## Measuring traffic speed

Part 6 asks for the operating speed of the traffic travelling along the main road. This input is optional, but we encourage you to try to get this information.

Measuring the traffic speed can be done using a speedometer. If you don't have one, the speed of vehicles can be measured by timing how long it takes for cars and motorcycles to travel between two points of a known distance apart.

To do this, pick two locations (such as light poles) along the main road on either side of the intersection. Using Google maps or a measuring device, record how far these two objects are apart. Then, using a stopwatch, record how long it takes for vehicles to travel between one and the other.
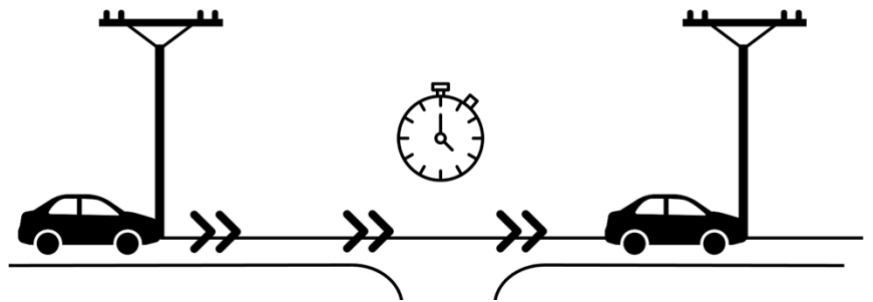
Only record vehicles travelling straight ahead. Do not record speed limited vehicles (such as small motorcycles), vehicles which are turning or stopping at the intersection or pedestrian crossing.

This should be done during off-peak times when there is the least traffic congestion.

If possible, measure the speed of a sample of vehicles (e.g. 20), and then calculate the average.

Note if the unit is kilometres per hour (km/h) or miles per hour (mph). The following examples assist with the conversion from seconds into km/h and mph.

IMPORTANT

NEVER STAND IN A LOCATION WHICH PUTS YOU AT RISK. Please take care of your safety and wear clothing which can be easily seen.

Example for km/h based on sample of 10 vehicles:

Distance between objects:	150 metres (m)
Vehicle	**Time (seconds [sec])**
1	9.1
2	8.6
3	7.4
4	9.0
5	8.8
6	9.4
7	6.8
8	8.6
9	8.5
10	7.8
Average	**8.4**

To calculate speed, divide distance over the average time:

150 m / 8.4 sec = 17.86 m/sec

To convert from m to km, divide by 1000:

17.86 m/sec / 1000 = 0.01786 km/sec

To convert from seconds to minutes, multiply by 60:

0.01786 km/sec x 60 = 1.0716 km/min

To convert to hours, multiply by 60 again:

1.0716 km/min x 60 = 64.3 km/h

Round to the nearest whole number.

The operating speed = 64 km/h

Example for mph based on sample of 10 vehicles:

Distance between objects:	164 yards (yd)
Vehicle	**Time (seconds [sec])**
1	9.1
2	8.6
3	7.4
4	9.0
5	8.8
6	9.4
7	6.8
8	8.6
9	8.5
10	7.8
Average	**8.4**

To calculate speed, divide distance over the average time:

164 yd / 8.4 sec = 19.52 yd/sec

To convert from yards to miles, divide by 1760:

19.52 yd/sec = 0.01109 mi/sec

To convert from seconds to minutes, multiply by 60:

0.01109 mi/sec x 60 = 0.6655 mi/min

To convert to hours, multiply by 60 again:

0.6655 mi/min x 60 = 39.9 mph

Round to the nearest whole number.

The operating speed = 40 mph