

Norwegian Athletic Federation

Ullevaal stadion
Sognsveien 75 J
0840 Oslo
NORWAY
E-mail: friidrett@friidrett.no
Phone: +47 94 83 33 26



COURSE MEASUREMENT REPORT

- REPORT FOR NATIONAL CERTIFIED COURSE -

INFORMATION ABOUT EVENT AND COURSE	
Event:	Drammen halvmaraton
Technical Organiser:	Sturla Friidrett
City/Place:	Drammen, Norway
Date of Arrangement:	08.09.2024
Date and time for measurement:	25.08.2024
Measured distance(s):	Half Marathon, 21.097,5m
Length of calibration course:	400m
Terrain:	Flat <input checked="" type="checkbox"/> Slightly hilly <input type="checkbox"/> Hilly <input type="checkbox"/> Terrain <input type="checkbox"/>
Type of course route:	Closed loop <input checked="" type="checkbox"/> Back and forth <input type="checkbox"/> A to B <input type="checkbox"/> Other <input type="checkbox"/>
Race surface:	tarmac roads
Elevation Start - Finish:	3m – 3m MSL
Description of start:	At the edge of the second manhold cover in Schwartz gate towards Knoffs gate, alongside Drammenshallen.
Description of finish:	At the official 100m startline at Marienlyst Stadion Friidrettsbane towards Bjørnstjerne Bjørnsons gate.
Distance, in a straight line, between start & finish:	175m
Start and Finish marked:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Km-markings:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Measurement direction:	Running direction <input checked="" type="checkbox"/> Opposite running direction <input type="checkbox"/>
National record can be approved:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

CONTACT INFORMATION		
	Measured by:	Organizer:
Contact person:	Samuel Hafahl	André Hjorteseth
Phone:	+47 970 46 905	+47 400 03 122
Email:	samuel.hafahl@gmail.com	andre@rundrm.no

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(s) has the correct length(s). The survey is valid for 5 years, except if the route is changed.

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12.04.2023 Samuel Hafsa hl

Date Signature by Course measurer Date Signature by NFIF

CALIBRATION COURSE AND PROCEDURE	
Length of measuring tape (steel measuring tape only)	50m
Length of calibration course 1st measurement	400m
Length of calibration course 2nd measurement	400m
Possible 3rd measure (max. 1 cm diff per 100m 1st and 2nd)	
Date and time for measurement	Measured by Jan Schjetlein
Average of measurements before adjustments	400m
Temperature (road or measuring tape)	20
Adjustment cf. D-(D*(1+(temp-20)*0,0000115)	1
Measured calibration distance after adjustment	300m
Distance from start/finish to calibration distance	5,5km

CALIBRATION INFORMATION - (max 8 counts difference of 1000 m between 4 measurements, ie 2 counts of 300m and 3 count of 400m)

	Pre-measurement:			Post measurement:		
	Date and Time: 25.08.2024 20:00			Date and Time: 25.08.2024 23:00		
	Start	End	Diff.	Start	End	Diff.
1st measure	88 789,0	93 439,5	4 650,5	37 466,0	42 118,0	4 652,0
2nd measure	93 439,5	98 089,0	4 649,5	42 118,0	46 770,0	4 652,0
3rd measure	98 089,0	102 740,0	4 651,0	46 770,0	51 421,0	4 651,0
4th measure	102 740,0	107 391,0	4 651,0	51 421,0	56 072,0	4 651,0

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	Pre measurement	Post measurement	
Average (1+2+3+4) / 4	4 650,5	4 651,5	Today's constant. Either highest or average of before and after measurement
Working constant 1 km	11 626,3	11 628,8	
Addn. +1%	11,6	11,6	
Measurement constant (rounded)	11 638,0	11 640,0	11 639,0

CONCLUSION OF MEASUREMENT

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1. Measurement method

Cook-Jones counter mounted on bicycle wheel

2. Measurement procedure

From start to the crossing point in the main 10k-loop should be run once.

The main 10k-loop should be run twice.

From then crossing point in the main 10k-loop to the finish line should be run once.

Start to 10k-loop

Stop counter - Start counter = total counts

15047 - 15457 = 410

Total counts / measurement constant * 1000 = total distance in meter

410 / **11639** * 1000 = 35,2 meter

Main 10k-loop

Stop counter - Start counter = total counts

135995 - 16209 = 119786

Total counts / measurement constant * 1000 = total distance in meter

11978 / **11639** * 1000 = 10291,8 meter

10k-loop to finish-line

Stop counter - Start counter = total counts

14234 - 7595 = 6639

Total counts / measurement constant * 1000 = total distance in meter

6639 / **11639** * 1000 = 570,4 meter

Start to 10k-loop	35,2m
2 x Main 10k-loop	10291,8m * 2 = 20583,6m
10k-loop to finish	570,4m
Total	21189,2m
Race length - Half marathon	21097,5m
Need for adjustment	-91,7m

Course is 91,7 meter too long.

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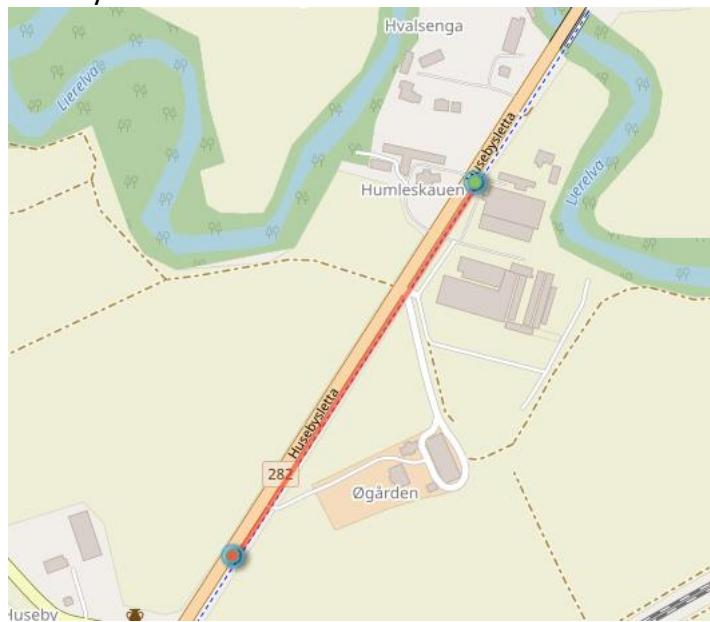


3. Course adjustment

The U-turn point in the 10k-loop should be moved 22,9m to make the loop 45,8m shorter. This 10k-loop is run twice, so the total length of the course will be a half-marathon 21097,5m

CALIBRATION COURSE MAP

Husebysletta 400m



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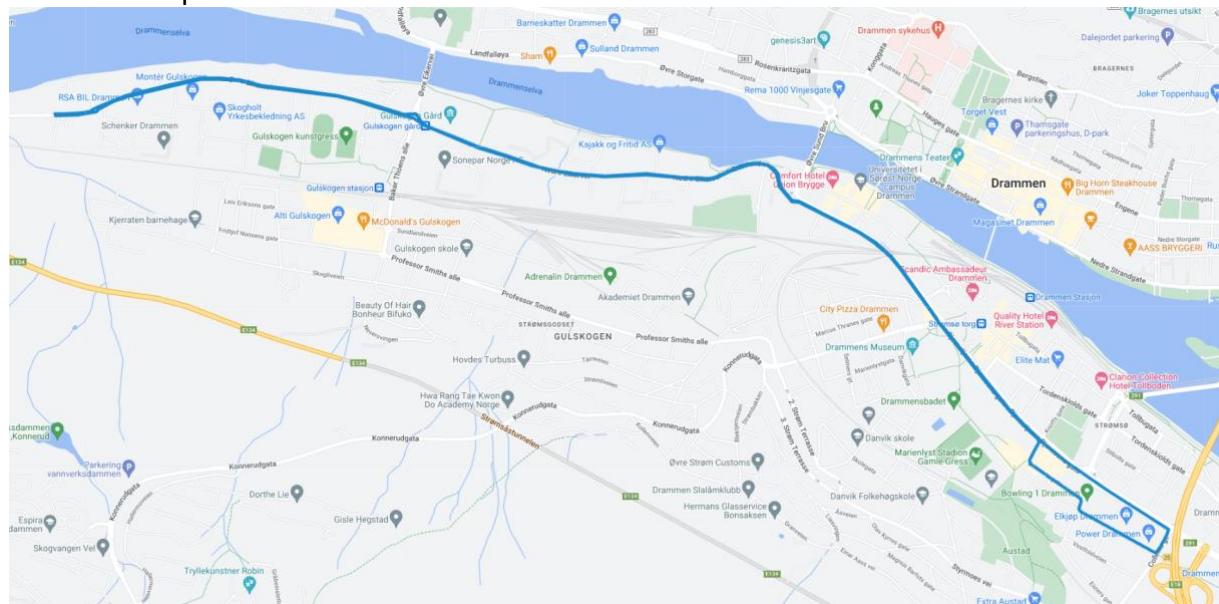
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COURSE MAP & DESCRIPTION

Main 10k-loop



<https://www.google.com/maps/d/edit?mid=1i29w67ZoA3R68tXLvuGk1sOUBQMWdD0&usp=sharing>

Start-line to 10k-loop (red line)



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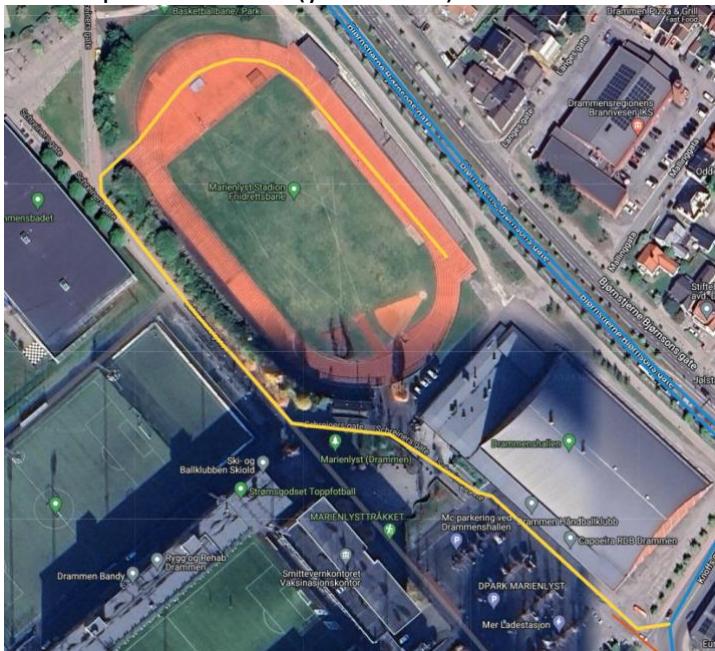
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10k-loop to finish-line (yellow line)



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Start



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U-turn at the end of the 10k-loop

The 10k-loop was measured to the spruce tree, and then moved 22,9m back.
The final u-turn point is at the end of the 10k-loop



At the first lamppost in Øvre Eikervei after the busstop

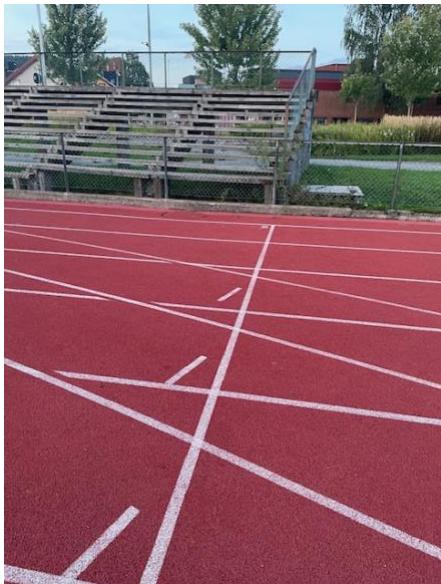
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Finish-line

100m startline.



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