

# ROADS

## VALUE STATEMENT

*I expect roads to be well-maintained which allow me to get where I need to go in a safe, predictable, and timely manner.*

# ROADS

## What is this Service?

A municipality's transportation system affects the economic vitality and quality of life of residents. The goal of roads services is to provide affordable, well-managed and safe traffic flow for pedestrians, cyclists, drivers, public transit and commercial traffic while contributing to the environment and the quality of community life.

Transportation infrastructure generally includes roads, bridges, culverts, sidewalks, traffic control systems, signage and boulevards. In addition to constructing and repairing infrastructure, roads services include clearing the transportation network of snow and debris to ensure that it is safe and convenient to use.

## Influencing Factors:

- **Capitalization Policy:** Dollar thresholds for the capitalization of roads expenditures differ. In one municipality, an activity could be considered an operating expenditure while in another municipality, it could be considered as capital.
- **Economic Conditions:** Inflationary increases in the cost of asphalt, concrete, fuel and contract services can reduce the amount of maintenance done with a given level of funding.
- **Level of Government:** Single-tier municipalities will have arterial, collector and local roads and in some cases, expressways. Regional governments, on the other hand, will not have data relating to local roads included in their results.
- **Maintenance Standards:** Different standards, set by their respective municipal councils, can have an impact on costs and affect municipal backlog of roads rated in poor condition and general levels of service.
- **Traffic Volumes & Urban Form:** Traffic volumes can accelerate the rate at which roads deteriorate and increase the frequency and costs of road maintenance. Traffic congestion, narrow streets, additional traffic signals and after-hour maintenance can also lead to higher costs.
- **Utility Cut Repairs:** Cost of utility cuts can vary significantly from one year to another.
- **Weather Conditions:** Frequency and severity of weather events can impact operation and maintenance costs, each municipality's service threshold for responding to weather events and service standards for road conditions.

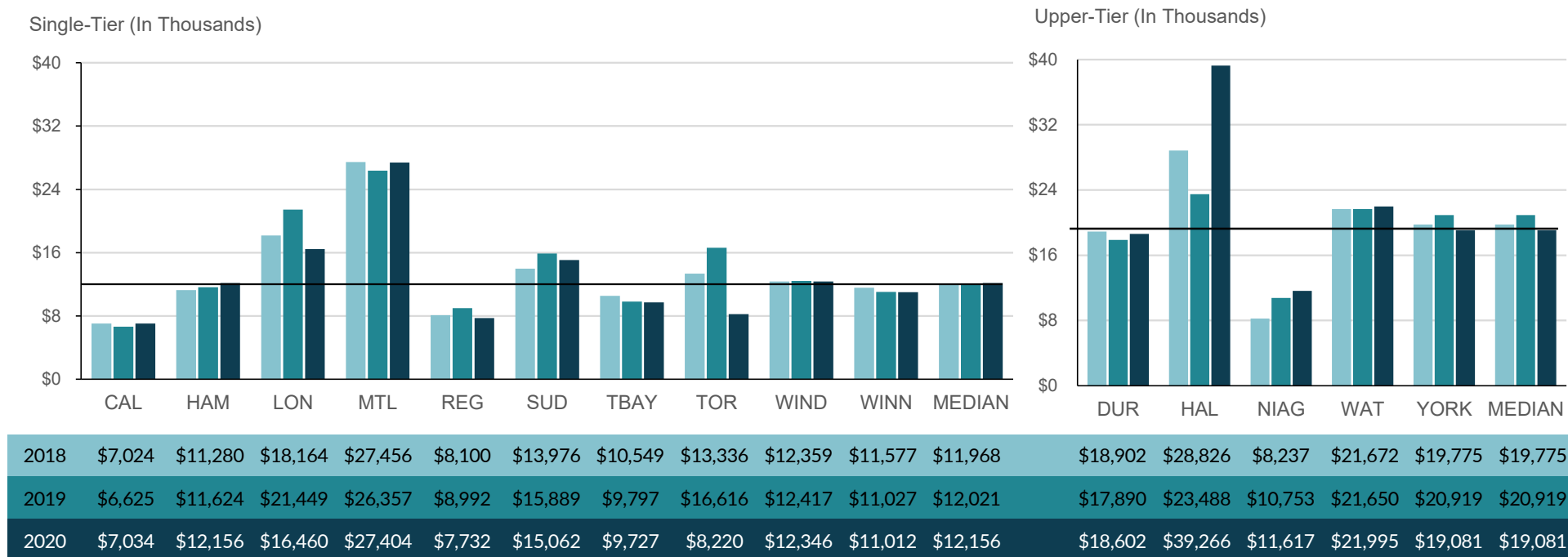
## Extenuating Circumstances:

- **COVID-19 Pandemic:** Despite the reduction in pedestrian and traffic volume, municipalities continued to maintain service levels contributing to public safety. Traffic volumes decreased due to provincial restrictions, which resulted in decreased collisions. Transit revenue loss impacted multiple departments. To ensure service delivery was maintained, health and safety protocols required the use individual vehicles and increased personal protective equipment which attributed to higher costs. Service levels were increased to to provide more value to active transportation.

# Roads

**Figure 28.1 Total Cost for Paved Roads per Lane Km (Hard Top)**

This measure represents the total cost to maintain hard top (paved) roads, not including traffic management, bridges, roadside or winter maintenance. It includes operating costs and amortization associated with capital costs for paved road maintenance. A lane km is defined as a kilometer-long segment of roadway that is a single lane in width. For example, a one km stretch of a standard two lane road represents two lane km.



Source: ROAD307T (Efficiency)

Calgary, Hamilton, Montréal, Thunder Bay, Toronto and Winnipeg include laneways (alleys) in this measure.

Halton: Some transportation services costs are included in operating costs as opposed to tangible capital assets. The numbers are not comparable from year to year.

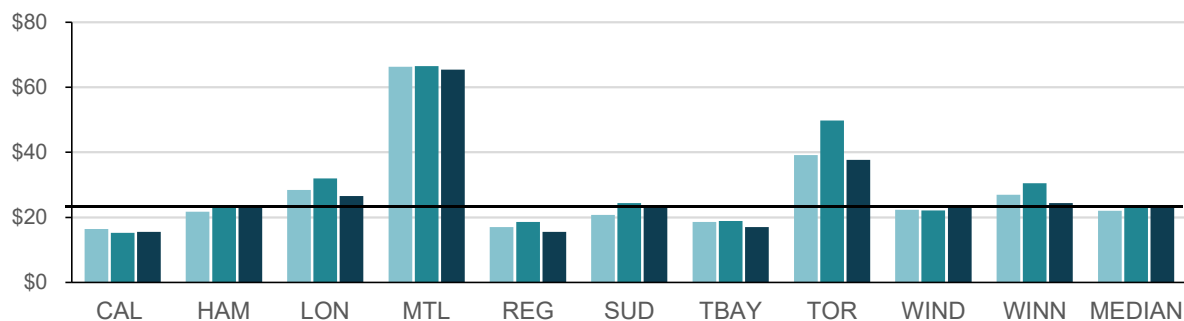
Toronto: Capital costs of transportation services increased due to tangible capital asset resulting in lower service costs. The numbers are not comparable from year to year.

# Roads

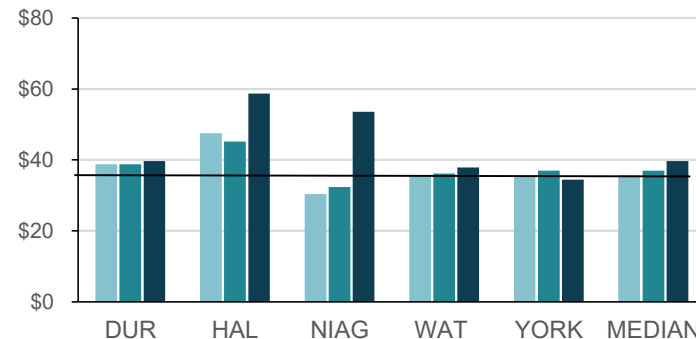
## Figure 28.2 Total Cost for Roads - All Functions Per Lane Km

This measure represents the total cost of all functions related to road maintenance. This includes operating costs and amortization associated with capital costs for paved and unpaved roads, bridges and culverts, traffic operations, roadside maintenance, and winter maintenance for roadways, sidewalks, and parking lots.

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



2018	\$16,394	\$21,722	\$28,430	\$66,366	\$17,045	\$20,704	\$18,560	\$39,117	\$22,356	\$26,953	\$22,039	\$38,775	\$47,542	\$30,425	\$35,718	\$35,441	\$35,718
2019	\$15,198	\$23,082	\$31,990	\$66,552	\$18,531	\$24,411	\$18,861	\$49,758	\$22,116	\$30,510	\$23,747	\$38,734	\$45,193	\$32,343	\$36,132	\$36,956	\$36,956
2020	\$15,565	\$23,456	\$26,533	\$65,503	\$15,485	\$22,898	\$17,040	\$37,702	\$22,931	\$24,370	\$23,194	\$39,693	\$58,678	\$53,553	\$37,865	\$34,408	\$39,693

Source: ROAD308T (Efficiency)

Calgary, Hamilton, Montréal, Thunder Bay, Toronto and Winnipeg includes laneways (alleys) in this measure.

Halton: Some transportation services costs are included in operating costs as opposed to tangible capital assets. The numbers are not comparable from year to year.

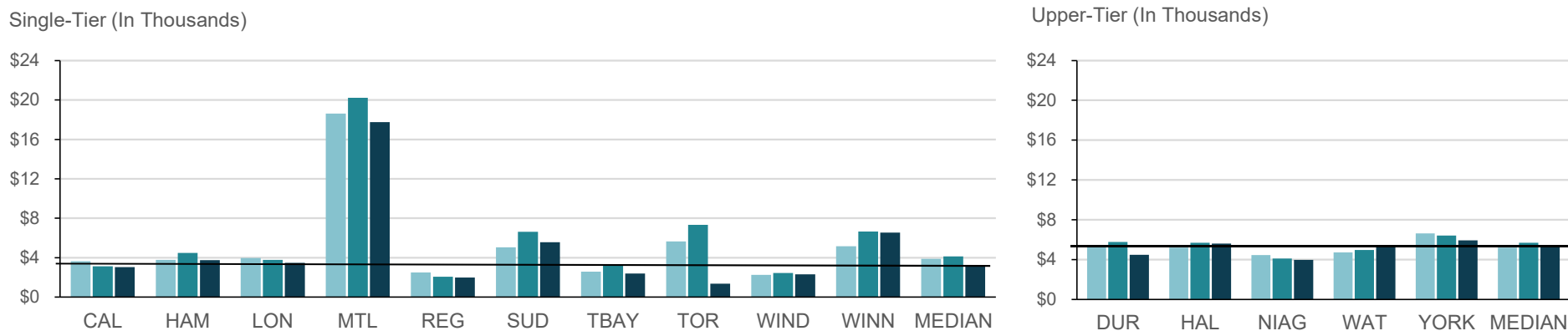
Niagara: In 2020, Niagara received an increased allocation of capital for road improvements.

Toronto: Capital costs of transportation services increased due to tangible capital asset resulting in lower service costs. The numbers are not comparable from year to year.

## Roads

**Figure 28.3 Total Cost for Winter Maintenance of Roads per Lane Km Maintained**

This measure represents the total cost for winter maintenance of a single lane km. It includes all functions included in clearing and maintaining the roadway and is not inclusive of sidewalk snow clearing and parking lots. Costs will vary from year to year due to winter weather conditions.



2018	\$3,637	\$3,788	\$3,974	\$18,624	\$2,496	\$5,065	\$2,580	\$5,643	\$2,275	\$5,159	\$3,881	\$5,450	\$5,202	\$4,459	\$4,729	\$6,643	\$5,202
2019	\$3,144	\$4,495	\$3,781	\$20,225	\$2,077	\$6,624	\$3,290	\$7,334	\$2,451	\$6,657	\$4,138	\$5,758	\$5,682	\$4,113	\$4,971	\$6,409	\$5,682
2020	\$3,055	\$3,756	\$3,473	\$17,761	\$1,981	\$5,561	\$2,411	\$1,357	\$2,311	\$6,546	\$3,264	\$4,479	\$5,610	\$3,971	\$5,271	\$5,941	\$5,271

Source: ROAD309T (Efficiency)

Calgary, Hamilton, Montréal, Thunder Bay, Toronto and Winnipeg include laneways in this measure.

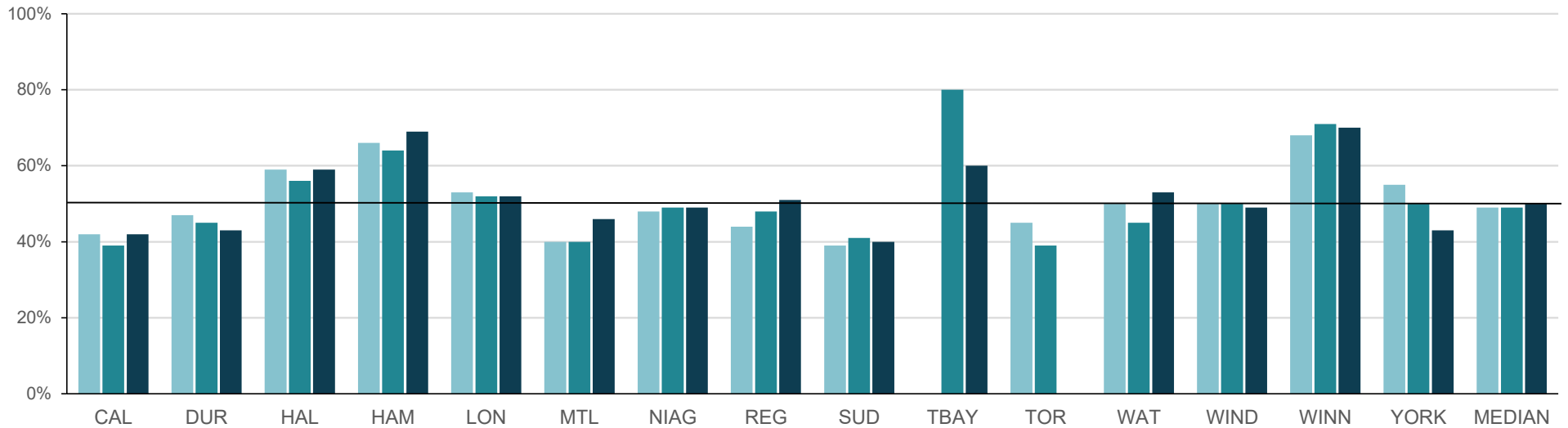
Montréal: The service thresholds for responding to weather incidents and the volume and type of snow removal required due to population density contribute to Montréal's higher cost.

Toronto: Capital costs of transportation services increased due to tangible capital asset resulting in lower service costs. The numbers are not comparable from year to year.

## Roads

**Figure 28.4 Percent of Paved Lane Km Where the Condition is Rated as Good to Very Good**

This measure reflects the percent of paved lane km where no maintenance or rehabilitation action is required except for minor surface maintenance. Municipalities may use different approaches to assess and rate road condition.



	CAL	DUR	HAL	HAM	LON	MTL	NIAG	REG	SUD	TBAY	TOR	WAT	WIND	WINN	YORK	MEDIAN
2018	42%	47%	59%	66%	53%	40%	48%	44%	39%	N/A	45%	50%	50%	68%	55%	49%
2019	39%	45%	56%	64%	52%	40%	49%	48%	41%	80%	39%	45%	50%	71%	50%	49%
2020	42%	43%	59%	69%	52%	46%	49%	51%	40%	60%	N/A	53%	49%	70%	43%	50%

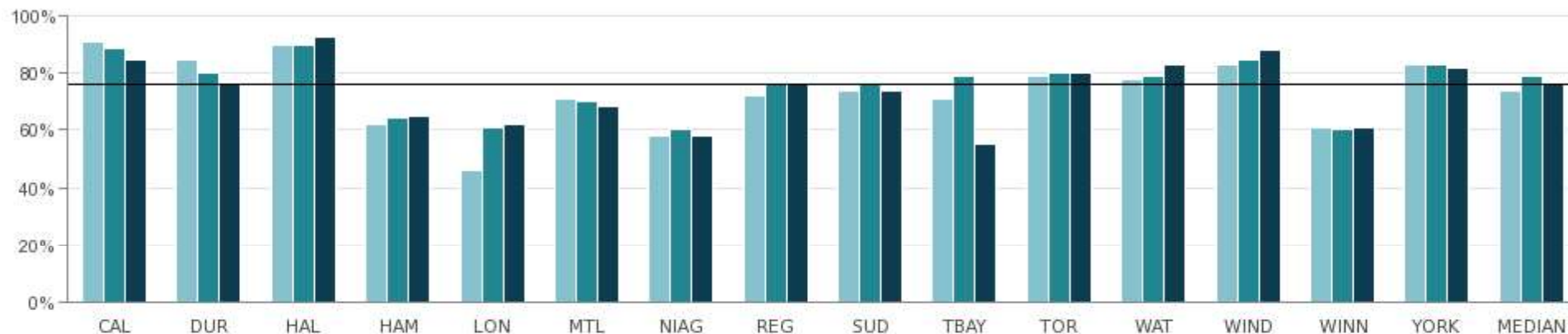
Source: ROAD405 (Customer Service)

Thunder Bay: New condition rating was completed in 2020. Rating decreased from previous rating performed. Data not available in 2018.

## Roads

**Figure 28.5 Percent of Bridges, Culverts and Viaducts Where the Condition is Rated as Good to Very Good**

This measure represents the percent of bridges, culverts and viaducts where the condition of primary components is rated as good to very good, requiring maintenance only. Municipalities may use different approaches to assess and rate the condition of these assets. Ratings are not always related to structural integrity (e.g. there may be some deterioration, but it is not structurally inadequate).



2018	91%	85%	90%	62%	46%	71%	58%	72%	74%	71%	79%	78%	83%	61%	83%	74%
2019	89%	80%	90%	64%	61%	70%	60%	77%	76%	79%	80%	79%	85%	60%	83%	79%
2020	85%	76%	93%	65%	62%	68%	58%	77%	74%	55%	80%	83%	88%	61%	82%	76%

Source: ROAD415 (Customer Service)

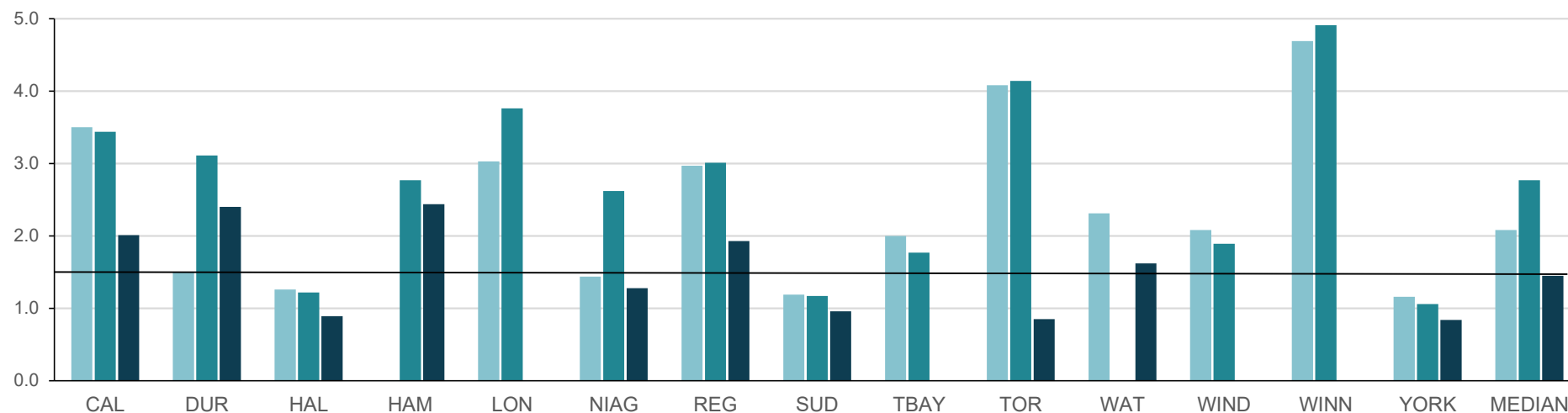
Thunder Bay: New condition rating was completed in 2020. Rating decreased from previous rating performed five years ago.



## Roads

**Figure 28.6 On-Road Traffic Collision Rate (Collisions per Million Vehicle Km)**

Vehicle Collision Rate (Collisions per Million Vehicle km) In 2020, most municipalities saw a reduction in traffic volume and changes in traffic patterns which may have been attributable to COVID-19 resulting in a decrease in on-road traffic collisions.



Municipality	2018	2019	2020
CAL	3.50	3.44	2.01
DUR	1.50	3.11	2.40
HAL	1.26	1.22	0.89
HAM	N/A	2.77	2.44
LON	3.03	3.76	N/A
NIAG	1.44	2.62	1.28
REG	2.97	3.01	1.93
SUD	1.19	1.17	0.96
TBAY	2.00	1.77	N/A
TOR	4.08	4.14	0.85
WAT	2.31	N/A	1.62
WIND	2.08	1.89	N/A
WINN	4.69	4.91	N/A
YORK	1.16	1.06	0.84
MEDIAN	2.08	2.77	1.45

Source: ROAD115 (Community Impact)

London, Thunder Bay, Windsor and Winnipeg: 2020 data not yet available.

Montréal: Does not report on this measure.

Toronto: The methodology used to determine this measure is currently under review and is not comparable to prior years.

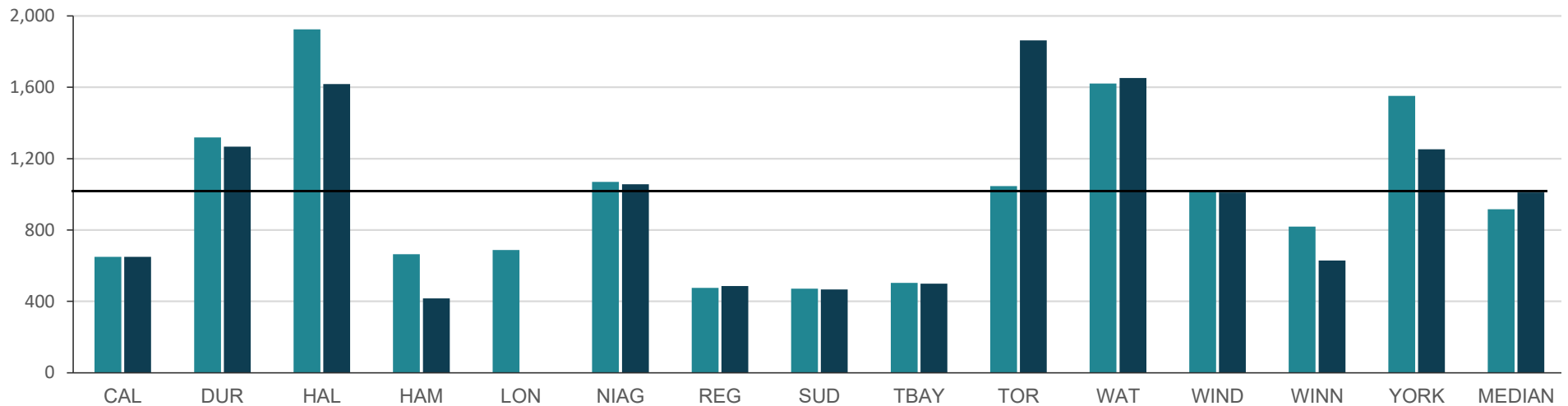
Waterloo: Unable to report in 2019.

# Roads

**Figure 28.7 Vehicle Km Traveled per Lane Km**

This measure indicates the number of times a vehicle travels over each lane km of major road, demonstrating road congestion. This measure was new in 2019. In 2020, many municipalities saw a reduction in traffic volume and changes in traffic patterns which may have been attributable to COVID-19.

(In Thousands)



2019	650,044	1,318,768	1,923,921	663,781	687,107	1,069,983	476,123	471,160	503,277	1,045,864	1,620,607	1,013,565	819,244	1,551,061	916,405
2020	648,944	1,266,457	1,618,356	416,706	N/A	1,056,658	486,530	467,094	498,821	1,862,999	1,651,399	1,011,054	628,504	1,252,895	1,101,154

Source: ROAD114 (Community Impact)

Montréal: Does not currently report on this measure.