Smart Portable Variable Message Boards

Infrastructure, Investment, and Development Services Committee

PRESENTED BY

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Roads, Parks and Fleet

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Current Technology

- Static Messages
- Unable to adapt to fluctuations in traffic
- Tend to be ignored, no useful long term messaging

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Current Technology

- Leaves motorist stranded in long queue with no information regarding duration
- Discourages route choices
- Unable to leverage technology for route/trip planning

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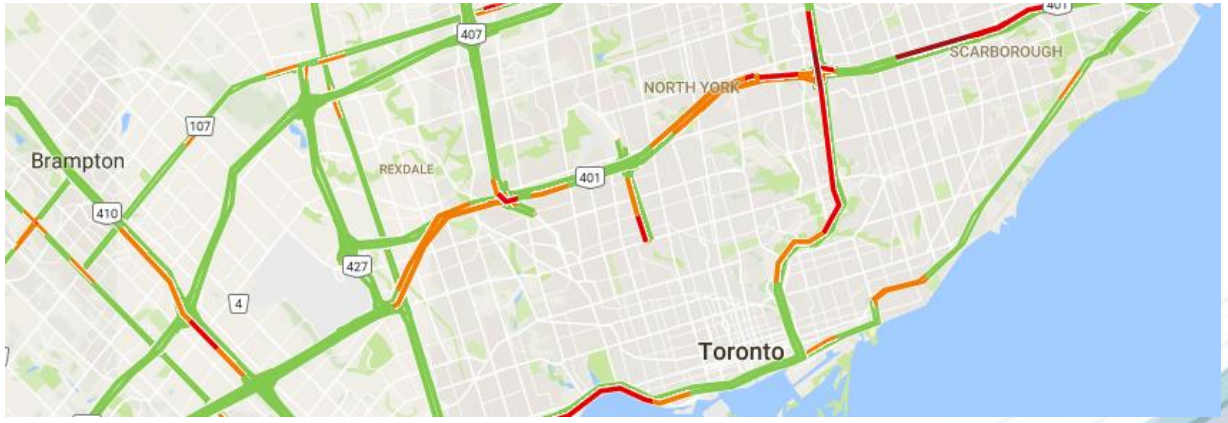
Advanced Traveler Information Systems (ATIS)

- Highly mobile society
- Increased desire for accurate and timely information
- ATIS split into two categories
  - Pre-trip (often web based, TV, radio)
  - En-route (In vehicle GPS, roadside smart signage)
- Both allow users to predetermine their route or adapt to changing travel patterns



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ATIS En-Route Roadside Devices

- Studies show drivers do not mind being slowed or stuck in traffic if they can make an informed choice
- Weigh the benefits and make alternate route choices

Queenston-Lewiston Bridge Queenston, ON/Lewiston, NY Last updated : 2017-02-01 09:50	no delay 2 lane(s) open	no delay 3 lane(s) open
Rainbow Bridge Niagara Falls, ON/Niagara Falls, NY Last updated : 2017-02-01 09:45	Not applicable	no delay 3 lane(s) open
Peace Bridge Fort Erie, ON/Buffalo, NY Last updated : 2017-02-01 09:14	12 min delay 7 lane(s) open	no delay 5 lane(s) open

Bluetooth Enabled Variable Message Boards

- Majority of cellular, GPS, handsfree devices are Bluetooth enabled
- Anonymous and unique MAC address (Media Access Control)
- Roadside receivers, Message boards, cloud based server

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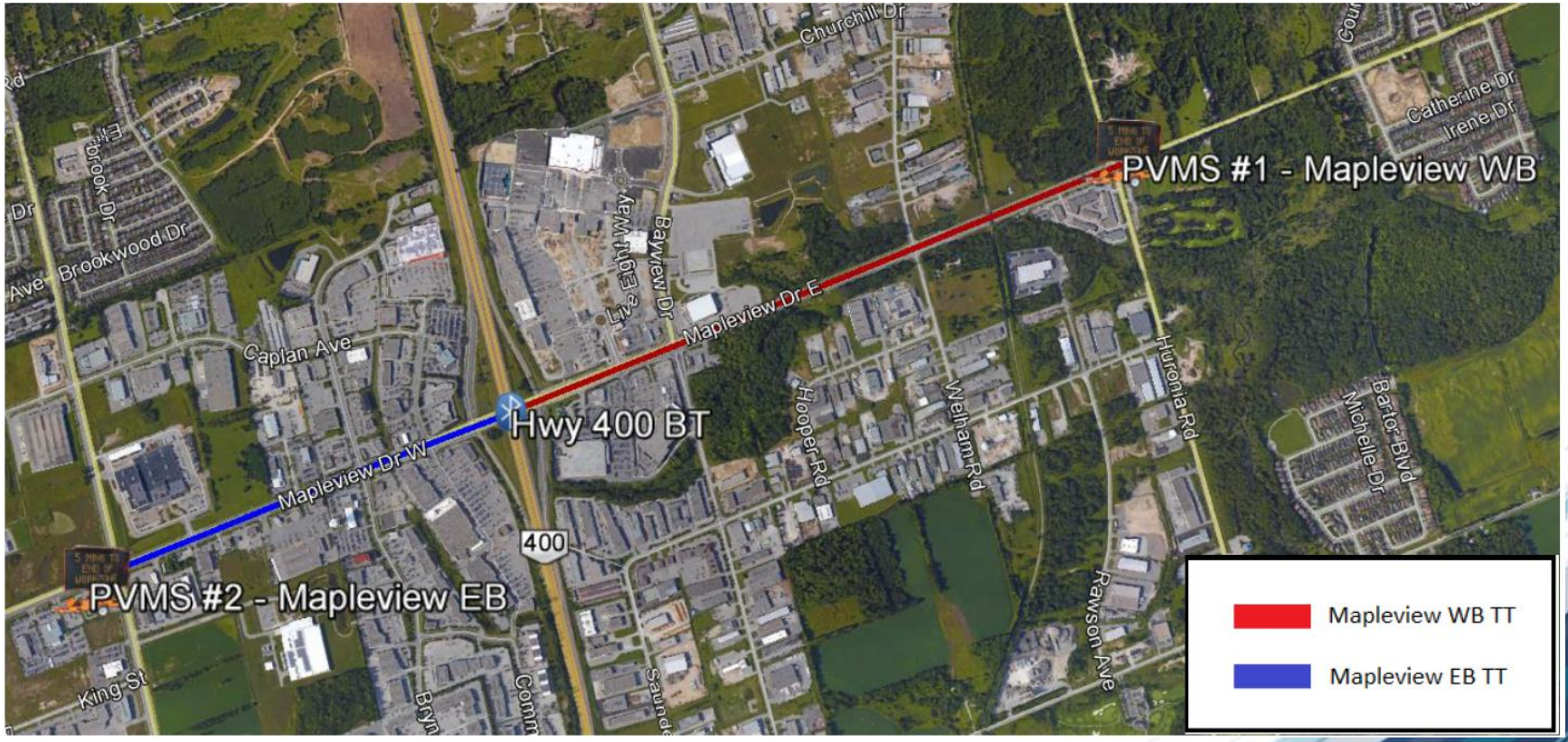
Bluetooth Enabled Variable Message Boards Mapleview Proposal



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Continued

Mapleview EB Messaging:

Mapleview WB Messaging:

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Value added Benefits

- Future scalability
  - Multiple boards can be connected and hosted by the same system
  - Creating a grid network of readers and displays
  - Host construction events/systems
- Systems are interchangeable with most current displays
- Web-based information easily shared with other systems
  - City Traffic Control Centre
  - City Web-based travel choice tool
  - MTO or other municipal centres
- Constantly collecting sample data of real events
- Leverage existing inventory
- Event or Emergency messaging

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Next Steps

- Current Mapleview Proposal
  - Two existing PVMS trailers
  - Vendor integration and set-up
  - ~$20,000
  - Can be accommodated within 2017 budget

- Role out Spring 2017
- Evaluate and integrate into large construction projects within the City
- Expand to other corridors Bayview, Yonge, Essa

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Questions?

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