COURSE MEASUREMENT DATA SHEET

Name of event: VASAI - VIRAR MAYORS MARATHON

Name of measurer: G. KRISHNAN

Date of measurement: 4.12.16 & 5.12.16

Start time: 12.30pm. Temperature: 25°

Finish time: 6.20pm Temperature: 26°

Constant for the Day: 11997.35 counts/km

MEASUREMENT DATA

Measured point	Counter reading	Cumulative counts	Cumulative distance in metres	Adjustment in metres
NEW VIVA college to Tirupati nagar.	501780	513775.3	1K	-
Tripti Desi Bar. By SRd.		561756.5	5K	
Achole Rd, near TVS Tyre		621733.0	10K.	
Vasai gaon Rd. opp: Federal Bank		681709.5	15K.	
Poncday at Samrat Rd, opp: VARD Builders.		741686.	20K.	
Thanda Bazar Rd opp: Vibrant study circle.		754844.8	21.097	
near Mc Donalds, Vasai gaon Rd.			25K.	
near Plum Point link Rd.		861639	30K	
opp: Sai Chaitanya Dham.		921615	35K.	
Akashi Rd, opp. H.P GAS office		981592.	40	
near Yashodha complex.			41	50m extended.
Finish opp: Viva college.		~~1007991~~	42.055	

1006247

Desired length of course: 42.195

Length of course as measured: ~~42.055~~ 42.055

Note any adjustments made to the course after measurement: Yes, one loop of 70 mtrs was extended at Yashodha complex. So that 140 mtrs can be adjusted.

APPLICATION FOR CERTIFICATION OF A ROAD COURSE

Name of event: VASAI - VIRAR MAYOR's MARATHON.

Advertised race distance: 42 km Race date: 11.12.2016

Race director: _____

Address: _____

Phone: _____ Fax: _____ Email: _____

Name of measurement team leader: G. KRISHNAN,

Address: 273 ASHOKA ENCLAVE-I, Sec-34, Faridabad

Phone: 9582040882 Fax: _____ Email: krish_0402@yahoo.com.

Location of start: NEW VIVA College VIRAR

Location of finish: VASAI

Type of terrain (please tick): ✓ Flat Undulating Hilly, over Bridges.

Type of course (please tick): Loop ✓ Out & back Point to point Other

Altitude (in metres above sea level): Start _____ Finish _____

Distance, in a straight line, between start and finish: ~~42~~ 0

SUMMARY OF MEASUREMENTS

Date(s) of measurement: 4.12.16 & 5.12.16

How many measurements of the course were made? 2

Names of measurers: G.KRISHNAN, NEERAJ Gaur, Raj

How much of the road width is available to runners throughout the length of the road race course?

6M

If the route at turns cannot be described as the 'shortest possible route', explain what restrictions will apply, and how these will be enforced?

By using Cones and Barricades.

Length of course after any adjustment: 42.195 Mtrs.

Difference between longest and shortest measurement: 108 mts short.

Which measurement was used to establish the final course length and WHY?

The Adjusted measurement was finalised since the Course was short by 160 and it was extended oneway 30 mtrs.

DETAIL OF THE CALIBRATION COURSE

1 Name of event: VASAI - VIRAR MAYORS MARATHON.

2 City/town: VASAI / VIRAR MUMBAI

3 Location of calibration course: VIRAR

4 Length of calibration course: 300 M/s.

5 Date(s) measured: 4.12.16

6 Method used to measure calibration course: By measuring scale Tape, Steel, Bicycle.

7 How many times did you measure the calibration course? 4 times.

8 Measurement team leader: G. KRISHNA

9 Address of team leader: 273, A.E.S Faridabad -

10 Phone contact of team leader: 9582040882

11 Email address of team leader: krish_0402@yahoo.com.

12 List names and duties of team members: Neeraj, Raj for holding tape and checking from one end.

13 Is the calibration course: STRAIGHT? Yes. PAVED? _____

14 How are the start and finish points marked? nails and Tape.

15 Are the start and finish points located in the road where a bicycle wheel can touch them, or elsewhere?

Yes.

16 Bicycle check. This is a check against miscounting the number of tape lengths. (if you use a gross measurement check other than a bicycle, please explain.)

A. Counts for full calibration course 30X10 = 300

B. Counts for one tape length 30 mts.

C. Divide A by B 300/30 = 10

D. Number of full tape lengths 10

17 Submit a map of this calibration course, showing direction of north, the name of the road (and relevant cross streets), and the exact locations of start and finish points, including taped distances from nearby permanent locations.

STEEL TAPING DATA SHEET
For measuring a calibration course

Name of calibration course: VASAI - VIRAR MAYORS MARATHON

City/town and State: VASAI / VIRAR, MUMBAI

Date: 4/12/16

Start time: 12.30 Pm. Finish time: 6.20 Pm.

Pavement temperature: Start 25° Finish 26° Average 25.5°
(thermometer shaded from direct sun)

Measurements and calculations:

First measurement. This establishes tentative start and finish marks which should not be changed until the final adjustment on line 6 below.

10	x	30	+	—	=	300 mtrs.
# tape lengths		distance per tape length		partial tape length		measured distance

Second measurement. This checks the distance between the SAME tentative start and finish points marked in the first measurement, but use new intermediate taping points.

10	x	30	+	-	=	300 mtrs.
# tape lengths		distance per tape length		partial tape length		measured distance

Average raw (uncorrected) measurement of course 300 mtrs.

Temperature correction. Use the average pavement temperature during measurement. Work out answer to at least seven digits beyond the decimal point.

Correction factor = 1.0000000 + (.0000116 x [Celsius temperature – 20])

Correction factor = 1.0000638

NOTE: For temperatures below 20C, factor is less than one
For temperatures above 20C, factor is greater than one

Multiply the temperature correction factor by the average raw measurement of the course (line 3)

1.0000638	x	300 mtrs	=	300.0000638
correction factor		avg. raw measurement		corrected measurement

If you wish, you may now adjust the course to obtain an even distance, such as one kilometre. This is not necessary as you may choose instead to use an odd-distance calibration course whose endpoints are pre-existing permanent objects in the road to guard against hazards such as repaving. If you adjusted the course, explain why you did it.

Final (adjusted) length of calibration course 300.0000638

BICYCLE CALIBRATION DATA SHEET

Name of event: VASAI - VIRAR MAYORS Marathon

Date of measurement 4.12.16 & 5.12.16

Name of measurer: G. KRISHNAN

Length of calibration course: 3km min.

PRE-CALIBRATION - ride the calibration course four times, recording data as follows:

Ride	Start count	Finish count	Difference
1	486360	489957	3597
2	489957	493552	3595
3	493552	497146	3594
4	497146	500740	3594

Time of day: 12.30pm. Temperature: 25°

WORKING CONSTANT = number of counts in one kilometre, calculated from the pre-measurement average count, and multiplied by 1.001 – the 'short course prevention factor'

Pre-measurement average count = 3595 x 1.001 = 3598.595

Counts per km = pre-measurement average count x 1000/length of calibration course in metres

Working Constant = counts per km x 1.001 = 11995.3

POST-CALIBRATION - ride the calibration course four times, recording data as follows:

Ride	Start count	Finish count	Difference
1	7330	10927	3597
2	10927	14523	3596
3	14523	18119	3596
4	18119	21715	3596

Time of day: 6.15 Am. Temperature: 26°

FINISH CONSTANT = number of counts in one kilometre, calculated from the post-measurement average count, and multiplied by 1.001 – the 'short course prevention factor' 14385/4 = 3596.25 = 3599.84.

Post-measurement average count =

Counts per km = post-measurement average count x 1000/length of calibration course in metres

Finish Constant = counts per km x 1.001 = = 11999.48

CONSTANT FOR THE DAY = the average of the working constant and the finish constant =

$$\frac{11999.48 + 11995.3}{2} = 11997.35$$