

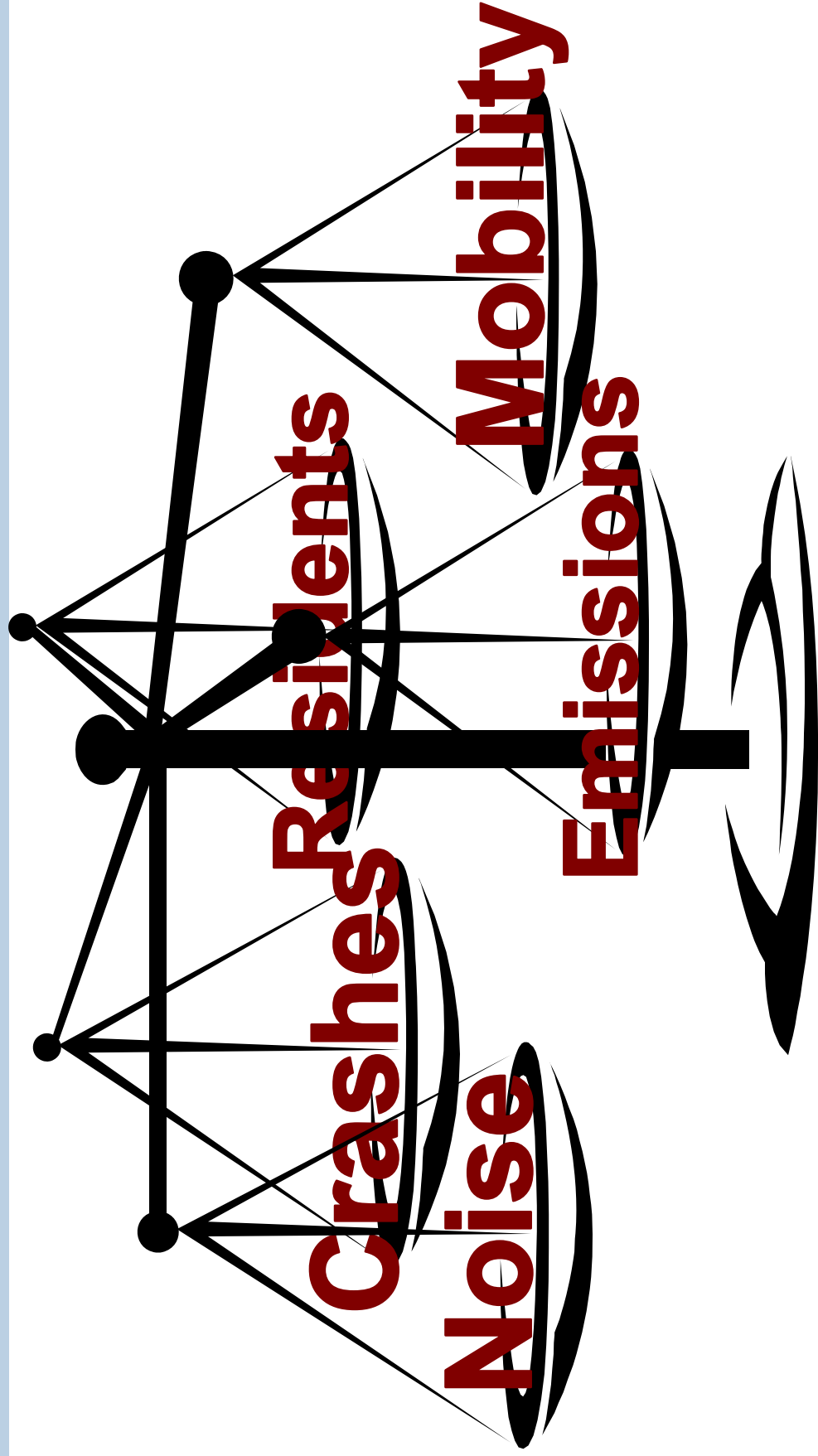


# **Setting Speed Limits on Regional Roads**

**Presentation to City of Markham  
Development Services Committee**

**Steven Kemp, P. Eng.  
January 14, 2014**

# Selecting a Posted Speed



# Speed is a Safety Issue

- Research shows about 17% of fatal crashes in Canada are speed-related



# Risk and Speed

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- Generally the faster we travel, the more likely we will:
  - Fail to process vital traffic information
  - Lose control of our vehicles
  - Be unable to stop without a collision
  - Suffer severe injury in the event of a collision

# Drivers Focus at 70 km/h



# Drivers Focus at 60 km/h



# Drivers Focus at 50 km/h

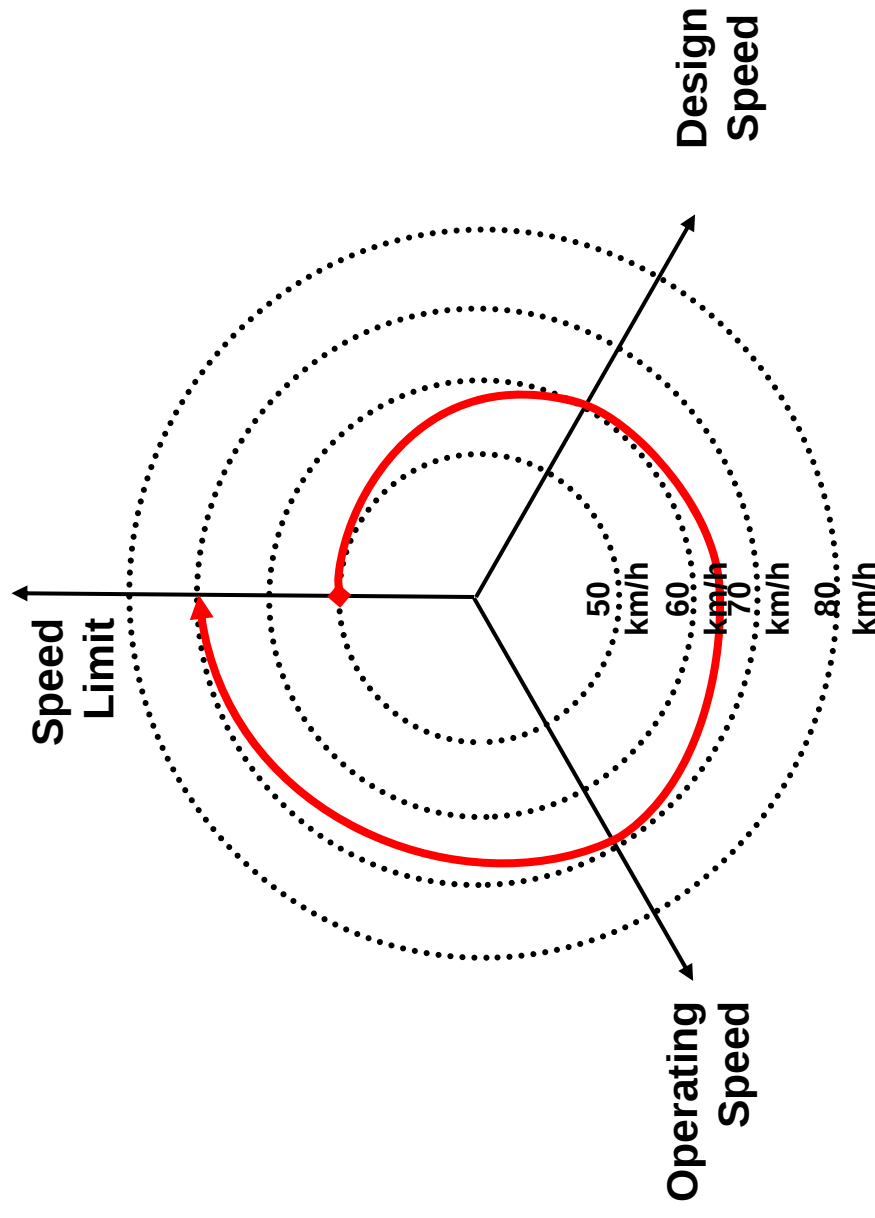


# York's Previous Policy

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- Focus on mobility – using 85<sup>th</sup> percentile speed as the main factor in determining the speed limit
- Speed limits can be adjusted based on access density, and pedestrian activity

# The 85<sup>th</sup> Percentile Speed Limit Spiral

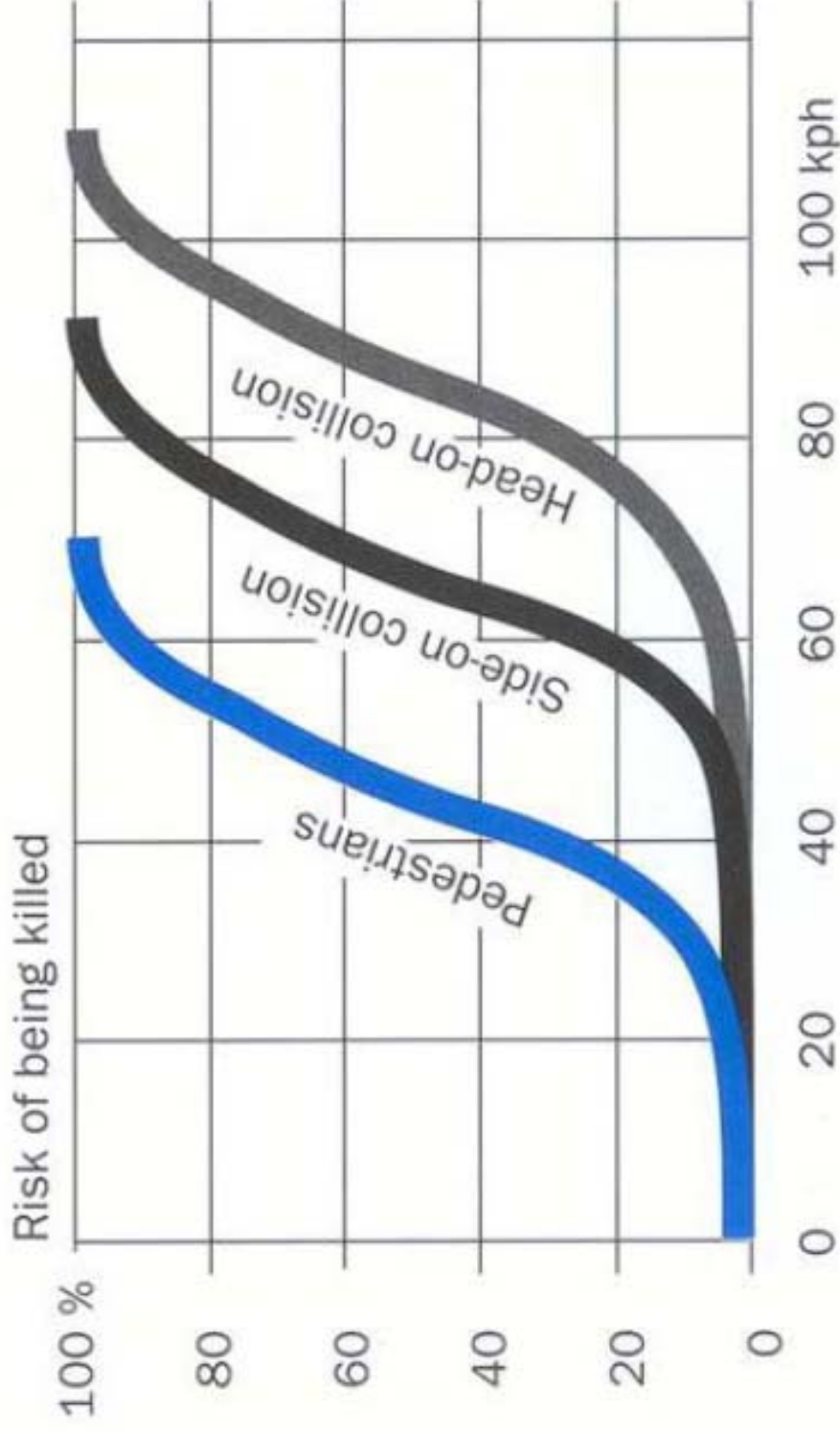


# Our New Approach to Setting Speed Limits

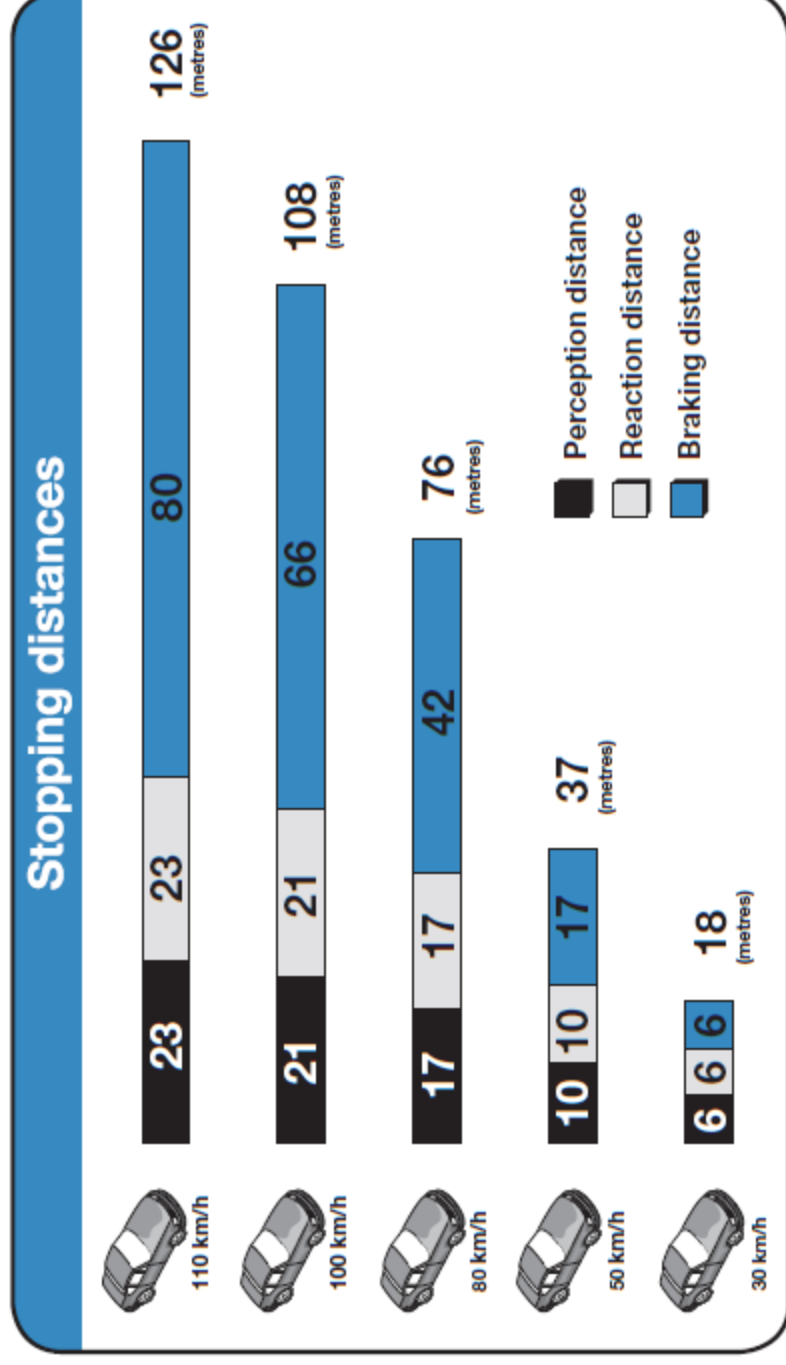
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- Injury minimization
- If a crash occurs – what is the fastest a motor vehicle can be traveling to avoid serious injuries or death?
- Limitation of the human body

# Crash Survivability and Speed



# Speed and Stopping Distances



# This Video Will Change Your Mind About Speed

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This Video Will Change Your Mind About Speed

# York's Speed Limit Policy

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- The basic urban speed limit is  
60 km/h
- Adjusted downward where heavy pedestrian or cyclist activity
- Adjusted upwards on controlled-access facilities

# York's Speed Limit Policy (Continued)

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- The maximum rural speed limit is  
80 km/h
- Adjusted downwards depending on  
traffic and roadway conditions
- Use the Nationally recommended  
Transportation Association of Canada  
(TAC) Guidelines

# Other Considerations

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- School zones on regional roads will all have 40 km/h speed limits that are time-limited
- Roads in transition areas from rural to urban will get a basic speed limit of 70 km/h, and will be adjusted upwards or downwards according to site specific conditions

# Travel Time Impacts

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- A reduction in speed from 80km/hr to 60 km/hr has the following travel time impacts:

|           |              |
|-----------|--------------|
| 10km trip | 2.5 minutes  |
| 30km trip | 7.5 minutes  |
| 50km trip | 12.5 minutes |

# Travel Time Impacts

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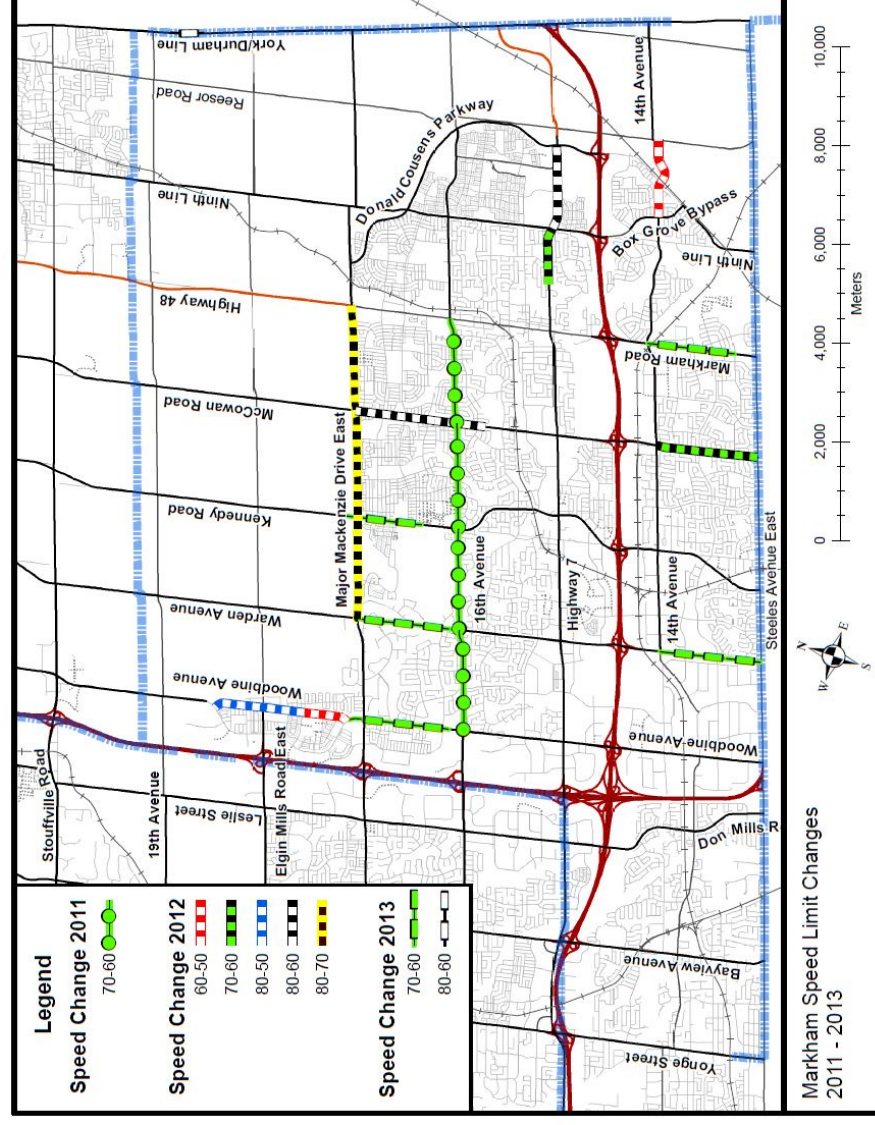
- Generally in urban areas operating speeds are less than the posted speed – particularly during peak periods
- Travel time impacts of speed limit reductions would typically occur off-peak

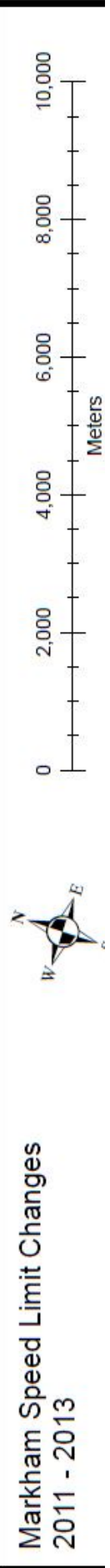
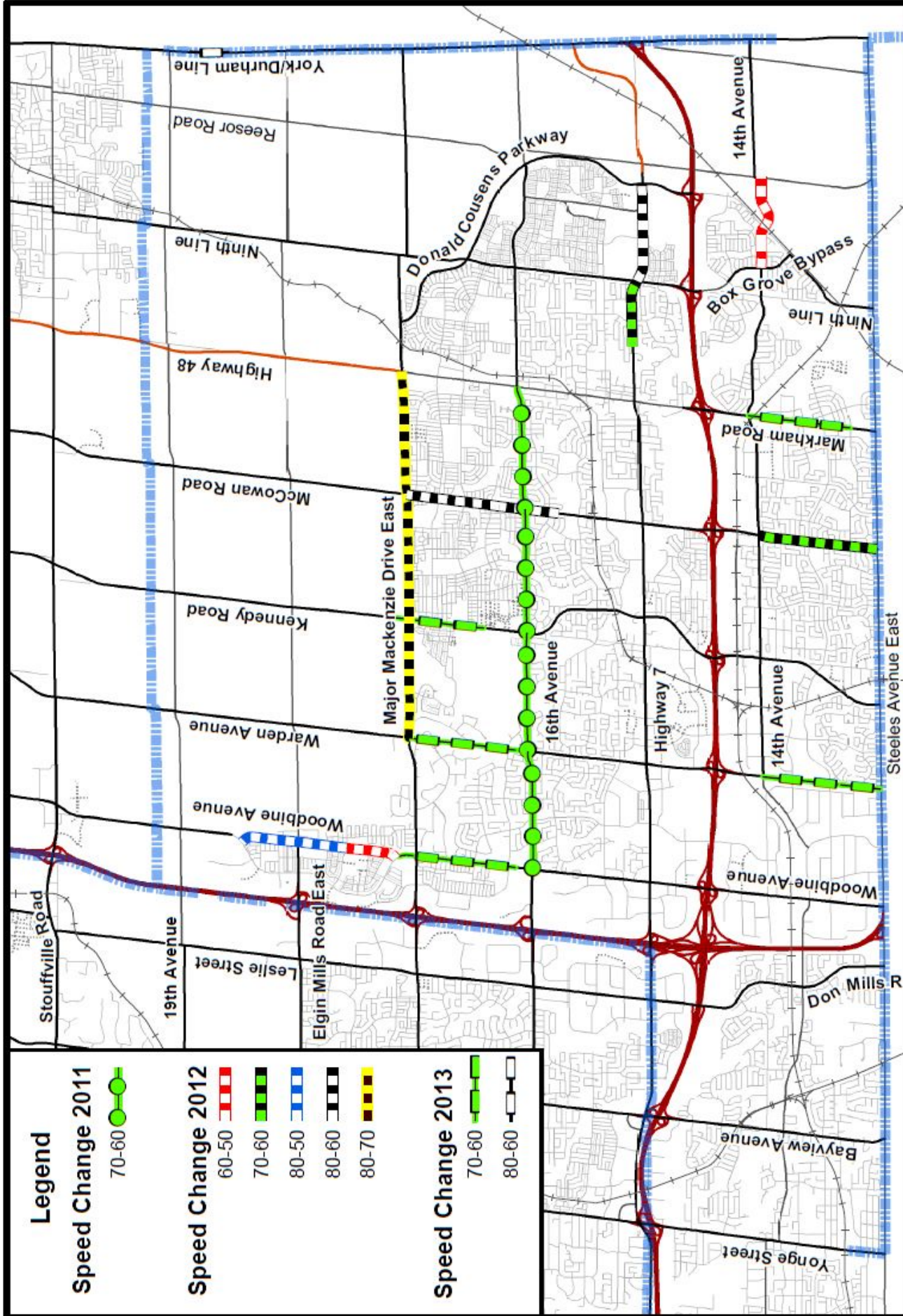
# Impacts to City of Markham

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- Old Woodbine - Victoria Square (80-50)
- Highway 7 - East of Main to DCP (70-60)
- Warden - 16<sup>th</sup> to Major Mack (70-60)
- Warden – Steeles to 14<sup>th</sup> Avenue (70-60)
- 16<sup>th</sup> Avenue – Woodbine to 48 (70-60)
- Major Mackenzie – Warden to 48 (80-70)

# Impacts to City of Markham





Markham Speed Limit Changes  
2011 - 2013

# Conclusions

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- Lower operating speeds = fewer collisions –and- less injury/death
- In urban areas lower operating speeds result in significant safety improvement for vulnerable road users
- No travel time impacts during peak traffic periods – minimal impact during off peak