

63rd Annual Municipal Engineers Association Conference

**Braking Boundaries:  
Centre Wellington's Journey Towards Safer Roads**

Adam Gilmore, Manager of Engineering

November 16, 2023



Centre Wellington



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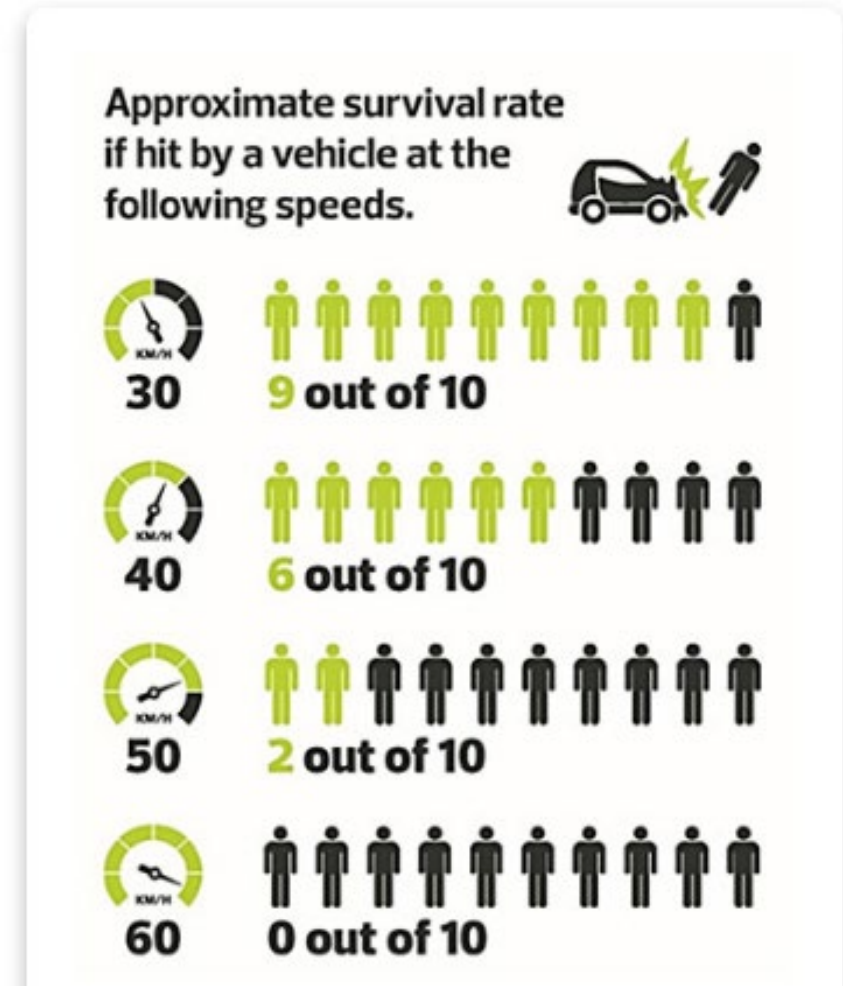
## Speeding Kills



A reduction in vehicle speed from 50 km/hr to 30 km/hr reduces the average probability of a pedestrian fatality from approximately 80 percent to approximately 10 percent.

**CANADIAN ASSOCIATION  
OF ROAD SAFETY PROFESSIONALS**

## Pedestrian Survival Rate by Vehicle Speed



# Speeding Kills

Ministry of Transportation

## Preliminary 2022 Ontario Road Safety Annual Report Selected Statistics

**At a Glance:** Situations with the Highest Road Fatalities, 2022

Category	Number of Fatalities	Percentage of Total Fatalities*
Pedestrian fatalities	92	15.5%
Large truck collisions	110	18.6%
Drinking and driving collisions	68**	11.0%
Inattentive driving collisions	97	16.4%
Speed-related collisions	105	17.7%
Motorcyclist fatalities	83	14.0%
Unbelted occupant fatalities	79	13.4%
<p>*Some fatal crashes involve more than one of the factors listed. These percentages do not add to 100.</p> <p>**This figure has not been verified against fatality files from the Office of the Chief Coroner (OCC) of Ontario. The final figure will change depending on OCC findings</p>		

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## Reactive vs. Proactive Solutions





# Concern-Driven Action (reactive)





# Data-Driven Action (proactive)



Online from:  
<https://www.jamartech.com/blackcatiiinfo>

1	Name:	VictoriaSt																		
2	Date/Time:	2023-02-27 12:38 PM																		
3	Site Code:	SLR-001																		
4	Station ID:	29																		
5	Location 1:	Victoria St																		
6	Location 2:																			
7	Location 3:																			
8	Location 4:																			
9	Latitude:	0.000000																		
10	Longitude:	0.000000																		
11	Channels:	Channel 1 - Direction X, Lane 1, Channel 2 - Direction X, Lane 2																		
12	Filters App:	None																		
13	Date	Time	Channel	Speed	Gap	Length	Headway	Following Distance												
14	2023-02-27	12:38:20	F Direction X	33.3	35	490	16.5	15262.5												
15	2023-02-27	12:38:26	F Direction X	38.2	6	513	6.3	6122.6												
16	2023-02-27	12:38:41	F Direction X	50.6	14	523	14.7	19981.4												
17	2023-02-27	12:38:49	F Direction X	37.2	8	442	7.8	7675.6												
18	2023-02-27	12:38:55	F Direction X	33.6	6	538	51.8	48346.7												
19	2023-02-27	12:40:00	F Direction X	39.9	64	434	64.5	70848												
20	2023-02-27	12:41:00	F Direction X	24.7	60	485	60.6	41309.4												
21	2023-02-27	12:41:25	F Direction X	46.2	25	475	25	31176												
22	2023-02-27	12:41:46	F Direction X	39	20	508	20.2	21482.5												
23	2023-02-27	12:42:05	F Direction X	34.6	19	462	19.3	18098.7												
24	2023-02-27	12:42:30	F Direction X	39.1	25	528	25.3	26956.2												
25	2023-02-27	12:43:29	F Direction X	21.6	58	450	59	35108.4												
26	2023-02-27	12:43:34	F Direction X	36.1	4	333	4.7	3962												
27	2023-02-27	12:43:41	F Direction X	37.8	6	1057	7.2	7211.4												
28	2023-02-27	12:43:58	F Direction X	30	16	460	16.4	12828.3												
29	2023-02-27	12:45:53	F Direction X	37.3	115	513	115.2	118788												
30	2023-02-27	12:46:47	F Direction X	33.6	638	419	523.7	488786.5												
31	2023-02-27	12:47:15	F Direction X	44.4	82	452	82.3	100892.8												
32	2023-02-27	12:47:46	F Direction X	48.9	58	432	58.6	78988.4												
33	2023-02-27	12:48:08	F Direction X	34.2	53	569	559.4	531023.2												
34	2023-02-27	12:48:50	F Direction X	36.5	64	488	63.9	64465.1												
35	2023-02-27	12:49:35	F Direction X	42.6	45	325	45	52680.8												
36	2023-02-27	12:51:08	F Direction X	38.2	179	508	232.9	246743.3												
37	2023-02-27	12:52:14	F Direction X	32.8	66	465	66.1	59788												
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39	2023-02-27	12:53:00	F Direction X	40.7	23	541	23.1	25533.6												
40	2023-02-27	12:53:28	F Direction X	32.8	27	224	27.5	24619.1												
41	2023-02-27	12:53:30	F Direction X	35.1	2	472	1.9	1613.6												
42	2023-02-27	12:54:01	F Direction X	44.5	107	478	107.4	132127.9												
43	2023-02-27	12:54:58	F Direction X	39.2	87	325	87.7	94967.4												
44	2023-02-27	12:55:23	F Direction X	53.5	81	447	81.2	120098.5												

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## CW's Speed Limit Policy and Technical Approach







A process and workplan for reviewing speed limits, assessing speeding concerns, and implementing effective speed reduction measures in urban and rural areas

- ✓ Data-driven, proactive
- ✓ Consistent methodology
- ✓ Considers a range of potential speed reduction measures
- ✓ Continuous process with annual reporting
- ✓ Endorsed by Council



# Where to start?: Using Resident Concerns to Help Prioritize Review Areas



# Online Speed Concern Reporting Tool for Residents



Speeding Concern

Centre Wellington Living Here Explore CW Doing Business

Speeding Concern

2022 Municipal Election  
2023 - 2026 Strategic Plan  
Accessibility and Inclusion  
Advisory Committees  
Animal Services  
Applications, Licences, Permits and Policies  
Asset Management  
Bids and Tenders  
Budget  
Business Licensing  
By-Law Enforcement  
By-laws  
Cemeteries  
Civil Marriage Ceremonies

Speeding Concern

Home / Township Services / Speeding Concern

Centre Wellington Speeding Concern Submission Form

Speeding concerns received from members of the public undergo a comprehensive review to identify and confirm each concern annually at the end of April. Appropriate actions will be taken to improve driver and pedestrian safety when

Centre Wellington Speeding Concern Submission Form Overview Design Collaborate Analyze Data Settings

Please note the following concern: Speed concerns submitted to the Township are reviewed in the analysis of safety and speed concerns on an annual basis as a conclusive report. The Township Logging a concern through this tool notifies the Ontario Provincial Police.

For emergencies contact the Office of the Chief of Police at 519-875-1234

Contact Information

Name\*

Email\*

Map showing reported speeding concerns (orange dots) in the Wellington area.

Name	email	Contact Preference	Issue/Request Location	Provide a detailed description	CreationDate	Review Comments	Review Status

[centrewellington.ca/en/living-here/speeding-concern.aspx](http://centrewellington.ca/en/living-here/speeding-concern.aspx)



Three (easy!) steps:

1. Review Current Speed Limit
2. Identify and Confirm Speed Concern
3. Apply Effective Speed Reduction Measures



Review current posted speed limit by considering:

- Transportation Association of Canada (TAC) guidelines



(Road Design Factors - Horizontal Alignment, Vertical Alignment, Average Lane Width, Average Lane Width, Pedestrian Exposure, Cyclist Exposure, Road Surface, Number of Intersections with Public Roads & Private Driveways, On-Street Parking)

- 85th percentile of observed traffic speed and drive test

What is speed most drivers feel comfortable driving?

- Collision history

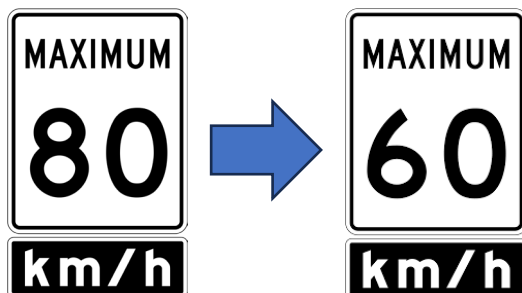
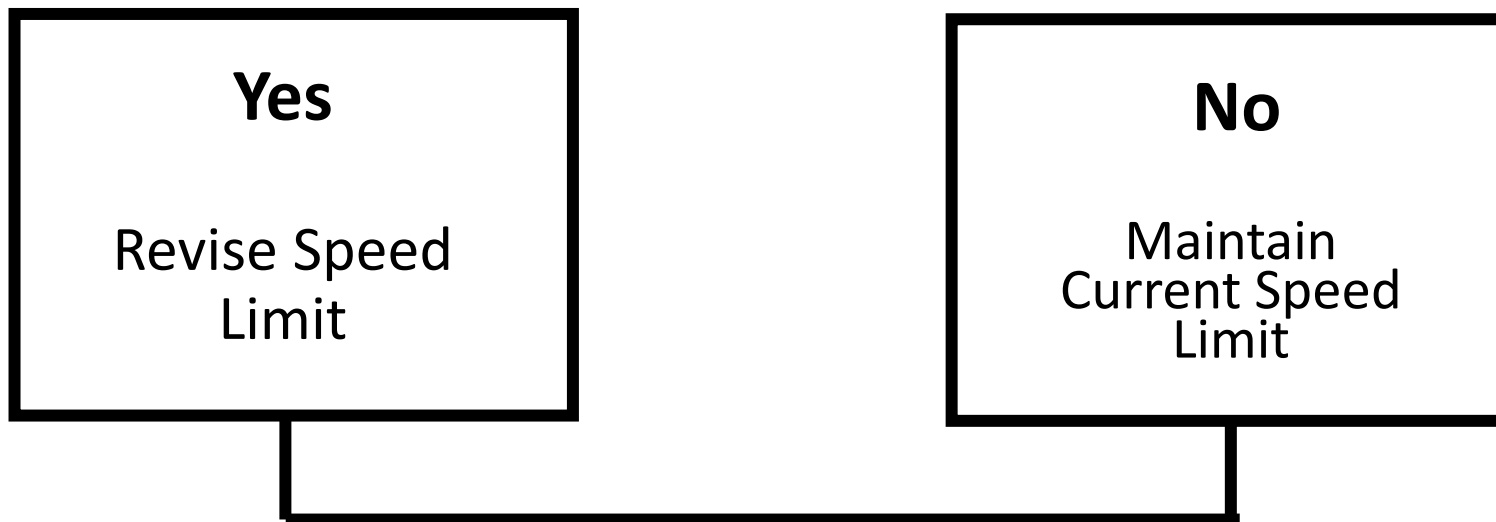
Is there a pattern of traffic related incidents?

- Neighbouring land use

(School, Hospital, Trail System, Daycare – etc.)

## Step 1: Reviewing Current Speed Limits

Does the initial speed review suggest the current posted speed limit should be changed?



Proceed to Step #2

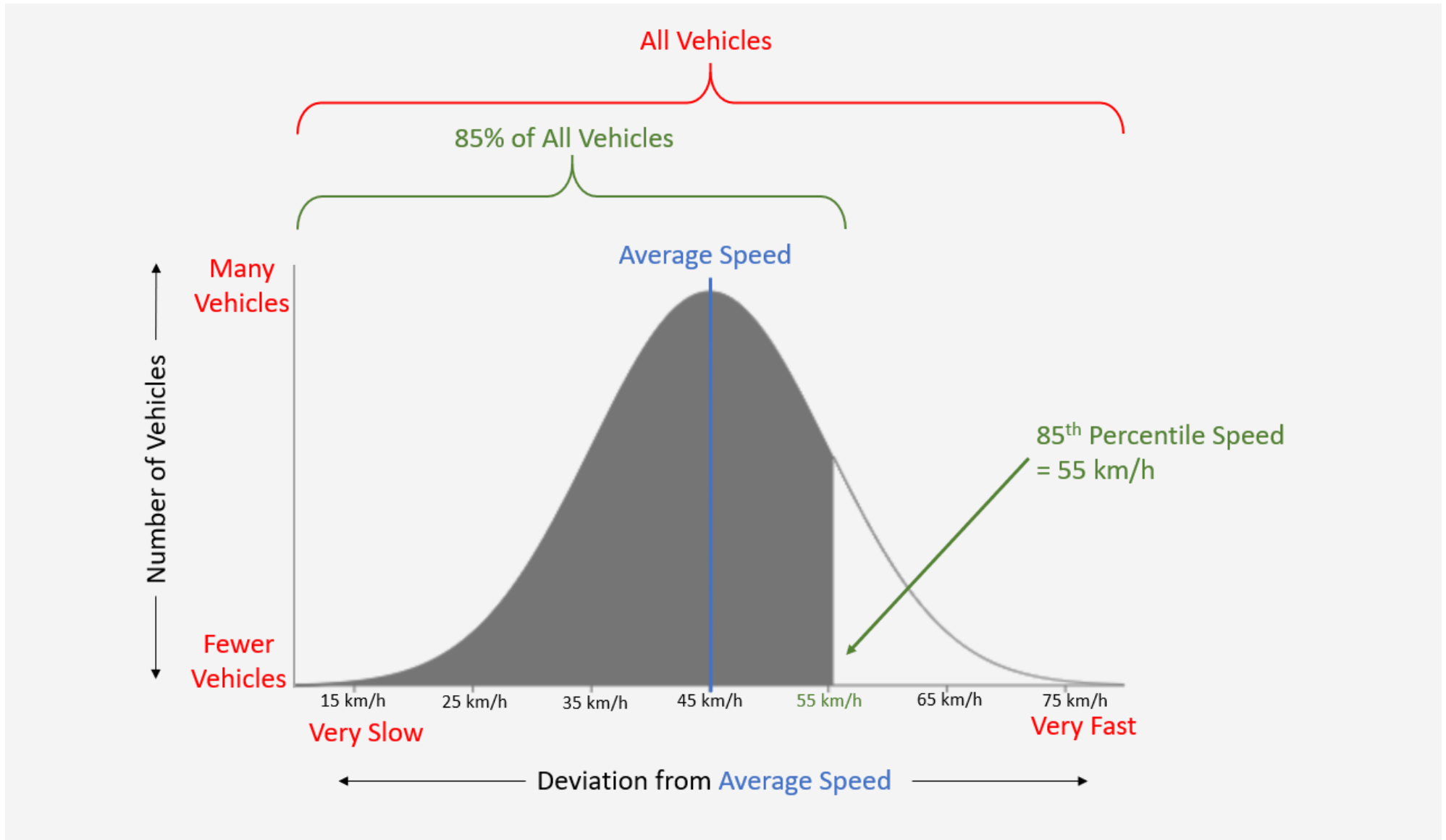


Identify and confirm speeding presence by considering:

- Public concern and observations
- Staff experience
- Traffic & Speed data
- 85th Percentile is 10 km/h over speed limit (Urban roads)
- 85th Percentile is 15 km/h over speed limit (Rural roads)

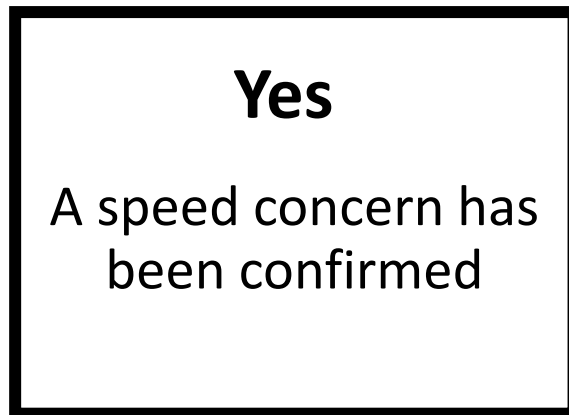


# 85<sup>th</sup> Percentile Speed

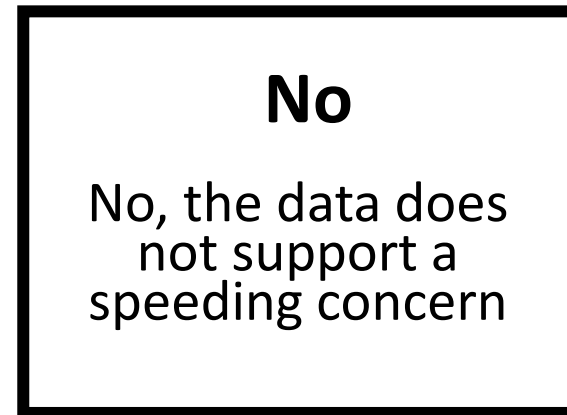


## Step 2: Confirming Speeding

Has a speed concern been identified and confirmed?



Proceed to Step #3



Conclude  
Assessment





## Changing Physical Environments



## Changing Attitudes and Behaviours



## Enforcement





Short Term Measures	Long Term Measures
Bollard – Speed Advisory	Capital Projects – Geometric mods
Speed Display Signs	Photo Radar
Speed Humps	Community Safety Zone
Enforcement	Education & Outreach

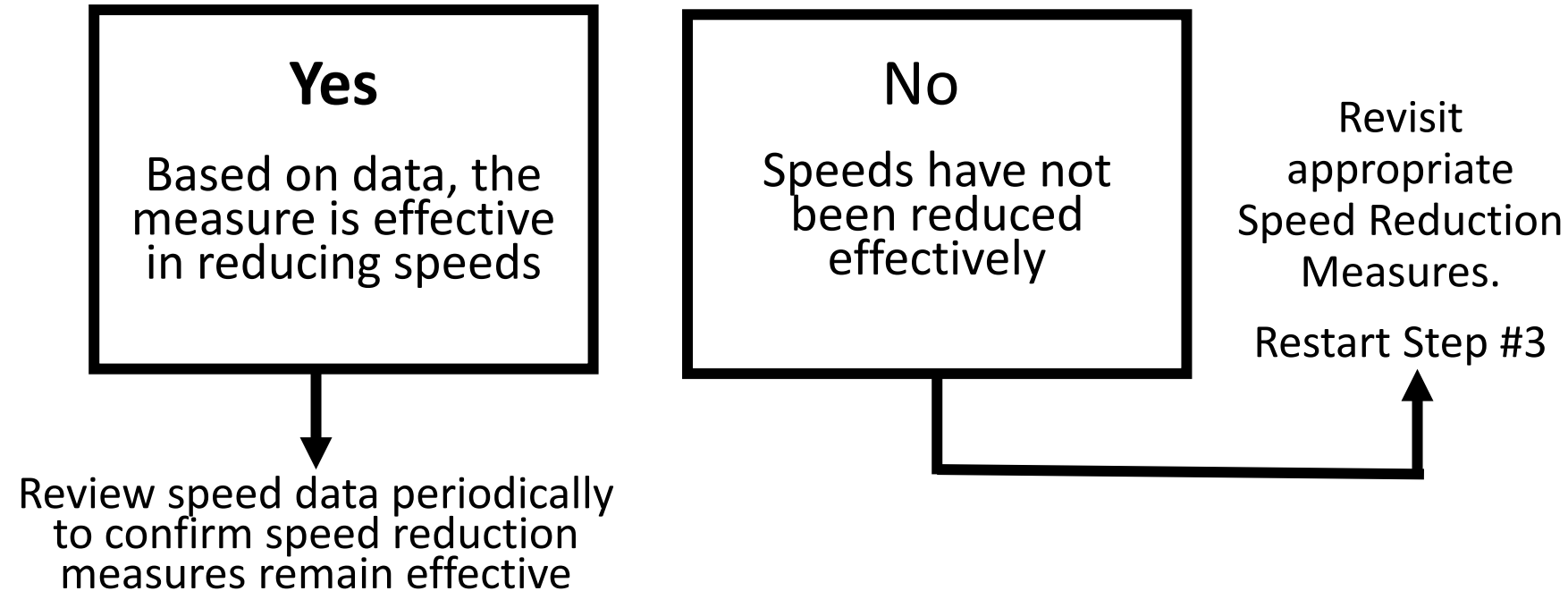






## Step 3: Speed Reduction Measures

Has an effective method of reducing traffic speed been selected?



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## Lessons Learned







- Online reporting tool is a hit!
  - Saves staff time receiving and responding to concerns
  - Effective way to track concerns and identify problem areas
- Making it a continuous process with annual reporting allows us to monitor effectiveness over time
  - Speed reduction recommendations are considered as part of the annual budget process
- Good data is key to identifying problem areas and recommending effective speed reduction measures
  - Annual traffic counts
  - Speed radar dataloggers
  - Obtaining and sharing information with law enforcement

**Early data and feedback from the community suggests that the policy is having a positive impact on road safety in the Township**



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Thank you!

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