Advanced Transportation Management System (ATMS)
Presentation and Tour
February 7, 2017

Mississauga
ATMS Project Background

• Increasing traffic volumes
  – Roadway network is near capacity, and in some areas, at capacity during am/pm peak periods.

• Increased urbanization

• Other transportation agencies
  – Need to integrate our efforts with Region of Peel/MTO who are also stakeholders in the transportation network.
ATMS Project Background

• Public expectations
  – The public expects the City to provide an efficient transportation network, to be able to respond to issues, and to provide timely/accurate information.
ATMS Project Background

• Operational needs
  – The existing Traffic Control System is at the end of its life cycle and needs replacement.
  – There is a need to upgrade to a more robust traffic signal communication.
  – A Traffic Management Centre is needed to provide staff with the workspace/resources to pro-actively manage traffic.
ATMS Project Background

- The Advanced Transportation Management System (ATMS) Project provides a means to meet our operational needs and the expectations of the public.
ATMS Project Vision

• To move from “passive” to “active” management.
ATMS Project Goals

• Maximize the available capacity of the roadway network
• Minimize the impact of roadway incidents to users
• Pro-actively manage traffic
• Assist in the provision of emergency services
• Create and maintain public confidence in traffic management
A well designed ATMS will make it possible to:

• Monitor travel conditions
• Influence the operation of traffic signals
• Disseminate information
• Interact with other transportation modes and agencies
ATMS Project Components

The following components will be phased in over time:
1. Build a Traffic Management Centre (TMC)
2. Upgrade traffic signal communications
3. Replace the traffic control system
4. Implement Intelligent Transportation Systems (ITS)
5. Explore future ATMS initiatives
ATMS Project Budget

- Overall capital budget of $16.2 million (gross) has been approved for the Project.
- The Region of Peel and Ministry of Transportation are partners in this project and their respective cost shares are estimated at $4.0 million.
1. Traffic Management Centre (TMC)

- The design and construction of a physical central space where traffic staff can monitor and respond to traffic.
- This component of the project is substantially complete.
1. Traffic Management Centre

Before

After
2. Traffic Signal Communications

- Leverage the City’s Ethernet IP Network
  - Hybrid of wired fibre, Wi-Fi and cellular
- 120 traffic signals have migrated to the new communication network
- Remaining signals to be completed by the end of 2018
3. Traffic Control System Replacement

- Replace Traffic Control System
- Replace Traffic Signal Controllers in the field
3. Traffic Control System Replacement

Objectives:

• Accommodate future modules and technology advancements (ex. traveler information)
• Ability to share information with the Region of Peel, MTO and neighbouring municipalities
• Ability to integrate with Transit and Fire (ex. traffic signal priority)
• Use the City’s network to communicate to Traffic Signal Controllers and other devices (ex. traffic cameras)
• Pro-actively manage traffic signals
4. Intelligent Transportation Systems (ITS)

- ITS involves the use of smart technologies.
- Currently, 38 traffic monitoring cameras set up along high profile corridors.
  - Target: 150 cameras throughout the City in the long term
- Piloting new detection technology (i.e. Radar) to detect vehicles, bicycles and pedestrians.
4. Intelligent Transportation Systems

• ATMS Demonstration to take place along Dundas Street (Ninth Line to Mississauga Road)
• Test and evaluate different traffic management technologies (ex. adaptive traffic control, incident management, traveller information)
• Targeted to start in 2017
5. Future ATMS Initiatives

- Awareness of future smart technologies to ensure that our Traffic Control System has the ability to incorporate these and other advancements.
- Subject to the business planning process.
### ATMS Project

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<td>Traffic Signal Communication Upgrade</td>
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<td>Traffic Management Centre (TMC)</td>
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Tour followed by Q&A.