

Umstead 007 - Event Information

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1 What Where and When

A three day orienteering event at Umstead State Park, Raleigh NC on March 2-4, 2007

- Friday, Sprint
- Saturday, World Ranking Event and Classic USOF Event
- Sunday, M&F-21- IOF long event and USOF Classic for all others

1.1 Schedule

Friday, March 2, 2007 at Umstead North off NC route #70 Glenwood Avenue

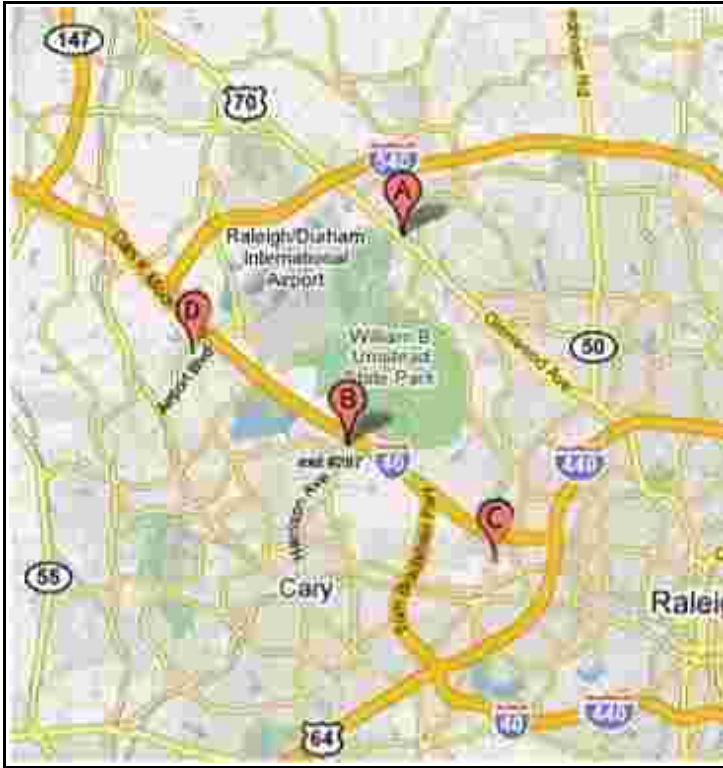
- Registration 1:00pm - 5:00pm Umstead North - Southern Parking Area
- Registration 6:00pm - 10:00pm Days Inn Airport
- Park hours 8:00am until 7:00pm (gate is locked promptly at 7:00pm)
- Sunset 6:10pm Dark by 6:30 (earlier if overcast)
- Model Event Open from Friday 10:00am until 6:00pm
 - 10:00am - 1:00pm maps available at the visitor center
 - 1:00pm - 5:00pm maps at registration at the southern parking area
- Sprint "O" 2:00pm - 4:00pm.

Saturday, March 3, 2007 at Umstead South off of I-40 exit #287

- Registration - 8:00am - 1pm Umstead South, Main Parking Area
- WRE & Classic length 10:00am - 1:00pm. Course closes at 4:00pm
- US Championship Trail Orienteering - Noon to 2pm - course closes at 4pm
- USOF Board Meeting 2:30 PM - 5:30 at the Fairgrounds Youth Center
- Awards - 5:30 at the Fairgrounds Youth Center
- Dinner - Begin serving at 6:00 at the Fairgrounds Youth Center

- Model Event 8:00am - 10:00am maps available at registration
- Sunday, March 4, 2007 at Umstead North off NC route #70 Glenwood Avenue**
- Registration 8:00am – Noon
- Starts from 9:00am – Noon
- Course closes at 3:00pm
- Awards – 2:00pm at the registration shelter near the finish

1.2 Area Map



- "A" Umstead North entrance for Friday & Sunday
- "B" Umstead South entrance for Saturday
- "C" Fairgrounds Youth Center entrance for dinner and dorms
- "D" Headquarters Hotel



2 Credits

Event Director: Joseph Huberman
 Registration: Ruth Bromer, Kent Shaw
 USOF Consultant: Eric Weyman
 WRE Adviser: Jan R. Lien
 Courses Day 1: Vladimir Gusiaticov, Eric Bone
 Courses Day 2: Peggy Dickison
 Courses Day 3: Vladimir Gusiaticov
 Print Consultant: Magnus Johansson

Starts: Andy Huber
 Finishes: Terese Camp, Joe Halloran
 Results: Sandy Fillebrown, Valerie Meyer
 Logistics: Eric Bone
 Trail Orienteering: Mike Brooks
 Dinner: Jim Kellenberger
 Shirts: Axis Gear
 Awards: Joseph Huberman

3 Map and Terrain

3.1 Umstead State Park

The park is split into southern (Reedy Creek) and northern (Crabtree Creek) sections by Crabtree Creek. The park covers some 23 km². Prior to the purchase of the land for public use, it had historically been used for timberland, as well as a site for several mills along Crabtree Creek. Remnants of milling operations can still be found preserved within the park. Forests were cleared as agricultural interests sprouted. While early farming efforts were successful, poor cultivation practices and one-crop production led to depletion and erosion of the soil. In 1934, federal and state agencies united to buy 20 km² of this submarginal land to develop a recreation area.

During segregation, the US Highway 70 entrance was for whites and the Reedy Creek entrance, for blacks. In 1966, the two areas were united under the same name; William B. Umstead State Park was open to everyone.

In 1989, a tornado ripped through the park, leaving a narrow trail of damage. In the fall of 1996, Hurricane Fran

caused much greater impact. A significant fraction of the trees in the park were knocked down in the direction of prevailing winds. The park was closed to orienteering for several years; multiple mappers worked hard to keep up with quickly changing vegetation features. Nature took its course and in 2007, the park is again suitable for orienteering, the running sport.

3.2 Terrain

Competition terrain, including the Model event, is 13.7 km² of Umstead State Park. The park is roughly bordered by US Highway 70 on the north, Interstate 40 on the south, Raleigh-Durham Airport on the west, and Ebenezer Church Road on the east. There is no distinct boundary in the terrain for most of the park, and private property signs are often out of date; the park expanded dramatically in recent years. If you find yourself surrounded by office buildings, you are off the map. Terrain to the west of the park is RDU Airport buffer, and the woods there look just like the park until the airfield starts.

The park is moderately hilly Piedmont, ridge and valley terrain. There are several artificial lakes. Crabtree Creek is normally not crossable, and courses do not go across it. Sycamore Creek (Days 1 and 3) is not crossable except in a few locations (bridges and shallow spots). It is not permitted to cross the creek except at those locations. Reedy Creek (Day 2) is crossable as indicated. Crossing points are not indicated in purple; use the regular map symbols and common sense. That is, do not cross the solid black line around water features, and if the water looks too deep for you otherwise, do not go into it. The water is freezing temperature.

Most of the forest is deciduous. Most of the impediment to running comes from the trees downed by the 1996 hurricane, and from the 1989 tornado damage. Aside from the areas impacted by the tornado (Day 2), there is little undergrowth, however areas of hurricane damage tend to have more of it. The visibility is in general good to excellent.

Rock features tend to be small and insignificant. There are numerous quartz cairns (rock piles), some quite prominent. Stone walls are piles of quartz that extend in a certain direction.

The trail network is moderately developed. There are several camps, each with a dozen or so buildings. There is light automobile traffic on the main park road (Days 1 and 3); use caution.

Some areas are marked out of bounds on the map. On Day 3, two of them have a defined border in the terrain, also shown on your map with a solid purple line. In both cases this is done for the sake of competitive fairness. Although the park would very much like all of us to stay out of the forbidden areas, mistakes happen. In these two cases, ending up on the wrong side of the boundary can lead to competitive advantage. Please observe the marked boundary, and report offenders to event staff as indicated further.

3.3 Map Standard, Scale, and Printing

The contour interval for all days is 3 meters. The scale is 1:10,000 with the following exceptions. On Day 1, all courses use the International Standard for Sprint Orienteering Maps and 1:5,000. On Day 3, Blue M-21+ and Red W F-21+ use 1:15,000.

The size of the map is 8.5" x 11" (216 x 279 mm) on Days 1 and 2. On Day 3, Blue M-21+ and Red W F-21+ use 11" x 17" (279 x 432 mm); Red M M-20, M35+, M40+, M45+, and M Red use 13" x 19" (330 x 483 mm); Green, Brown, and Orange courses use 8.5" x 14" (216 x 356 mm); and White and Yellow use 8.5" x 11" (216 x 279 mm).

Maps are sealed in appropriately sized clear plastic cases of 0.004" (100 um) thickness.

Maps have been printed on high-resolution (at least 1440 x 720 dots per inch) Epson inkjet printers. The ink is waterproof. The paper is coated photo-quality paper of 90 brightness. The paper is not waterproof. The printing resolution is the highest allowed by the printer.

3.4 Map

3.4.1 History

The original orienteering map of the eastern portion of the park was made in 1982 by David Linthicum. In 1988, Pat Dunlavy and Mikell Platt mapped the western part. Joseph Huberman surveyed the tornado damage in 1989.

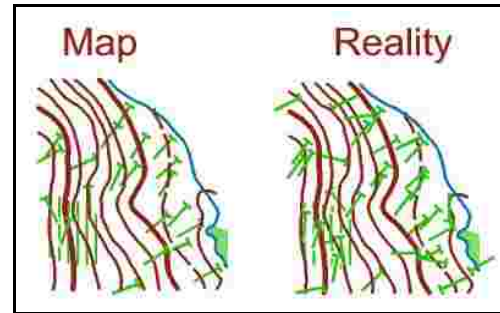
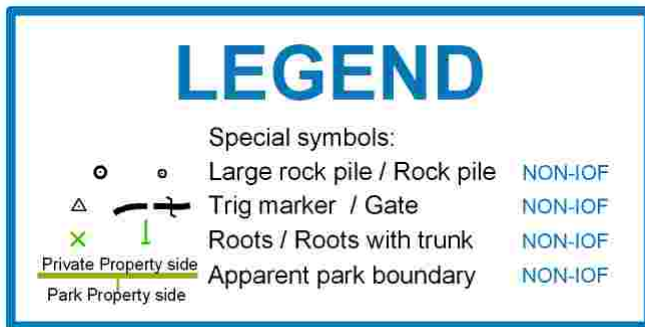
Scott Pleban updated the western part in 1994. Mark Dominie completed the survey, fieldchecking the central part and updating most of the rest of the park in 1994. The complete version of the map hosted the 1994 US Relay Orienteering Championships (won by QOC) and a spring A meet in 1996.

Hurricane Fran's aftermath required extensive changes to the depiction of vegetation. This work was done in 1997 by Georgiy Kuntsevitch (north) and Marat Gizatulin (south), who introduced the first incarnation of the downed tree symbol. BOK event directors made minor updates afterwards.

The entire park was surveyed again by Josef Trzicky in 2006 and early 2007. The drafting was done by Jan Csibrei.

3.4.2 Legend and special symbols

The legend is printed on the map. On Day 2 and on the Green, Brown, and Orange course maps on Day 3, it is the abbreviated version of the legend that only contains special (non-standard) symbols. It is reproduced below:



3.4.3 Mapping style and conventions

The newest map is somewhat imperfect but highly usable. These notes are intended to aid in its interpretation.

The most striking peculiarity is the mapping of the trees downed by the storm ("roots with trunk" in the legend above). The trees are shown only if there is a rootstock, and the trunk is off the ground. Whereas this was to be expected, perhaps even desired, in the years immediately following the storm, the dead trees in 2007 are generally beyond the point that they would seriously impede forward movement. Are they useful for navigation?

Rootstocks and earth mounds from the downed trees are quite prominent in the terrain, most commonly exceeding 1 m. But, the symbol size originally chosen for the downed trees made the map seem overly cluttered. Also, the size of the symbol was such that it did not allow the relative size and orientation of closely spaced trees to be depicted accurately. As a result, our estimate is that only about 60% of the downed trees with (large enough) roots are shown; most of the omissions and distortions are in the busy areas. The example above shows a representative comparison of the map vs. reality.

Rootstocks without a trunk are shown with the common green X. The course setters could not determine what the green O's denoted.

The course setters had no time or desire to re-fieldcheck the fallen trees. The IOF Adviser and the course setters suggested more than once that the map would possibly be better off without them. But, given the emotional capital invested in the mapping of the fallen trees, we agreed on a few symbol changes, with no deletions. In another deviation from accepted mapping traditions, dead trees and rootstocks are commonly shown inside the medium and dark green, where they are virtually unreadable on the run.

With one exception on the White course on Day 2, no controls have been placed on dead trees, rootstocks, or special trees.

On the map, it is hard to distinguish, perhaps by design, areas of fallen trees from the undergrowth symbol, vertical green lines. Most of the areas shown with the "slow running" and "difficult to run" greens are actually storm damage, and thus it is possible to see quite far across those. They would have been more appropriately mapped with the vertical green line ("undergrowth") symbol. Conversely, some of areas shown with the latter are in reality not easy to see through, and would be more appropriately shown with the solid greens.

Rootstocks and earth mounds from the downed trees are quite prominent in the terrain. The dot knolls are much less prominent, and so, in most cases, are the cairns. However, a few of the cairns are quite large and are shown with a contour with black rocky ground dots. In the original symbol set, the cairn symbol (O-dot) appeared larger than this combination, leading to the absurd situation in which the visual prominence of an object on the map did not match its importance in the terrain. We reduced the cairn symbol to a smaller one shown above for cairns lower than 0.5 m. As we found out, the printer driver did not take lightly to that, so upon close inspection of the map, most of the cairn "eyeballs" are looking off to one side or another. You really have to study the map at rest to see that, though.

Most mapped boulders are well under 0.5 meters. "Large boulders" are generally bigger than 0.5 m.

Contours in general are very good. Their drafting is outstanding. The most recent work added a lot of dry ditches and gullies, and their mapping is mostly excellent.

There can be extra or missing buildings in the camps and in the woods due to recent construction and demolition.

4.4 Refreshments

Only plain water is provided on the courses. The water is not distributed into cups. Water is located at controls. There is one water control for at least every 2.5 km of each course, with the exception of Day 1 and the Yellow course on Day 3.

5 Courses

	Format	Length (km)	Climb (m)	Controls	Map scale, 1:	Est. winning time (min)
Friday, Day 1						
White	Standard	1.50	30	8	5000	15
Yellow	Standard	2.00	50	8	5000	15
Sprint OBG	Sprint	2.15	50	10	5000	15
Sprint RB	Sprint	2.50	70	12	5000	15
Saturday, Day 2						
White	Standard	1.95	25	8	10000	25
Yellow	Standard	3.25	65	10	10000	35
Orange	Classic	4.14	135	14	10000	40
Brown	Classic	5.05	95	10	10000	35
Green	Classic	4.63	190	12	10000	40
Red M	Classic	7.46	330	20	10000	55
Red W	Middle	4.27	190	13	10000	35
Blue	Middle	5.23	205	17	10000	35
Sunday, Day 3						
White	Standard	2.29	55	8	10000	25
Yellow	Standard	3.52	105	10	10000	35
Orange	Classic	4.61	120	9	10000	45
Brown	Classic	4.40	145	10	10000	50
Green	Classic	6.40	195	12	10000	55
Red M	Classic	9.57	265	13	10000	70
Red W	IOF Long	10.32	320	12	15000	60
Blue	IOF Long	13.73	390	17	15000	90
Red M: M-20, M35+, M40+, M45+, M=Red						
Red-W: F-21+						

5.1 Model Event

The Model Event is open as indicated in the schedule. Prior to the opening of the registration on Day 1, maps are available for \$5.00 from the park office. Enter the park as for Day 1 and follow signs to Visitor Center.

The Model event is representative of the three days of competition. SportIdent equipment is different from that of the Model Event on Days 1 and 3. The Model map does not show the terrain in ISSOM symbols (Day 1).

5.2 Maximum Times

- For Day 1, the time limit is 1 hour.
- For Day 2, it is 3 hours with the exception of the WRE courses Blue M-21+ and Red W F-21+, for which it is 2 hours.
- For Day 3, the limit is 3 hours with the exception of the courses Blue M-21+ and Red W F-21+, for which it is 4~hours. All time limits will be strictly enforced.

If your maximum time has elapsed, you must report to the finish.

5.3 Control Equipment

We are utilizing SportIdent version 7 on Day 1, version 8 for the Model and Day 2, and version 5, 6, and 7 on Day 3. Some controls are to be placed well in advance of the competition day. If your control does not beep or flash the confirmation LED, you must punch with the attached paper punch. Paper punches from malfunctioning controls are required and will be verified.

Controls are on lightweight stakes. Do not lean on the stake.

5.4 World Ranking Event Start Draw

Start times for the World Ranking Event participants on Day 2 will be randomly drawn from the time interval between 10:00 and 11:30, and made available according to the schedule. The start interval for the WRE is 2 minutes.

5.5 Walk to Start

- The walk to the start from the parking is (km):
- Day 1: 0.74
- Day 2: 0.006
- Trail "O" 0.01
- Day 3: 0.85

5.6 Start Procedure

- You will be called up 2~minutes prior to your time, and may pick up your control descriptions. At the next line, you wait one minute until your start.
- You must punch the start SportIdent unit at your assigned start time.
- The start location is the start triangle on your maps. The navigation starts at this map issue point.
- The start procedure for the World Ranking Event is identical to that utilized for the rest of the competition.

5.7 Control Descriptions

Control descriptions will be printed on the face side of your maps for all three days. Descriptions for the White and Yellow courses will be given as text, and those for the rest of the courses, as international pictorial descriptions.

IMPORTANT: The descriptions will not be available in your event packets. Instead, we provide a sheet of the descriptions for all controls, all days. The descriptions for your particular course will only be available two minutes prior to your start, at the call-up line. The size of the control description box is 5 mm, i.e. the

description sheet given to you at the start is 40 mm (1.57") wide. The descriptions on the map are 6 mm/box, 48 mm wide in all.

5.8 Close Controls

Controls are placed as close as 90 m on similar features on Day 2. No controls are within 50 m of one another.

5.9 Spectating

There is no spectator control on Day 1. On Day 2, competitors on the Blue M-21+ and Red M M-20, M35+, M40+, M45+, M-Red courses are visible from the spectating area less than 5 minutes before their finish. The start, finish, and spectating area for Day 2 are close together, as specified by the Leibnitz Convention.

On Day 3, all competitors with the exception of White and Yellow courses pass through the spectator control, located close to the finish, approximately one third into their courses.

5.10 Finish

There is a remote, unmanned finish on Day 1. Your time is taken when you punch the finish SportIdent unit. The walk to the parking from the finish is 0.70 km.

E-punch download for all three days is in the immediate vicinity of the finish. So, don't head back to your car yet after the finish, download and hang out for results and socializing!

6 Complaints and Jury

The jury for the event will consist of three members and will be announced at the same time the start times for the WRE are published. The same jury has powers for the WRE and for the rest of the event.

Complaints and protests should be directed to Event Director, Joseph Huberman. Complaints regarding the WRE can also be made to the IOF Adviser, Jan R. Lien. The deadline for WRE complaints is 23:59 Eastern (US) Standard Time on Day 2, 03 March 2007.

7 Safety

All competitors are requested to carry a whistle or signaling device. If you are hurt blow the whistle in groups of three. Uncrossable sections of creeks are marked with solid black lines. The water is cold! Do not try and cross streams if the water is over your knees.

If you are lost and find a trail – stay on the trail. If you find a control – stay with the control. We will search for you by first driving the roads, running the trails, and picking up the controls.

7.1 Safety Bearings

The park is divided generally in thirds by two large creeks running west to east, Sycamore Creek on the north, and Crabtree Creek on the south. If you are in the north section the safety bearing is north, and you will eventually find houses or major roads. If you are in the south section, the safety bearing is south, and you will meet up with I-40. If you are in the middle section there is no "best" safety bearing, but generally if you go west you are likely to find a trail, or at least the airport. Do not go out into the airport field. Follow it north.

8 Awards

Awards must be picked up at the awards ceremonies. If you are leaving early you should designate someone to pick your award up for you. In some cases it may be possible to pick your award up at registration.

- Sprint - All USOF classes – ribbons
- WRE - M-21+ and F-21+ - medals
- The award ceremony for the sprint and WRE event will be held at the Youth Center at the NC Fairgrounds, just prior to, and at the same location as the dinner, at 5:30pm on Saturday.
- M-21+ and F-21+ - Day 3 – Imprinted back sack
- USOF classes (except MF-21+) Combined times for Saturday and Sunday– Imprinted back sack
- Trail "O" US Championships All Trail "O" classes – USOF championship medals
- The USOF 2 day Classic event and the IOF long event awards ceremony will be held at the registration shelter on the north side of Umstead Park at 2:00 pm