

ROADS SNAPSHOT MEDIAN FOR 2017

**VEHICLES ON
MAIN ROADS**
1.6M
per lane kilometre
ROAD112 (COMMUNITY IMPACT)

51%
of roads are
rated good
or very good
ROAD405M
(CUSTOMER SERVICE)



72%

of bridges, culverts
and viaducts are rated
good or very good
ROAD415M
(CUSTOMER SERVICE)

roads maintenance costs

PAVED

SINGLE-TIER \$11,926/km

UPPER-TIER \$18,889/km

WINTER

SINGLE-TIER \$4,315/km

UPPER-TIER \$4,779/km



ROAD3071 (EFFICIENCY); ROAD3097 (EFFICIENCY)

KEEP IN MIND:

Influencing Factors

Influencing factors can create variances in comparison data from year-to-year and from municipality-to-municipality.



Economic Conditions

Inflationary increases



Level of Government

Single-tier vs. Upper-tier municipalities



Maintenance Standards

Road ratings and levels of service



Policies

Capitalization: operating vs. capital expenditures

Amortization: varies depending on type and age of infrastructure, climate, etc.



Traffic Volumes & Urban Form

Affects frequency and cost of maintenance



Utility Cut Repairs

Costs can vary significantly year-to-year



Weather Conditions

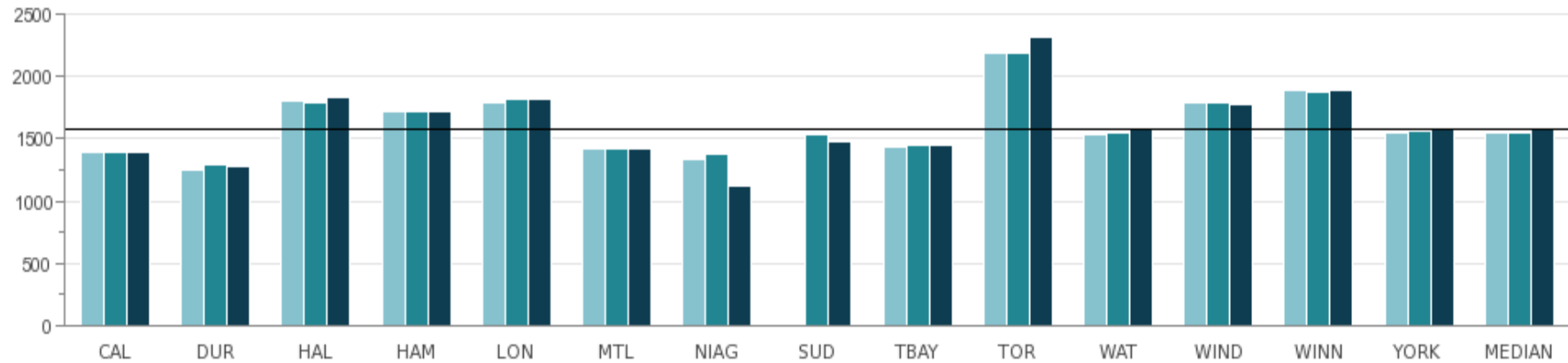
Impact operation and maintenance costs

For a full description of influencing factors, please go to: www.mbncanada.ca

Fig. 28.1 Vehicle km Traveled per Lane km (Class 1, 2, and 3 Only)

The measure indicates the number of times a vehicle travels over each lane km of major road, demonstrating road congestion.

(In Thousands)



2015	1,396,747	1,252,575	1,802,430	1,726,344	1,798,144	1,425,839	1,337,229	N/A	1,438,841	2,186,344	1,533,336	1,793,551	1,885,653	1,548,927	1,548,927
2016	1,397,240	1,285,501	1,786,814	1,724,731	1,813,929	1,425,839	1,380,678	1,535,319	1,453,542	2,186,344	1,552,336	1,792,297	1,876,027	1,558,607	1,555,472
2017	1,395,810	1,272,686	1,832,114	1,715,118	1,818,149	1,425,839	1,116,535	1,477,790	1,453,542	2,315,584	1,591,212	1,779,072	1,894,506	1,571,312	1,581,262

Source: ROAD112 (Community Impact)

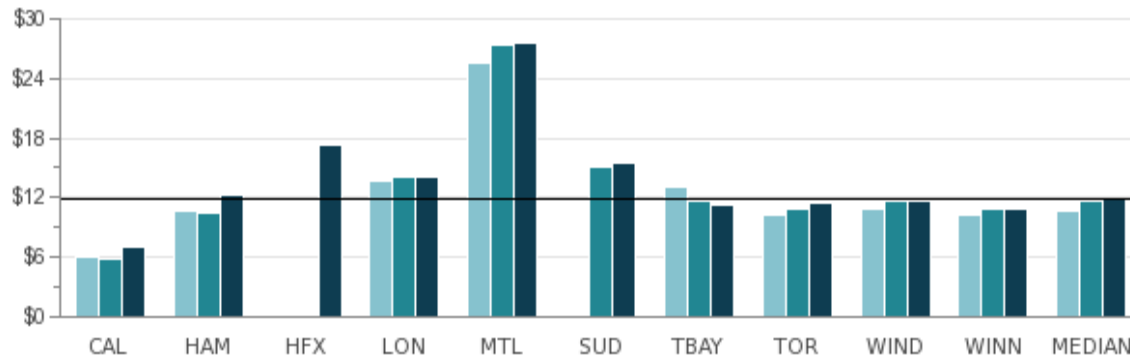
Halifax: Does not report - different road classification system in Nova Scotia.

Montreal: Does not include Class 1 Lane km - jurisdiction of the Province.

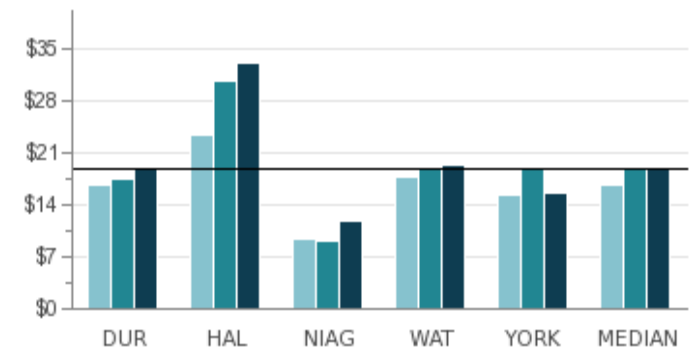
Fig. 28.2 Total Cost for Paved Roads per Lane km (Hard Top)

This measure represents the total cost to maintain hard top (paved) roadways. 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).

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



2015	\$6,027	\$10,743	N/A	\$13,630	\$25,585	N/A	\$13,027	\$10,229	\$10,770	\$10,167	\$10,757	\$16,523	\$23,467	\$9,352	\$17,835	\$15,357	\$16,523
2016	\$5,882	\$10,517	N/A	\$14,061	\$27,447	\$15,111	\$11,746	\$10,846	\$11,736	\$10,777	\$11,736	\$17,500	\$30,479	\$9,079	\$19,138	\$19,127	\$19,127
2017	\$7,077	\$12,187	\$17,252	\$14,111	\$27,577	\$15,468	\$11,362	\$11,491	\$11,665	\$10,928	\$11,926	\$18,889	\$32,959	\$11,681	\$19,250	\$15,579	\$18,889

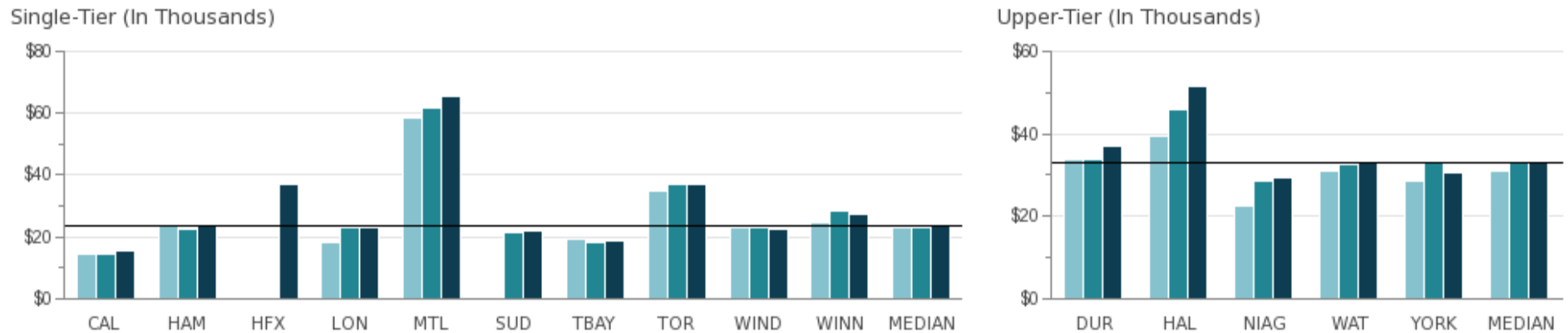
Source: ROAD307T (Efficiency)

Halton: Some transportation services costs such as: master plans, EAs, feasibility studies, land costs and road resurfacing are included as operating costs as opposed to TCAs.

Montreal: The higher cost can be attributed to investments in infrastructure and higher amortization costs.

Fig. 28.3 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 control for roadways, sidewalks, and parking lots.



2015	\$14,523	\$23,591	N/A	\$18,463	\$58,371	N/A	\$19,479	\$35,115	\$22,817	\$24,912	\$23,204	\$33,786	\$39,625	\$22,439	\$30,949	\$28,437	\$30,949
2016	\$14,454	\$22,507	N/A	\$22,966	\$61,492	\$21,698	\$18,486	\$36,759	\$23,014	\$28,459	\$22,966	\$33,808	\$45,667	\$28,472	\$32,568	\$33,341	\$33,341
2017	\$15,607	\$23,785	\$36,780	\$23,250	\$65,657	\$21,958	\$18,983	\$37,112	\$22,506	\$27,128	\$23,518	\$36,956	\$51,644	\$29,461	\$32,838	\$30,538	\$32,838

Source: ROAD308T (Efficiency)

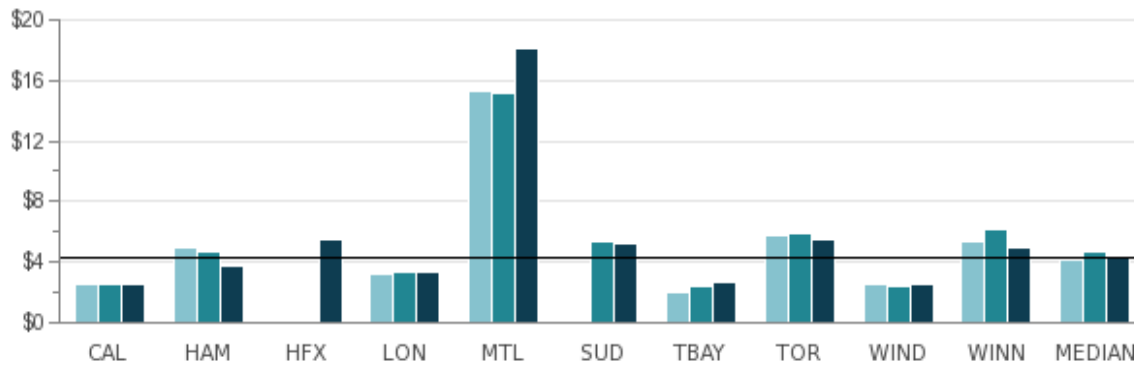
Halton: Roads restoration costs, contracted services costs, and roads and bridges amortization costs increased due to Halton Region’s continuous growth, new construction and roads rationalization.

Montreal: The higher cost can be attributed to investments in infrastructure and higher amortization costs.

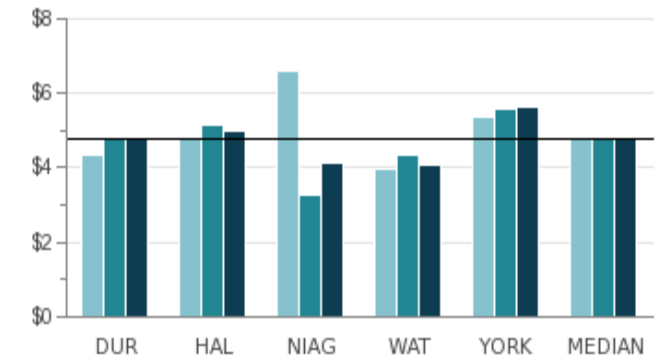
Fig. 28.4 Total Cost for Winter Maintenance of Roadways per Lane km Maintained

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.

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



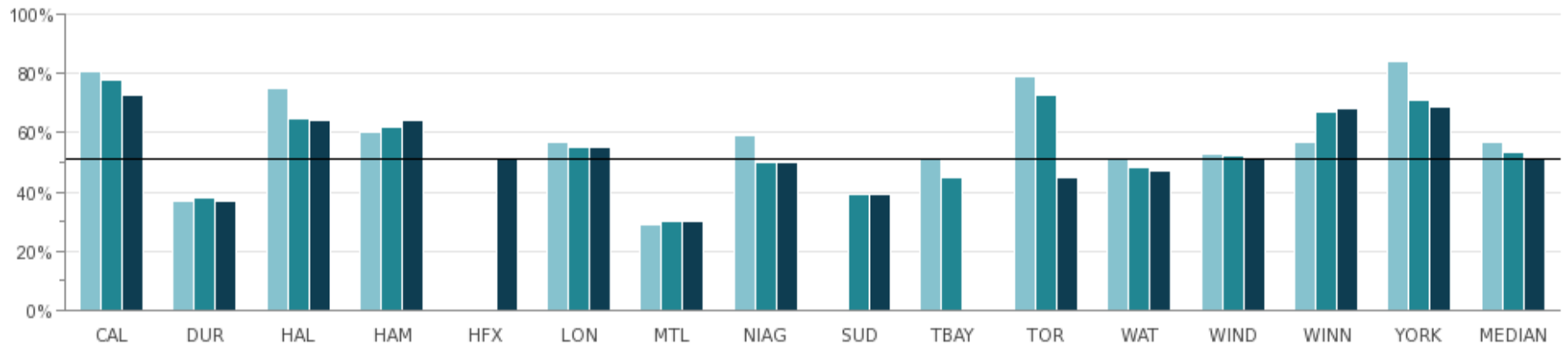
2015	\$2,491	\$4,971	N/A	\$3,279	\$15,291	N/A	\$2,019	\$5,707	\$2,543	\$5,314	\$4,125	\$4,319	\$4,778	\$6,583	\$3,955	\$5,370	\$4,778
2016	\$2,541	\$4,736	N/A	\$3,406	\$15,189	\$5,352	\$2,464	\$5,872	\$2,406	\$6,147	\$4,736	\$4,760	\$5,148	\$3,277	\$4,322	\$5,600	\$4,760
2017	\$2,566	\$3,725	\$5,538	\$3,383	\$18,167	\$5,215	\$2,693	\$5,553	\$2,534	\$4,905	\$4,315	\$4,779	\$4,975	\$4,108	\$4,089	\$5,642	\$4,779

Source: ROAD309T (Efficiency)

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

Fig. 28.5 Percent of Paved Lane Km where the Condition is Rated as Good to Very Good

The percentage 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.



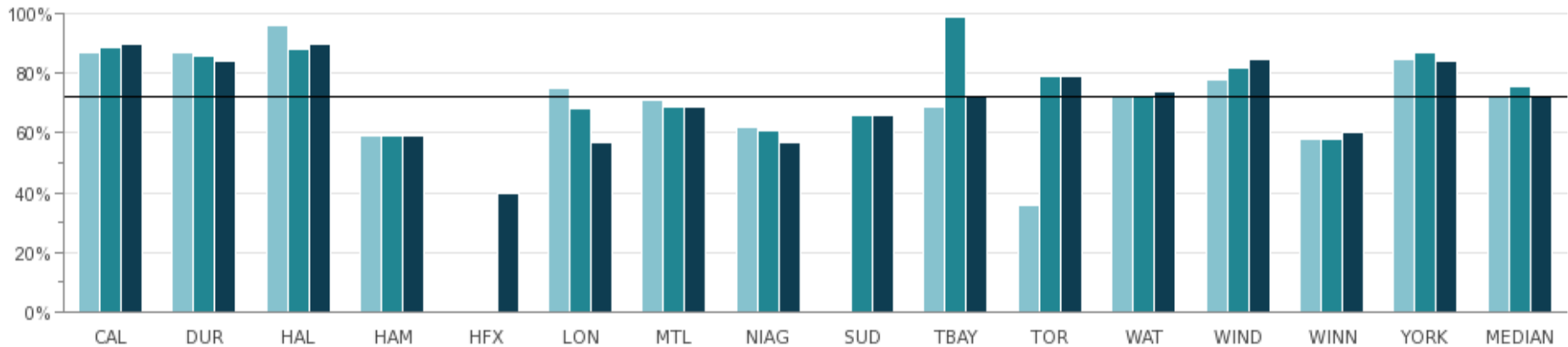
2015	81%	37%	75%	60%	N/A	57%	29%	59%	N/A	51%	79%	51%	53%	57%	84%	57%
2016	78%	38%	65%	62%	N/A	55%	30%	50%	39%	45%	73%	48%	52%	67%	71%	54%
2017	73%	37%	64%	64%	51%	55%	30%	50%	39%	N/A	45%	47%	51%	68%	69%	51%

Source: ROAD405M (Customer Service)

Toronto: In 2017, Toronto changed from manual data collection methods to a network wide automated pavement data collection and re-assessed its trigger values for good-fair-poor condition ranges. The 2017 results cannot be directly compared to previous years' results.

Fig. 28.6 Percent of Bridges, Culverts and Viaducts Where the Condition is Rated as Good to Very Good

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).



2015	87%	87%	96%	59%	N/A	75%	71%	62%	N/A	69%	36%	73%	78%	58%	85%	73%
2016	89%	86%	88%	59%	N/A	68%	69%	61%	66%	99%	79%	72%	82%	58%	87%	76%
2017	90%	84%	90%	59%	40%	57%	69%	57%	66%	72%	79%	74%	85%	60%	84%	72%

Source: ROAD415M (Customer Service)

Toronto: In 2016, Toronto starting using the Bridge Condition Index (BCI) for reporting.

