## Norsk friidrett

Ullevaal stadion
Sognsveien 75 J
0840 Oslo
E-mail: friidrett@friidrett.no
Tlf.: +4794833326

## COURSE MEASUREMENT REPORT

 - RAPPORT FOR NASJONAL KONTROLLMÅLT LøYPE -| Event and Course |  |  |
| :---: | :---: | :---: |
| Event : Fana Halvmaraton |  |  |
| Promoting Organization: BFG Bergen Løpeklubb |  |  |
| Date : June 11th 2022 |  |  |
| Date and Time of measurement: June $915: 30$ |  |  |
| Measured distance: Half marathon (21 097,5m) |  |  |
| Length of calibration course: 302.45 |  |  |
| Terrain: Flat $\square$ Slightly hilly $\times$ Hilly $\square$ Terrain $\square$ <br> Race surface: Tarmac roads <br> Course configuration: Closed loop X Back and forth A to B Other <br> Elevation : Start - Finish: Om <br> Description of Start: Fana Stadium, start 80m (marked with red) <br> Description of Finish: Fana Stadium, 21,17m past the start <br> Distance, in a straight line, between start \& finish: 21m <br> Is Start and Finish marked: Yes $X$ No $\square$ <br> Km-markings: Yes $X$ No $\square$ <br> Measurement direction: Running direction X Opposite running direction |  |  |
| Contact information |  |  |
|  | Measured by | Organizer: |
| Name: | Geir Jensen | Morten Hauso |
| Phone: | +4748082200 | +4793219038 |
| Email: | Ccie8795@gmail.com | mortenhauso@hotmail.com |

It is hereby confirmed that the course has been measured by a nationally certified course measurer from Norwegian Athletics. The course is measured in accordance with Norwegian athletics regulations, and the distance has the correct length. The survey is valid for 5 years, except if the route is changed.


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| Calibration |  |
| :--- | :--- |
| Length of measuring tape (steel measuring tape only) | 50 m |
| Length of calibration course 1st measurement | 302.50 m |
| Length of calibration course 2nd measurement | 302.50 m |
| Possible 3rd measurement (max. 1 cm diff per 100m <br> between first 2 measurements) |  |
| Average of measurements before adjustments | 302.50 |
| Temperature (road or measuring tape) | 6 C |
| Adjustment cf. D-(D*(1+(temp-20)*0,0000115) | 0.0487 m |
| Measured calibration distance after adjustment | 302.45 |
| Distance from start/finish to calibration distance | $3 \mathrm{~km}, 5 \mathrm{~min}$ by car |

Calibration information (max 8 Counts difference of 1000 m between 4 measurements, ie 2 Counts of 300 m and 3 Count of 400 m )

|  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Pre-measurement | Post-measurement |  |  |  |  |
|  | Date/Time: June 9 15:00 | Date/Time: June 9 18:00 |  |  |  |  |
|  | Start | End | Reading | Start | End | Reading |
| 1. | 158000 | 161481 | 3481 | 426114 | 429597 | 3483 |
| 2. | 161600 | 165082 | 3482 | 430600 | 434082 | 3482 |
| 3. | 165400 | 168882 | 3482 | 434200 | 437681 | 3481 |
| 4. | 169000 | 172483 | 3483 | 437800 | 441282 | 3482 |

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Pre measurement Post measurement

| Average(1+2+3+4) / 4 |  |  | Today's constant. Either <br> highest or average of before <br> and after measurement |
| :--- | :--- | :--- | :--- |
| Working Constant | 3482 | 3482 |  |
| $\mathbf{+ 1 \% o}$ | 11512,5973 | 11512,5973 |  |
| Measurement constant | 11524 | 11,513 |  |


| MÅLEPROSEDYRE |  |  |
| :--- | :--- | :--- |
| Measurement constant | $\mathbf{1 1 5 2 4}$ | Description |
| Distance | Counter | Fana Stadion, 80m mark |
| $\mathbf{0 . S t a r t}$ | 180000 | Ramp to pedestrian bridge Rådalen |
| $\mathbf{1 k m}$ | 191524 | Beginning of detour after Byggern |
| $\mathbf{2 k m}$ | 203048 | Walkway before buss-stop (Stend) |
| $\mathbf{3 k m}$ | 214572 | Walkway |
| $\mathbf{4 k m}$ | 226096 | Kvernabekkveien 51b |
| $\mathbf{5 k m}$ | 237620 |  |
| $\mathbf{6 k m}$ | 249144 | On the Sidewalk |
| $\mathbf{7 k m}$ | 260668 | Hamrevegen |
| $\mathbf{8 k m}$ | 282192 | Buss-stop by the Golf-club |
| $\mathbf{9 k m}$ | 295240 | Walkway |
| $\mathbf{1 0 k m}$ | 306764 | Lap2: 5m before the 4km mark |
| $\mathbf{1 1 k m}$ | 329812 | Lap2: 5m before the 5km mark |
| $\mathbf{1 2 k m}$ | 341336 | Lap2: 5m before the 6km mark |
| $\mathbf{1 3 k m}$ | 352860 | Lap2: 5m before the 7km mark |
| $\mathbf{1 4 k m}$ | 364384 | Lap2: 5m before the 8km mark |
| $\mathbf{1 5 k m}$ | 375908 | Lap2: 5m before the 9km mark |
| $\mathbf{1 6 k m}$ | Lap2: 5m before the 10 km mark |  |
| $\mathbf{1 7 k m}$ |  |  |

LDP I NDRGE

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| $\mathbf{1 8 k m}$ | 387432 | Walkway after buss-stop (Stend) |
| :--- | :--- | :--- |
| $\mathbf{1 9 k m}$ | 398956 |  |
| $\mathbf{2 0 k m}$ | 410480 | Pedestrian bridge, Rådalen |
| $\mathbf{2 1 k m}$ | 422004 | Fana Stadium, southern curve, orange marker <br> on stands |
| $\mathbf{2 1 . 0 9 7 5 k m}$ Finish | 423128 | Fana Stadion, 21,17m past the start-line |

## Conclusion

- Measurement method

Jones counter mounted on bicycle wheel

- Measurement procedure

The measurement was carried out by a continuous measurement in the running direction from start to the finish.

- Course adjustment

When I crossed the start/finish line the Jones counter was 422 884, but it "should" have been 423 128. The difference equals 21.17 m , so the finish-line will be moved 21.17 m away from the start-line, in the running direction.
$(423128-422884)$ ticks $* 1000 \mathrm{~m} / 11524$ ticks. $=21.17 \mathrm{~m}$

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Calibration Course map


The calibration course is on the walkway along the Fana road (Fanaveien), Between the manhole cover by the bus-stop, and the asphalt edge at border marker (marked with 3 nails in the asphalt). The measurement starts between the manhole cover and the frame.

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Course map and description


Course description:
Part I, From Fana Stadium to the old train station at Stend, ( 3.55 km )

- Start and finish at Fana Stadium. Start is at the mark for 80 m . The starting line is marked with a red cross in the stands. All km markings are marked with an orange dash and distance (see photos). (The exception is km 1 , marked in yellow paint)


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- Run 200 m around the track in the normal running direction, and out the gate.
- To the right towards Rådalskrysset, run on the right side of the road.
- Up to the footbridge in Rådalen. Turn left, cross the bridge and continue towards Rådalslia school. Continue right passed the school, and towards the new pedestrian bridge crossing the new motorway.
- Directly after Byggern, turn right. This section (700m) is a detour, due to road-work
- Follow the Osbane route past the station at Stend,

Part II, From Stend, one lap around Stendavannet and Klokkarvannet (7 km)

- Run along Kvernabekksveien to Hamre
- Use the pedestrian crossing to cross Titlestadveien
- Turn right at Hamre into the "Hamre road" (Hamrevegen) after running around the roundabout clockwise.
- The runners must run on the right side of the road in Hamrevegen.
- When the Hamre road meets Fanafjellsvegen turn right. Run on the right side of the main road to the church, do not use the pedestrian shortcut.
- After the church (Fana Kirke) use the walking and cycling path to the station at Stend
- The runners must cross the Titlestad road at the entrance to parking spaces at the station, and not cross the road at the traffic light

Part III, One more lap around Stendavannet and Klokkarvannet (7 km)

- Turn right and run one more time to Hamrevegen, Fana church and to Stend station
- Once again the runners must cross the Titlestad road at the entrance to parking spaces at the station, and not cross the road at the traffic light

Part IV: From the station at Stend, back to Fana Stadium ( 3.55 km )

- Turn left and follow the pedestrian and cycle path back towards Byggern, to the right over the motorway, past Rådalslia school, over the pedestrian bridge in Rådalen and up the hill to Fana Stadium
- On the Stadium, run in normal running direction approximately 250 m from the gate to the Finish-line.
- The finish-line is 21.17 m past the start


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The start is at the 80 m mark, marked by a red sign on the stands.


Km 1 is on the ramp to the pedestrian bridge in Rådalen


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Along Hamrevegen (Km-marker 8 and 15) (photographed opposite running direction) there is no pavement, and the runners must run on the right side of the road.


5 km and 12 km at Kvernabekksveien 51b

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At the roundabout at Hamre, runners must run 2m outside the roundabout itself, will be blocked with cones and barrier tape


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At the beginning of Hamreveien, a short distance before and after km-marker 7 and 14, the runners must use the pavement.
When the pavement ends, the runners must use the right side of the road until they reach Fanavegen. Guards must be in place to make sure runners do not un on the left side of the road.


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Km-marker 4 and 11. On the walkway between Stend and Kvernabekksveien

