

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE APRIL 2, 2012
FROM:	JOHN BRAAM, P. ENG. ACTING EXECUTIVE DIRECTOR, PLANNING, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT	DUNDAS STREET WATERMAIN MAINTENANCE

RECOMMENDATION

That, on the recommendation of the Acting Executive Director, Planning, Environmental & Engineering Services and City Engineer, this report **BE RECEIVED** for information.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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- [Environment and Transportation Committee, November 12, 2007, Agenda Item #4a, Communication Policy for Construction Projects](#)
- [Dundas and Waterloo Streets Infrastructure Renewal Project, Built and Natural Environment Committee, March 7, 2011, Agenda #8](#)

BACKGROUND

Purpose:

Dundas Street is being repaved from west of the Thames River bridge to Wellington in early 2012. These works had previously been budgeted and the contract award report will come to Committee and Council in April. The Water Service Area has also planned maintenance activities in advance of the road works to ensure water valves are operational. This report is to advise of the coordination activities to ready the hard infrastructure for the World Figure Skating Championships in March 2013.

Discussion:

Following the 2007 sink hole in the intersection of Wellington Street and Dundas Street the City evaluated the condition of the infrastructure in the core area. It was determined that the underground infrastructure is in need of attention to avoid service interruptions or worse another catastrophic failure. The economic loss of unscheduled events, such as the sink hole, can be significant (power disruption shut down most downtown businesses for 24 hours). On the other hand, underground utilities including water, sewers, natural gas, power and communication networks are key supports for the daily needs of business. A planned, coordinated and communicated work program allows all stakeholders to be prepared and for the work to be done at a period that ensures cost effectiveness and minimum disruption.

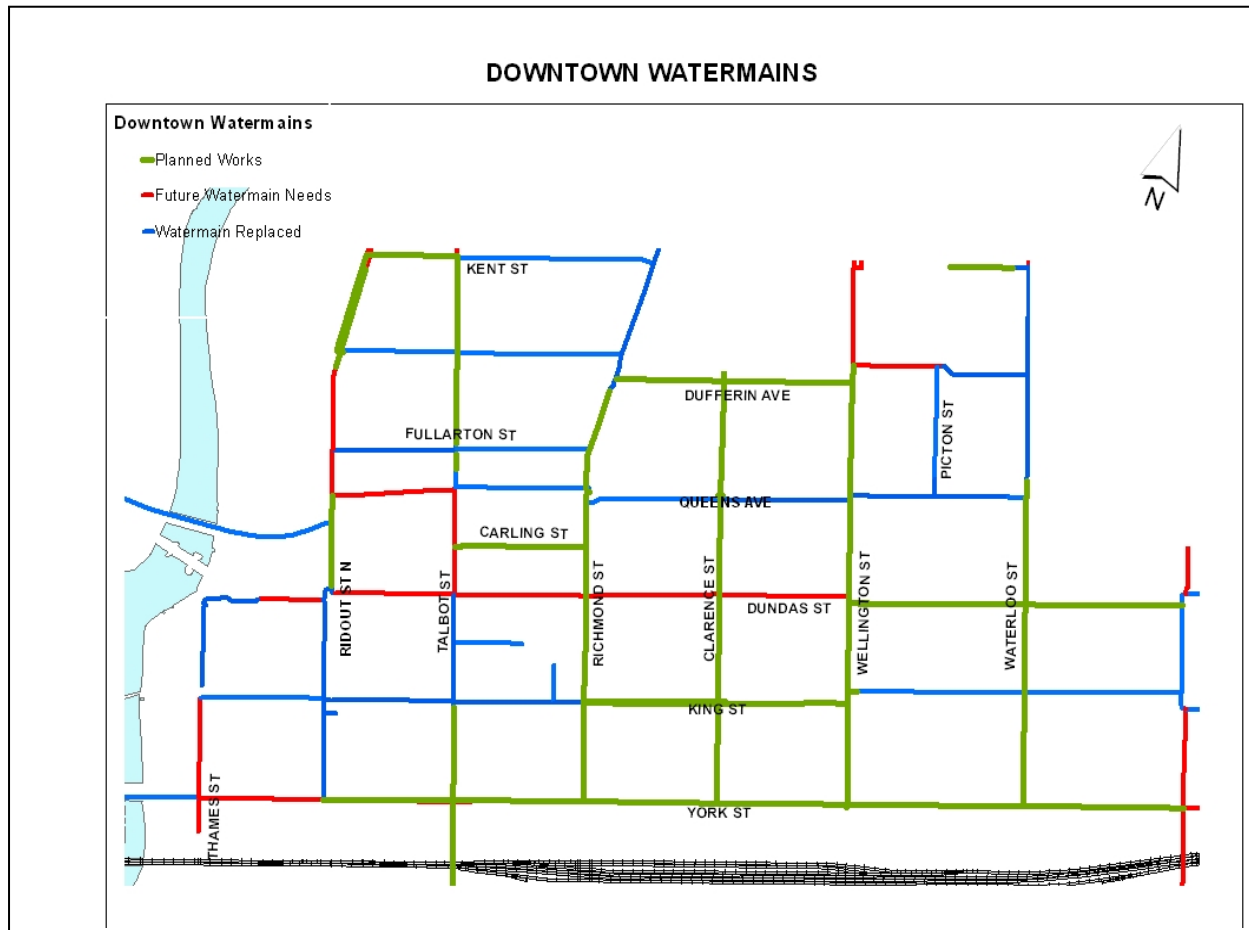
On Dundas Street there are many businesses that depend on a reliable supply of water. In 2011, a 5 month infrastructure renewal project was successfully completed for Dundas (Wellington to Colborne) and Waterloo Streets (Dundas to York). To strengthen the water grid in this area, the existing 150mm watermain was replaced with a 300mm watermain. City work was coordinated with Bell Canada, London District Energy, Roads and Transportation and Planning. Contact with other utilities was made and no other significant works were required for these portions of the streets.

Communication with other utilities west of Wellington on Dundas Street, has not identified any other major works which could be coordinated with the future need to replace the aging 1905 150 mm diameter watermain on the south side of Dundas. This watermain has only experienced 3 breaks and 2 leaks in the 35 year history of watermain breaks. There has however been a

slight increase in the frequency of breaks and leaks recently, but may be related to disturbances from steam lines and hydro vault maintenance, as all utilities are quite congested under the roadway and curb lines.



The map shows watermains in the downtown area that have already been renewed (blue), those that are planned within the next 20 years (green), and future needs beyond 20 years (red). Dundas has been identified as a future need, but could be accelerated at the time that major road reconstruction or sewer work is contemplated.



During 2011, coordination meetings were held within Planning and Engineering to discuss future work along Dundas Street and, specifically, work that could be accomplished prior to the World Figure Skating Championships in 2013. It was recognized that significant utility renewal, beautification and streetscape initiatives could not be completed in the available timeframe, nor was there budget available for such improvements. Major infrastructure renewal will therefore be delayed at least 5 years, the minimum anticipated life of the pavement mill and overlay contract which has been tendered for the 2012 construction season.

Vibration from the pavement milling activity can sometimes loosen joints on City watermains of this vintage and result in leaks. To ensure that these can be dealt with in a timely manner, if they occur, the line valves have been assessed. A few valves along Dundas Street require replacement; this work will be undertaken in advance of the paving operation, requiring partial lane shut-downs for brief periods of time. Subsequent to this work, a pilot program will be undertaken to assess the condition of the watermains on Dundas Street (150 mm diameter watermain vintage 1905, and 300 mm diameter watermain vintage 1966). The pilot program will also include a leak test. Previous leak tests were conducted in 2008 and these results can be compared.

Communication with the Public and Businesses:

In advance of the road work, City Water crews will undertake maintenance on watermain isolation valves. Traffic control measures will be set up; although it is contemplated that Dundas Street will not have to be closed to traffic for the watermain work. Short-term water service interruptions may be required to expedite the work. Businesses will be contacted through normal notification methods required for maintenance activities. We anticipate the total watermain and road work to take up to six (6) weeks. We anticipate the start of watermain maintenance and road construction to be mid-April 2012, as previously communicated ([Dundas](#)

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[Street Repaving Letter, Novemeber 21, 2011](#)). Given the mild winter, it may be possible to undertake the valve maintenance earlier.

Other Planned Work:

Several other initiatives are being planned for the downtown, Dundas Street in particular. These are briefly listed below:

- LTC bus rerouting detouring off of Dundas Street onto King and Queen will be required when resurfacing is undertaken west of Wellington because of the narrow roadway.
- Downtown Master Plan Improvements likely will not be implemented for 3 to 7 years, although, if opportunities and funding for minor improvements along Dundas Street can be determined prior to that time, they may be incorporated into the preparations for the WFSC.
- Downtown Tree Master Plan – The City’s Urban Forester will look for opportunities in the downtown for in-filling and enhancements, with a potential to complete part of the plan prior to the fall of 2012.

Conclusion:

A six week construction window is required to undertake the utility and road work on Dundas Street. The underground infrastructure maintenance work is required to provide reliable service to the public and businesses along Dundas and avoid traffic disruptions on this major arterial. It is intended to minimize the construction impacts for this project as much as possible, recognizing that more significant infrastructure renewal will be required within approximately 5 to 7 years when the streetscape will be transformed as part of the Downtown Master Plan. Undertaking underground watermain maintenance activities prior to paving, will allow surface and minor streetscape enhancements to be undertaken in 2012 in preparation for the 2013 World Figure Skating Championships.

Acknowledgements:

This report was prepared by Roland Welker, Water Engineering Division, with input from Karl Grabowski, Transportation Planning and Design Division and Ivan Listar, Manager Urban Forestry.

PREPARED BY:	RECOMMENDED BY:
ROLAND WELKER, P.ENG. MANAGER, WATER ENGINEERING	JOHN BRAAM, P.ENG. ACTING EXECUTIVE DIRECTOR, PLANNING, ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER

March 27, 2012

RW/

c.c.: John Fleming, City Planner
 John Winston, General Manager, Tourism London
 John Lucas, Acting Director of Roads and Transportation