



2015 Speed survey results Summary

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For more information about road safety check out the Ministry of Transport website at www.transport.govt.nz.

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Purpose

The purpose of this report is to present summary results of the Ministry's annual survey of vehicle speeds. The results of the latest survey are presented along with the trends over time. There is no further discussion of the results or the statistical significance of trends.

Background to the Annual Speed Surveys

The speed surveys are designed to monitor changes in free speeds of vehicles in both 100km/h speed limit areas and main urban 50km/h areas. Free speeds are measured when vehicles are unimpeded by the presence of other vehicles (i.e., there is some distance between a vehicle travelling at a free speed and the vehicle in front of it) or by environmental features such as traffic lights, intersections, hills, corners or road works. Monitoring the speeds of unimpeded vehicles provides a measure of driver choice of speed. This provides us with information on the effectiveness of speed management measures and provides information for developing safety policies.

Speed surveys are conducted at randomly selected sites around New Zealand annually to provide an estimate of the national speed profile. There are about 65 open road and 65 urban sites surveyed each year. The current sites have been surveyed since 1995. The speed survey results can also be broken down to a regional level and into light and heavy vehicles.

The regional surveys are designed to track changes over time in driver speed choice within regions; they are **not** designed to provide valid comparisons between regions. To obtain valid comparisons between regions the set of sites used in each region would need to be comparable in every way.

Vehicle speeds are measured by a surveyor, who surveys the site at the same time of day and day of the week as in previous years. The surveys are carried out in an unobtrusive manner to ensure that the speeds measured are minimally affected by the survey procedures.

The national speed profile provides a measure of safety on New Zealand's roads. Research has shown a clear link between vehicle speeds and road crashes. This is because as speed increases, stopping distances increase, there is greater probability of exceeding the critical speed on a curve, and there is greater chance other road users will misjudge how fast the speeding driver is travelling. Furthermore the severity of injuries resulting from a crash is directly related to the pre-crash speed of the vehicle, whether or not speeding was a factor in the crash.

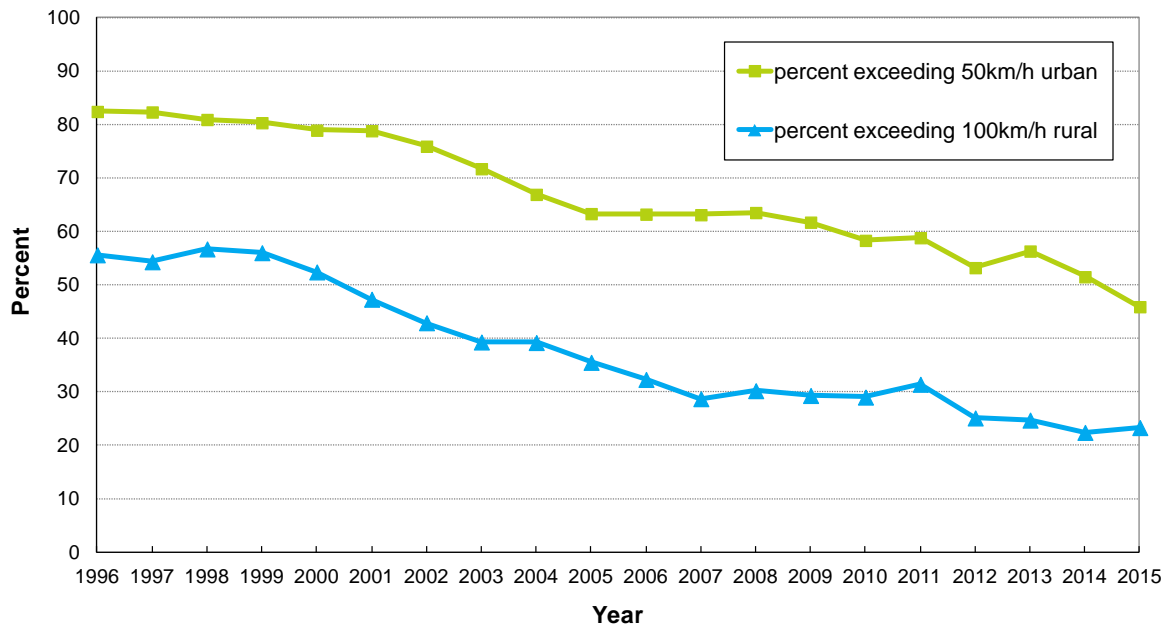
Car Speeds

In 2015, speeds were surveyed for 14,632 cars on the open road (speed limit 100 km/h) and 19,520 cars on urban roads (speed limit 50 km/h). Surveys were spread over 70 open road and 66 urban sites.

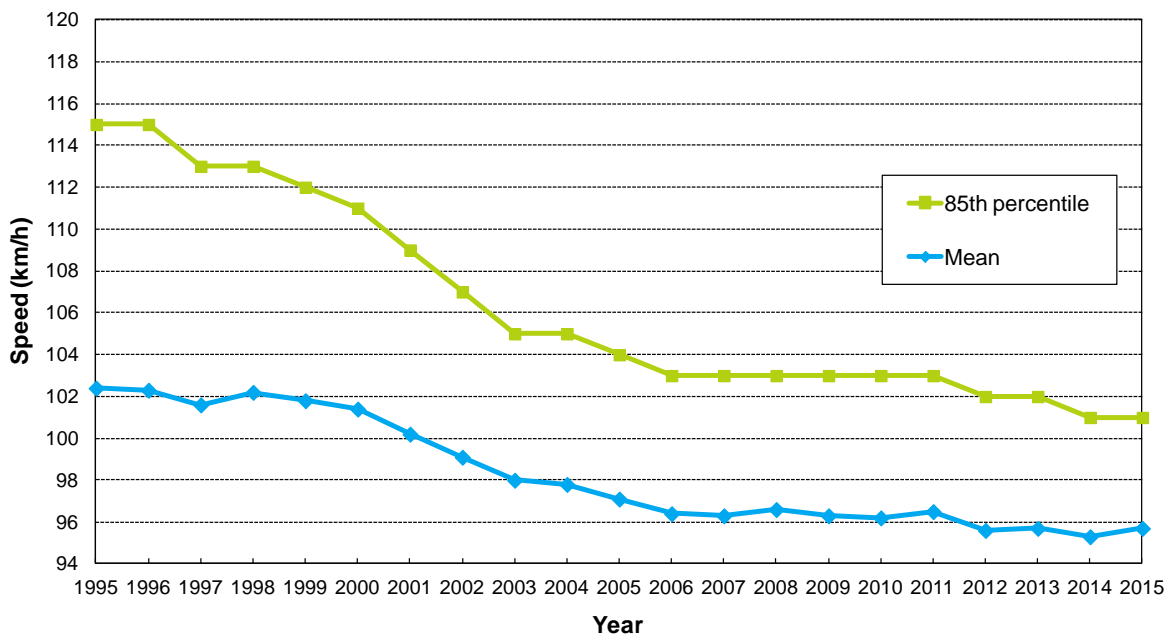
Year	Open Road Car Speeds			Urban Car Speeds		
	Mean speed (km/h)	85th * percentile (km/h)	Percent travelling over 100 km/h	Mean speed (km/h)	85th * percentile (km/h)	Percent travelling over 50 km/h
1996	102.3	115	56%	56.5	64	82%
1997	101.6	113	54%	56.3	63	82%
1998	102.2	113	57%	55.9	63	81%
1999	101.8	112	56%	55.8	63	80%
2000	101.4	111	52%	55.3	62	79%
2001	100.2	109	47%	55.2	62	79%
2002	99.1	107	43%	54.3	61	76%
2003	98.0	105	39%	53.7	60	72%
2004	97.8	105	39%	52.9	58	67%
2005	97.1	104	36%	52.4	58	63%
2006	96.4	103	32%	52.6	58	63%
2007	96.3	103	29%	52.5	58	63%
2008	96.6	103	30%	52.6	58	64%
2009	96.3	103	29%	52.3	57	61%
2010	96.2	103	29%	52.0	57	58%
2011	96.5	103	31%	52.0	57	59%
2012	95.6	102	25%	51.3	56	53%
2013	95.7	102	25%	51.7	57	56%
2014	95.3	101	22%	51.1	56	52%
2015	95.7	101	23%	50.4	55	46%

* 85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.

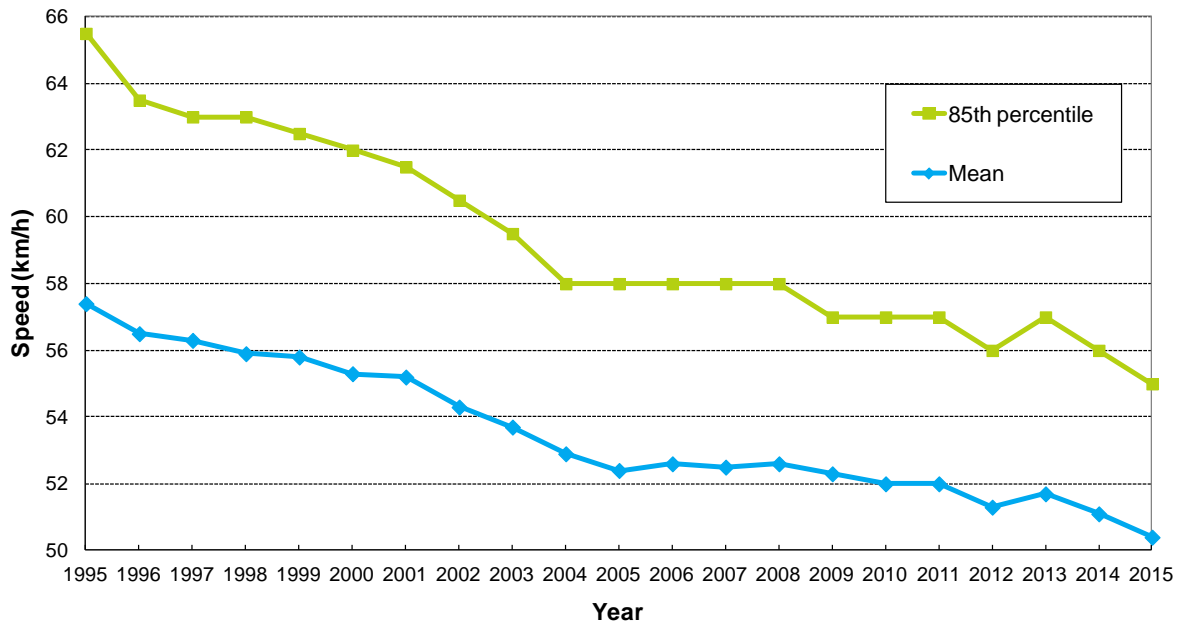
Percent of cars exceeding the speed limit



Open road car speeds

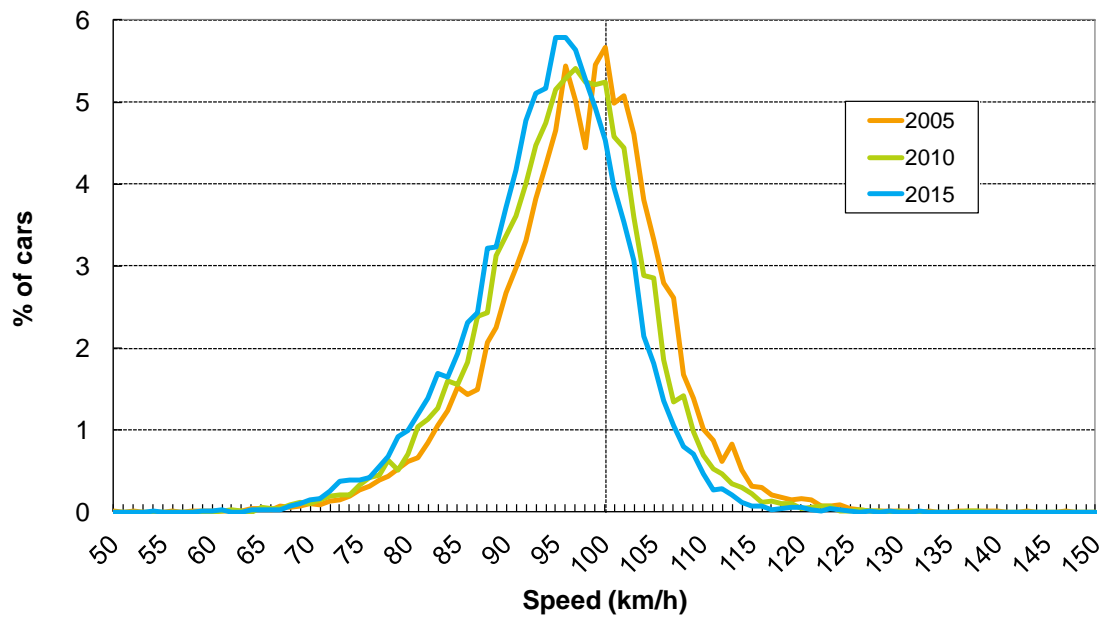


Urban car speeds

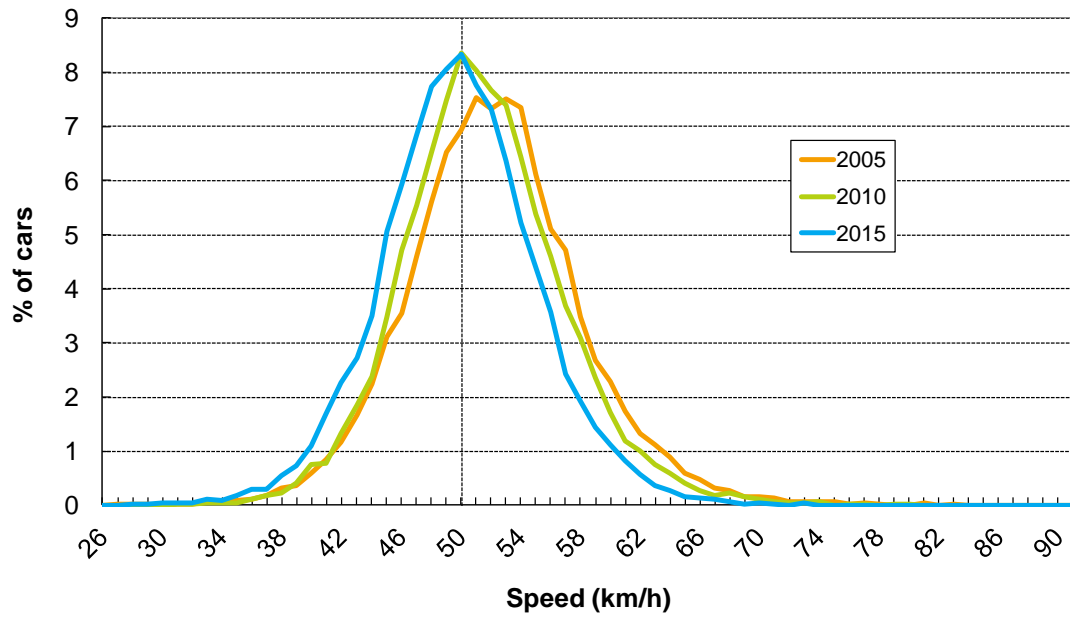


The following two charts show how the open road and urban speed distributions have changed over the last ten years.

Open road car speed distribution



Urban car speed distribution



Regional results

The regional surveys are designed to track driver speed choice within regions. They are not designed to provide valid comparisons between regions.

Open road car speeds – Mean speeds (km/h)

Region	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	N [#]
Northland	96.0	95.0	96.3	95.8	96.0	95.5	93.6	94.5	94.7	92.1	994
Auckland	96.5	96.2	95.3	95.9	93.8	95.5	93.3	94.8	93.6	90.7	2,685
Waikato	96.6	95.2	94.6	94.6	94.8	93.7	93.0	93.8	93.7	93.9	1,828
Bay of Plenty	97.3	97.8	95.8	96.7	98.4	97.0	96.7	96.7	96.4	98.1	1,159
Gisborne	91.2	91.5	95.4	96.4	95.4	96.5	94.0	90.7	87.0	93.9	561
Hawke's Bay	96.1	96.3	99.8	99.3	100.3	99.9	93.8	95.2	94.3	94.1	1,033
Taranaki	94.2	94.4	94.3	93.0	92.9	96.3	97.2	93.9	93.3	93.3	693
Manawatu-Wanganui	97.3	97.7	97.0	97.4	96.9	100.4	97.9	97.4	97.5	97.8	1,181
Wellington	92.1	93.2	94.0	95.6	94.4	94.7	95.2	96.0	96.3	95.4	878
Nelson-Marlborough	-	-	-	-	-	-	-	-	-	* note	286
West Coast	-	-	-	-	-	-	-	-	-	* note	234
Canterbury	100.2	99.3	98.5	98.9	98.3	100.7	99.3	99.2	98.4	98.3	1,238
Otago	97.3	99.8	100.9	99.7	98.8	99.5	99.4	99.4	99.6	98.2	1,116
Southland	*note	99.4	100.1	99.9	99.3	93.4	98.3	98.2	95.2	96.2	746
New Zealand	96.4	96.3	96.6	96.3	96.2	96.5	95.6	95.7	95.3	95.7	14,632

N = number of cars surveyed in latest year

* Note: Too few sites in this area to provide regional estimates.

Open road car speeds – 85th percentile speeds (km/h)

(85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.)

Region	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Northland	104	102	104	103	104	103	101	103	102	100
Auckland	109	109	108	110	107	108	106	107	106	103
Waikato	102	101	101	100	100	99	99	99	99	99
Bay of Plenty	107	107	105	106	106	106	107	106	106	108
Gisborne	101	101	106	107	106	106	106	100	100	103
Hawke's Bay	101	101	105	104	105	105	99	100	100	99
Taranaki	102	102	102	100	100	104	104	102	101	100
Manawatu- Wanganui	104	103	103	103	103	106	104	104	103	103
Wellington	101	102	102	104	102	102	103	105	104	102
Nelson- Marlborough	-	-	-	-	-	-	-	-	-	* note
West Coast	-	-	-	-	-	-	-	-	-	* note
Canterbury	105	104	103	103	102	104	103	103	102	102
Otago	104	105	105	104	103	104	104	105	105	104
Southland	-	105	106	105	105	99	104	103	100	101
New Zealand	103	103	103	103	103	103	102	102	101	101

* Note: Too few sites in this area to provide regional estimates.

Urban car speeds – Mean speeds (km/h)

Region	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	N [#]
Northland	53.0	53.0	52.4	51.8	51.7	51.5	51.8	52.6	51.9	50.4	1,264
Auckland	55.4	55.3	55.1	54.8	54.1	54.0	52.7	54.1	52.9	51.5	4,121
Waikato	53.9	52.2	52.5	51.5	52.3	51.8	51.9	51.5	50.3	50.5	1,005
Bay of Plenty	55.7	55.2	55.8	55.0	55.3	55.2	54.5	54.6	53.9	52.4	1,526
Gisborne	47.4	48.2	49.5	49.2	49.2	49.5	47.8	46.9	46.2	46.1	1,124
Hawke's Bay	52.3	51.7	52.2	52.7	51.4	52.1	52.1	50.6	50.0	50.1	1,198
Taranaki	48.4	48.9	48.2	48.7	48.8	49.4	48.5	48.4	48.4	48.4	1,418
Manawatu- Wanganui	50.3	50.2	51.6	51.2	50.9	51.6	50.4	50.8	50.7	50.7	1,744
Wellington	49.1	49.4	49.7	49.3	49.1	49.1	49.3	49.0	48.5	48.0	1,058
Nelson- Marlborough	49.0	49.0	50.4	48.9	49.0	49.0	49.1	48.8	47.8	47.4	1,624
West Coast	-	-	-	-	-	-	-	-	-	*note	-
Canterbury	52.5	52.5	52.1	52.5	52.3	51.4	50.4	51.3	50.9	50.3	970
Otago	53.1	52.4	51.4	51.4	51.0	50.9	50.9	50.6	51.3	50.8	1,409
Southland	* note	55.1	54.4	54.3	54.0	54.1	53.3	54.1	53.6	53.7	1,059
New Zealand	52.6	52.5	52.6	52.3	52.0	52.0	51.3	51.7	51.1	50.4	19,520

N = number of cars surveyed in latest year

* Note: Too few sites in this area to provide regional estimates.

Urban car speeds – 85th percentile speeds (km/h)

(85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.)

Region	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Northland	57.5	58.0	57.0	56.0	56.0	56.0	56.0	57.0	56.0	54.0
Auckland	60.0	60.0	60.0	59.0	59.0	58.0	57.0	59.0	57.0	55.0
Waikato	59.5	58.0	58.0	57.0	57.0	57.0	56.0	57.0	55.0	55.0
Bay of Plenty	61.5	61.5	62.5	62.0	62.5	61.5	60.5	60.5	59.5	58.5
Gisborne	53.0	53.5	54.0	54.0	54.0	54.5	53.0	53.0	52.0	52.0
Hawke's Bay	57.0	57.0	57.0	57.0	56.0	56.0	57.0	55.0	55.0	55.0
Taranaki	54.0	54.0	53.0	54.0	54.0	55.0	54.0	54.0	53.0	54.0
Manawatu- Wanganui	55.0	55.0	56.0	56.0	56.0	56.0	56.0	56.0	55.0	56.0
Wellington	53.0	53.0	53.5	53.0	53.0	53.0	53.0	53.0	53.0	51.0
Nelson- Marlborough	53.5	53.5	54.5	53.5	53.0	53.5	53.0	53.5	52.5	51.5
West Coast	-	-	-	-	-	-	-	-	-	*note
Canterbury	58.0	59.0	58.0	58.0	59.0	59.0	58.0	59.0	58.0	58.0
Otago	57.0	57.0	56.5	56.5	55.5	55.5	55.5	55.5	55.5	55.5
Southland	*note	60.5	59.5	58.5	58.5	58.5	57.5	58.5	58.5	57.5
New Zealand	58.0	58.0	58.0	57.0	57.0	57.0	56.0	57.0	56.0	55.0

* Note: Too few sites in this area to provide regional estimates.

Heavy Vehicle Speeds

Prior to 3 May 2004 heavy vehicles towing trailers, other than articulated trailers, were subject to an 80 km/h open road speed limit. For other heavy vehicles the limit was 90km/h. From 3 May 2004 the open road speed limit for all heavy vehicles is 90 km/h.

All Heavy vehicles

Year	Open Road HV Speeds				Urban HV Speeds			
	Mean speed (km/h)	85 th * percentile (km/h)	Percent travelling over 90 km/h	Number of Heavy Vehicles surveyed	Mean speed (km/h)	85 th * percentile (km/h)	Percent travelling over 50 km/h	Number of Heavy Vehicles surveyed
1995	91.2	100	59%	2,484	53.5	60	71%	1,227
1996	91.4	100	59%	3,313	53.8	61	69%	1,875
1997	91.6	100	60%	3,414	54.5	61	74%	1,744
1998	92.1	101	62%	3,336	54.1	61	72%	1,736
1999	92.1	100	63%	2,946	53.4	60	67%	1,711
2000	91.5	100	60%	3,483	53.3	60	67%	1,890
2001	90.6	98	55%	3,279	53.4	60	70%	1,482
2002	89.5	97	49%	2,849	52.8	60	64%	1,312
2003	89.3	96	46%	3,084	52.1	59	62%	1,334
2004	88.9	96	46%	3,032	51.5	57	59%	1,251
2005	88.9	95	46%	2,951	51.0	57	53%	1,139
2006	89.3	95	44%	2,560	51.0	57	51%	960
2007	88.6	94	40%	2,676	50.5	56	49%	1,028
2008	89.2	95	46%	2,939	50.9	56	55%	903
2009	88.9	95	43%	2,888	50.1	55	48%	944
2010	89.2	95	45%	2,962	49.7	55	44%	978
2011	88.9	95	44%	2,914	50.1	56	47%	911
2012	88.6	94	39%	2,468	48.7	54	34%	920
2013	88.0	93	32%	2,573	49.1	54	39%	896
2014	87.7	93	31%	2,959	48.0	53	30%	812
2015	87.9	93	31%	3,117	46.8	52	23%	953

* 85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.

Heavy vehicles with no trailer (Rigid trucks and Buses)

Year	Open Road HV Speeds HV - no trailer				Urban HV Speeds HV - no trailer			
	Mean speed (km/h)	85th * percentile (km/h)	Percent travelling over 90 km/h	Number of Heavy Vehicles surveyed	Mean speed (km/h)	85th * percentile (km/h)	Percent travelling over 50 km/h	Number of Heavy Vehicles surveyed
1995	91.0	100	57%	1,292	53.9	60	73%	1,066
1996	91.2	101	59%	1,741	53.8	60	69%	1,590
1997	91.3	100	57%	1,876	54.6	61	75%	1,542
1998	91.6	101	59%	1,837	54.1	61	72%	1,509
1999	91.9	101	60%	1,631	53.5	60	68%	1,503
2000	91.5	100	60%	1,832	53.2	60	68%	1,636
2001	90.8	99	57%	1,670	53.5	60	70%	1,283
2002	90.1	98	54%	1,409	53.0	59	64%	1,136
2003	89.6	97	49%	1,508	52.1	58	63%	1,142
2004	88.6	96	44%	1,440	51.6	57	59%	1,070
2005	89.0	96	45%	1,416	51.0	57	53%	1,019
2006	89.0	96	42%	1,177	51.0	57	51%	830
2007	88.1	94	37%	1,232	50.5	56	49%	853
2008	88.4	95	40%	1,295	50.9	56	55%	788
2009	88.5	95	41%	1,318	50.1	55	48%	793
2010	88.5	95	39%	1,273	49.8	55	44%	844
2011	88.4	95	43%	1,310	50.0	55	45%	810
2012	88.1	94	37%	1,030	48.8	54	35%	783
2013	87.3	94	32%	1,050	49.1	54	38%	740
2014	86.7	93	28%	1,128	48.0	53	30%	671
2015	87.4	93	31%	1,232	46.9	52	23%	810

* 85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.

Articulated heavy vehicles (Semi-trailers and B-Trains)

Year	Open Road HV Speeds HV - articulated			
	Mean speed (km/h)	85th * percentile (km/h)	Percent travelling over 90 km/h	Number of Heavy Vehicles surveyed
1995	94.0	101	74%	551
1996	92.7	100	63%	681
1997	94.1	100	73%	640
1998	94.0	101	71%	606
1999	94.1	101	77%	496
2000	93.7	100	75%	592
2001	92.9	98	70%	566
2002	91.4	98	59%	489
2003	91.9	98	66%	510
2004	91.0	96	58%	537
2005	89.9	95	53%	479
2006	89.9	95	49%	470
2007	89.9	95	48%	528
2008	90.3	94	54%	602
2009	89.9	94	47%	515
2010	89.9	94	48%	542
2011	90.1	95	47%	524
2012	89.1	94	40%	430
2013	88.3	93	33%	482
2014	88.7	93	36%	578
2015	88.8	93	33%	579

In the latest year only 53 articulated rigs were surveyed in urban areas.

* 85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.

Heavy vehicles towing trailers, other than articulated (Truck and trailer, A-Trains)

Year	Open Road HV Speeds			
	HV – towing trailers other than articulated			
Year	Mean speed (km/h)	85th * percentile (km/h)	Percent travelling over 90 km/h	<i>Number of Heavy Vehicles surveyed</i>
1995	89.9	99	53%	641
1996	91.0	100	57%	891
1997	91.1	99	60%	898
1998	91.9	99	62%	893
1999	91.6	99	62%	819
2000	90.4	98	53%	1,059
2001	89.0	96	43%	1,043
2002	88.2	94	36%	951
2003	87.7	94	32%	1,066
2004	88.4	94	40%	1,055
2005	88.5	94	43%	1,056
2006	89.3	94	42%	913
2007	88.7	94	41%	916
2008	89.7	95	48%	1,042
2009	89.0	95	44%	1,055
2010	89.7	95	48%	1,147
2011	89.2	94	44%	1,080
2012	88.9	94	41%	1,008
2013	88.3	93	32%	1,041
2014	88.1	93	31%	1,253
2015	88.1	93	31%	1,306

In the latest year only 90 truck and trailer rigs were surveyed in urban areas.

* 85th percentile speed means 15% of the vehicles surveyed were travelling faster than this speed.