Measurement report

Narva Linna Jooks

21,1 km

Karen Aau
WA - AIMS B grade measurer
May 2023

GENERAL INFORMATION

Name of measurer: Karen Aau, B grade measurer

Address: Vanakuu 13-13, Tallinn, Estonia

Phone: +37253416303

E-mail: aau.karen@gmail.com

Name of event: Narva Linna Jooks

Location: Narva, Estonia

Race date: 10.06.2023

Distance: 21,1 km

Advertised race distance: not less than 21097.5 m

Race contact person: Vladimir Vsivtsev

Phone: +372 5348 5279

E-mail: vovav@akkesport.net

Description of the course

Type of course: lap, mostly flat

Race surface: asphalt

Altitude:

Start – 30 m, Finish – 30 m

Highest point – 37 m, Lowest point – 7 m

Difference in elevation highest > lowest point – 30 m

Measurement details

Section of road available: Entire width of road, some sections splited half with cones

Line to be taken at turns: shortest possible route

DETAIL OF THE CALIBRATION COURSE

Date: 08.04.2019

Location of calibration course: Tallinna mnt light traffic road, Narva, Estonia

Measure method: steel taped

Number of measurements: 2

Markers: nails

Start time: 10:30 **Finish time:** 11:30

Temperature: *Start* +11°C, *Finish* +11°C, *Average* +11 °C

MEASUREMENTS AND CALCULATIONS:

1 First measurement.

8	x	49,9 m	+	0,8 m	=	400 m
# tape lengths		distance per tape length		partial tape length		measured distance

2 Second measurement.

8	x	49,9 m	+	0,783 m	=	399,983 m
# tape lengths		distance per tape length		partial tape length		measured distance

3 Average raw (uncorrected) measurement of course 399,9915 m

4 Temperature correction.

Correction factor = 1.0000000 + (.0000116 x [11 – 20]) = 0,9998956

5 Multiply the temperature correction factor by the average raw measurement of the course

0,9998956	x	399,9915 m	=	399,949741m
correction factor		avg. raw measurement		corrected measurement

6 Final (adjusted) length of calibration course: **400 m**

399,95 m + 0,05 m = 400m

Summary: To get 400 m length calibration course, added 5 cm with steel tape.

BICYCLE CALIBRATION DATA SHEET

PRE-CALIBRATION:

Day: 13.05.2023 **Time:** 15.45 **Temperature**: +18°C

Start count	Finish count	Difference
644300	648668	4368
648668	653036	4368
653036	657403	4367
657403	661771	4368

Pre-measurement average count = (4368+4368+4367+4368) / 4 = 4367,75

Counts per km = 4367,75x1000/400 = 10919,375

Working Constant = 10919,375x1.001/1000 = **10,93029437 c/m**

POST-CALIBRATION:

Day: 13.05.2023 **Time:** 20.30 **Temperature**: +15°C

Start count	Finish count	Difference
939400	943769	4369
943769	948139	4370
948139	952508	4369
952508	956878	4370

Post-measurement average count = (4369+4370+4369+4370) / 4 = 4369,5

Counts per km = 4369,5x1000/400 = 10923,75

Working Constant = 10923,75x1.001/1000 = **10.93467375 c/m**

CONSTANT FOR THE DAY = (10,93029437+10.93467375) / 2 = **10.93248406 c/m**

COURSE MEASUREMENT DATA SHEET

reading	counts	distance	adj.dist	location
Measured in running direction, 13.05.2023, c = ***10,93248406 c/m***				
662400	0	0,0m		START – at Suur St. near TÜ Narva College (sketch attached)
677678	15278	**1397,5 m**		P1 – lp left hand before Peetri Plats roundabout
--- adjustment here removes 1046 counts / ***10,93248406 c/m*** *= 95,7 m*				
677678	15278	1397,5 m		P1 – lp left hand before Peetri Plats roundabout
702973	25295	3711,2 m	3615,5 m	P2 – after Joala/Kalda intersection „no parking sign“ right hand
723545	20572	**5592,9 m**	**5497,2 m**	P3 – traffic light post right hand before the Joala/Kalda intersection
--- adjustment here adds 66 counts / ***10,93248406 c/m*** *= 6 m, overall removes 89,7 m*				
723545		5592,9 m	5497,2 m	P3 – traffic light post right hand before the Joala/Kalda intersection
737253	13708	6846,8 m	6757,1 m	P4 - bike path sign right hand before turn to Linnuse St.
894029	156776	**21187,2 m**	**21097,5 m**	FINISH - at Suur St. near TÜ Narva College (sketch attached)

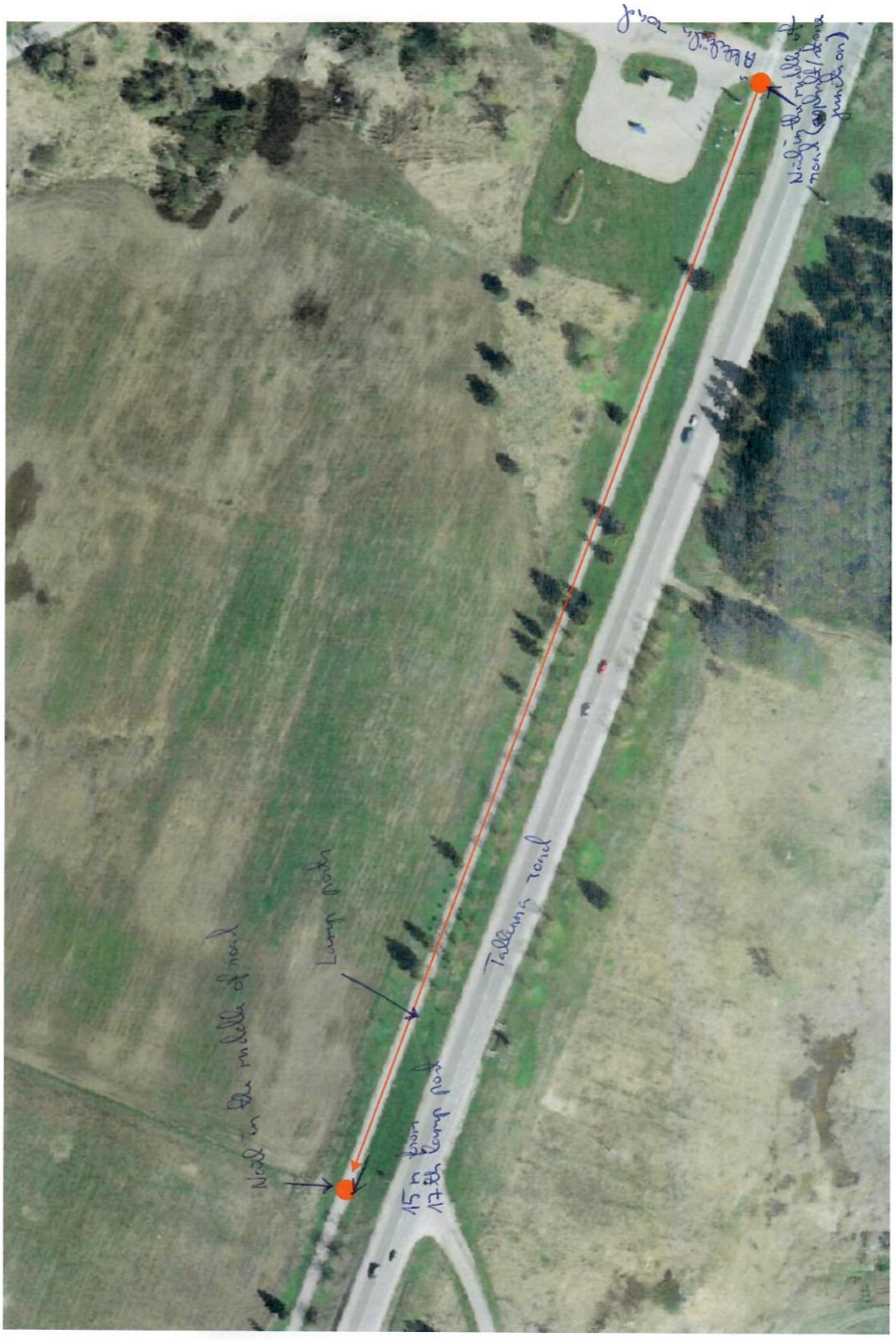
Note any adjustments made to the course after measurement:

Adjustment made between P1 -> P2 and P3 -> P4.

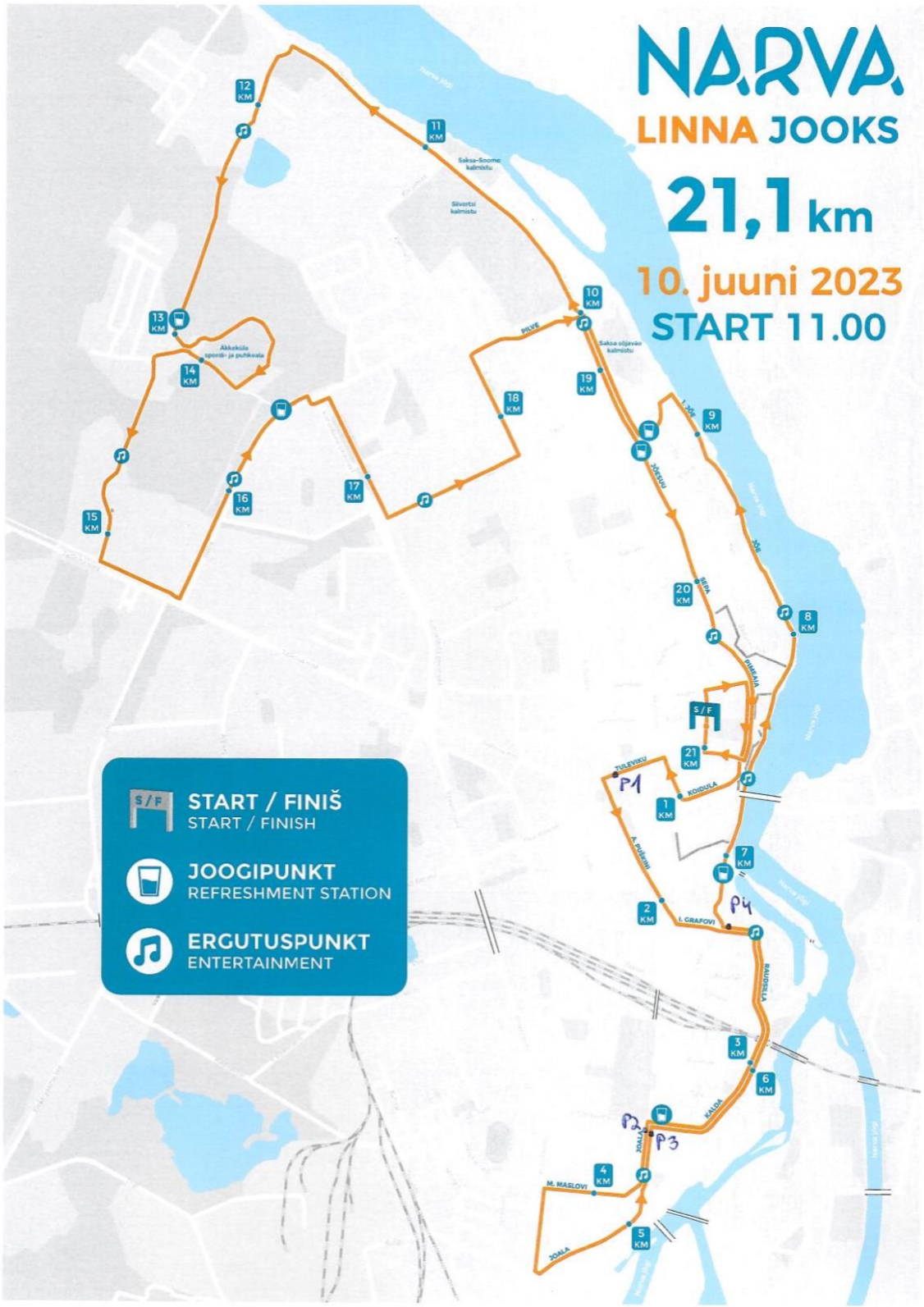
Notes:

lp= lamp post

CALIBRATION COURSE



COURSE


NARVA
LINNA JOOKS
21,1 km
10. juuni 2023
START 11.00
START / FINIŠ
START / FINISH
JOOGIPUNKT
REFRESHMENT STATION
ERGUTUSPUNKT
ENTERTAINMENT

START AND FINISH LINE

WORLD ATHLETICS

INTERNATIONAL MEASUREMENT CERTIFICATE

Name of Race
Narva Linna Jooks Half Marathon

Distance
21097.5m

Location
Narva

Country
EST

Date of Race
10.06.2023

Date of Measurement
13.05.2023

Elevation Change
0m/km

Separation
0 % of race distance

Name(s) of the measurer(s)
Karen Aau

World Athletics – AIMS Grade
B

Country
EST

Certificate Number
EST2023-180

Expiry Date
31.12.2027

International Measurement Administrator
Hugh Jones

Registered On
24.05.2023

Signed

This certificate certificate certifies that the length of the above road race has been established by an accredited World Athletics – AIMS Grade A or B measurer employing the method of a bicycle calibrated with a "Jones Counter". It remains valid for 5 years subject to the course defined in the full measurememnt report submitted by the measurer being unchanged in any way. Any modifications to the course, however minimal, will nullify this Certificate and require a new measurement to be undertaken. Possesion of this certificate does not indicate any sanction of the race by World Athletics or membership of AIMS.

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