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Toronto's Congestion Management Plan

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Congestion Management Plan (CMP)

2015 – 2018 Capital Plan approved by Toronto City Council in December 2013.

- 2014 - \$3.0 M
- 2015 - \$7.5 M
- 2016 - \$12.11 M
- 2017 - \$19.21 M
- 2018 - \$15.43 M

Total of \$57.25 M over five years



Congestion Management Plan (CMP)

- 35 projects over a five year period
- To ensure delivery – **ITS Planning & Capital Projects Delivery** unit within the TMC
- Existing Urban Traffic Control Systems unit to be renamed **ITS Operations** – three groups (Traffic Signal Operations, Active Traffic Management, Systems Support)
- 10 additional staff – 8 in 2014 and 2 in 2016 (Manager, Senior Engineer, Engineer, Project Leads, Technologists)



CMP - Goals

1. Maximize the efficiency and reliability of the transportation system
2. Improve the safety of the transportation network
3. Improve the city's ability to detect and respond to incidents, events and changing conditions
4. Improve the availability of information to the public
5. Reduce the impact of transportation on the environment



What We Are Doing

Traffic Operations Centre (TOC)

- Contracted operations 24/7 (do not handle signal timing changes)
- Extending **City** traffic operations staff hours from 8:00 am – 4:00 pm to 6:00 am – 6:00 pm
- Renovations (\$600k)
- Sharing camera feeds
- New video wall – Activu & Genetec software (\$3.0M)





What We Are Doing

Congestion and Engineering Studies

- Signal coordination studies
 - Approx 200 signals (6 routes) in 2013 and 300 signals in 2014 (8 routes)
 - Reduction of total delay by 573,000 hours (8.0%)
 - Reduction of stops by 50,150,000 (8.7%)
 - Increase in average speed by 1.2 km/h (4.3%)
 - Reduction of fuel consumed by 2,882,500 l (4.2%)
 - Reduction of emissions by 63,990 kg (4.2%)
 - Annual benefit of \$16.0M with a B/C ratio of 74



What We Are Doing

Construction Coordination

- Road closure plans
- Construction permit enforcement
- Coordinating timing of large construction projects
- Maps for planned and current construction projects





What We Are Doing

Curbside management

- Review of parking restrictions
- Targeted enforcement by TPS and TPA
- Traffic cameras in the Downtown core – 8 installed
- Increase of parking fines
- Increase in “peak hours”



What We Are Doing

Alternative Transportation

- TSP (Unconditional)
- Bike parking facilities, separated lanes, shared lanes, bike trails, bike signals, bike sharing (former BIXI)
- Pedestrian signal timings upgrade to 1.0m/s everywhere
- APS at all new signals – 25% of signals





What We Are Doing

ITS - Expressways

- Replace field controllers with ATCs
- Non-intrusive detection for VOC data
- Traffic cameras (78) on expressways – full coverage on Gardiner Expressway, Don Valley Parkway & Allen Rd (4)
- Emergency power at 30 ramp signals



What We Are Doing

ITS - Arterials

- Replace all interval based controllers with phase-based (NEMA)
- Wireless communication to traffic signals (956/2282)
- SCOOT traffic adaptive control (348 intns)
- Installing 40 arterial cameras





What We Are Doing

Incident and Event Response

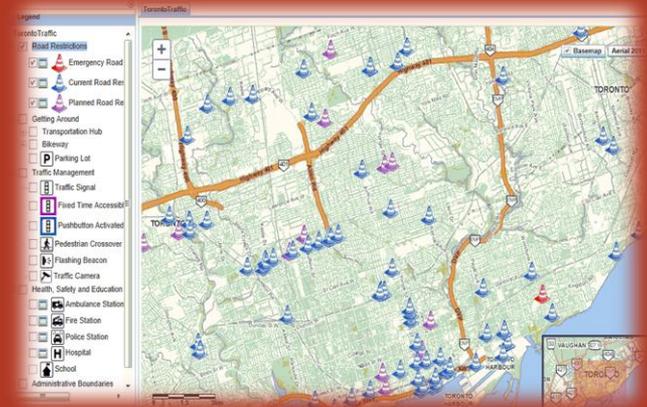
- Improving response times
- Emergency management plans
- Road closure plans
- Emergency vehicle signal pre-emption (local) – 55
- Snow route designation and enforcement



What We Are Doing

Traveller Information

- Changeable electronic message signs (16)
- Changeable portable message signs (16)
- VMS display of travel times on expressways
- Road Restriction Map (Live)
- OpenData
- City website improvements





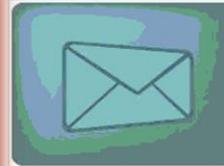
What We Are Doing

Traveller Information (Cont.)

- Traffic Conditions and cameras map (Live)
- Listserv (Toronto E-Updates)
- Sharing camera feeds and information with media & other stakeholders
- Twitter Feeds (@TO_Gardiner_LS
@TO_DVP @TO_AllenRoad
@TO_Arterials)



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What We Will Be Doing

Traffic Operations Centre

- Replacement of ATMS software over a two year period
- Extended hours for signal timing coverage to 8:00 pm, Mon - Fri
- C2C - Seamless sharing of information and video with other control centres by 2016
- Arterial camera monitoring – 120 signalised intersections by 2016



What We Will Be Doing

Congestion and Engineering Studies

- Auxiliary timing plans
- Emergency (evacuation routes) timing plans
- Updating coordination studies on a 5 year cycle
- ATM feasibility study
- ICM feasibility study



What We Will Be Doing

Construction Coordination

- Smart work zones
- Web-based RoDARS
(Roads Disruption Activity Reporting System)
- Lane occupancy permit review – cost to reflect actual traffic impact
- Work zone management and performance monitoring
- Streamlining permit review and approval process





What We Will Be Doing

Curbside Management

- Parking charge review – based on supply and demand
- Work with the business community to find solutions to parking and loading challenges
- Smart Park – technology to monitor parking paces and provide info to drivers





What We Will Be Doing

Alternative Transportation

- TSP enhancements
- HOV/Bus lanes review
- Cycling infrastructure expansion
- Corridor renewal





What We Will Be Doing

Intelligent Transportation Systems

- Upgrade to SCOOT or replacement with new ATSC
- Expansion of ATSC from 348 to 500 signals over a 5 year period
- 120 arterial cameras over a 3 year period, including PanAm Games routes and sites
- Enhanced network monitoring and monitoring of flood prone areas





What We Will Be Doing

Intelligent Transportation Systems

- Expansion of ATSC from 348 to 500 signals over a 5 year period
- Expand and update communications network
 - explore alternatives and opportunities to share





What We Will Be Doing

Incident and Event Response

- Better AID with new ATMS software
- Traffic incident management and service patrol teams
 - rapid clearance of expressway incidents
- Steer it – clear it program
- Universal fire PE





What We Will Be Doing

Traveller Information

- Traveller information strategy
- VMS display of travel times on arterials
- Events database
- Use of third party data
- Increased public access to current road and traffic information



More information

- **Congestion Management Plan**

<http://www1.toronto.ca/City%20Of%20Toronto/Transportation%20Services/TMC/Files/PDF/Congestion%20Management/Congestion%20Management.pdf>

- **Expressway closures & major route closures**

<http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=ab601fbd85412410VgnVCM10000071d60f89RCRD&vgnnextchannel=0c9c4074781e1410VgnVCM10000071d60f89RCRD>

- **Road restrictions map**

<http://map.toronto.ca/maps/map.jsp?app=TorontoTraffic>

- **Traffic Camera Locations**

www.toronto.ca/rescu/list.htm

- **E-updates**

<http://www.toronto.ca/e-updates>

- **Twitter**

@TO_Gardiner_LS @TO_DVP @TO_AllenRoad @TO_Arterials



Questions

