Marathon

ii) Out/back

An out and back course is one which goes to a turnaround point, reverses direction and comes back along the opposite side of the same road to finish at the same point at which it started (or just adjacent). It is best if the road used is a divided highway so that one roadway can be used exclusively in each direction, and the turning point can be defined by an existing break in the central divider of the highway.

This layout makes logistics easier and reduces the use of some resources. Water stations can be made "double-sided" and medical stations and toilets can be located in the middle of the road on the central divider, but signage and timing points cannot be doubled up in this way. Course marshals in the very early part of the race may be redeployed to the other roadway after the last runner has passed, but further along the course this will not be possible as the lead runners will already have come through on their return journey. Many courses were designed in this way, before running became a mass sport, – but that was also before traffic management became a major problem.

Highway authorities may be reluctant to close down both roadways for the race. They may insist that one of them remains open for normal traffic. If this is so then doubling up out and back routes on just one roadway (but separating them by barriers, cones, advertising hoardings and tape, etc) may be possible. If the roadway is too narrow for this then returning runners may best be directed along a parallel route.

iii) Single loop

Using a single loop eliminates the problem of lapping but will require much more extensive road closures and less efficient use of resources along the course. Spectators will only get one or perhaps two chances to view the race.

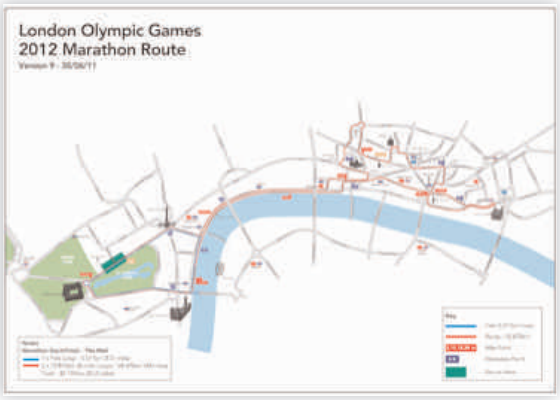
Example of a Single Loop Course - Berlin Marathon

iv) Multiple loops

A multiple loop course is only suitable for relatively small fields of similar-standard runners – such as championship races. In any mass race multiple loops can only be used if they are of unequal size, so that the front runners do not catch up those at the back of the field. For example, if a marathon consists of one lap of 15km and another lap of 27.2km, then the slowest runners must have passed 15km by the time the winner finishes the race. This would mean that runners slower than about 8:30/km (or 6 hour pace for a marathon) would impede the passage of the winner and should be warned before the race that if they fall below this schedule they will be required to walk on the pavement (sidewalk) rather than on the road.

For elite races a multiple loop course is ideal: it allows spectators to see more of the action, it requires fewer road closures and allows more efficient use of resources in marking and servicing the route (water stations, medical provision, signage, branding, TV positions, course marshals etc.) Great care must be exercised in balancing the number and standard of participants against the number of loops they will be required to run. If a 10km race is to consist of 10 loops of 1km, and the winner is likely to run 28:00, then the slowest runner in the field should still be able to run under 31 minutes. If this is not possible then the length of the loop should be extended: a 2km lop would allow runners up to 35 minutes to be accommodated; a 5km loop up to 55 minutes. These times are those elapsed after crossing the start line, so if crowding significantly delays the passage of runners over the start line, this will increase the chances of the front runners catching up back markers on a multi-loop course.

Using a multi-loop course will dictate that both start and finish facilities are in the same area, but the start facilities will be upstream of the start line and the finish facilities downstream of it. To allow for efficient dual use it may be advisable to use a separate finish section branching off from the main lap before it is completed, although this will mean that the finish line is a separate timing location to the end of the lap.



Example of a Multiple Loop Course - London Olympic Marathon

Geographical considerations

The local topography and road layout will help determine the course configuration. Courses may incorporate more than one element: a point-to point race, such as the Sydney Olympic Games course, included a loop and out/back section en route. This is where the race organiser's familiarity with their local area will be crucial. At the planning stage it is invaluable to already be aware of which roads are most lightly used – and therefore may be used as out/back sections – or where the road network allows alternative circulation routes for traffic.

In eventually seeking support from the police and permissions for road closures from the local highway authority it will greatly help your case if you show that you have thought carefully about how to minimize the inevitable inconvenience that other road users will face as a result of the race taking place.

In the Paris Marathon, for example, about 15km of the route is run on traffic-free roads in the Bois de Vincennes and the Bois de Boulogne. For most of the distance that separates them the route runs along the embankment of the River Seine, ducking under underpasses at each bridge. Although this makes for a slightly more undulating course, none of the bridges have to be closed. In the Budapest Marathon extensive use is made of the "lower embankment", which passes under the bridges, so that traffic is not disrupted.

In general, if traffic circulates on the right-hand side of the road then it makes sense for runners to run a circuit which involves right-handed turns. At its simplest, a 10km race conducted around a 2.5km square 'box' of roads will obstruct very few road users – only those seeking access to the network from within the 'box' (or vice-versa). You should always be aware of this possibility of 'locking' areas in by the race route surrounding them. If such an area includes a vital service such as a hospital, fire station or police station then your route will almost certainly not be approved.

Submitting your route for approval

When submitting your route for approval by the necessary local authorities ensure that you have a list of all roads (no matter how short) that it uses. If one is missed out the road closure order will not cover it, and your route will be compromised.

Submit detailed maps indicating exactly how much of the road will be given over to runners, where barriers will be placed and where course marshals will be stationed. Make sure that you have identified people within your own organisation ("chief sector marshals") that can take charge of arrangements for clearly-defined sections of the course. Provide a list of these people and their contact details.

Provide some indication of alternative routes, although it may be the Police who will take the responsibility of defining these and making them known to the public.

Course Measurement

When designing a course consider the requirements for course measurement and race day set-up. The best principle is to keep it simple. If participants have access to the full width of the road, this may provide some measurement challenges but it will be easy to set up on race day. If participants are restricted to one lane of a multi-lane roadway, measurement may be easier but race day set-up will be difficult, as barriers of some description will need to be used to confine participants to that measured lane. Failure to properly set up the course as measured could jeopardise the ratification of records.

When the course has been determined and permission has been granted for its use you need to start the process of fine-tuning by having the course accurately measured. Pay particular attention to the need to anticipate

where you may be able to add or subtract distance in order to make the course conform to the precise measurement.

IAAF and AIMS recognize only one method of course measurement, namely that using the Calibrated Bicycle and a Jones Counter. It is a condition of the IAAF World Championships, Olympic Games, IAAF Label system and AIMS membership that road races are measured by an accredited IAAF/AIMS Grade A or B measurer, and that such a measurement must be made every five years or whenever the course is changed. This level of Certification is also required for all races where athletes compete to qualify for IAAF World Championships or the Olympic Games. In addition, in cases where events conduct multiple races on the same day, each race that is over an advertised distance must also be measured by an IAAF/AIMS Grade A or B measurer.

Laying Out a Calibration Course

Jones Counter

The method of measurement is highly accurate for road race courses but there are other types of race surfaces (sand, grass, etc.) for which the approved method of road race measurement may not be appropriate.

To find out more about having your course measured by an accredited IAAF/AIMS measurer, visit the AIMS website: aimsworldrunning.org. For a list of the International Course Measurement Administrators, see Appendix I.

The Measurement Administrator will put you in touch with an accredited IAAF/AIMS Measurer who is available to measure your course. You will be expected to meet all travel and accommodation expenses and you will need to negotiate a fee for the work involved in the measurement directly with the measurer. The measurer will send a copy of his measurement report to the Measurement Administrator who, if all is in order, will issue the International Measurement Certificate as prescribed by IAAF Rule 240.3.

Note that this process only relates to races of international character as described above. Many countries operate their own national systems of measurement and certification. These involve the same technical principles in the measurement method but procedures for certification will be different in each country.

The Start

> **IAAF Rule 162.1**
>
> Note: In the case of events starting outside of the stadium, the start line may be up to 30cm in width and maybe of any colour contrasting distinctively with the surface of the start area.

The start should be as wide as possible and clearly marked. It should be noted that a start gantry will likely reduce the width available to runners on the start line. Note that timing devices have different maximum antennae widths, and this must be taken into account when designing the start area.

Space requirements

Race organisers should plan on allocating at least 0.4 m^2 per participant at the start. This along with the width of the start line is essential for calculating the size of the start system and corrals when used.

Warm-up area

A warm up area is not practical for races with thousands of runners but one should be provided for the elite runners. Most events with elite athletes will have a secure area which would include toilets, refreshments and medical facilities for their exclusive use. This area can also serve as a final call room where runner's bibs and timing transponders can be confirmed. A separate call room/area is required for IAAF World Championship and Olympic Games events.

Managing the start

Most large road races incorporate wave starts and corral systems to help manage large numbers of participants. Runners' start times and location assignments are usually based on past performances and are designed to reduce overcrowding at the start and at narrow sections of the race route. Coordination with registration (bib assignments) and race day logistics is essential to ensure participants are in their correct starting position.

Pace signs indicating a participants expected finishing time should be erected to assist the participants in assembling in the right position at the start. This is especially important for smaller and medium size events that do not use a corral system.

Runners should be brought forward to the start ("back–loading").

Elite runners would usually be given access behind the start line and in front of the corral or holding system for the other runners.

Races often incorporate a safety buffer zone of 5-10m between the elite runners lined up at the start and the general participants behind them.

Athletes with a disability: wheelchair athletes and others

Many races include a disabled/wheelchair athlete division into their events. Special logistics need to be incorporated to ensure the safety of all participants.

The majority of wheelchair competitors will complete the course faster than most of the runners – and may reach speeds of over 40km/hour on downhill

sections. Therefore, race organisers should start the wheelchair athletes prior to the start of the runners. The actual time between starts is dependent on several factors including: the number and ability of wheelchair athletes, the race distance, and the course configuration.

Most large events will start their wheelchair athletes 15 – 30 minutes before the runners. A longer interval between starts may result in logistical issues with municipalities for small, local events which would require the closing of roads for a longer period of time. In these situations, race organisers will likely start the wheelchair athletes 2-5 minutes prior to the other athletes.

Wheelchair Start - Chicago Marathon

Events with a downhill start may utilise a controlled start for the wheelchair athletes to prevent accidents. Other safety modifications may need to be made to potentially dangerous turns and hills throughout the course.

Non wheelchair disabled athletes will often need more time and "assistance" to finish a race than the other participants. Event organisers will often provide them with an early start in addition to allowing other individuals escort them through the course.

Recommended start procedure

IAAF Rule 240.6

Start

The races shall be started by the firing of a gun, cannon, air horn or like device. In races which include a large number of athletes, five-minute, three-minute and one-minute warnings before the start of the race should be given. The athletes shall assemble on the start line in the manner determined by the organisers. The Starter shall ensure that no athlete has his foot (or any part of his body) touching the start line or the ground in front of it, and shall then start the race.

1. The announcer should give time updates to the start. As per Rule 240.6, these should be given at five minutes, three minutes, and one minute to the start.
2. Only athletes and specifically accredited individuals should be allowed in the start areas.
3. Officials should check that the appropriate athletes are placed on the front line according to the directions of the Race Director or relevant Delegate.
4. Referee, starter, and timekeepers should have a clear view of the start. A raised platform should be provided for the starter.
5. The start coordinator should make sure that all vehicles in the lead procession are ready to go.
6. The starter or starter's assistant shall ensure that no athlete has his foot (or any part of his body) touching the start line or the ground in front of it, and shall then start the race (IAAF Rule 240.6)
7. The races shall be started by the firing of a gun, cannon, air horn, or like device. The command for longer races shall be used (Rule 162.2(b)) "on your marks", then the start signal

Restarting after a false start is impractical in a road race with thousands of runners, therefore the time keepers need to be prepared to start their timing devices on the break of the first runner if it occurs prior to the start signal.

Women's performances may be ratified as world records either in mixed gender races or women's only road races. A women's-only road race can be conveniently staged by having separate women's and men's start times. The time differential is determined so that one group cannot catch up to the other. For the marathon a differential of 20-30 minutes should be sufficient. Start times should be calculated to allow enough time between the top finishers in the wheelchair, women, and men's division for the best presentation at the finish line.

Course Set Up

At no stage should runners be in any doubt about where to run. There are many ways to guide runners and in most races several of these are used alongside each other.

- lead vehicles
- road markings, including a "blue line"
- signage
- boards, barriers, tape and cones
- course marshals

Lead vehicles

In most races a lead vehicle guides runners by driving or riding around the course about 50-100m ahead of the lead runner (see separate section on Lead Vehicles).

Road markings

Even if the driver of the lead vehicle is entirely familiar with the course it is still advisable to have some indication of the course route. Markings painted on the road are perhaps the simplest way of providing this. Arrows may be painted on the road (subject to permission from the highway authority) just before and at every junction to show whether the course proceeds straight ahead or turns to the left or the right. Several such arrows will be required at any turn, particularly at roundabouts or complex junctions with many traffic islands. Even where the course proceeds straight ahead, and there are no side turnings, a painted arrow will inspire confidence among isolated runners that they are on course.

The most comprehensive form of road marking is a "blue line" – a continuous or dotted line painted along the entire length of the course that approximates to the measured line. It need not be blue in colour, but to avoid confusion it should be a different colour to any normal road markings. It may be expensive to provide a blue line, as to do this efficiently will require specialist highway marking vehicles and personnel. It will be even more

expensive if the highway authorities require the line to be removed after the race is over.

Blue lines are commonly used in big-budget city races or on lap courses where they need only be of limited length. Dotted blue lines are much easier to lay out, as slight irregularities in their alignment (and gaps left because of obstructions such as parked cars) are not so readily visible.

The blue line, for practical reasons, is not exactly the same as the measured line. The measurer will round corners at a distance of 0.3m from the kerb, but line-painting machinery is more likely only to be able to get as close as 1m or even 1.5m to the kerb. This is not important; the blue line is only an indication of the "shortest possible route" that the measurer follows.

Time clocks

Events should have large electronic display clocks at key locations on the course (kilometer or 5 kilometer and/or mile points, halfway mark). Clocks need to be mounted on tripods adjacent to the distance markers. Whenever possible, use "double sided" clocks. There are two main types of displays: one using an older technology of "flip digits" and newer technology using "LED". Be aware that some of the newer LED clocks may not be visible in bright sunlight.

Incorrectly set clocks are confusing and of little use. Plan to ensure that the clocks are properly set. This can be achieved in different ways, including radio communication or officials from the start traveling along the course to set the clocks.

Where the race budget does not extend to providing clocks along the course it can be valuable to have officials or volunteers calling out the elapsed time as runners pass by a significant point (such as halfway).

Signage

Lead vehicles are good for the lead runners to follow, and other runners should follow those ahead of them. Road markings show runners where to go at any one time, but signage is crucial in giving advance warning to vehicles and runners alike of where the course goes next.

Where the course proceeds straight there is little need for directional signage, although informational signage advising of upcoming water stations, toilets and medical posts will still be required. At changes of direction, signs with arrows can be fixed to lamp-posts and other street furniture (but obscuring normal road signage may be prohibited). They can also be attached to barriers placed in the roadway specifically to force runners into making the turn.

At turnaround points and where runners in different races may diverge or converge, signage is very important. Sufficient warning must be given so that runners can get themselves into position to take the turn. Signs should be visible well in advance and be repeated several times.

Boards, barriers, tape and cones

Where signage may indicate the way, boards, barriers and tape may enforce it. Cones are more indicative than enforcing, but each of these physical items has its uses in defining the course on race day.

Advertising boards can be placed in the roadway to fulfill a dual function: to fulfill sponsorship requirements and to help define the course. Likewise, where barriers are placed to define and enforce the course (typically they will be linked up to form a continuous and immovable line) they may also be used to attach "banner roll" – a roll of material on which the main sponsors of the race are printed. The decision as to which method to use will most likely depend upon how robustly the course needs to be defined.

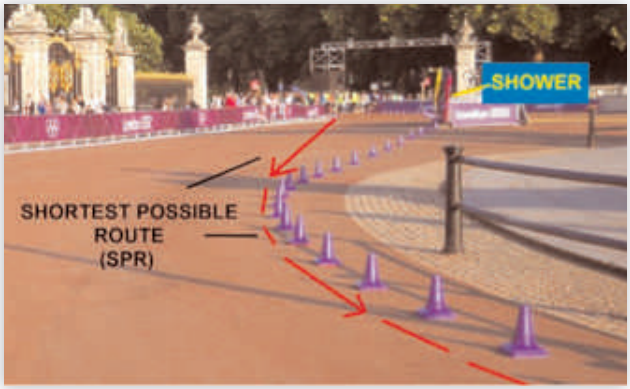
Where the intention is simply to indicate the course to runners it may be sufficient to place barriers or boards at intervals on or along the roadway and stretch plastic tape between them. This tape may be general "hazard" tape or specifically printed up with the race name and logo or those of particular race sponsors. Athletic shoe companies in particular are likely to

have plentiful supplies at their disposal. Using tape is an inexpensive (typically it comes in 500m long rolls) and effective way to visually define the course so that runners can easily see where to go.

Even where the course is defined by a continuous line of barriers it may also be helpful to use tape to give them greater visibility. Tape can be used along straight sections of the course to separate spectators from runners by stretching it between roadside trees or street furniture. This will only be effective where crowds are not pressing. At places where great concentrations of spectators are expected then barriers should be used to keep crowds off the course.

Where there are few spectators along the course it may be worthwhile to use tape at corners, again stretched between roadside items of street furniture, to prevent runners cutting across the pavement (sidewalk) at corners.

Cones are similarly eye-catching, and can help indicate direction to runners from a distance, either used by themselves or as a visual back-up to barriers. They should also be used at junctions where runners have to be directed differently at different times (in different races) because they can be re-arranged quickly and easily. This pre-supposes that course marshals are also on duty at such locations to make re-arrangements and to back this up with verbal instructions. Every effort should be made to prevent the set up of any barricades, signage, cones, etc. from narrowing the race course or increasing the distance of the course.



Course Marshals

Apart from the lead vehicle showing the lead runners where to go, all other means of directing runners mentioned so far are passive. They are simply placed there and the runner is expected to respond to them. In stressful situations such as during a race runners may not be very mentally alert to anything other than their own condition. It is crucial that course marshals are used throughout the length of the course to give active direction to runners. They have great advantages over other means of course control. They can shout or point to give advance warning, and they can provide additional information such as location of aid stations ahead.

Course marshals should be positioned at road junctions at least in pairs, and at intervals along the course. At turnaround points several marshals will be required. Chief marshals responsible for defined sectors of the course should decide on optimum deployment of the marshals that are available to them. These chief marshals, forming in total a small group of no more than a dozen, should be appointed by the course director and liaise directly when necessary (see Sector management section below).

For greatest effectiveness course marshals should be easily identifiable. A colour-coded T-shirt and cap will be enough to achieve this but some consideration should be given as to whether marshals will require fluorescent safety bibs for greater visibility (these will certainly be required for events held during hours of darkness).

It is not the duty of a course marshal to direct traffic, but their physical presence on the course may make them targets for abuse from drivers frustrated by road closures. For this reason course marshals should be backed up by a police presence. Do not rely on the local municipality/police to direct the runners. In most cities their main role is to prevent vehicular traffic from encroaching on the course.

Distance markers

Signs should also be used along the course to indicate the distance elapsed in the race. These can usefully be posted every kilometer, and should at minimum be placed every 5km. In countries using Imperial measurement

the distance should be marked every mile as well as every 5km. The halfway point should also be posted.

Distance markers are commonly attached to the nearest convenient lamp-post. In some cases this can be 30m or more away from the actual point, and in such circumstances can only act as a rough guide to pace for leading runners and commentators. If distance markers are placed in this way then it is advisable to paint obvious markings on the road at the actual point, so that those interested can monitor the pace more precisely. The precise location is also essential for "official timers." Every effort should be made to erect distance markers at their actual location.

There will come a point towards the end of the race where it is more relevant for runners to know the distance to go rather than the distance elapsed. Signs indicating distance to go as a "countdown" over the final kilometre (perhaps placed every 200m) can help runners to judge their effort better.

These signs are placed to inform runners, and should be placed so that they face in the direction from which runners approach. If the race is televised the distance markings should be double-sided so that spectators can also see them. They should be placed at sufficient height so that they can be seen over the heads of spectators and be of such a size and clarity that they can be seen 100m in advance.

Informational signage

Guiding runners around the course is the basic minimum. Along the way race participants will have to be provided with several necessary amenities to which the signage should draw their attention. Signage should be used to warn runners as they approach water and sponging stations; replacement fluids provision; elite drinks tables; mist stations; toilets; medical stations. It is common practice to place signs indicating such facilities are available 100m ahead.

Refreshment Stations

IAAF Rule 240

Drinking / Sponging and Refreshment Stations

Number of stations and locations:

8. (a) Water and other suitable refreshments shall be available at the finish of all races.

(b) For all events, water shall be available at suitable intervals of approximately 5km. For events longer then 10km, refreshments other than water shall also be made available at these points.

Note (i) Where conditions warrant, taking into account the nature of the event, the weather, conditions and the state of fitness of the majority of the competitors, water and /or refreshments shall be placed at more regular intervals along the route.

Note (iii) Mist stations may also be arranged, when considered appropriate under certain organisational and/or climatic conditions.

Type of Refreshments:

(c) Refreshments may include drinks, energy supplements, foodstuffs or any other item other than water. The Organising Committee shall determine what are suitable refreshments based on prevailing conditions

Refreshments provided by:

(d) Refreshments will normally be provided by the Organising Committee. The Organisers may permit athletes to provide their own refreshments. Where this happens the athlete may nominate at which stations they shall be made available to the athlete. Refreshments provided by the athletes shall be kept under the supervision of officials designated by the Organising Committee from the time that the refreshments are lodged by the athletes or their representatives. Those officials shall ensure that the refreshments are not altered or tampered with in any way.

Refreshment distribution:

(e) The Organising Committee shall delineate, by barriers, tables or markings on the ground, the area from where refreshments can be received or collected, which. Refreshments shall be placed so that they are easily accessible to, or may be put by authorised persons in the hands of, the athletes. Such persons shall remain inside the designated area and not enter the course nor obstruct any athlete. No officials shall, under any circumstances, run beside an athlete while he is taking refreshment or water.

(f) In competitions held under Rules 1.1(a), (b), (c) and (f), a maximum of two officials per Country may be stationed behind the table at any one time.

Note: For an event in which a Country may be represented by more than three athletes, the Technical Regulations may allow additional officials at the refreshment stations..

Runners carrying refreshments:

(g) An athlete may at any time carry water or refreshment by hand or attached to his body provided it was carried from the start or collected or received at an official station.

Not allowed:

(h) An athlete who receives or collects refreshment or water from a place other than the refreshment stations, except where provided for medical reasons from or under the direction of race officials, or takes the refreshment of another athlete renders himself liable to disqualification by the Referee. The Referee should, for a first such offence, warn the athlete, normally be showing a yellow card. For a second offence, the Referee shall disqualify the athlete, normally by showing a red card. The athlete shall then immediately leave the course.

Providing water and replacement fluids is a mandatory aspect of all distance races. The lack of, or inadequately serviced stations can result in severe medical problems and even death. Detailed plans must be in place

to ensure there are enough fluids available at regularly-spaced refreshment stations. Very large fields may require more water stations but runners and staff should be cautioned against excessive fluid intake.

Refreshment station logistics

Water stations should be available prior to the start, at the finish and at least every 5km along the course. In warmer climates every 2.5km is advisable. On out-back courses they can be placed in the centre of the road and made "double-sided" to reduce the number of locations required.

How much water?

Approximately 250-330ml of water (common bottle sizes) should be provided per runner. If it is an out-back course supplies should be doubled and separated into two equal parts, ready to serve to one side for the outward journey and to the other side for the return. If two races pass by the water stations (eg marathon and half-marathon) at different times then the supplies planned for each race should be stored and served separately. It should be noted that sponges are not as effective in dissipating body heat but are allowable under the Rules. Drinking water is of far more value than sponging.

Configuration of water stations

The size of a water station is dependent on the number of runners and the distance between each station. Care should be given to designing a water/ refreshment station that allows all of the runners easy access. This is accomplished by spreading the refreshment tables out over a longer distance.

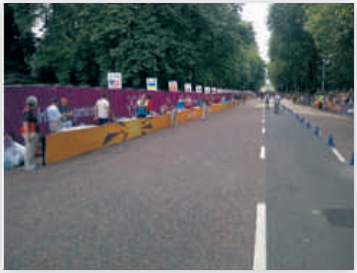
It is common practice at larger events to extend refreshment stations over 100m along the road or make them 2 sided. Tables should be placed about 2m apart and bottles or cups placed on the roadside edge of the table, to give runners maximum accessibility to them. Avoid placing refreshment stations on turns; optimum placement is on sections of the course with 200m of straight roadway before and after.

It is often useful, especially in warm climates, to also provide a glucose-electrolyte replacement drink at alternate drink stations. This should be offered at a separate table placed after the water tables.

Water station supplies should include waste bins, rakes and gloves for volunteers to collect discarded cups and bottles when the flow of runners permits. This minimises tripping hazards for participants and is also appreciated by the residents and local governments of the areas surrounding the water stations.

Personal Refreshment (elite drink) tables

Elite athletes must be given the opportunity to have their own personal drinks placed on tables ready for them to pick up at 5km intervals along the course. Arrangements for this should be announced at the technical meeting. Elite runners/coaches/managers should be told where and by when they must hand in their personal drinks. These should be in a separate bottle for each drinks station. The bottles may be provided by the race organisation or runners should be advised beforehand that they must bring their own, but these may not



be made of glass or metal. The bottles should be clearly marked with the runner's name, race number and the kilometer point where the drink is to be placed. These bottles should be placed on clearly marked tables separate from the common drinks stations (and signposted separately).

Protocol for safeguarding drinks to prevent tampering

Refreshments provided by the athletes shall be kept under the supervision of officials designated by the Organising Committee from the time that the refreshments are lodged by the athletes or their representatives. Those officials shall ensure that the refreshments are not altered or tampered with in any way.

Medical Aid stations

Race organisers should recruit a medical partner to provide and staff aid stations along the route. Major Medical aid stations should be placed in areas where risks of casualties are higher or access for evacuation is difficult. Major aid stations should be equipped and staffed to provide the same level of care as the finish line medical station.

Minor aid stations should be located in conjunction with water stations to provide first aid and relief from minor discomfort (such as blisters and chafing) and to transport any more serious cases on to specially equipped facilities.

They should be located approximately every 5km, and about 100m after the water station.

Toilets

Providing toilets is very important at the start of the race, and in lesser numbers at the finish, but there should also be some placed at intervals along the course. Runners will consciously "hydrate" themselves before the start and this may result in heavy demand for toilets immediately before the start and in the first few kilometers of the race. Further along the course they may be placed more strategically. If they are located where outward

and return route is on the same road this will reduce the number required. Signage should be used to make runners aware that they are approaching toilet locations.

Timing points

Transponder timing allows runners' split times to be taken with minimum personnel involved, but this may not be an appropriate use of resources. It is often more useful for transponder timing mats to be placed at the geographical extremities of the course (or where there is a turning point) so that cheating can be detected (see Cheating section). This will most likely mean that the mats are placed at odd locations where the times recorded are difficult to interpret.

In many races it is very useful to record the leading runner's time at every 5km point, but this can also be done by having race officials (one timekeeper and one recorder) stationed at the location with a running watch. They can shout times out to the leading runners as they pass through (although the clock on a lead vehicle may also be visible to them) and then relay these times back to the race press officer or commentary team.

If it is only the leading times that are of interest, the same officials on a vehicle with the appropriate accreditation for course access, can then ride ahead to take times at the next 5km split. If the same information is required for the leading woman runner, then another team will be required, and they will have a much more difficult time in reaching the following split location due to the greater numbers of male runners around them on the course.

Providing information to runners further down the field is another matter. This can be done by placing a digital display clock at the split point, or by race officials continuing to shout out the elapsed time to passing runners. Alternatively, simply marking the split points accurately and clearly allows runners to time themselves with their own watches.

Course entertainment

Entertainment is commonly used in large events along the route to help motivate participants as well as providing entertainment to the spectators standing for long periods of time. This can be in the form of live and/or recorded music. An organiser may wish to provide different themes along the route with different music to represent each theme. Often cultural groups within the city where the race is held can get involved.

Sector management

As can be seen from the above notes, many different items have to be placed along the length of the course. Although these are likely to be delivered from a central source, checking that they are in place should be the responsibility of people placed locally. The course should be divided up into sectors and a chief sector marshal assigned to each sector defined. This chief marshal has overall responsibility for ensuring that all signage and facilities are in place according to an agreed schedule, and that all course marshals are stationed in their agreed locations. The chief sector marshals should be in direct contact with the course director.

4. Race Management

Lead vehicles

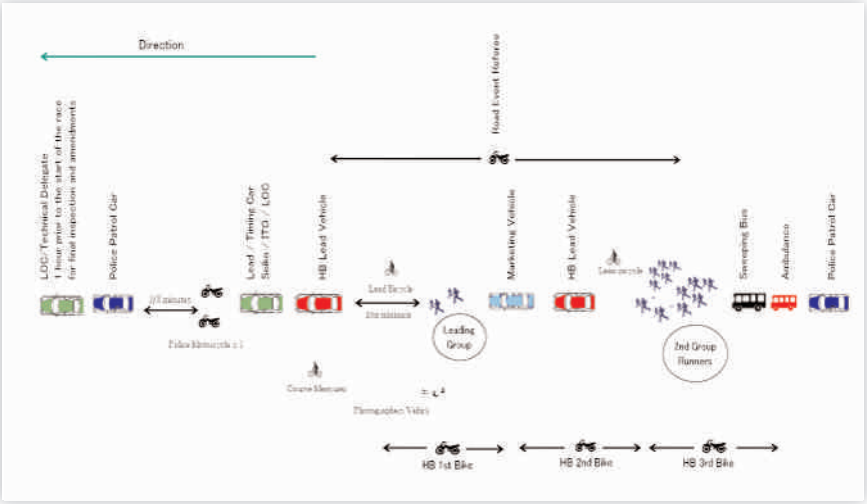
In most races a lead vehicle guides runners by driving around the course about 50-100m ahead of the lead runner. In smaller races this vehicle could simply be a race official on a bicycle who is intimately familiar with the course. In large races it could be a specially-constructed (perhaps electrically-powered) vehicle with seats rearranged to face backward towards the runners and a digital clock mounted on top. The most important things about this vehicle (whether a truck, car, or simply a bicycle) are:

- that it keeps in front of the lead runner at all times
- that its driver, navigator or rider knows exactly where the course goes and where along the course the vehicle will have to get further ahead of the lead runners in order to negotiate speed bumps or difficult turns.

This vehicle, if motorised, may contain a navigator (or "co-pilot"); the race referee, the course measurer and a timing official.

It may also be necessary for other official vehicles to stay in front of the runners, such as:

- a 'pilot' vehicle, far in front, to check that the course is properly laid out (see Course management section)
- a police motorcycle or two to assist with securing the course. These should be immediately in front of the lead vehicle, on either side of the road.
- A photographers' or press/radio vehicle, driven by a race official and taking instruction from the lead vehicle.
- TV motorcycles, which will be the vehicles closest to the runners



Vehicle Line Up for IAAF World Championships Marathon

The interplay of the above vehicles among themselves and with the leading runners is a very complex operation that requires thorough rehearsal before the event and constant communication during it. This is particularly true of the lead vehicle and the **photographers' vehicle** and/or the **radio vehicle**.

All vehicles must always consider safety as a priority. This includes keeping a safe distance from the runners on the course. The minimum recommended distance is at least 5m between any vehicle/motorbike and the athletes.

Photographers will want to get close to the runners to obtain pictures without "shake", but this can then present a hazard or obstruction to the runners. If the vehicle has to make a tight turn it will slow down and runners may overtake it. This is why the driver of the photographer's vehicle must take instruction from the lead vehicle. The course measurer, race referee, or equivalent official in the lead vehicle will know the

course well. He or she should instruct both drivers to speed up in order to take a turn, go over speed bumps or through a width restriction far enough in advance so that runners do not close down on the lead vehicles. If there is a tight turnaround point on the course negotiating this could involve the vehicles having to make a three-point turn, for which they will need at least a minute, or 300m of clear lead over the runners.

The **police motorcycles** also need to keep clear of runners and secure passage for them by ensuring that spectators do not encroach into the road. This will mean that they should operate in parallel, one on each side of the road. For most of the time, this is a routine and straightforward operation, but they also have to keep careful watch for any possible irregularity developing on the sidelines.

The **TV motorbikes** (bikes are far preferable to a TV car) should be instructed not to impede the runners. Left to themselves they may get very close to runners and this may distract and obstruct them. Leading runners have sometimes remonstrated to the camera vehicle in such situations, which reflects badly on the professionalism of the TV company and on the race organisation. The best guidance for TV bikes is a "blue line" painted in the road which approximates to the measured line or the "shortest possible route" (see 'Course management' section).

The blue line is the ideal running line and the lead runner will most likely adhere fairly closely to it. Using this line as a guide, TV bikes and other lead vehicles can see where the course goes and also see how runners are likely to move across the road at different points in the course. This should allow the rider, anticipating the runners' movements, to recognise when he needs to move across from one side of the road to the other (ahead of the runners) to avoid being trapped on the kerb. The TV bikes should at no time drive along the blue line; the rider should always make a decision as to which side of the blue line he should be on – usually the side furthest from the kerb.

Every effort should be made to position all vehicles to allow the runners to see the shortest path of the course directly ahead of them.

Separate men's and women's races

If the elite women's and men's fields set off at different times then two sets of the above vehicles may be required (excepting the pilot vehicle). If the elite women's race takes place concurrently with the mass race then a separate lead vehicle will still be required to stay in front of the leading women. This will require the driver of the vehicle to navigate very carefully through those male runners running at a similar pace. A motorbike or bicycle may be better adapted to doing this than a larger vehicle.

Other course vehicles

Other vehicles may require access to the course, but they will not be part of the formation at the front of the race. If the race is run on a point-to-point course baggage vehicles will have to carry runners' belongings from the start to the finish. These should travel separately, either on the course ahead of the pilot vehicle (which will involve departing at least 15 minutes before the start) or by a different route altogether.

A vehicle may also be required to pick up pacemakers who have been asked to take the race at a certain pace to a particular point. These pacemakers should be given clear instructions as to exactly where they should wait for this vehicle. Once the vehicle has recovered the pacemakers it should leave the course and return to the start/finish or race HQ by a separate route.

A **sweep vehicle** may be used at the back of the field. In small races it can collect those runners who are unable to complete the course, but in larger races this is not practical. What it can do in either case is to inform runners that the roads are re-opening and runners are obliged to act as normal pedestrians, which will involve using the pavement/sidewalk and obeying all traffic signals.

Competition officials

Road races should utilise sufficient certified officials to ensure the integrity of the competition. Volunteers often perform jobs that should be done by certified officials. This may mean that the event cannot adequately administer the rules of competition and the ratification of records could be

jeopardised. Be aware that many certified athletics officials may not be well-versed in the rules and protocols as they apply to a road racing event.

Officials may include:

- Referee
- Jury of Appeal - only required in Championship events
- Call Room Judges (for Elite division)
- Starter (often works with a dignitary/celebrity starter)
- Umpires (should include an adequate number at refreshment stations)
- Marshals
- Transponder Judge- helps to ensure that the transponder timing system is set up and working correctly
- Photo-Finish Judge
- Timers & Judges (finish line and course timing points)
- Road Course Measurer- responsible for the measurement and certification of the race course.

Additionally, for IAAF World Athletic Series events, the following are appointed by the IAAF;

- Technical Delegate
- International Technical Official (ITO/ICRO)

Finish line

Along with the start, the finish line is the highest profile area of a road race. Every effort should be made to keep these areas free and clear of people who have no necessary role. It is best if only the designated "tape holders" be at the finish line when the winners finish. Areas off to the side of the finish line (out of the view of the media) should be set up for officials and time keepers. Additional zones at least 20m beyond the finish can be designated for post finish logistics for elite athletes.

The layout of the finish line should be designed with the following parameters in mind:

Wherever possible the last 200m prior to the finish line should be on a relatively straight, flat roadway.

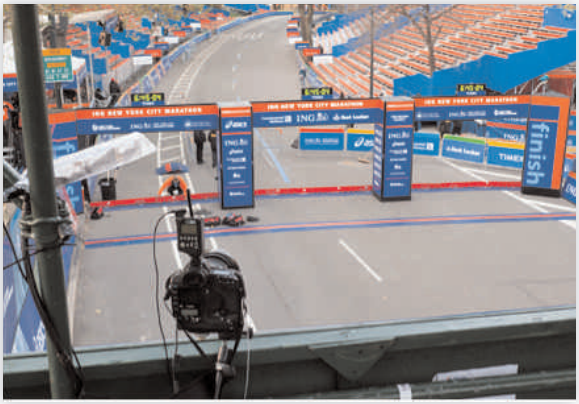
The finish line should be wide enough to accommodate the anticipated peak flow of finishers.

Secured areas should be provided for;

- Television
- Photographers
- Medical
- Doping Control
- Media

Multiple Finish Lines

Many large events incorporate a finish line that is subdivided into 2 or 3 finish sections adjacent to each other. This is very useful in helping to isolate and highlight the top division finishers and celebrity participants. By using cones or vertical columns separate finish lines can be provided for the top men, women, and wheelchair athletes. It is common practice to open all of the finish lines for the mass participants after the elites have finished and as the flow across the finish line increases. The separate streams of finishers usually continues through into the post finish line area to assist delivery of services to finishers including refreshments, heat blankets, medical, finisher medals, etc.



Example of a Multiple Finish Line

Advantages of the multiple finish line

- Finish lines can be open and closed to assist with various logistic situations.
- Allows top finishers to be highlighted for television and the media.
- Helps provide for a controlled area for elite athletes and celebrity runners after finishing.
- Helps finish line staff and volunteers to assist the participants at the finish line and post finish area.
- Helps the medical team provide aid to finishers. A finish line can easily be closed for a runner requiring immediate medical attention.

Finish line gantry/structures

Most races have some type of overhead finish line gantry/structure to support signage and digital display clocks. These structures need to be sturdy and able to withstand high winds. Many governments have strict safety regulations in regards to these types of temporary structures.

The design and placement of the structure is important to be able to accommodate both transponder and photo finish equipment. Some events that use the multiple finish line system will place the structure approximately one metre beyond the finish line to allow a clear view for the photo finish camera.

Photographers' Area

A secure area approximately 20+ metres beyond the finish line should be set up for photographers. A volunteer/staff member must be assigned to control the positioning and movement of the photographers. Some of the large events erect an overhead gantry or 'bridge' beyond the finish line for photographers and TV. This greatly reduces the number of people on the ground and provides for an uncluttered finish area.

Mixed Zone

Events with high profile athletes will require an area past the finish line where the press & TV can interview athletes. The mixed zone should be set up off to the side in an area that does not interfere with the flow of the other finishers but which will ensure that all elite athletes must pass through.

Post-finish runners' amenities

Even though the race is over runners will still need to be provided with essentials such as fluids and heat blankets. Race organisers should create a post-finish "flow plan" and provide enough space to implement it in such a way that there is no backing up. When possible the post finish area should be on a straight, wide roadway or a large field. For races with thousands of finishers, water and other amenities should be placed further away – a minimum of 50m from the finish line.

Recommended order of amenities:

- water
- heat blankets (weather dependent)
- medals
- photography – photographing finishers with their medals
- refreshments
- baggage reclaim
- family reunion

Many popular races will have a dedicated post finish area for VIPs, celebrities and other special guests who have completed the race. This is often needed in order to provide the extra security required.

Some races will apply a different flow (such as: medals, photographer, water, blankets) to allow runners to be photographed without wearing the heat blankets. This order should only be implemented when there is a good flow plan and runners are not detained too long through the photo process.

Finish Area Medical

Race organisers must incorporate professionals for this aspect of the event. The size and staffing of the medical area will be dependent on several factors including the distance, number of participants, and weather conditions. This area needs to be set up within 100m of the finish and have unobstructed access to the runners. Often a large tent is sufficient for this purpose. Ambulances should be able to drive freely to and from this area without crossing the flow of runners. Trained medical volunteers and staff should be in attendance at the finish line throughout the race to assist the participants.

Doping Control Area

A secure, private area with toilet facilities needs to be provided for doping control. The configuration and set up will be determined by the doping control officials. This usually includes an outer room for administration, waiting and separate areas for men and women for sample collection.

If the race hotel is relatively close to the finish area it may be possible to use a space within the hotel as the doping control center. Those runners selected for doping control will have to be chaperoned from the finish line to the doping control center, and this may include attendance at the award ceremony and press conference.

Awards & Award Ceremonies

Where prize money is awarded, this may be announced at the prize ceremony immediately following the race, but the money itself should only be released after careful checking that each money-winning performance was valid. For big races this will also mean awaiting the results of doping control.

Most road races will have an awards ceremony after the race. The smaller events will usually recognize both the overall as well as the age group winners, when age group awards are offered, at this ceremony. Larger events might limit the awards ceremony to the top finishers and send out

age group awards by post. In marathons it is not practical to ask top athletes to wait around for a ceremony that would include age group winners.

Race Timing and Results

The basic reason most people enter a race is to record a definite time covering a definite distance. An official, correct time is recognition of a runner's performance. Accurate recording of results is essential for awards, the press, rankings and ratification of records.

Timing a small race of fewer than 100 people poses entirely different issues from one in which tens of thousands participate. The budgetary constraints, and the equipment and personnel available, will also be quite different. Small club events can easily be timed with conventional stopwatches and printer-timing devices but most events today hire independent timing companies to provide the equipment, personnel and expertise. Some of the larger running organisations like the New York Road Runners stage over 50 races annually with an average of 5000-7000 runners per event. They have full time staff members and their own timing equipment dedicated to timing and race results.

Types of Timing Systems

The main types of timing systems available are:

1) **Transponders** ("active" or "passive) that are assigned to runners so that finishing times are registered electronically into a computer system as runners cross the finish line. This is definitely the most efficient method of timing races, and any race with more than 1000 runners will most likely find some version of a transponder system within the constraints of their budget. Results can be directly outputted for press, TV and to the race website, although they should be described as 'unofficial results' until they have been verified.

2) **Manual printer-timers**, where a timekeeper depresses the key on a hand-held printer-timer each time a runner crosses the finish line. Runners then have to queue up in their finishing order so that their running number

can be checked against their finishing position. There are various ways in which this can be done to render the processing and eventual output of results easier. An independent check must be made from time to time, where a runner is selected whose number is noted directly alongside the finishing time (usually on the printout) so that the two lists remain synchronised.

3) **Hand-held stopwatches**, where timekeepers call out a time as each runner crosses the finish line and this time is written down by someone else on a pre-prepared sheet. Runner numbers must also be matched with their finishing positions as in (2) above, and the same occasional cross checks need to be made. This method can only cope with relatively small size races, with no more than a few hundred runners. It is nearly always used as an additional method to time the first few finishers in a race (see below)

In all cases a back-up system will be required in case of the breakdown of the primary system. In most cases such backup can be achieved simply by continuously filming the finish line with a high speed video camera as runners pass through, keeping the race clock in frame and focus. Even if the race clock breaks down the clock operating within the camera can be checked against the time elapsed in the race.

Additionally, it is strongly advised that the traditional hand-held stopwatch method (see 3 above) be used for the top finishers in any race to act as an independent backup system

Transponder timing

IAAF rule 165.24 permits the use of transponder timing systems in road races.

Transponder systems are based on continually evolving Radio Frequency Identification (RFID) technology. Each runner wears a transponder that has a unique identification code which is matched with the runner's information in a computer database. Depending on the timing system, the transponder may be worn on the shoe or attached to the bib.

The runner's transponder can be detected anywhere that the appropriate antennae systems are placed along the course: at the start, finish and split points. Depending on the transponder timing system, the antennae may be housed in rubber/plastic mats, as a wire loop that can either be taped to the ground or attached to an overhead gantry.

As the transponder crosses the antennae threshold, the system records its unique frequency along with the time, then stores the data and transmits it to the scoring system.

Advantages of transponder timing: 'Net Time' vs. 'Gun Time'

Events that use antenna systems (transponder timing systems) at the start can provide their participants with a **"net time"** - the time between when an individual runner actually crosses the start line and when he/she crosses the finish line. This is different from the **"gun time"**, where the start time is the same for all participants at the start of firing the gun. "Net time" is valuable information for runners in large events where it could take several minutes for the entire field to cross the starting line. Under IAAF Rules, the "gun time" is the official time, but many large, non-championship events routinely provide "net times" for informational purposes as well as using these times to determine age group winners. Net time is not permitted for IAAF World Record purposes.

In summary. transponder systems offer significant advantages:

- fast and accurate results for each individual participant
- "net times" and split times can be made available to participants
- split times can be fed to press, TV, internet and social media
- there is no backing up of runners at the finishing line
- there is less build-up and break-down of material at the finish line
- accurate recording of times at intermediate points
- automated checkpoints along the course can be used to safeguard against cheating

Active and Passive Transponders

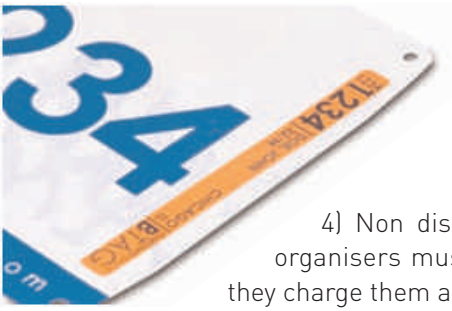
Transponders are available as either "active" or "passive". In order for a transponder to be energised to transmit its unique frequency it must be powered either by its own battery ("active") or by induction emitted by an electromagnetic field from the antennae ("passive)".

The main practical differences between active and passive transponder systems are:

1) Active transponders are much more expensive (may be up to 20 times as much as passive transponders) and are generally more accurate than passive transponders.

2) Active transponders can transmit information as runners pass over a wire loop. Such a loop could be merely taped to the road surface. The "passive" system requires a more elaborate antennae system than the wire loop antennae for the "active" system. The active system requires no heavy matting and costs for transport of equipment and time for set up are much reduced.

3) Disposable passive transponders have been developed and used in many top road races around the world. These systems offer logistical advantages as well as reduced costs per transponder.



4) Non disposable transponders are items that race organisers must retrieve from their race entrants, unless they charge them a deposit for "rental" which will cover the cost incurred by possible loss of the transponder. "Transponder retrieval" is a specific function that must be considered and carefully planned out in any finish line set-up.

Issues with transponder systems

Transponder systems provide varying degrees of accuracy. Systems using an active transponder are usually more accurate when compared to photo finish timing then those using passive transponders. Additional problems can arise in the actual determination of finish order with tightly packed runners, especially if only one shoe transponder is used. There have been many situations where one runner's torso crosses the finish line before another but his transponder was on his trailing foot. Many high profile races will provide elite athletes with a transponder for each foot. Passive bib transponders have become popular in the last few years for large events but their ability to effectively differentiate between close finishers needs to be improved

It is recommended that races use video recording as a backup to help reconcile any discrepancies in the order of finish or missed transponders. For high profile events with prize money, races should incorporate photo finish timing to confirm the order of finish.

Race organisers should develop a protocol for the quick verification of finishers utilising all available data (transponder, photo-finish, video, etc.) to provide for a speedy and accurate broadcast of results.

When problems occur with these systems it is usually because operators do not understand all set up and software issues. Either employ a dedicated timing company or, if you are renting or purchasing the equipment yourself, make sure that your entire team are thoroughly briefed by the distributor before you use the system in a real race.

Transponder frequency interference

Video screens, sounds systems and other electronic devices could potentially interfere with the ability of a transponder system to capture the signal. Testing should take place in advance to ensure that there is no interference.

Positioning and technical specifications

IAAF Rule 240 requires that the start and finish are clearly marked with a line up to 30cm in width of any colour that contrasts to the color of the road surface. Depending on the transponder system used, it is essential that the finish line is correctly identified.

Antennae placement

Different transponder companies embed their antennae at slightly different locations in their "mats." Many will read from the front edge of the mat while others may be in the middle (active & UHF). Regardless, the antennae (mats) should always be positioned so ALL of the antennas (primary and secondary) are completely behind the start and ALL of the antennas (primary and secondary) are completely behind the finish, or split timing points. Failure to properly position the antennae will result in runners being recorded on a slightly short course.

Transponder systems used for splits should be placed on the road along the shortest possible route. Care should be taken to ensure that these systems are correctly placed based on course certification information to help with the potential ratification of records.

IAAF Rule 165.24

Transponder System

a) none of the equipment used at the start, along the course or at the finish line constitutes a significant obstacle or barrier to the progress of the runner

b) the weight of the transponder and its housing carried on the runners' uniform, race number or shoe is not significant.

c) the system is synchronized to the start signal. The official time is that elapsed between the start signal and the runner reaching the finish line. The time elapsed between a runner crossing the start and the finish line can be made known to the runner, although it will not be considered the official time.

d) the system requires no action by the runner during the competition, at the finish line or at any stage in the results processing

5. Elite Athletes

When assembling an elite field, carefully consider what you wish to achieve and keep this overall objective in mind when other decisions have to be made.

Underlying objectives

Why are you seeking an elite field? Have new funds become available, perhaps through one particular sponsor? Could such funds be used for other purposes, or do they have to be dedicated to recruiting an elite field? As race director you should advise your sponsors where you think money could be most productively spent in order to improve the quality of the race. There will be many possible ways in which this could be achieved; the recruitment of elite runners is only one of them.

If you are decided upon recruiting elite runners to your race, consider what you think this could achieve:

- Satisfaction for a particular sponsor
- Faster times, and through this (but also requiring added attention to media and PR aspects) greater international recognition.
- International competition for top domestic runners, which may help to develop home talent.

Decide what budget you can devote to this initiative. Do not get involved in any negotiations without a clearly-defined budget for elite athletes.

Recruiting elite runners

After this decision to commit resources, you must decide how the money can be spent to best effect. Should you try to do this job yourself or should you engage a consultant through whom you can deal with elite runners and their agents? In all cases, the race organiser remains fully responsible for ensuring that all contractual monies are paid to the athletes or their officially Authorised Athletes Representative (Agent or Manager).

This should be a relationship based on trust and defined by contract. The consultant will likely also be an elite athlete manager. He should declare which of his own athletes he is seeking to place in the field, and any special arrangements he may have with other agents (such as split fees, or extra commission) for placing their runners. A consultant should not charge any athlete or athletic agent for signing runners on behalf of the event he represents.

The first priority is to establish targets:

- What level of performance will have an impact?
- What level of performance is required to secure further funding?
- What level of performance is required to secure enhanced coverage (print, radio & TV attention)?
- Which particular runners can best achieve impact?

If fast times will by themselves attract interest, no matter who runs them, then the investment becomes a question of recruiting the fastest runners at the best prices.

An elite field can almost of itself generate more media interest, both in the specific race and in the event as a whole - especially if the main protagonists recruited are distinctive, diverse characters, or have some particular local connection. The aim for most races will be to generate an engaging enough "story" behind the athletic competition so that TV interest can be attracted.

To achieve this several international runners could be recruited, with target times specified for their performances. Generally it is better to engineer a close race rather than invite one strong runner who may be a runaway winner, but may also do no more than necessary to win (and therefore get overpaid for their performance).

Elite competition may be restricted to the headline race, but there could be some benefit in recruiting one or two elite runners even for the subsidiary events, especially if they are carefully chosen to complement the domestic competition expected.

Selection of runners

Good local runners are the best asset of any race. If they are of international standard and prepared to run in your race, then they need to be provided with appropriate competition. This would be a very good point from which to start planning an international field.

All other domestic runners. They will be looking both for a competitive race and the possibility of winning some of the prize money on offer.

International runners. Engaging those who are based close by will allow travel costs to be minimized.

Runners recruited by approaching agents or athletic federations. You will need to specify very clearly exactly what type of runner and level of performance you are seeking and have a clear idea of what you are willing to pay to secure them. Agents (and this may include the federation) will take a percentage of the fee for themselves, so it is in their interest to over-value the runners they offer.

Safeguarding against abuse

Knowledge is an invaluable asset in any marketplace. In marathon running useful knowledge is very easily obtained because race results are given wide publicity. Targeted searches of the Internet will usually reveal whether the race qualifications quoted by a runner are genuine.

Race enhancement through elite recruitment

Extra resources could be committed to:

- Increasing prize monies to make it generally more attractive to runners.
- Covering travel and accommodation (within agreed limits) for the targeted invitees.
- Engaging a pacemaker to ensure that the race is run at the desired pace.
- Using the services of a consultant to recruit a group of athletes of the desired performance level.

Using a consultant will mean that any approaches from athletes, agents or federations will be passed to them. They will be responsible for delivering the group subject to agreed conditions, and in doing so they will screen the claims of potential participants.

Administrative and budgetary considerations

The budget at the disposal of the Elite Athlete Coordinator will NOT include the agreed, published, prize list, but WILL include:

Appearance Fees: Appearance fees are payable, if your event has a large enough budget, to attract runners in whom you have a particular interest. Each runner or their agent may consider that they have a particular market value, but as race organiser it is up to you to make your own assessment of the value of particular runners. Appearance fees are usually paid to runners with an established reputation. A consultant may be able to advise on the "correct" value of a runner according to fast times run in the past, but this is not the only relevant criteria.

The fee payable should be assessed in relation to the pre-event publicity that the runner in question can deliver to your own particular event. Just because a runner may have fast times to their credit does not necessarily mean that this will be of specific value to your race. You are the best judge of this value and you should insist that you have the final decision concerning appearance fees negotiated by any consultant you may engage.

Time bonuses: To give runners a clear incentive to achieve fast times, you may consider offering time bonuses. Typically these will be payable to all runners who run faster than a target time that you specify. If you specify incentives for more than one target time be sure to emphasise that these are not cumulative. To safeguard finances in the event of very favorable race conditions you may also need to dictate a "cut off" where, if several runners break the stated times, only the first few of them are paid the bonus. Similarly, you can specify reduced payments when certain agreed performances are not achieved.

Visas: There must be clear and regular communication between the organisers and runners or their representatives. Once terms are agreed,

invitations for visas must be sent out early to avoid last-minute panic. Visa fees and ground transportation in the athlete's own country should be allowable expenses to be claimed against the race travel budget.

Travel: It should be clearly understood whether the race will arrange travel or whether the runner or agent should do this themselves and later claim reimbursement. To avoid confusion race organisers should agree individual ticket prices on application. If no prior agreement has been reached, the race organiser will not necessarily be obliged to refund the ticket price in full.

Accommodation: You should agree in advance the standard of accommodation that will be provided, if any. Make sure runners know which meals (if any) are included in the room bill and what extras they must pay for themselves.

Meals: You should budget to meet the cost of meals for invited runners. If you have many invited runners attending your race you may find it more convenient to provide them with a separate menu in a separate eating area from the main hotel restaurants. This arrangement has the advantage that you can agree a menu that is appropriate to an endurance runner's pre-race diet. An alternative approach is to simply allocate a cash sum to each runner as a "per diem", so that they can make their own decisions about what food they buy.

Detailed arrangements

Apart from an agreement in principle reached with the athlete, agent or federation, specific contracts should be drawn up with individual athletes and agents which include detailed clauses specifying bonuses for good performance or penalties (i.e. percentages of an agreed fee withheld) in the event that the athlete fails to perform. Athlete/Agent contracts for events should always include the right of the Event to reduce fees if the athlete under-performs or does not finish the race.

Equally, the Event has a clear responsibility to fulfill its obligations in terms of timely payment of runners. It is unacceptable for payments to be delayed beyond six months from the date of the event, or more than two months after doping control results are known. Target deadlines should be half of

this time. Any undue delay will damage the reputation of the race and create uncertainty concerning future commitments. As a race organiser you should above all be realistic about the timing of payments and always communicate with athletes/agents if there are unavoidable delays.

There are also details that the race director should attend to as a matter of courtesy and self-interest, such as:

- **Arranging to meet athletes at their point of arrival (Airport/Train) and deliver them to their point of departure**. If you are organising travel for invited runners make sure that the journey does not involve many hours in transit between flights; this will harm their performance. Ensure that return flights have been reconfirmed prior to departure for the airport and that a race official stays with runners until they are checked in.

- **Giving clear guidelines concerning allowable expenses**. If the race is providing accommodation and food for athletes, make sure that the arrangements are clearly stated.

- **Offering basic information and hospitality services at the race hotel.** An information desk should be set up in the hotel lobby to serve as a convenient point of contact. A race official should be in attendance at appointed times. All relevant information should be prominently posted here. Water and perhaps some light refreshments should be made available. Races with bigger budgets may consider setting aside a room within the hotel as a dedicated "hospitality room" and providing such facilities as Newspapers, TV/video and Internet connections.

- **Offering specific medical attention**. This may involve no more than making basic medicines and first aid available through the help desk, but it is also useful to allow runners direct contact with the race medical staff. Inform runners how they can do this, perhaps by signing up for appointments at the help desk. Pre- and post-race massage could be offered on a similar basis.

- **Offering a chance to tour the course**. Detailed course maps (with course profiles) should be made available, but if at all possible runners should be offered the opportunity for a course tour.

- **Making sure that athletes are fully advised of their responsibilities**. This may include attendance at press conferences, interviews, technical meeting, prize giving ceremonies, and the possibility of providing a blood or urine sample to doping control.

- **Holding a technical meeting the day before the race.** All elite runners or their representatives must attend this meeting to be fully informed of race rules and course information (see below).

- **Providing facilities for personal drinks during the race.** The standard arrangement is to allow elite runners to pick up personal drinks every 5km. Runners should be informed at the technical meeting where and when they must hand in their personal drinks. These should be in a separate bottle for each drinks station. The bottles may be provided by the race organisation or runners advised beforehand that they must bring their own. The bottles should be clearly marked with the runner's name, race number and the kilometer point where the drink is to be placed. These bottles should be placed on clearly marked tables separate from the common drinks stations.

- **Ensuring runners are taken to the race start**. Before leaving the hotel a race official should check off a list of invited runners to make sure that they are all present and that they board official transportation to the race start (or are personally escorted there). They should arrive at the start area at least an hour before the race and be taken to a safe/warm area for them to rest and prepare. They should be able to leave belongings in this area for the duration of the race, or have them safely transported to an equivalent area at the finish line in the case of a point-to-point course. Drinks should be available before and after the race. They should have easy access to a suitable area in which they can warm up, where they will not be impeded by the media or other runners. At an agreed time before the start (usually between 5-10 minutes) invited runners will be escorted from the preparation area (usually a tent or marquee reserved for the exclusive use of elite runners) to the start line, where they will be positioned in front of the mass runners so that they are not impeded by them at the start.

- **Guiding runners away from the finish line**. As elite runners finish they should be closely guided through the finish procedures towards a recuperation area (usually the same as the preparation area). They should be provided with water and/or energy replacement drinks. If they have been selected for doping control they should be accompanied by a chaperone and informed of the requirements of the testing procedure (see separate section on Doping Control). If they have to wait for a significant time before testing or before award ceremonies then food should also be provided.

- **Taking runners back to their accommodation after the race**. Once runners are recovered they should be provided with official transport back to the race headquarters or wherever they are staying. It is quite acceptable for them to wait long enough so that they have all finished the race (this should be less than one hour), but if certain runners are significantly delayed by award ceremonies, press commitments, doping contol or suchlike, then these runners should be provided with alternative transport rather than delaying all others.

Technical Meeting

The Technical Meeting is usually held at the Headquarters Hotel. The purpose of a Technical Meeting is to provide the elite athletes, and their coaches/managers with information that is critical to their participation. This includes but is not limited to the following:

- Transportation to and from the start/finish
- Pre-race facilities: toilets, refreshments, warm up area
- Presentation of the athletes at the start
- Information about the course
- Information about pacemaking arrangements
- Information about the placement of personal drinks
- Review of the relevant Rules of Competition
- Mixed zone procedures
- Protocol for protests & appeals
- Review of Doping Control procedure
- Awards ceremony and post-race interviews

6. Competition Rules

Pacing

IAAF Rule 144

Giving Assistance

2. Any athlete giving or receiving assistance from within the competition area during an event shall be warned by the Referee and advised that, if there is any repetition, he will be disqualified from that event. If an athlete is subsequently disqualified from the event, any performance accomplished up to that time in the same round of that event shall not be considered valid. However, performances accomplished in a previous round of that event shall be considered valid.

   For the purpose of this Rule, the following shall be considered assistance, and are therefore not allowed:

   (a) pacing in races by persons not participating in the same race, by athletes lapped or about to be lapped or by any kind of technical device (other than those permitted under Rule 144.2(g)).

Pacemakers have been a part of athletics for many decades and have been successfully incorporated into road racing to help ensure fast times, although some major events have chosen not to use them. In large events pacemakers have also been used to assist mass participants to reach their goal times. All pacemakers should be clearly identified by their kit and running bib. It is recommended that there should not be more than three pacemakers for any given pace as well as prohibiting personal pace makers. This requirement is mandatory for all IAAF Label road races.

Pacemakers are required to be registered participants in the race and should be included in the race results.

Cheating

Cheating in road races is more common than most people think. There have been high-profile cases where runners at the front of the race have cheated in order to win prize money, but there are many less obvious cases. Runners further back, hidden among the crowds who participate in big races, may cheat simply in order to get a certificate "proving" that they have done something that they did not do. Crude cheating is simple to detect, particularly since the use of transponder timing systems has become widespread.

Course Cutting

Course cutting may simply involve the runner jumping a kerb onto a footpath instead of staying within the roadway at a turn, and saving a few metres.

Behind them, mass runners will have no such inhibitions. Moreover, pressure of numbers filling the roadway will tend to push slower runners out so that they fill all available space, whether it is in the roadway or on a footpath.

The crucial word here is "available". The race organiser can decide what should be made available and take measures to restrict runners to this predetermined space. Barriers should line the road at places where runners could cut corners.

Taking a short-cut down a side street to rejoin a race at a later stage is a more serious, calculated attempt to cheat. Out-and-back courses offer anyone the chance to turn around early and "save" a lot of distance. A checkpoint at the far extremities of the course will easily detect those runners who have done this. A check can be provided by a transponder timing point at this location. Otherwise pairs of spotters and recorders (at least one pair for men and one pair for the leading women) should be stationed at these points to record the passage of runners. This may also be

done by a video camera, but checking the tape can be time-consuming. Similar measures should also be taken in the case of multiple-lap courses.

When using a video camera to record the passage of runners, select a location where runners make a right angle turn. As they approach the turn they will tend to run in single file to take a shorter path around the corner. Place the video camera outside the corner and film as runners round the corner, presenting their race number to the camera.

One legitimate reason for runners to leave the course could be to make use of toilets provided along the route depending on their location.

Jump-ins

One variation on course-cutting is to jump in after the start. This could be 41km after the start, but it may be after only 195m. This is a slightly different type of cheating and raises different problems.

Runners without race numbers often jump in either to save the entry fee or because the entries were already closed when they applied to run. Unregistered runners will consume resources intended for bona fide race entrants. If they do cross the finish line they can cause confusion, and it is sometimes their specific intention to do so.

In big races "No transponder, no time" means they will not appear in race results, but if they are not ejected before the finish line they may still be able to take away a finisher's medal and goody bag intended exclusively for bona-fide race participants.

For others who jump in late in the race, their cheating is only incidental. It is not their main intention. They are jumping in for the publicity - to appear on TV or just in front of a crowd of attentive onlookers. They may be seeking publicity for a cause, and will pull out a banner as they enter the finishing straight.

In all cases it makes sense for race organisers to save themselves embarrassment by positioning teams of "bandit catchers" to eject all those people from the final few hundred metres who are not wearing a genuine

race number (they sometimes wear fake numbers, of varying believability). This should be done as close as possible to the race finish while remaining out of sight of finish line observers.

Misrepresentation

If a registered runner does not run the race then that race number must not be transferred to another runner. The motive for doing so may be just to save an entry fee, but this could also be a case of misrepresentation, with the participating runner impersonating the registered runner. This can cause serious confusion in cases where medical attention may be required. Requesting verification of identity at registration limits this problem but does not eliminate it.

To reduce the incentive for those seeking to save on a race entry fee (particularly a punitive "late" fee) the race organiser could allow re-assignment of race numbers for a nominal administrative fee. Doing this may interfere with the assignment of race number sequences to particular groups of runners (male/female or senior/masters categories, for example). Even so, if the race has registered the change it will show up on the database so that runners can be correctly identified as individuals with records, and potentially embarrassing mistakes can be avoided at the presentation of awards.

Some runners will misrepresent themselves specifically in order to win prizes to which they are not entitled. They may lie about their age so that they are competing in a weaker age group competition, but they may get another runner to run on their behalf, but then claim the prize themselves at the award ceremony. All evidence that may confirm or refute the credentials of all prize winners should be carefully checked before making the awards.

Videotaping runners as they cross the finish line is highly recommended as a back up measure to confirm contested results. It will show, where the transponder times don't, whether a man ran with a woman's number or a 25-year old ran with a 60-year old runner's number.

Inadvertent switching of number and/or transponders happens quite frequently, most often between family members. This may be husband and wife but may also be visiting runners who are sharing a hotel room. Although inconvenient, such mistakes are usually corrected with the direct assistance of those affected (and usually at their own insistence).

Disqualifications

Disqualifying a runner will cause problems, but not as big problems as allowing cheaters to win. Race organisers must be able to prove that runners cheated before disqualifying them. Many methods of checking, like spotters recording race numbers, are not foolproof. Even a video record can be questioned. Make sure the camera has a time recorded on the tape. Only disqualify a runner if you can confirm that they cheated, and if you can, then make sure that they are disqualified.

Cheating offends against the ideals of sport and failing to act against it will bring running into disrepute.

Protest and Appeals

Protest procedures for elite races and elite athletes are outlined in IAAF Rule 146.

Rule 146 may work well for the elite division of a road race but may not be practical for the age group divisions in large events where it may take several hours to post the results for all of the finishers. In addition, several days may be needed for race officials to scrutinise recorded split times and race video. Some races will have a 24 hour protest window for the non elite division from the time that the Officials Results are posted. It is essential that all protest protocols be made available before the race to all participants as well as along with the posted results.

All races must have a Referee to help resolve disputes. A Jury of Appeal is mandatory for Federation Championship races and is recommended for all events. It is important that when selecting a Referee and Jury that they fully

understand the Technical Rules. One member of the Jury should be a Certified Official

Records - Ratification

Road race organisers need to ensure that all of the technical rules are followed to allow for potential records and their ratification by the IAAF. The ratification requires the filling out and submission of a World Record form available on the IAAF website.

Road races that anticipate a potential record can help expedite the process by having their race course measured in advance by two IAAF road course measurers.

IAAF Rule 260.28(e)

The course must be verified (i.e. re-measured as late as possible before the race, on the day of the race or as soon as practical after the race by a different "A" grade measurer from any of those who did the original measurement.

Note: If the course was originally measured by at least two "A" grade or one "A" and one "B" grade measurer, and at least one of them is present at the race to validate the course as per Rule 260.28(e), no verification under this rule will be required.

7. IAAF Label Road Races

1. General Principles

1.1 Each year, the IAAF awards a designation referred to as an IAAF Road Race Label to leading Road Races around the World.

1.2 Races shall be divided into three categories:

- **Marathons**
- **Half Marathons**
- **Other races –** included under this category :

- Races over "official distances" for which World Records are recognised
(see IAAF Rule 261): 10Km – 15Km – 20Km – 25Km - 30Km – 100Km;
- "Classical" races" over non-standard distances.

1.3 There shall be 3 levels of label for each of these categories:

- **IAAF Gold Label**
- **IAAF Silver Label**
- **IAAF Bronze Label**

1.4 These Regulations may be amended every year by the IAAF.

2. Applications / Labels

2.2 Applications for an IAAF Road Race Label may be submitted by Race Directors of races that comply with the conditions mentioned in these Rules (and annexed documents).

2.3 Races should submit to the IAAF an Application duly signed by the Member Federation (MF) of the country in which the race is staged, by the relevant deadline (see 2.4 below), using the appropriate application form for an IAAF Label.

2.4 Applications shall only be accepted from races that have been contested for at least two editions prior to the date of Application.

2.5 Applications will be evaluated twice yearly: races held from January to June inclusive shall be evaluated in August, with Applications received by the IAAF no later than 15 August, and races held from July to December inclusive shall be evaluated in December, with Applications to be received by the IAAF no later than 15 December.

2.6 The relevant IAAF Label shall be granted initially for one year.

2.7 Races that have held the same level of Label for no less than three consecutive years may be awarded the same level of IAAF Label for a three year period upon the fourth renewal subject to full compliance with all Label Regulations and the submission of an Annual Report Form.

2.8 The acceptance or rejection of an Application is at the sole discretion of the IAAF and shall be based on the race fulfilling all of the criteria laid out in these Regulations.

2.9 The IAAF reserves the right to refuse the renewal of a Label to any Race that fails to comply fully with the IAAF Label Road Race Regulations.

3. Obligations / Requirements of the Organisers

3.1 Athletes

International Field

Gold and Silver Label Races must have an 'international elite field' with a minimum of five men and five women participating in the competition in the relevant Label category as defined in §3.2 hereunder of at least 5 different nationalities (note: this could be, for example, elite men from 3 countries and elite women from 2 countries for mixed gender races); a minimum of four different nationalities must be represented at the elite level in Bronze Label Races.

Single gender elite invitational races shall have at least five men or five women in the relevant elite athlete category representing at least 5 different nationalities.

To be considered as part of the international elite field for the purposes of the IAAF Road Race Label, all elite runners must be 'bona fide competitors'.

Full details, current Regulations and application forms are available on the Label Road Races section of the IAAF web site www.iaaf.org.

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The above details are also available on the IAAF website.

Relevant IAAF Rules

RULE 144

Assistance to Athletes

Indication of Intermediate Times

1. Intermediate times and preliminary winning times may be officially announced and/or displayed. Otherwise such times must not be communicated to the athletes by persons in the competition area without the prior approval of the appropriate Referee. This approval shall be given only when there are no time displays visible to athletes at the relevant point and in circumstances where such times will be provided to all athletes in the race. The competition area, which normally also has a physical barrier, is defined for this purpose as the area where the competition is being staged and which has an access restricted to the competing athletes and personnel authorised in accordance with the relevant Rules and Regulations.

Giving Assistance

2. Any athlete giving or receiving assistance from within the competition area during an event shall be warned by the Referee and advised that, if there is any repetition, he will be disqualified from that event. If an athlete is subsequently disqualified from the event, any performance accomplished up to that time in the same round of that event shall not be considered valid. However, performances accomplished in a previous round of that event shall be considered valid.

   For the purpose of this Rule, the following shall be considered assistance, and are therefore not allowed:

(a) pacing in races by persons not participating in the same race, by athletes lapped or about to be lapped or by any kind of technical device (other than those permitted under Rule 144.2(g)).

Only practical to enforce with the Elite Division of a Road Race

(b) possession or use of video or cassette recorders, radios, CD, radio transmitters, mobile phone or similar devices in the arena.

(c) except for shoes complying with Rule 143, the use of any technology or appliance that provides the user with an advantage which he would not have obtained using the equipment specified in the Rules.

For the purpose of this Rule, the following shall not be considered assistance, and are therefore allowed:

(d) Communication between the athletes and their coaches not placed in the competition area. In order to facilitate this communication and not to disturb the staging of the competition, a place in the stands, close to the immediate site of each Field Event, should be reserved to the athletes' coaches.

(e) Medical examination / treatment and/or physiotherapy necessary to enable an athlete to participate or continue participation once on the competition area. Such medical examination / treatment and/or physiotherapy may be provided either on the competition area itself by the official medical staff appointed by the Organising Committee and identified by armbands, vests or similar distinctive apparel or in designated medical treatment areas outside the competition area by accredited team medical personnel specifically approved by the Medical or Technical Delegate for the purpose. In neither case shall the intervention delay the conduct of the competition or an athlete's trial in the designated order. Such attendance or assistance by any other person whether during competition or immediately before competition once athletes have left the Call Room is assistance.

(f) Any kind of personal safeguard (e.g. bandage, tape, belt, support, etc.) for protection and/or medical purposes. The Referee in conjunction with the Medical Delegate shall have the authority to verify any case should he judge that to be desirable. (See also Rule 187.4.)

(g) Devices carried personally by athletes during a race such as heart rate or speed distance monitors or stride sensors, provided that such device cannot be used to communicate with any other person.

Interpretation :

Elite athletes are permitted to share water bottles but they will be warned if in the opinion of the Referee, one is assisting the other.

Rules of Assistance and pacing cannot easily be applied in mass events.

RULE 145

Disqualification

If an athlete is disqualified in an event for an infringement of any Rule, reference shall be made in the official results to the Rule which has been infringed.

RULE 165.28

Timing System

Transponder System

24. The use of Transponder Timing Systems approved by IAAF in events held under Rules 230 (races not held completely in the stadium), 240 and 250 is permitted provided that:

(a) None of the equipment used at the start, along the course or at the finish line constitutes a significant obstacle or barrier to the progress of an athlete.

(b) The weight of the transponder and its housing carried on the athletes' uniform, bib or shoe is not significant.

(c) The System is started by the Starter's gun or synchronised with the start signal.

(d) The System requires no action by an athlete during the competition, at the finish or at any stage in the result processing.

(e) For all races, the time shall be converted to 0.1 second and recorded to the whole second. All read times not ending in zero shall be converted and recorded to the next longer whole second, e.g. 2:09:44.3 shall be recorded as 2:09:45.

Note: The official time shall be the time elapsed between the firing of the starting gun and the athlete reaching the finish line. However, the time elapsed between an athlete crossing the start line and the finish line can be made known to him, but will not be considered an official time.

Interpretation:

In many large road races where it could take several minutes for all the runners to cross the starting line, event organisers "may" use "net times" to determine age group awards. But world records must be determined by "gun time"

(f) Whilst the determination of the finishing order and times may be considered official, Rules 164.2 and 165.2 may be applied where necessary.

Note: It is recommended that judges and/or video recording(s) also be provided to assist in determining the finishing order.

25. The Chief Transponder Timing Judge shall be responsible for the functioning of the System. Before the start of the competition, he will meet the technical staff involved and familiarise himself with the equipment. He shall supervise the testing of the equipment and ensure that the passing of the transponder over the finish line will record the

athlete's finish time. In conjunction with the Referee, he shall ensure that provision is made for the application, when necessary, of Rule 165.24(f).

RULE 240

Road Races

Distances

1. The standard distances shall be: 10km, 15km, 20km, Half-Marathon, 25km, 30km, Marathon (42.195km), 100km and Road Relay.

   Note (i): It is recommended that the Road Relay race be run over the Marathon distance, ideally over a 5km loop course, with stages of 5km, 10km, 5km, 10km, 5km, 7.195km. For a junior Road Relay, the recommended distance is a Half-Marathon with stages of 5km, 5km, 5km, 6.098km.

   Note (ii): The transfer is made when there is a physical contact between the athlte who comes and the athlete who starts. The vertical contact must be within 20 meters of the takeover zone.

The Course

2. The races shall be run on made-up roads. However, when traffic or similar circumstances make it unsuitable, the course, duly marked, may be on a bicycle path or footpath alongside the road, but not on soft ground such as grass verges or the like. The start and finish may be within an athletic arena.

   Note (i): It is recommended that, for Road Races staged over standard distances, the start and finish points, measured along a theoretical straight line between them should not be further apart than 50% of the race distance. For approval of Records, see Rule 260.28 (b).

   Note (ii): It is acceptable for the start and/or finish and any other segments of a race to be conducted on grass or other soft ground non paved surfaces. These segments shall be kept to a minimum.

3. In events on roads the course shall be measured along the shortest possible route that an athlete could follow within the section of the road permitted for use in the race.

   In all competitions under Rules 1.1(a) and, where possible, (b), (c) and (f), the measurement line should be marked along the course in a distinctive colour that cannot be mistaken for other markings.

   The length of the course shall not be less than the official distance for the event. In competitions under Rules 1.1(a), (b), (c) and (f), the uncertainty in the measurement shall not exceed 0.1% (i.e. 42m for the Marathon) and the length of the course should have been certified in advance by an IAAF approved course measurer.

   Note (i): For measurement, the "Calibrated Bicycle Method" shall be used.

   Note (ii): To prevent a course from being found to be short on future re-measurement, it is recommended that a "short course prevention factor" be built in when laying out the course. For bicycle measurements this factor should be 0.1% which means that each km on the course will have a "measured length" of 1001m.

   Note (iii): If it is intended that parts of the course on race day will be defined by the use of non-permanent equipment such as cones, barricades, etc. their positioning shall be decided not later than the time of the measurement and the documentation of such decisions shall be included in the measurement report.

   Note (iv): It is recommended that for Road Races staged over standard distances, the overall decrease in elevation between the start and finish should not exceed 1:1000, i.e. 1m per km. For approval of Records, see Rule 260.28 (c).

   Note (v): A course measurement certificate is valid for 5 years, after which the course shall be re-measured even when there are no obvious changes to it.

4. The distance in kilometres on the route shall be displayed to all athletes.

5. For Road Relays, lines 5 cm wide shall be drawn across the course to mark the distance of each stage and to denote that scratch line. Similar lines shall be drawn 10m before and 10m after the scratch line to denote the takeover zone. All takeover procedures, which unless otherwise specified by the organisers comprise a physical contact between the incoming and outgoing athletes, shall be completed within this zone

The Start

6. The races shall be started by the firing of a gun, cannon, air horn or like device. The commands for races longer than 400m shall be used (Rule 162.2(b)). In races which include a large number of athletes, five-minute, three-minute and one-minute warnings before the start of the race should be given. On the command "On your marks", the athletes shall assemble on the start line in the manner determined by the organisers. The Starter shall ensure that no athlete has his foot (or any part of his body) touching the start line or the ground in front of it, and shall then start the race.

Safety and Medical

7. (a) Organising Committees of Road Races shall ensure the safety of athletes and officials. In competitions held under Rules 1.1(a), (b), (c) and (f), the Organising Committee shall ensure that the roads used for the competition are closed to motorised traffic in all directions.

   (b) A hands-on medical examination during the progress of an event by the official medical staff appointed by the Organising Committee and identified by armbands, vests or similar distinctive apparel shall not be considered assistance.

   (c) An athlete shall retire at once from the race if ordered to do so by the Medical Delegate or a member of the official medical staff.

Drinking / Sponging and Refreshment Stations

8. (a) Water and other suitable refreshments shall be available at the finish of all races.

(b) For all events, water shall be available at suitable intervals of approximately 5km. For events longer then 10km, refreshments other than water shall also be made available at these points.

Note (i)Where conditions warrant, taking into account the nature of the event, the weather, conditions and the sate of fitness of the majority of the competitors, water and /or refreshments shall be placed at more regular intervals along the route.

Note (iii): Mist stations may also be arranged, when considered appropriate under certain organisational and/or climatic conditions.

(c) Refreshments may include drinks, energy supplements, foodstuffs or any other item other than water. The Organising Committee shall determine what are suitable refreshments based on prevailing conditions

(d) Refreshments will normally be provided by the Organising Committee. The Organisers may permit athletes to provide their own refreshments. Where this happens the athlete may nominate at which stations they shall be made available to the athlete. Refreshments provided by the athletes shall be kept under the supervision of officials designated by the Organising Committee from the time that the refreshments are lodged by the athletes or their representatives. Those officials shall ensure that the refreshments are not altered or tampered with in any way.

(e) The Organising Committee shall delineate, by barriers, tables or markings on the ground, the area from where refreshments can be received or collected, which. Refreshments shall be placed so that they are easily accessible to, or may be put by authorised persons

in the hands of, the athletes. Such persons shall remain inside the designated area and not enter the course nor obstruct any athlete. No officials shall, under any circumstances, run beside an athlete while he is taking refreshment or water.

(f) In competitions held under Rules 1.1(a), (b), (c) and (f), a maximum of two officials per Country may be stationed behind the table at any one time.

Note: For an event in which a Country may be represented by more than three athletes, the Technical Regulations may allow additional officials at the refreshment stations.

(g) An athlete may at any time carry water or refreshment by hand or attached to his body provided it was carried from the start or collected or received at an official station.

(h) An athlete who receives or collects refreshment or water from a place other than the refreshment stations, except where provided for medical reasons from or under the direction of race officials, or takes the refreshment of another athlete renders himself liable to disqualification by the Referee. The Referee should, for a first such offence, warn the athlete, normally be showing a yellow card. For a second offence, the Referee shall disqualify the athlete, normally by showing a red card. The athlete shall then immediately leave the course.

The practical application of this rule may be difficult at times especially when the athlete in question is in the middle of a pack of other runners.

Race Conduct

9. In Road Races, an athlete may leave the road or track with the permission and under the supervision of an official, provided that by going off course he does not lessen the distance to be covered.

If the Referee is satisfied on the report of a Judge or Umpire or otherwise that an athlete has left the marked course thereby shortening the distance to be covered, he shall be disqualified.

General Conditions

1. The Record shall be made in a bona fide competition which has been duly arranged, advertised and authorised before the day of the event by the Member in whose Country or Territory the event takes place and which has been conducted under the Rules.

2. The athlete achieving the Record must have been eligible to compete under the Rules and must have been under the jurisdiction of a Member of the IAAF.

3. When a World Record is set, the Member in the Country where the Record performance was set shall collect together, without delay, all the information required for ratification of the Record by the IAAF. No performance shall be regarded as a World Record until it has been ratified by the IAAF. The Member should immediately inform the IAAF of its intention to submit the performance.

4. The official application form of the IAAF shall be completed and dispatched to the IAAF Office within thirty days. Forms are available, on request, from the IAAF Office, or may be downloaded from the IAAF website. If the application concerns a foreign athlete (or a foreign team), a duplicate of the form shall be sent within the same period to the Member Federation of the athlete (or team).

5. The Member of the Country where the Record was set shall send, with the official application form:
   - The printed programme of the competition;
   - The complete results of the event;
   - The photo finish and zero control test image (see Rule 260.22(c)).

6. Each athlete who sets a World Record must submit to doping control at the end of the event, to be conducted in accordance with the Rules and IAAF Anti-Doping Regulations currently in force. In the case of a Relay Record, all members of the team must be tested.

The sample(s) collected shall be sent for analysis to a WADA-accredited laboratory and the result(s) sent to the IAAF to be added to the other information required by the IAAF for the ratification of the Record. If such testing results in a doping violation, or if such a testing is not conducted, the IAAF shall not ratify this Record.

7. If an athlete has admitted that, at some time prior to achieving a World Record, he had used or taken advantage of a substance or technique prohibited at that time, then, subject to the advice of the Medical and Anti-Doping Commission, such Record will not continue to be regarded as a World Record by the IAAF.

8. The following categories of World Records are accepted by the IAAF:
   (a) World Records;
   (b) World Junior Records;
   (c) World Indoor Records;
   (d) World Junior Indoor Records.

9. For individual events, at least three athletes and for relay events, at least two teams, must be bona fide competitors in the event.

10. The Record shall be better than or equal to the existing World Record for that event, as accepted by the IAAF. If a Record is equalled it shall have the same status as the original Record.

11. Records made in preliminary rounds, in deciding ties, in any event which is subsequently decreed void under the provisions of Rules 125.7, 146.4(a) or 146.5, or in individual events in Combined Events competitions, regardless of whether or not the athlete completes the whole Combined Events competition, may be submitted for ratification.

12. The President and the General Secretary of the IAAF together are authorised to recognise World Records. If they are in any doubt whether or not the Record should be accepted, the case shall be referred to the Council for decision.

13. When a World Record has been ratified, the IAAF will so inform the athlete's National Federation, the Federation applying for the Record and the relevant Area Association.

14. The IAAF will supply the official World Record Plaques, for presentation to World Record Holders.

15. If the record is not ratified, the IAAF will give the reasons.

16. The IAAF shall update the official List of World Records every time a new World Record has been ratified. This list shall represent the performances regarded by the IAAF as being, from the date of the list, the best performances yet set by an athlete or team of athletes in each of the recognised events listed in Rules 261, 262, 263, 264.

17. The IAAF shall publish this list on 1 January of each year.

28. For World Records in Road Running Events:

    (a) The course must be measured by one or more "A" or "B" grade IAAF/AIMS approved measurers.

    (b) The start and finish points of a course, measured along a theoretical straight line between them, shall not be further apart than 50% of the race distance.

    (c) The overall decrease in elevation between the start and finish shall not exceed 1:1000, i.e. 1m per km.

    (d) Any course measurer who originally measured the course or another "A" or "B" grade measurer in possession of the complete measurement data and maps must validate that the course measured was the course run, normally by riding in the lead vehicle.

    (e) The course must be verified (i.e. re-measured) as late as possible before the race, on the day of the race or as soon as practical after the race, preferably by a different "A" or "B" grade measurer from any of those who did the original measurement.

Note: If the course was originally measured by at least two "A" or "B" grade measurers and at least one of them is present at the race to validate the course as per Rule 260.28(d), no verification under this Rule 260.28(e) will be required.

(f) World Records in Road Running Events set at intermediate distances within a race must comply with the conditions set under Rule 260. The intermediate distances must have been measured and marked during the course measurement and must have been verified in accordance with Rule 260.28(e).

(g) For the Road Relay, the race shall be run in stages of 5km, 10km, 5km, 10km, 5km, 7.195km. The stages must have been measured and marked during the course measurement with a tolerance of ±1% of the stage distance and must have been verified in accordance with Rule 260.28(e).

Note: It is recommended that national governing bodies and Area Associations adopt similar rules to the above for the recognition of their own records.

RULE 261

Events for which World Records are Recognised

Fully Automatically Timed performances (F.A.T.)
Hand Timed performances (H.T.)
Transponder Timed performances (T.T.)

Men

F.A.T. or H.T.

or T.T.: Road Races: 10km; 15km; 20km; Half Marathon; 25km; 30km; Marathon; 100km; Road Relay (Marathon distance only);Race Walking (Road): 20km; 50km.

Women

F.A.T. or H.T.

or T.T.: Road Races: 10km; 15km; 20km; Half Marathon; 25km; 30km; Marathon; 100km; Road Relay (Marathon distance only); Race Walking (Road): 20km.

Note: Except Race Walking competitions, IAAF shall keep two World Records for women in Road Races: A World Record for performance achieved in mixed gender races and a World Record for performance achieved in single gender races.

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