



Traffic Calming Workshop

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Agenda

- Purpose of the Workshop.
- Traffic Calming/Council Strategic Priorities.
- History - Policies and Practices.
- What others are doing.
- Town's Traffic Calming Plan (TCP) and results.
- Future trends in Traffic Calming.
- What we are doing for 2022.

Purpose of the Workshop

1. To highlight how the Town got to this point.
2. To summarize what municipalities are doing.
3. To outline what the Town is doing.
4. To determine where the Town is going.

What is Traffic Calming?

- Reduction of vehicle speeds (focus of this Workshop).
- Reduction of vehicle volumes.

Traffic calming is part of the overall Road Safety of a community.

Traffic Calming can be achieved by:

- Vertical deflection (speed humps).
- Horizontal deflection (bollards).
- Roadway Narrowing (bike lanes).
- Surface Treatments (patterned asphalt).
- Pavement Markings (centre lines).
- Education and Enforcement.

Council Strategic Priority

Safe Streets

1. Incorporate technology / data-driven tools and tactics into engineering design and enforcement measures related to the safety of vehicles, pedestrians, and other transportation modes in order to enhance trail and street safety.
2. Continue to implement the traffic mitigation strategy and Active Transportation Plan and explore / advance an off-road Mulock multi-use path.
3. Continue efforts to build a strong network of community and subject matter experts (e.g. York Region, York Regional Police (YRP) in the implementation of initiatives (e.g. automated speed enforcement).
4. Design and implement an effective communication strategy that provides expanded opportunity for community consultation and emphasizes education, awareness and safe, respectful shared use among all users of road and trail systems.
5. Develop a 'complete street' design and construction/reconstruction methodology to support ongoing safe street initiatives and continue to explore design options related to speed reduction, where appropriate.

History of Traffic Calming

- 1972 – Bylaw 1972-28
- 1982 – first speed humps installed in the Town
- 1998 – Canadian Guide to Neighbourhood Traffic Calming – first edition
- 2000 – effort to narrow roadways through construction and reconstruction
- 2001 - first attempt at Traffic Calming Policy (speed humps- PWPOL53)
- 2005 – Neighbourhood Traffic Management Guide – Town of Newmarket
- 2005 – Sidewalk Policy
- 2007 – Traffic calming measures no longer require Environmental Assessment
- 2007 – Parking Policy
- 2008 – Safety Cone Sam joins the Town
- 2009 – Transportation Management Policy
- 2011 – Update of the 1992 Traffic Bylaw
- 2014 – OPA #11 – Active Transportation Network
- 2016 – Public Consultation and Support Policy
- 2018 – Canadian Guide to Traffic Calming, second edition
- 2019– Town-wide Mitigation Strategy (started in 2017)

What Others are Doing

Reviewed 26 Ontario Municipalities

- Ajax Aurora Barrie
- Brampton Brantford Burlington
- Cambridge Guelph Hamilton
- Kingston London Milton
- Mississauga Oakville Oshawa
- Ottawa Peterborough Pickering
- St. Catharines Thunder Bay Toronto
- Vaughan Waterloo Whitby
- Whitchurch-Stouffville Windsor

What Others are Doing

Same/Similar:

- Some TCP are in their 3rd revision
- Most use the full array of TC measures
- Most have a public acceptance level
- A few limit types of traffic calming measures
- A good number stated stop signs are not traffic calming
- Most have an evaluation component – speed/volume/collisions
- Traffic calming measures are divided up into different categories

What Others are Doing

Other Municipalities are doing Differently:

- Some use a ranking system for implementation
- Some define various forms of speed humps
- A few have a removal section as part of the TCP
- Many have complicated decision matrix or graph
- Many list all traffic calming measures in their toolbox



What Others are Doing

What the Town is doing Differently:

- We view as Town-wide where others view as street specific
- We view an incremental approach to traffic calming
- We did a great amount public consultation, congress, survey, to create latest version
- We crafted the TCP to be Newmarket-specific

What Others are Doing

What we have learned to improve:

- Trying to keep the system/evaluation as simple as possible.
- Trying to make the TCP simple to understand.
- TCP are constantly evolving – pilots and trials.
- Public consultation of all stakeholders is a key component.

What Others are Doing

Difference between Traffic Calming Guides

1st edition (1998) and 2nd edition (2018)

Added:

1. Different types of speed humps
2. Lateral Shifts *
3. Speed Kidney *
4. Lane Narrowing/Road Diet
5. Vertical Centreline treatment (bollards)
6. Textured Pavement
7. Dragon Teeth *
8. On-road 'sign' pavement markings
9. Education and Enforcement Components

What Others are Doing

- Speed Kidney



- Dragon Teeth



- Lateral Shift



Newmarket Traffic Calming Plan

Different Categories:

- Traffic Calming is divided up into Category 1 and Category 2.
- Category 1 measures are used when there is measured speeding, but below the policy speed limit.
- Category 1 measures are the first part of the incremental approach.
- Category 1 can be permanent or temporary.
- Category 2 measures are the permanent, more intrusive measures.

Newmarket Traffic Calming Plan

Policy Speed Limits:

Category 1 measures:

- Local roads – operating speed 10 km/h or less above the posted speed limit.
- Collector roads – operating speed 15 km/h or less above the posted speed limit.

Category 2 measures:

- Above the 10/15 km/h policy limit.

Newmarket Traffic Calming Plan

Category 1 Measures:

Permanent

- Pavement markings
- Signage
- Road side improvements
- Lane Narrowing (non-construction)

Temporary

- Speed Management Program
 - Boulevard lawn signs
 - Solar radar boards
 - Flexible bollards

Newmarket Traffic Calming Plan

Category 2:

Permanent

- Speed Humps (humps, tables cushions)
- Curb radius reduction
- Curb radius extension
- Lane Narrowing (construction)
- Pedestrian Refuge Islands

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Measure specifically excluded from the TCP:

- Chicanes (public input)
- Rumble strips (noise issues)



Measures not in TCP but reviewing:

- Raised crosswalk (Copper Hills)
- Raised intersections (trial on Lorne Ave.)
- Raised Centre median (Queen Street)
- Textured intersection/crosswalks (Main Street)
- On Road “Sign” pavement markings (School Zone)

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Measures not in the TCP – not under study:

- Traffic Circles/Traffic Buttons/Roundabouts
- Speed Kidney
- Dragon Teeth
- Lateral Shift

Newmarket Traffic Calming Plan

Results: from Information Report 2021-31 – results for 2020.

Solar Radar Board — -5.5 km/h (ranged from -2.1 to -9.2 km/h)

Bollards - -4.4 km/h (ranged -1.3 to -7.1 km/h)

*note:-1.6km/h on side streets

Road Narrowing (bike lanes) - -2.6km/h

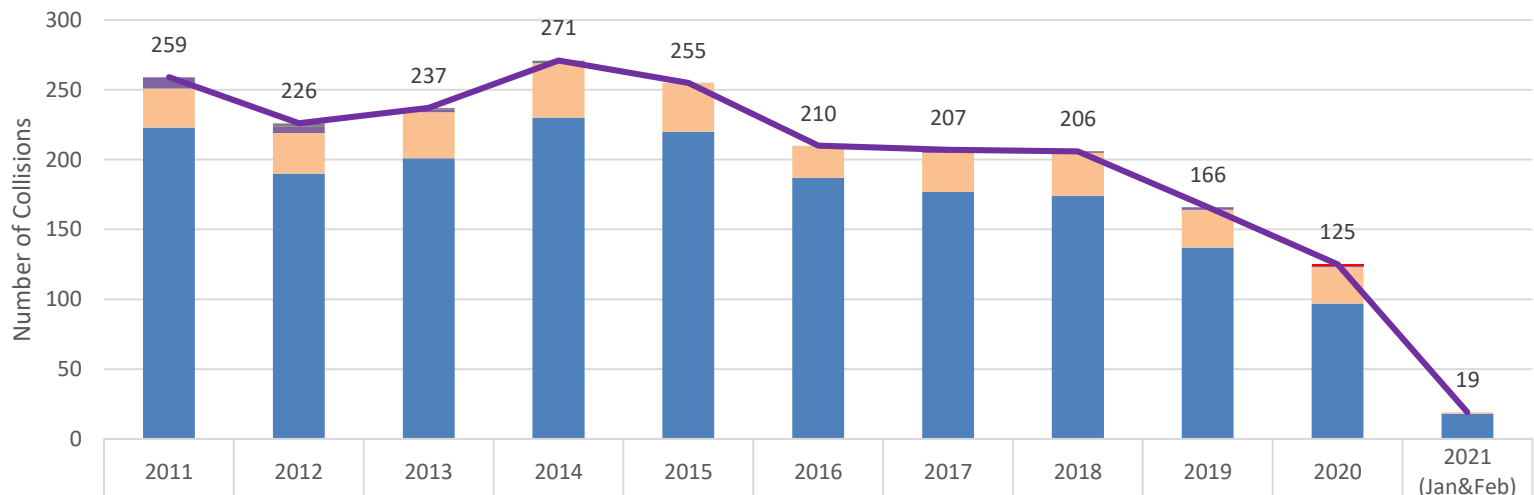
Road Narrowing (bump-outs) - -2.2 km/h

Road Narrowing (PRI) - -2.6km/h

Newmarket Traffic Calming Plan

Results: Collisions

Number of Collisions on Local Roads



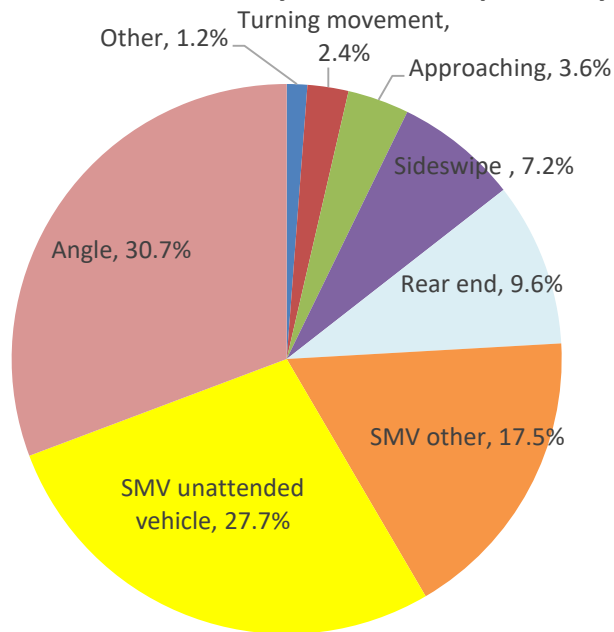
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█ Fatal injury	0	0	0	0	0	0	0	0	0	1	0
█ Non-reportable	8	5	2	0	0	0	2	1	2	1	0
█ Non-fatal injury	28	29	33	39	35	23	28	31	27	26	1
█ P.D. only	223	190	201	230	220	187	177	174	137	97	18
█ Total	259	226	237	271	255	210	207	206	166	125	19

█ P.D. only
 █ Non-fatal injury
 █ Non-reportable
 █ Fatal injury
 █ N/A
 — Total

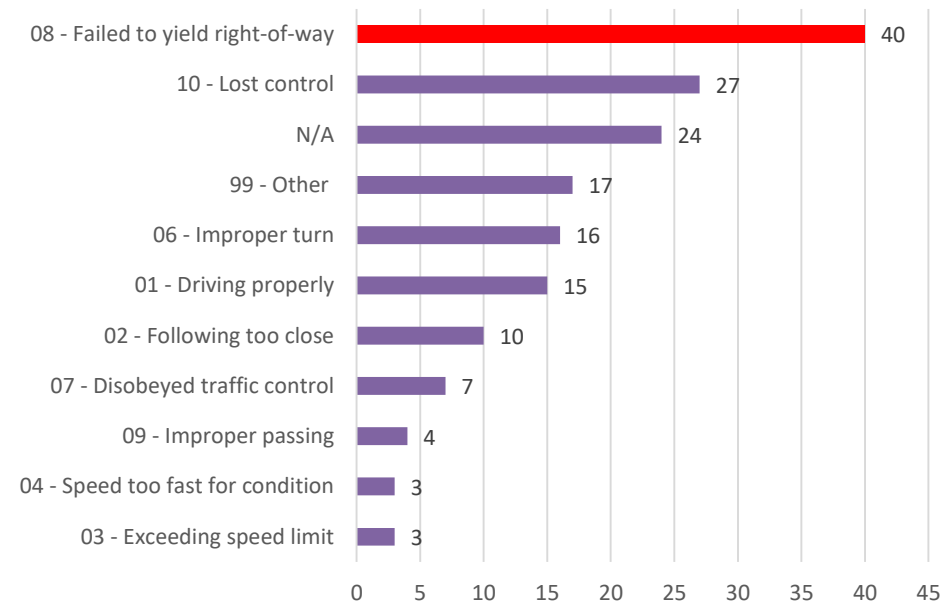
Newmarket Traffic Calming Plan

Results: Collisions

2019 Collisions by Initial Impact Type



2019 Collisions Apparent Driver Action

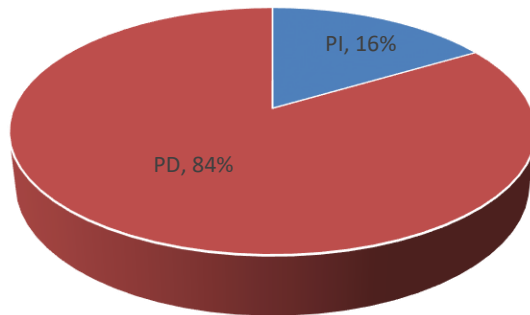


166 Total Recorded Collisions

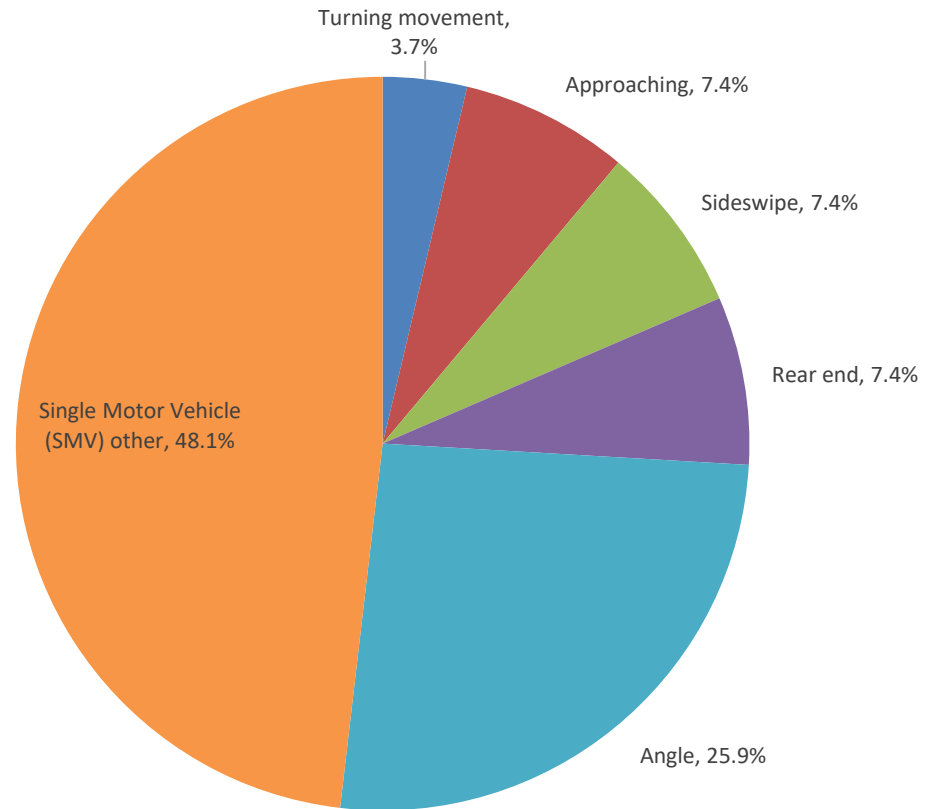
Newmarket Traffic Calming Plan

Results: Collisions

2019 Collisions: PD vs PI



PI Collisions by Initial Impact Type

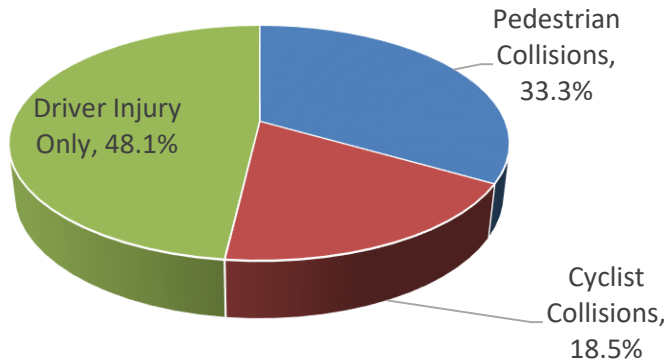


27 Personal Injury Collisions

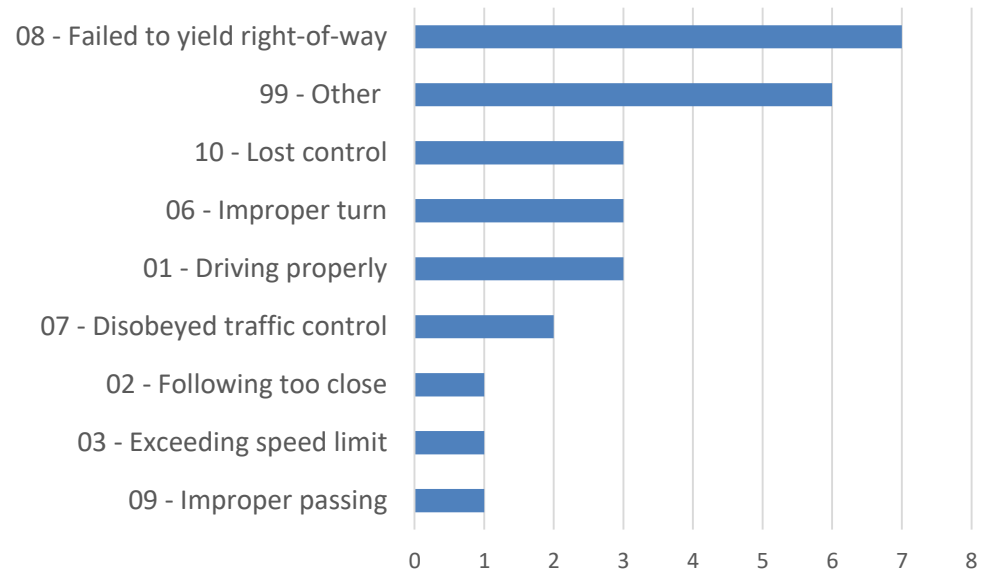
Newmarket Traffic Calming Plan

Results: Collisions

2019 PI Collision Types by Mode



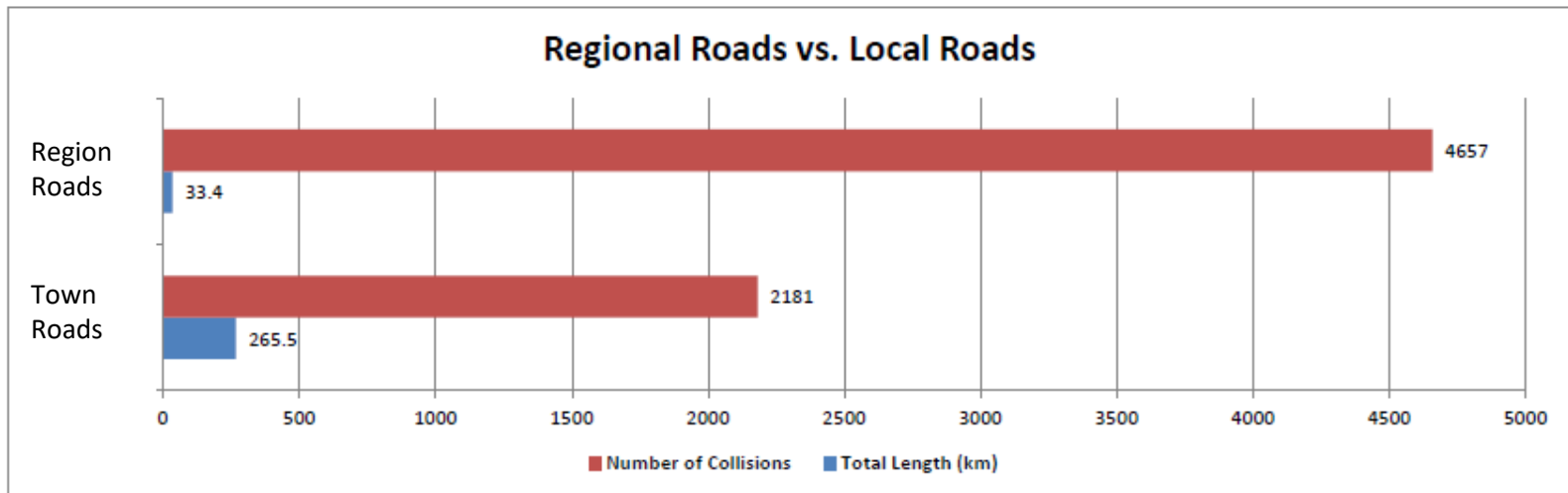
2019 PI Collisions Apparent Driver Action



Newmarket Traffic Calming Plan

Results: Collisions comparison

Newmarket Collisions: Regional Roads vs. Local Roads (Jan 2010 - Jul 2019)



Town Roads 8.2 Collisions Per 1 km
Regional Roads 141.1 Collisions Per 1 km

Newmarket Traffic Calming Plan

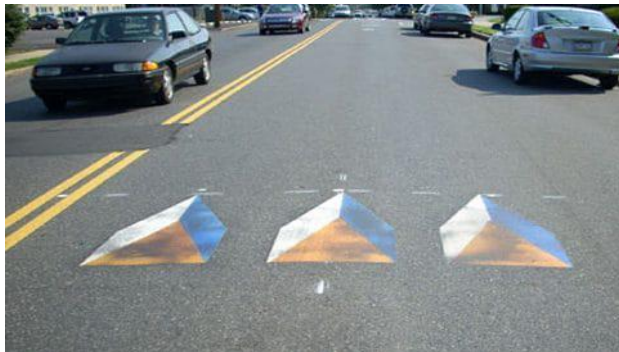
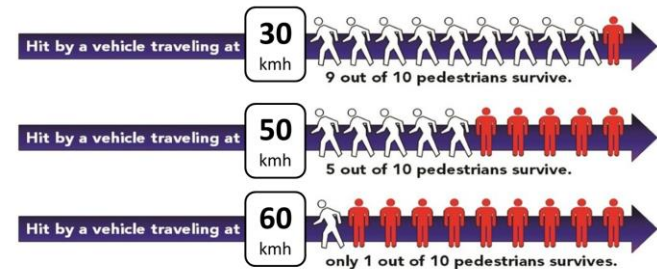
Results: Collisions comparison

	Regional Roads		Town Roads	
1	Yonge Street and Davis Drive	272	Main Street and Queen Street	37
2	Yonge Street and Mulock Drive	227	Bonshaw Avenue - Yonge to Flagstone	22
3	Yonge Street and Eagle Street	178	19th Sideroad - west of Bathurst	22
4	Leslie Street and Davis Drive	174	Harry Walker Parkway - Davis to Pony	21
5	Yonge Street and Kingston/Dawson	168	Eagle Street and Lorne Avenue	18
25	Davis Drive and Forhan Avenue	56		

* From January 2010 to July 2019

New(er) Traffic Calming Ideas

- Vision Zero or Toronto's Vision Zero 2.0
 - Speed limit reduction
- Automated Vehicles
 - Pace Car concept
- Liquid-filled speed bumps
- Automated Speed Enforcement (ASE)
- LED Pavement Markings
- Optical Illusion Pavement Markings



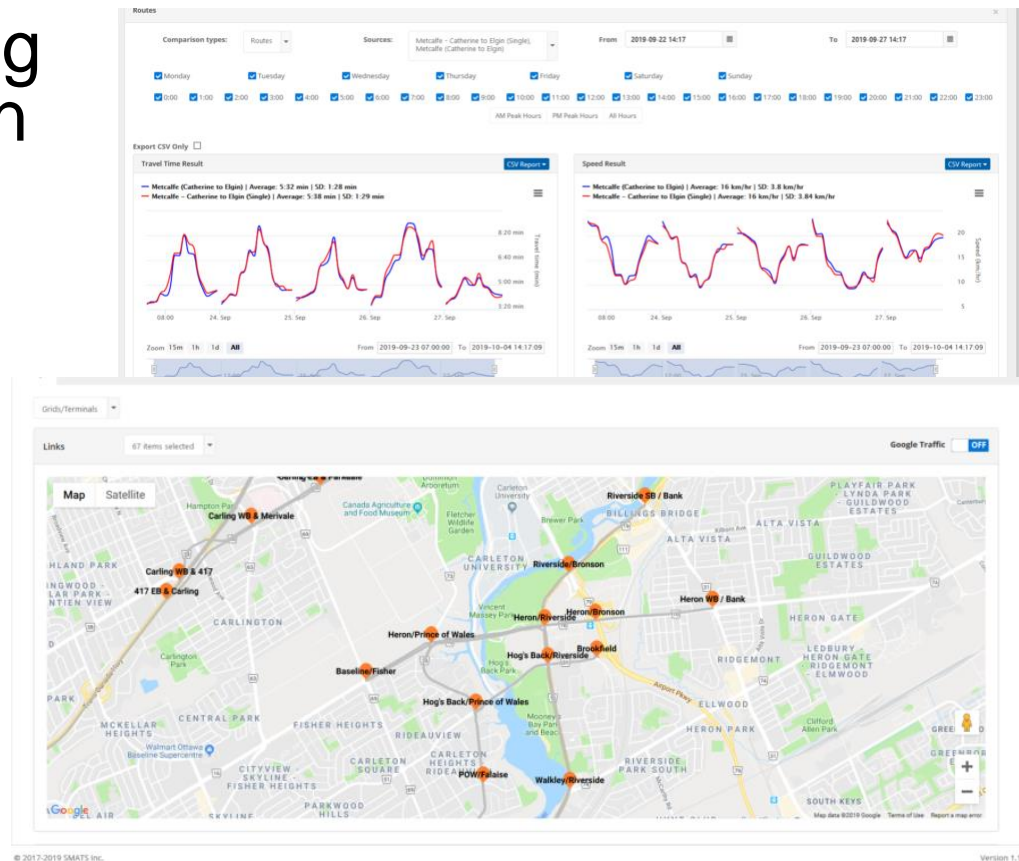
Sensor Program

- Monitor traffic count – cars, trucks, buses, pedestrians
- Traffic signal management
 - Volumes, weather, emergencies
- Traffic flow and speed monitoring
- Emergency assistance
 - Detection of crashes
- Weather monitoring



Sensor Program

- Congestion monitoring – understanding when and why congestion occurs
- Construction impacts
- Traffic Studies for future planning and upgrades
- Address complaints with real-time data
- Understand traffic patterns



For 2022

1. Updated Communication Plan:
 - Keeping it Simple
 - Expanding the Outreach
 - New Boulevard Lawn Signs
2. Solar Radar Speed Boards – 7 more.
3. Expanded Bollard Program.
3. Pilot the Child Silhouette sign.
4. Speed Limit Reduction for Lorne Avenue.
5. Continued Monitoring and Evaluation.

Thank you



Questions?