

2018-2022 Council Work Plan

Update on Improved Service Delivery - Infrastructure



Presentation by: Fuwing Wong
General Manager, Finance & Infrastructure Services

18-June-2019 General Committee Meeting

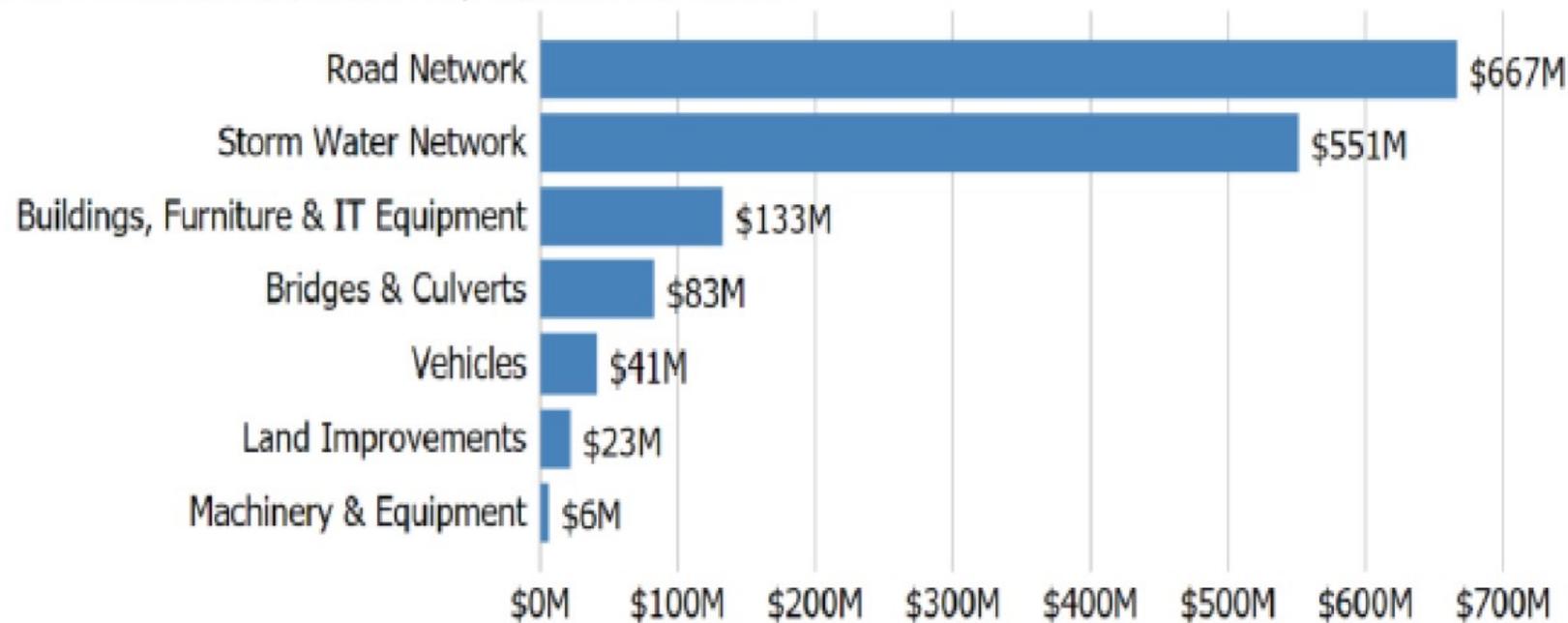
Improved Service Delivery

- Improve roads and long-term planning to maintain roads to standard 
- Plan for improved stormwater management to reduce drainage issues
- Build and maintain parks and green space
- Plan and fund recreation infrastructure that meets the changing needs of the community
- Explore community hub models for service delivery
- Provide options for an innovation hub for residents, entrepreneurs and small businesses

Current State

	lane km			
	Gravel	Asphalt	Surface Treatment	Concrete
Urban	0	585.62	6.88	2.32
Rural	234.33	464.76	337.37	0

Figure A: Asset distribution by replacement cost

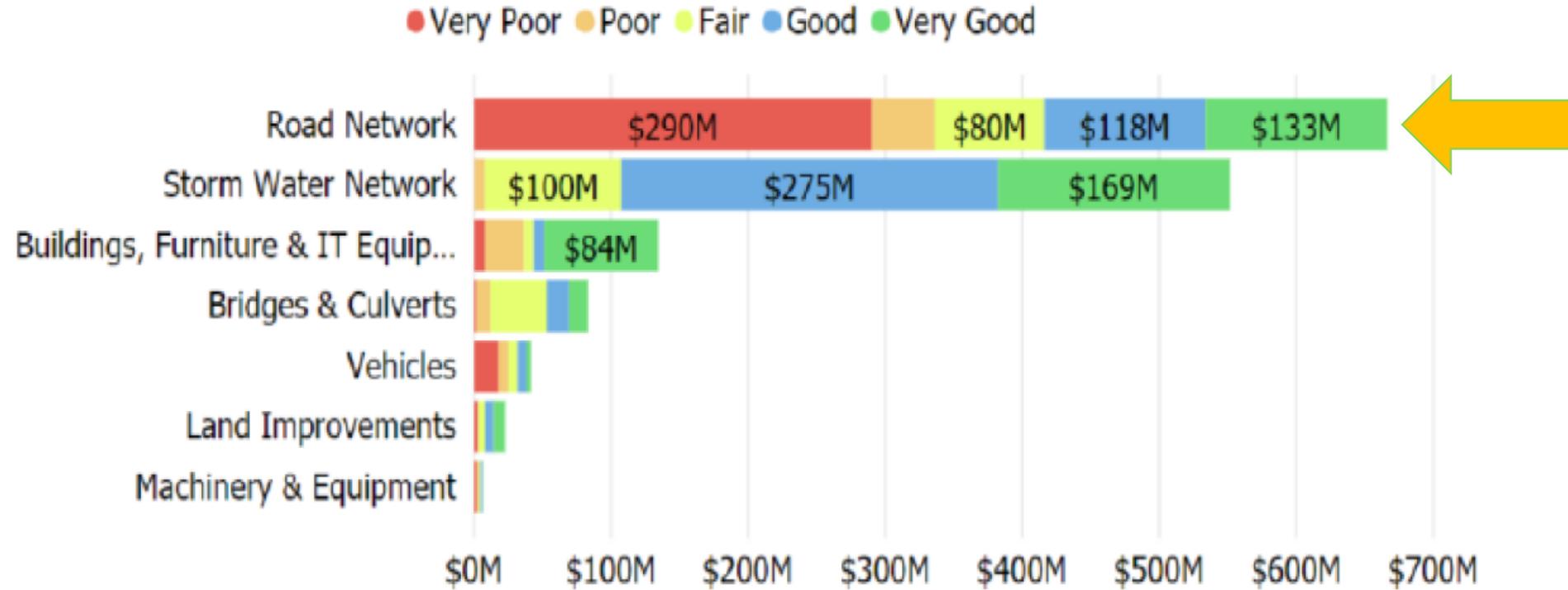


The 2018 Asset Management Plan for the

Town of Caledon

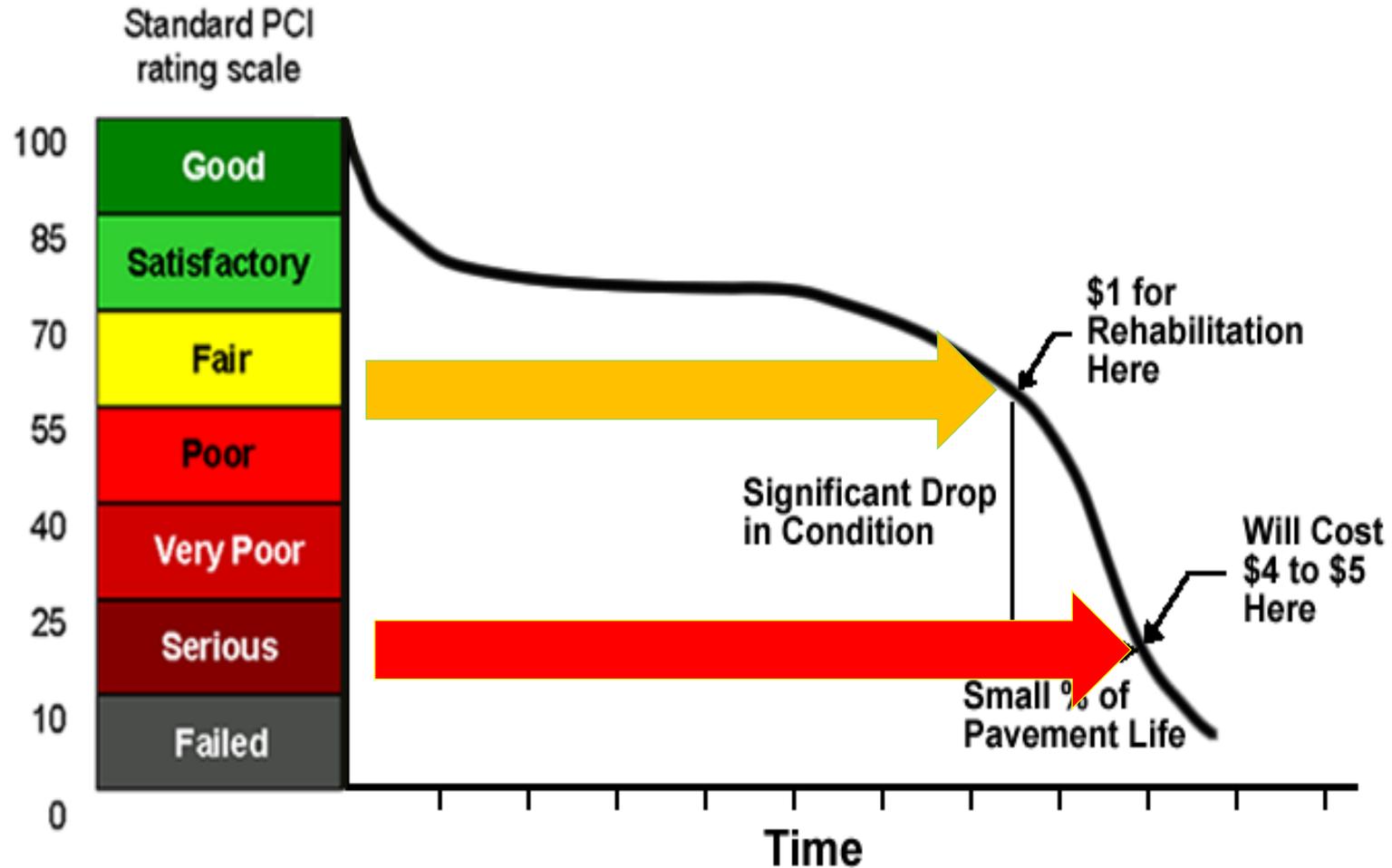
Asset Management Plan Data

Figure B: Asset condition distribution



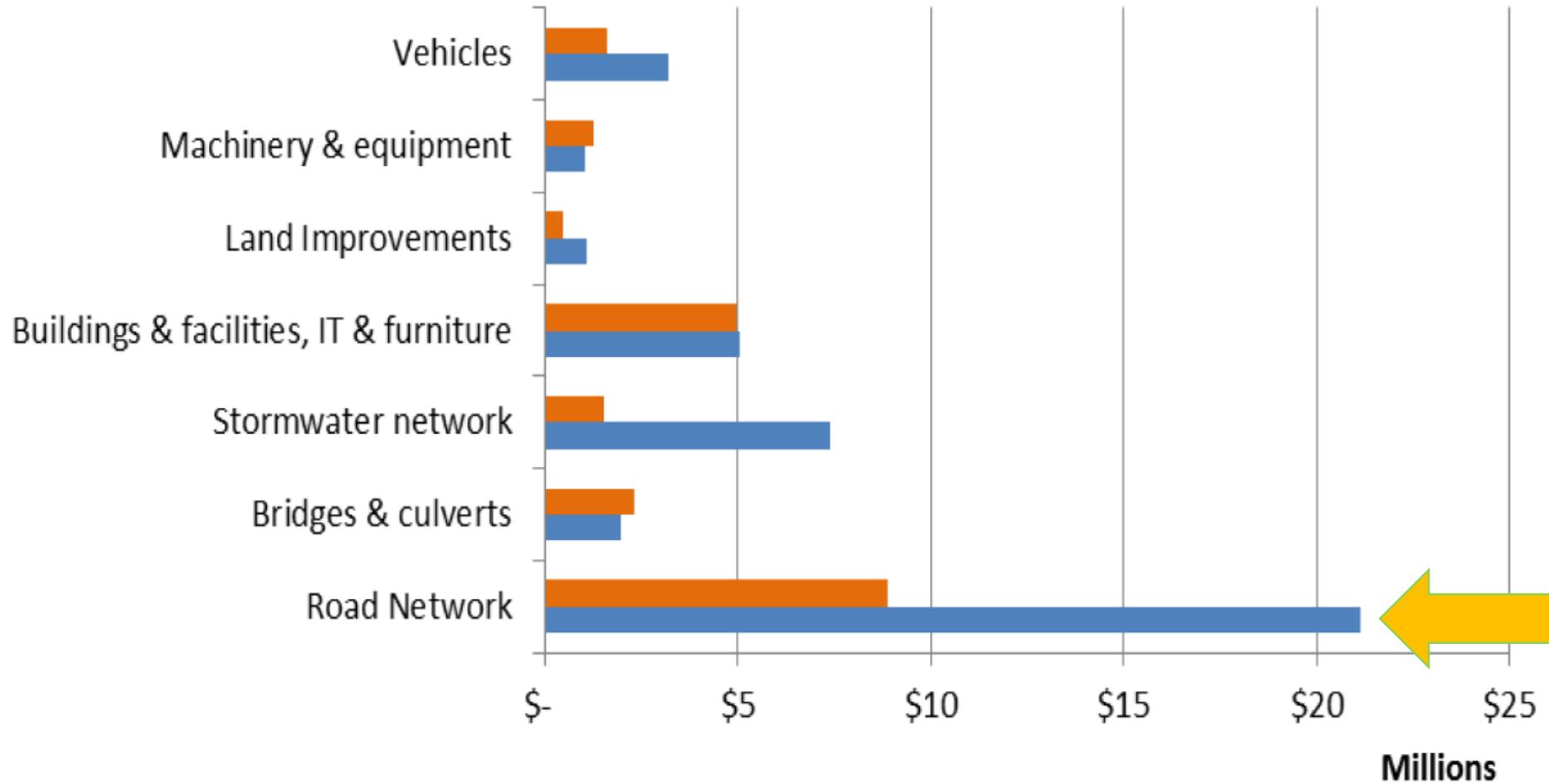
Road Network Management Philosophy

At an overall road network level, it is more cost-effective to allocate maintenance / minor rehabilitation funds to road sections *before* they slip into the costly reconstruction conditions



Asset Management Plan Recommendations

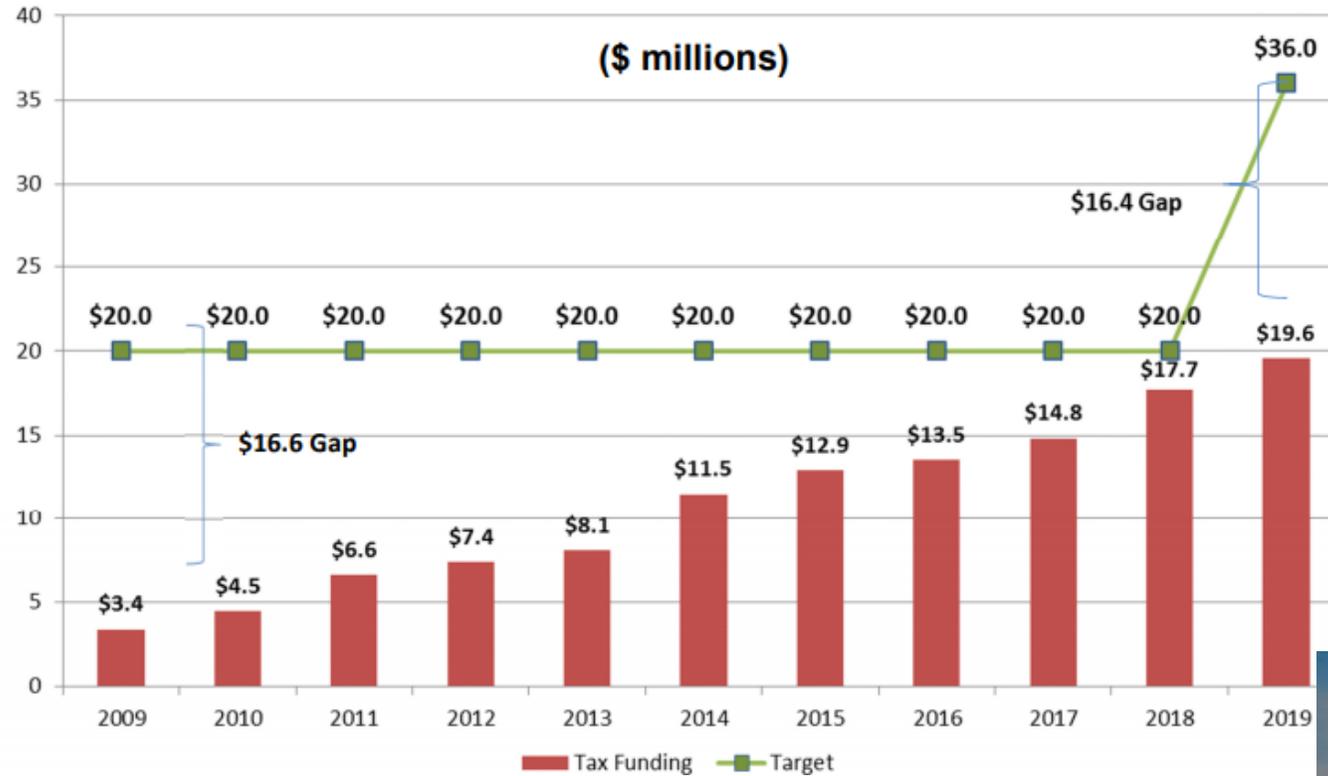
Figure C: Town's average annual funding deficit for its infrastructure assets



■ Total funding available as of 2018 ■ Avg. annual investment required

Current Funding Sources

- Tax Funded Capital Program \$19.6 million annually (2019) – Note: only \$7.8 million allocated to roads in the 2019 budget



- Federal Gas Tax \$3.7 million (2020)
- Ontario Community Infrastructure Fund (OCIF) \$1.4 million (2020)
- Aggregate Levy \$0.2 million (estimate)



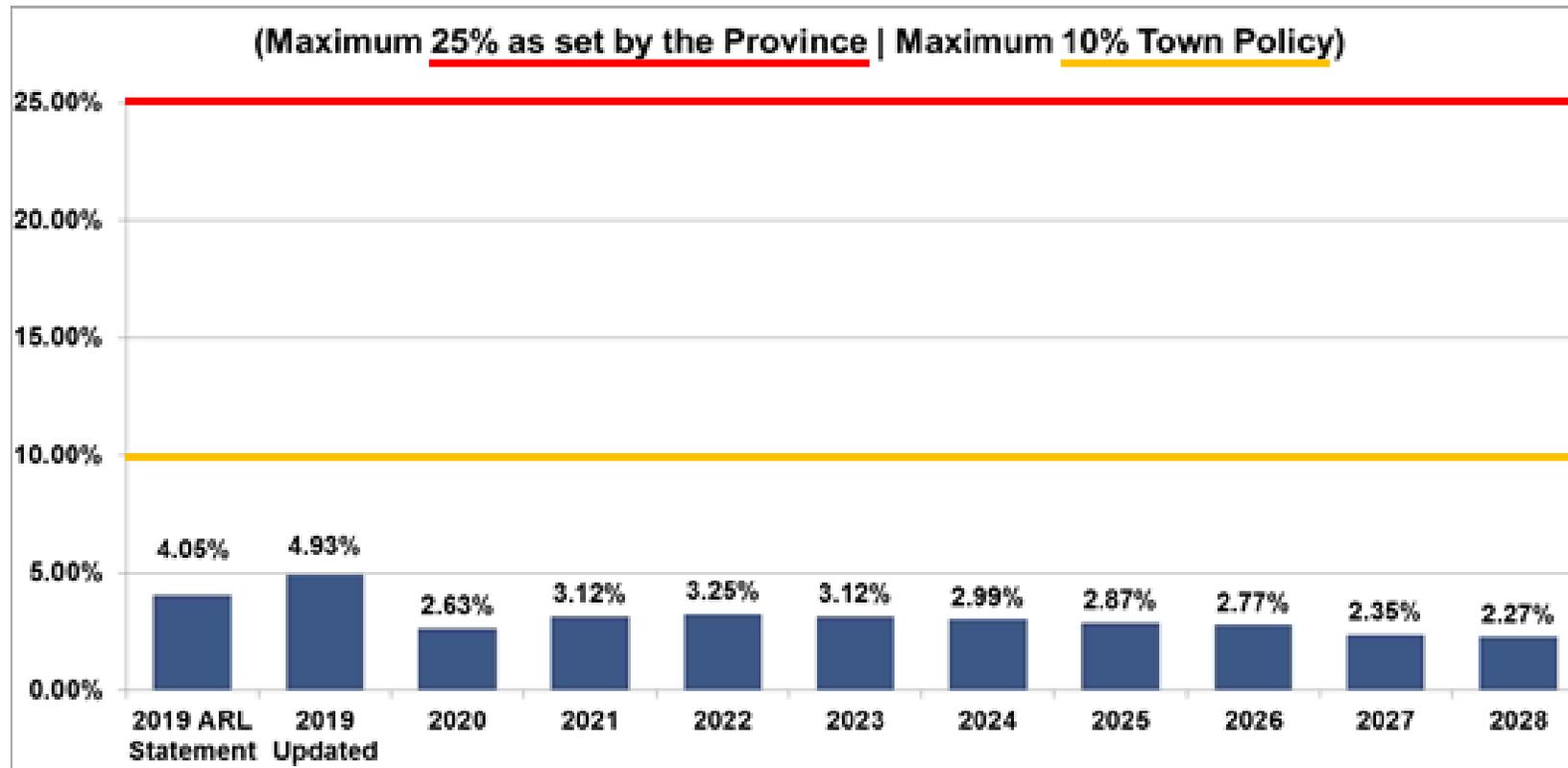
Ontario 

Ministries →

Ministry of Infrastructure

Funding Options – Short Term

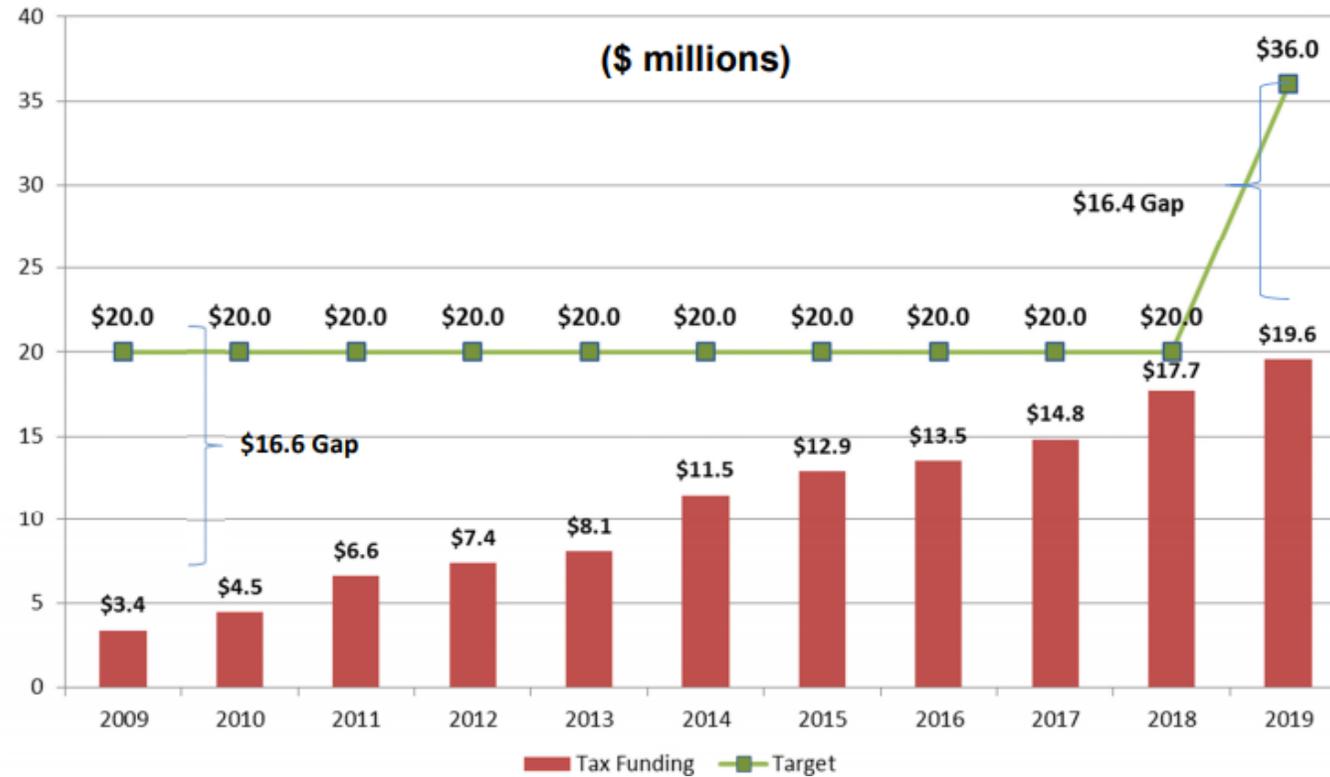
- One-time (doubling) Federal Gas Tax - \$3.6 million
- Utilize Capital Asset Replacement Reserve (former “Hydro Reserve Fund”) – 2020 forecasted balance \$14.8 million | Grows by \$2.1 million per year
- Increase debt-financing for roads – currently \$4.1 per year for “Enhanced Roads Program”
 - Based on current rates, 1% tax increase for debt-financing costs related to every \$5 million of debt;
 - Option to borrow \$20 million in 2020 and \$20 million in 2021 and still stay within the internal debt repayment limit of 10% Net Revenues



\$40 million debenture may result in 8.3%

Funding Options – Long-Term

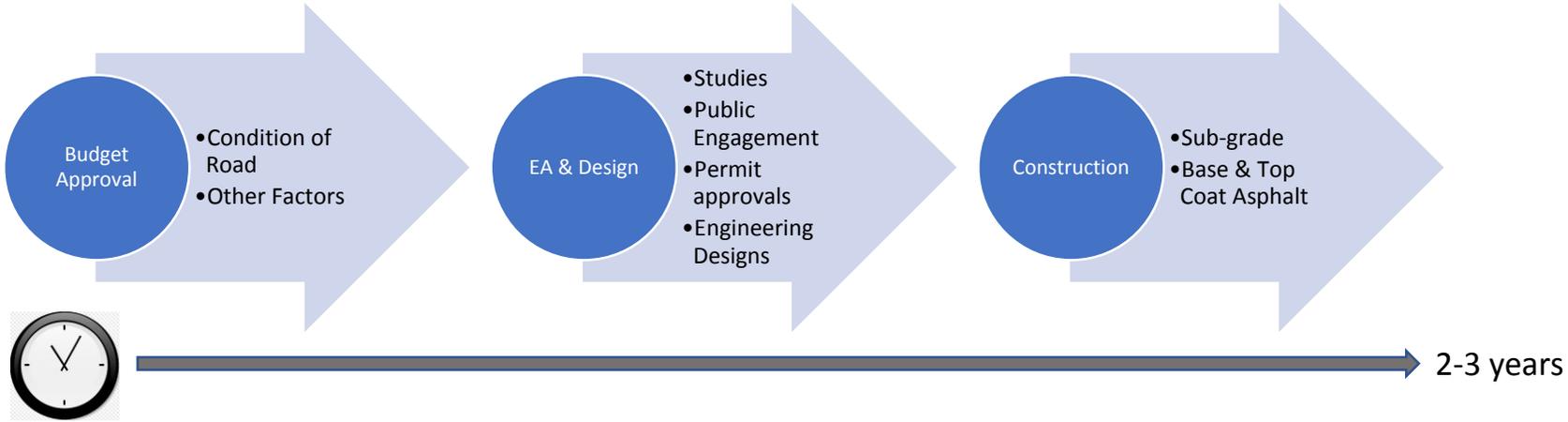
- Property Tax Increases for a sustainable and reliable capital funding program



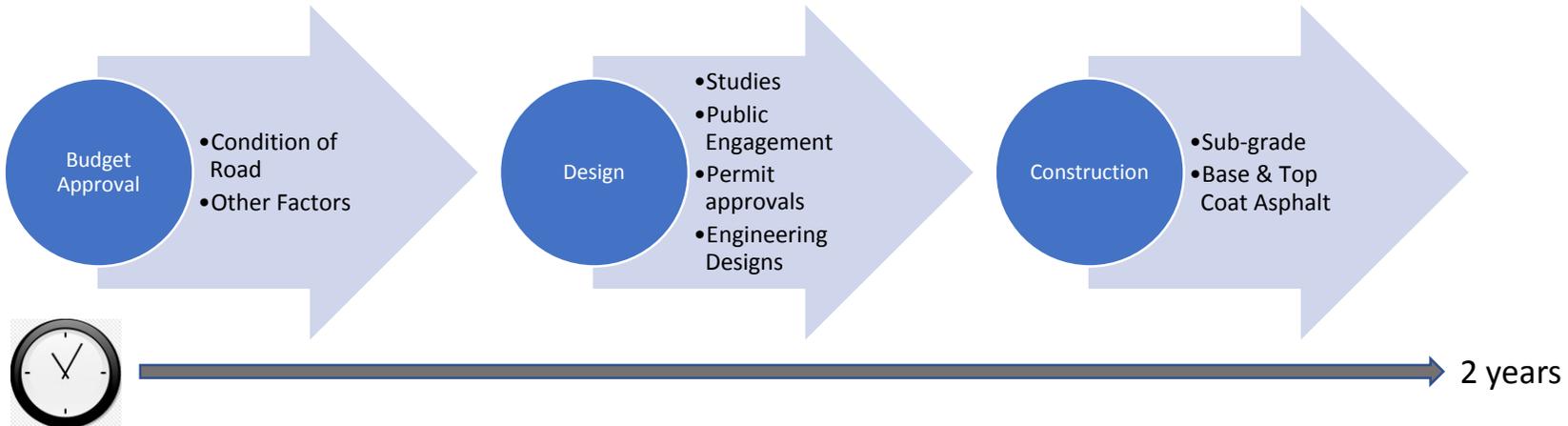
- Implementation Plan – Look at Alternate methods of service delivery / alternate programs for lower volume roads
 - Requires changes in programming – not just more dollars

Traditional Road Capital Programs at the Town

Road Reconstruction



Road Rehabilitation



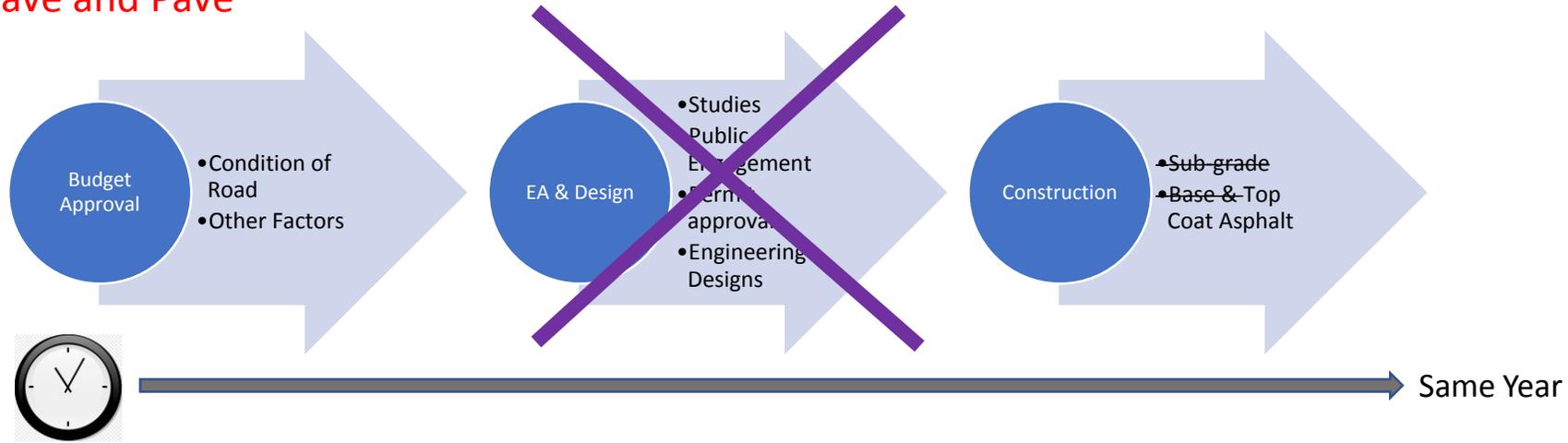
Staffing Resources



4 Engineering Project Managers
(incl. Supervisor)

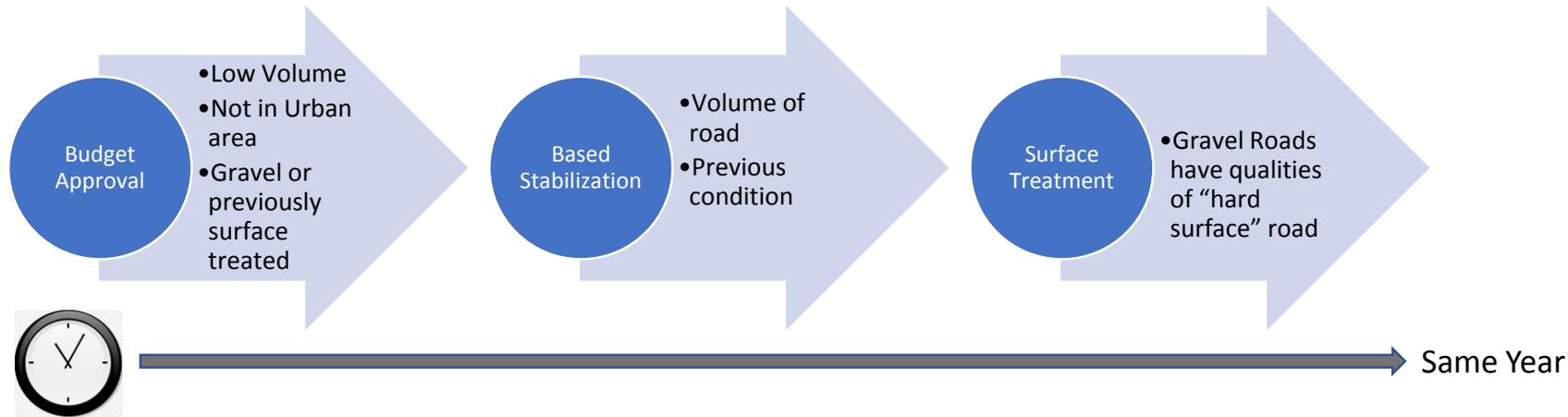
Traditional Road Capital Programs at the Town

“Shave and Pave”



Alternate Road Capital Program (Low Volume Roads)

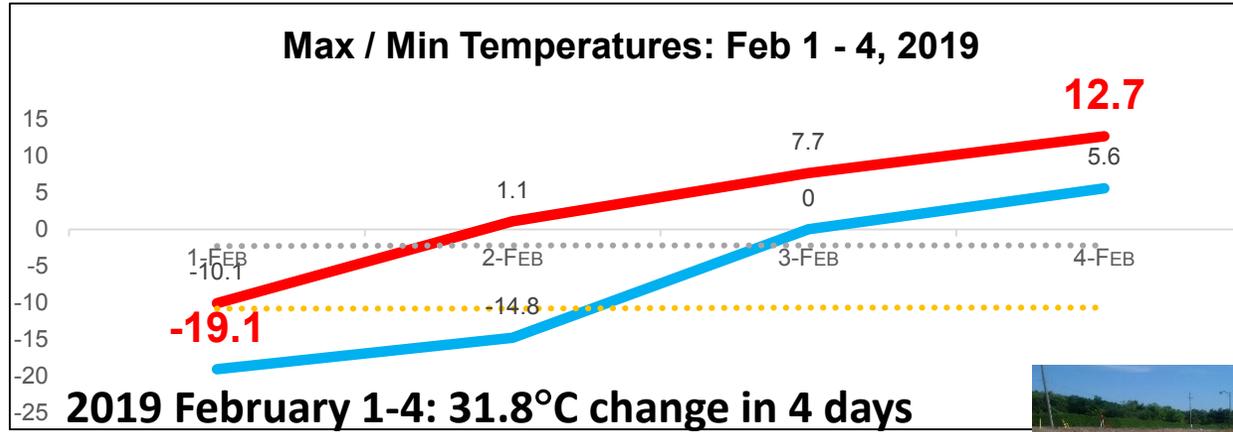
Surface Treatment or "Tar & Chip"



Other:

- Maintenance of Surface Treated Roads – Micro Surfacing or Slurry Seal
- New program for roads and other infrastructure in old/abandoned subdivisions

Impact of Climate Change on Infrastructure



2014 Significant Rain Event:
Flooding in Inglewood and Caledon Village



2016 Alton: Rain intensity exceeding 100 year storm intensity resulting in an unassumed pond failure and sediment discharge



Resident in Caledon busts out a kayak to make their way through flooded waters. - Udogors/Instagram

2018 Throughout Caledon:
February Credit and Humber River ice jam resulting in flooding in Inglewood and other parts of Caledon



March 15 2019:
Bolton Flood

Climate Change Adaptation Efforts

- \$0.5 million – Post-Winter Road Program
- Surface Treat Gravel Roads
- Updated Tender Specifications on winter maintenance vehicles
- Working on Community Climate Change Action Plan



COMMUNITY CLIMATE CHANGE ACTION PLAN

Project Background

The Town of Caledon, widely-respected for its progressive approach on environmental matters, has been developing a *Community Climate Change Action Plan* since November 2010. This Plan builds on prior environmental achievements and addresses the Town's Partners for Climate Protection commitments.

What is Partners for Climate Protection?

Since 2003, the Town has been a member of Partners for Climate Protection – a network of more than 200 Canadian municipal governments committed to greenhouse gas reduction and climate change action. This group of municipalities recognize they have a role to play with climate change given that "up to half of Canada's greenhouse gas emissions are under the direct or indirect control or influence of municipal governments".

There are five milestones associated with Partners for Climate Protection: 1) creating a greenhouse gas emissions inventory and forecast; 2) setting an emissions reduction target; 3) developing a local action plan; 4) implementing the action plan or set of activities; and 5) Monitoring progress and reporting results. More information on Partners for Climate Protection or climate change science can be found online at <http://gmf.fcm.ca/partners-for-climate-protection/>.

The Town has been working on these five milestones over the past few years. The *Community Climate Change Action Plan* builds on a community greenhouse gas inventory that was developed in 2008 and 2009. This chart illustrates the community contributors of greenhouse gas emissions as revealed in the inventory.

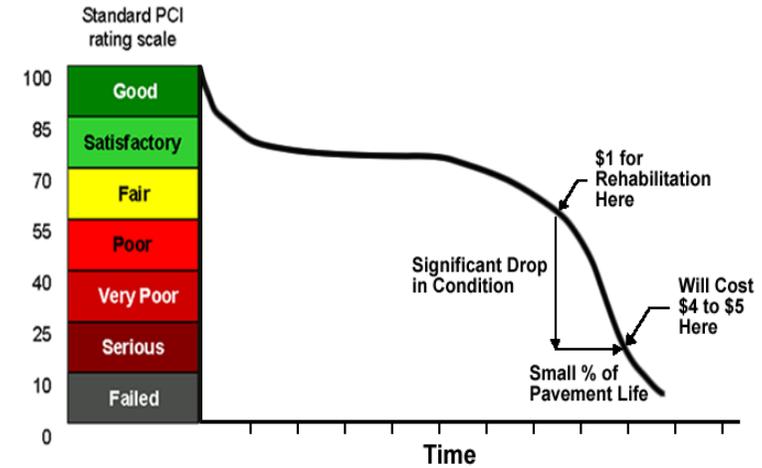
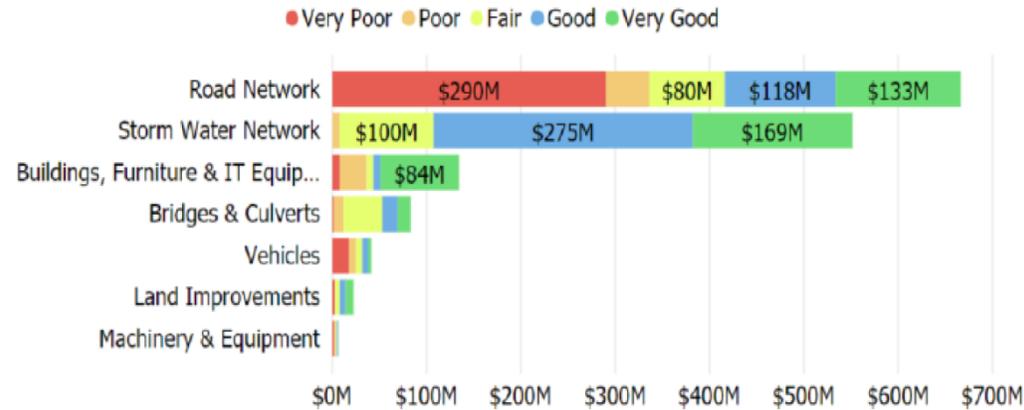
Based on these findings, the *Community Climate Change Action Plan* contains a series of proposed greenhouse gas reduction actions, categorized as follows: transportation; green development; energy; schools; agriculture; community awareness; tree planting and naturalization; waste; local food; and longer term actions.

1 2010, Federation of Canadian Municipalities - About Partners for Climate Protection. Retrieved from <http://gmf.fcm.ca/partners-for-climate-protection/>

Sector and Emission Source	Percentage of total emissions
Community transportation	37%
Energy Usage from residential buildings	21%
Energy usage from commercial buildings	16%
Energy usage from industrial buildings	6%
Agricultural related emissions	11%
Waste related emissions	8%

In Summary....

Figure B: Asset condition distribution



- Multi-dimension approach:
 - Plan for the increase of Funding and Resources for Major Road Reconstruction/Rehabilitation Projects;
 - Alternate programs for low volume roads;
 - Establish new program to address roads impacted most following each winter – e.g. funding but no pre-assigned roads;
 - Program to deal with old/abandoned subdivisions;
 - Community Climate Change Action Plan