

## SECTION II

# 15 Roads Services



### What is the 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.

Single-tier municipalities are responsible for maintaining all types of roads, including arterial, collector and local roads and, in some cases, expressways and laneways. Upper-tier governments are not responsible for maintenance of local roads.

### 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.

**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 associated with fibre optic cables can vary significantly from one year to another.

**Weather Conditions:** The frequency and severity of winter storm events can impact winter maintenance costs as well as each municipality's service threshold for responding to a winter storm event and service standard for road conditions after a storm event.

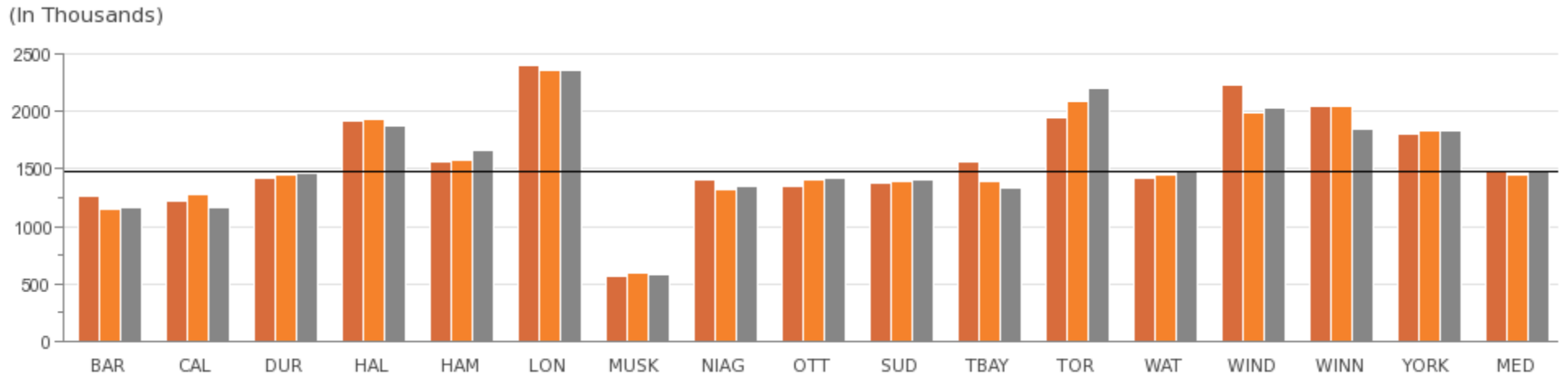
### Additional Information:

*The City of Winnipeg collected data in this service area for the first time in 2009. Therefore their results for 2009 may not be comparable. Contact the Winnipeg Municipal Lead for further information.*

## Roads Services

### What is the volume of traffic on our main roads?

Fig 15.1 Vehicle Km Traveled per Lane Km (Major Roads)



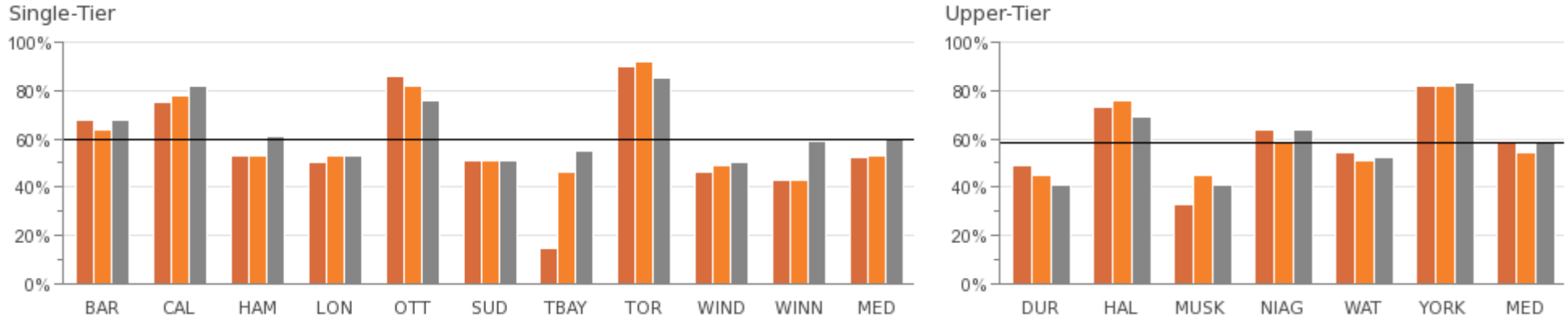
2009	1,262,504	1,216,163	1,427,266	1,916,999	1,557,786	2,406,029	571,104	1,402,702	1,345,665	1,380,456	1,562,370	1,946,384	1,417,367	2,237,533	2,052,770	1,810,940	1,492,526
2010	1,155,295	1,276,262	1,444,985	1,929,288	1,579,986	2,362,910	592,823	1,322,471	1,406,446	1,389,149	1,391,852	2,087,290	1,443,048	1,993,237	2,052,770	1,840,729	1,444,017
2011	1,170,895	1,170,390	1,468,854	1,871,424	1,668,549	2,364,605	574,882	1,346,335	1,418,661	1,399,626	1,334,409	2,203,301	1,482,950	2,034,842	1,842,572	1,840,537	1,475,902

Source: ROAD112 (Community Impact)

Comment: The measure indicates the number of times that a vehicle travels over each lane kilometer of road and demonstrates road congestion.

## What percent of paved roads are rated good to very good?

Fig 15.2 Percent of Paved Lane Km where the Condition is Rated as Good to Very Good

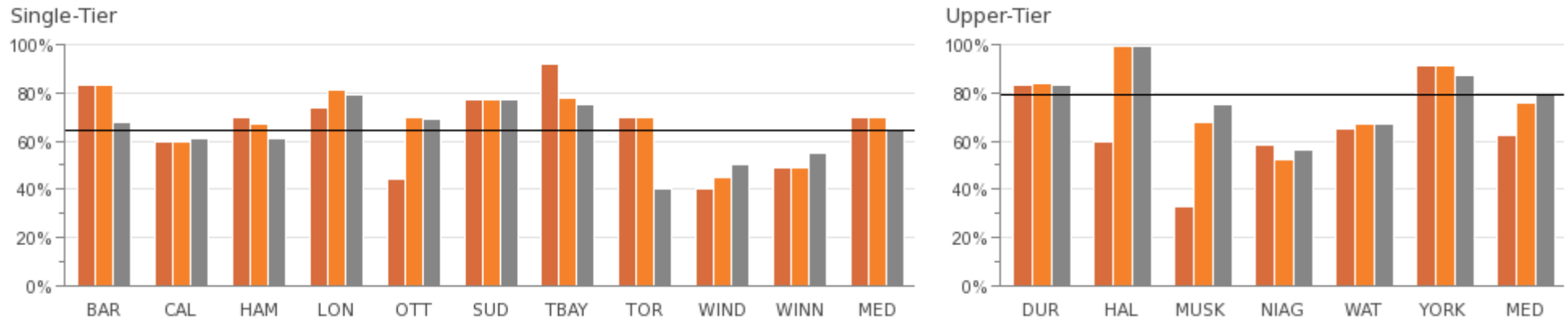


2009	68%	75%	53%	50%	86%	51%	15%	90%	46%	43%	52%		49%	73%	33%	64%	54%	82%	59%
2010	64%	78%	53%	53%	82%	51%	46%	92%	49%	43%	53%		45%	76%	45%	58%	51%	82%	55%
2011	68%	82%	61%	53%	76%	51%	55%	85%	50%	59%	60%		41%	69%	41%	64%	52%	83%	58%

Source: ROAD405M (Customer Service)

### What percent of bridges and culverts are rated good to very good?

Fig 15.3 Percent of Bridges and Culverts where the Condition is Rated as Good to Very Good



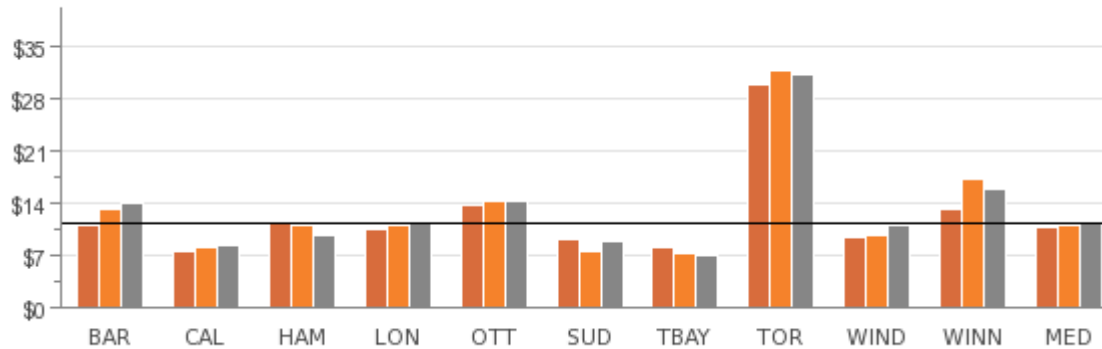
2009	83%	60%	70%	74%	44%	77%	92%	70%	40%	49%	70%		83%	60%	33%	58%	65%	91%	63%
2010	83%	60%	67%	81%	70%	77%	78%	70%	45%	49%	70%		84%	99%	68%	52%	67%	91%	76%
2011	68%	61%	61%	79%	69%	77%	75%	40%	50%	55%	65%		83%	99%	75%	56%	67%	87%	79%

Source: ROAD415M (Customer Service)

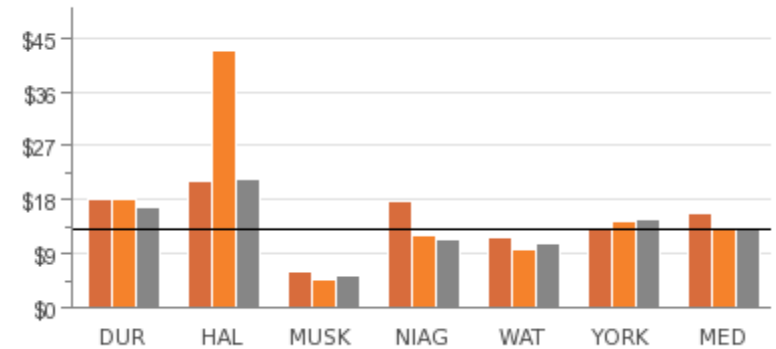
## What is the operating cost to maintain our roads per lane Km?

Fig 15.4 Roads Operating Cost (All Functions) per Lane Km

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



2009	\$11,049	\$7,584	\$11,448	\$10,387	\$13,652	\$9,174	\$7,991	\$29,717	\$9,508	\$13,057	\$10,718		\$18,259	\$20,957	\$6,011	\$17,709	\$11,643	\$13,550	\$15,630
2010	\$13,266	\$8,013	\$11,047	\$11,014	\$14,094	\$7,442	\$7,135	\$31,521	\$9,538	\$17,063	\$11,031		\$18,265	\$42,829	\$4,547	\$12,190	\$9,842	\$14,291	\$13,241
2011	\$13,867	\$8,345	\$9,591	\$11,587	\$14,167	\$8,808	\$7,090	\$31,186	\$10,972	\$15,702	\$11,280		\$16,875	\$21,290	\$5,293	\$11,281	\$10,722	\$14,878	\$13,080

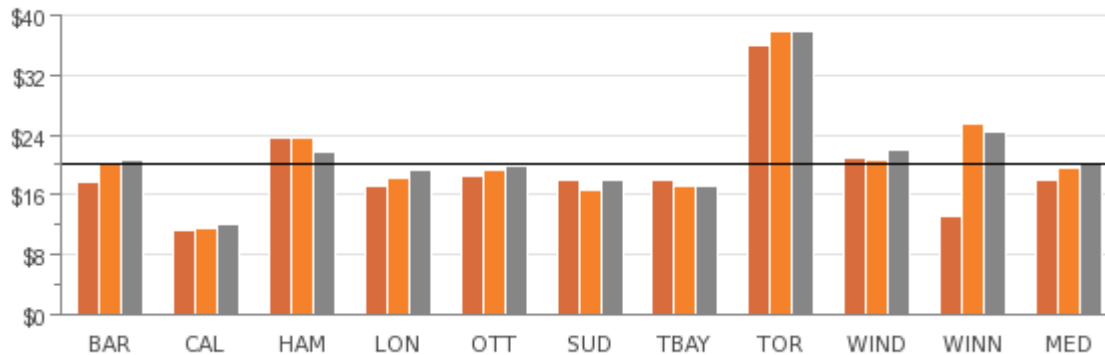
Source: ROAD308 (Efficiency)

Note: Roads annexation and other extraordinary expenses significantly impacted Halton's results in 2010.

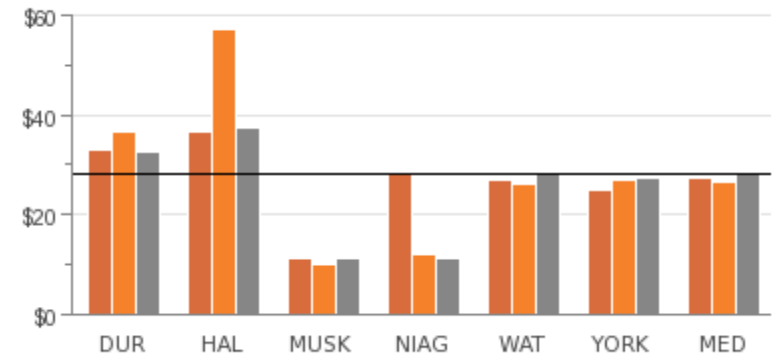
### What is the total cost to maintain our roads per lane Km?

Fig 15.5 OMBI Total Roads (All Functions) Cost per Lane Km (includes amortization)

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



2009	\$17,821	\$11,195	\$23,493	\$17,068	\$18,609	\$17,938	\$17,838	\$35,933	\$20,953	\$13,057	\$17,888		\$32,930	\$36,582	\$11,238	\$28,189	\$26,921	\$25,075	\$27,555
2010	\$20,031	\$11,610	\$23,572	\$18,112	\$19,383	\$16,612	\$17,174	\$37,937	\$20,543	\$25,417	\$19,707		\$36,786	\$57,131	\$10,136	\$12,190	\$25,964	\$26,837	\$26,401
2011	\$20,711	\$12,052	\$21,798	\$19,263	\$19,754	\$17,944	\$17,265	\$37,883	\$22,031	\$24,484	\$20,233		\$32,440	\$37,382	\$11,206	\$11,281	\$28,604	\$27,334	\$27,969

Source: ROAD308T (Efficiency)

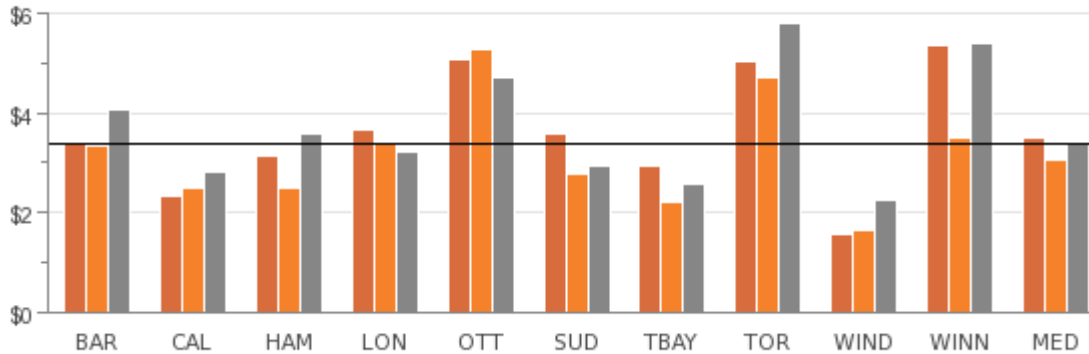
Note: Calculation includes amortization.

Note: Roads annexation and other extraordinary expenses significantly impacted Halton's results in 2010.

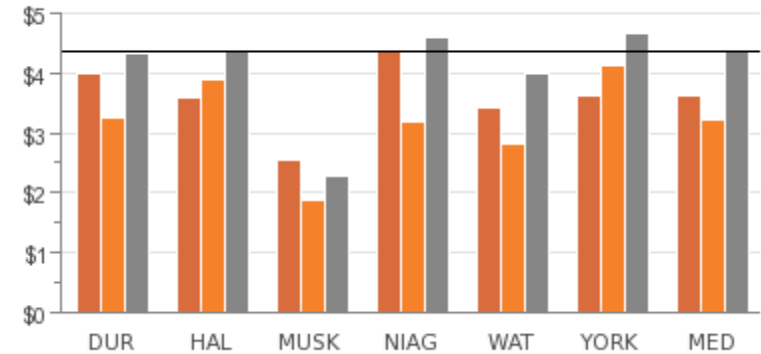
## How much does it cost to maintain our roads in winter?

Fig 15.6 Operating Costs for Winter Maintenance of Roadways per Lane Km Maintained in Winter

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



2009	\$3,425	\$2,339	\$3,144	\$3,643	\$5,070	\$3,599	\$2,921	\$5,024	\$1,569	\$5,337	\$3,512		\$3,998	\$3,580	\$2,536	\$4,360	\$3,426	\$3,634	\$3,607
2010	\$3,352	\$2,508	\$2,510	\$3,411	\$5,260	\$2,783	\$2,227	\$4,720	\$1,660	\$3,520	\$3,068		\$3,250	\$3,878	\$1,893	\$3,186	\$2,803	\$4,115	\$3,218
2011	\$4,082	\$2,819	\$3,569	\$3,221	\$4,724	\$2,931	\$2,592	\$5,777	\$2,240	\$5,399	\$3,395		\$4,334	\$4,404	\$2,277	\$4,578	\$3,997	\$4,665	\$4,369

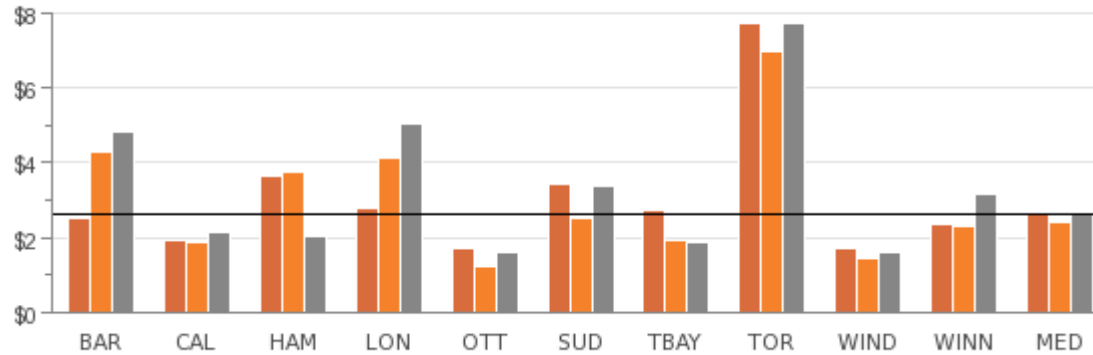
Source: ROAD903 (Efficiency)

Note: Winter maintenance includes plowing, sanding, salting and pre-treating roads for hazardous conditions.

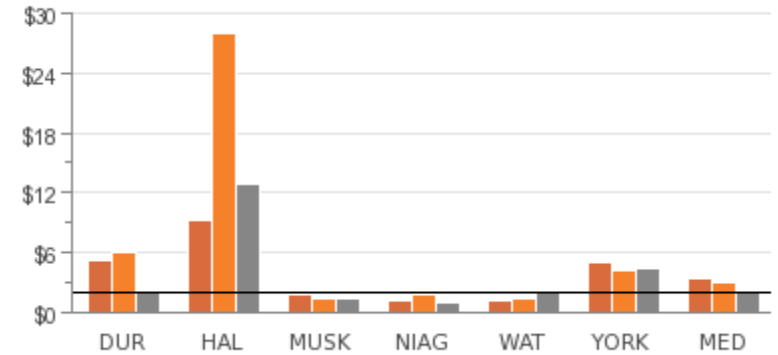
## How much does it cost to maintain one Km of paved road?

Fig 15.7 Operating Costs for Paved (Hard Top) Roads per Lane Km

Single-Tier (In Thousands)



Upper-Tier (In Thousands)



2009	\$2,529	\$1,912	\$3,623	\$2,815	\$1,732	\$3,435	\$2,731	\$7,745	\$1,743	\$2,375	\$2,630	\$5,183	\$9,303	\$1,756	\$1,210	\$1,174	\$4,987	\$3,372
2010	\$4,305	\$1,877	\$3,739	\$4,144	\$1,217	\$2,515	\$1,913	\$6,990	\$1,433	\$2,300	\$2,408	\$6,133	\$27,962	\$1,414	\$1,839	\$1,495	\$4,156	\$2,998
2011	\$4,848	\$2,121	\$2,053	\$5,067	\$1,612	\$3,355	\$1,894	\$7,737	\$1,625	\$3,161	\$2,641	\$1,953	\$12,797	\$1,492	\$1,068	\$2,025	\$4,465	\$1,989

Source: ROAD901 (Efficiency)

Note: Roads annexation and other extraordinary expenses significantly impacted Halton's results in 2010.