



**Public Works Committee
REPORT 08-011
9:30 a.m.
Monday, June 16, 2008
Hamilton Convention Centre
One Summer's Lane
Albion Rooms A, B and C**

Present: Mayor F. Eisenberger
Chair R. Powers
Vice Chair C. Collins
Councillors B. Bratina, L. Ferguson, T. Jackson,
M. McCarthy, S. Merulla, D. Mitchell

Also Present: Councillors R. Pasuta, M. Pearson
S. Stewart – General Manager, Public Works
B. Shynal – Director, Operations and Maintenance
G. Davis – Sr. Director, Capital Planning and Implementation
D. Hull – Director, Transit Operations
C. Hill – A/Director, Energy, Fleet and Facilities
B. Goodger – Director, Waste Management
J. Harnum – Sr. Director, Water and Wastewater
C. Biggs – Legislative Assistant, City Clerk's

**THE PUBLIC WORKS COMMITTEE PRESENTS REPORT 08-011 AND
RESPECTFULLY RECOMMENDS:**

1. Minutes of Various Sub-Committees (Item 5.1)

That the following be received:

- (a) Solid Waste Management Master Plan Steering Committee - April 9, 2008
- (b) Waste Reduction Task Force - April 16, 2008
- (c) Clean City Liaison Committee - May 1, 2008
- (d) Glanbrook Landfill Coordinating Committee - May 26, 2008

Council – June 25, 2008

2. Lake Erie Region Source Protection Committee Minutes – May 1, 2008 (Item 5.2)

That the May 1, 2008 Minutes of the Lake Erie Region Source Protection Committee, be received.

3. Summary of Municipal Drains (PW08076) (Wards 11 and 14) (Item 5.3)

That Report PW08076 respecting Summary of Municipal Drains, be received.

4. Driveway Snow Clearing (PW08069) (City Wide) (Item 5.4)

That Report PW08069 respecting Driveway Snow Clearing, be received.

5. Proposed Permanent Closure of Portion of a Public Unassumed Alley at Rear of 11 Hollywood Street North, Hamilton (PW08073) (Ward 1) (Item 5.5)

That the application of to permanently close and purchase a portion of the public unassumed alley at the rear of 11 Hollywood Street North, Hamilton be denied.

6. Rapid Transit Feasibility Study – Public Consultation Update (PW08043(a)) (City Wide) (Item 7.1)

- (a) That staff be directed to continue the Rapid Transit Feasibility Study (Phase 2) with a focus on Light Rail Transit;
- (b) That staff be directed to report back to Public Works Committee in September 2008 with a proposed work plan for future studies, public consultation, design and construction;
- (c) That staff continue discussions with Metrolinx to ensure a Hamilton Rapid Transit project is identified in their 2009 - 2013 rolling five year capital plan;
- (d) That staff aggressively pursue as many opportunities as possible to achieve more public comment/outreach.

7. Metrolinx Regional Transportation Plan Process and “Quick Win” Service Enhancements - “A-Line” and “B-Line” (PW08074) (City Wide) (Item 7.2)

- (a) That the General Manager of Public Works, be authorized and directed to:

- (i) Implement "Stage 1" of a new "A-Line" Rapid Transit Service, initially operating between the Airport and the Downtown, in September 2009 as detailed in the Alternatives Section of this report;
 - (ii) Permanently allocate \$475,000, from the remaining uncommitted balance, in Provincial Gas Tax funding to fund the operating cost of Stage 1 of the "A-Line";
 - (iii) Increase the Complement of Transit Mechanics by one (1) from forty-two (42) to forty-three (43);
 - (iv) Increase the complement of Transit Bus Operators by three (3) from 399.3 to 402.3 to allow for implementation of Stage 1 of the "A-Line";
 - (v) Sole-source for the provision of 18 New Flyer Low-Floor Diesel/Electric 60-foot Articulated buses at a gross cost of \$16,500,000;
 - (vi) Approve \$350,000 in one time capital funding from Federal Gas Tax monies for the installation of two articulated bus hoists at the Mountain Transit Facility;
- (b) That the General Manager of Public Works be directed to report to Public Works Committee at key milestones in the Metrolinx Regional Transportation Process.

**8. Accessible Pedestrian Signals (PW08077) (City Wide)
(Public Works Committee Outstanding Business List) (Item 7.3)**

- (a) That the 2008 Transportation Association of Canada (TAC) standard for Accessible Pedestrian Signals (APS) be endorsed as the City's standard;
- (b) That, commencing in 2009, all new full and intersection pedestrian signals installed in the City of Hamilton be equipped with accessible pedestrian signals;
- (c) That, commencing in 2009, at all signalized intersections impacted by major reconstruction in the City of Hamilton, accessible pedestrian signals be added, with the cost of the accessible pedestrian signals in reconstruction projects to be included in the overall reconstruction project cost;

- (d) That the City commence a retrofit program to install accessible pedestrian signals at all existing signalized intersection locations, with the program to be based on available capital funding and with locations to be chosen in consultation with the City's Advisory Committee for Persons with Disabilities and agencies serving people with visual or visual and hearing disabilities;
- (e) That the program to introduce new accessible pedestrian signals be contingent on the availability of mobility training for users of the signals, with such mobility training to be supplied by organizations external to the City of Hamilton;
- (f) That the item relating to audible pedestrian signals be removed from the Public Works Committee Outstanding Business List.

9. Use of Roundabouts in the City of Hamilton (PW08078) (City Wide) (Public Works Committee Outstanding Business List) (Item 7.4)

- (a) That the policy for installing modern roundabouts as per "Installation of Modern Roundabouts", attached hereto as Appendix "A", be adopted;
- (b) That the policy for installing neighbourhood mini-roundabouts as "Installation of Neighbourhood Mini-Roundabouts", attached hereto as Appendix "B", be adopted;
- (c) That initial installations of neighbourhood mini-roundabouts be funded from the Annual Traffic Calming capital budget, up to a maximum amount of \$50,000, subject to funding availability;
- (d) That the item relating to implementation of roundabouts in Ward 4 be removed from the Public Works Committee Outstanding Business List.

10. Property Purchase - CP Rail Trail (PW08068/PED08143) (Ward 1) (Item 7.5)

- (a) That the Real Estate Section of the Planning and Economic Development Department be authorized and directed to prepare an offer to purchase, in a form acceptable to the City Solicitor, from Canadian Pacific Railways, for the railroad right-of-way parallel to, and south of, Main Street West from the east limit of the Fortino's property to Stroud Street, more particularly described as Part of Lot 23, Registrar's Complied Plan 1478, described as Parts 3, 4 & 5 on Reference Plan 62R-16082, subject to an easement in favour of Union Gas over Part 3 on Plan 62R-16082, being PIN 17457-0273(R); and Lot 64, Registrar's Complied Plan 1480, except Part 2 on Plan 62R-6456, being PIN 17458-0289 (R), at a price of \$725,000, plus applicable taxes, transfer fees, real estate assessments, environmental investigations, real estate fees and other associated costs, conditional upon successful completion of an environmental investigation;
- (b) That the Offer to Purchase the CP rail right-of-way be conditional upon Canadian Pacific Railways agreeing to a 20-year lease of lands through the Aberdeen rail yard, with leased property described as Part of Lot 24, Registrar's Complied Plan 1482, lying west of Highway 403, except Part 1 on Reference Plan 6456, being PIN 17588-0624(R), and Lot 9, Registrar's Complied Plan 1479, Part of Lot 24 Registrar's Complied Plan 1482, lying east of the line between the southerly production of the south east angle of Baxter St., Plan 767 and Highway 403; Part Lot 20, Concession 4, Barton, being PIN 17596-0185(R);
- (c) That the Real Estate Section of the Planning and Economic Development Department be authorized and directed to negotiate a lease agreement with the Canadian Pacific Railways in a form acceptable to the City Solicitor for those lands described in (b);
- (d) That the cost of purchase of the Canadian Pacific rail right-of-way from Fortino's to Stroud Avenue be charged to capital account 4030758700, CP Rail Trail - West Hamilton;
- (e) That the one-time cost of \$150,000 to lease CP Rail land for a period of 20 years be funded through the Capital Projects - Hamilton Reserve Dept. ID 108035;
- (f) That the associated annual operating budget impact of \$40,000 be referred to the 2009 Operating Budget as a pressure;
- (g) That the CP rail trail conversion be named in honour of Canadian Pacific Railways;

- (h) That, upon successful completion of the real estate purchase transaction, a charitable donation receipt be issued to Canadian Pacific Railways for the difference between the \$725,000 purchase price and the appraised value of the property based on an independent appraisal prepared by a member in good standing with the Appraisal Institute of Canada, with authority for the administration of charitable receipt request to be delegated to the City Treasurer;
- (i) That, as required, up to \$300,000 additional one-time funding for the rail trail be transferred from the 2008 Annual Bicycle Route Improvements Capital budget, 4030817124 to provide sufficient funding, if it is determined that lighting of the CP Rail Trail or other contingencies are considered necessary, or appropriate;
- (j) That, subject to a successful offer to purchase being presented to and accepted by Canadian Pacific, installation of a traffic signal at the intersection of Aberdeen and Studholme, be referred to the capital budget process for consideration of inclusion in the New Traffic Signal Installations capital budget;
- (k) That the Mayor and City Clerk be authorized and directed to execute any necessary documents, in a form satisfactory to the City Solicitor, and that any Legal Services expenses or other administrative expenses be charged to capital account 4030758700, CP Rail Trail-West Hamilton.

**11. Greenhill Avenue Storm Drainage Study (PW08064) (Ward 5)
(Public Works Committee Outstanding Business List) (Item 8.1)**

- (a) That the General Manager of the Public Works Department be authorized and directed to file the Greenhill Avenue Storm Drainage Study as per the Municipal Class Environmental Assessment (October 2000 as amended in 2007), on the public record with the Municipal Clerk for a thirty day public review;
- (b) That upon the completion of the thirty day public review and period final approval, the General Manager of the Public Works Department be authorized and directed to include the projects identified in the Greenhill Avenue Area Storm Drainage Study as part of 2009 Capital Budget submissions;
- (c) That the General Manager of the Public Works Department be authorized and directed to implement the Maintenance and Operations procedures recommended within Greenhill Storm Avenue Area Storm Drainage Study Report PW08064;

- (d) That the General Manager of the Public Works Department be authorized and directed to implement that all future sub-divisions be designed in accordance with the approved City of Hamilton Storm Drainage Policy (May 2004);
- (e) That the item relating to “Greenhill Neighbourhood Flooding” be removed from the Outstanding Business List on the Public Works Committee Agenda, but that the issue relating to outstanding insurance claims resulting from the flooding be added until such time as staff present a report.

12. Waste Management Services for Festivals and Special Events (PW08057/FCS08057) (City Wide) (Item 8.2)

- (a) That the criteria for “Festival and Special Events – Waste Management Service”, as outlined in Appendix “C” attached hereto, be approved and used as a guide by the Special Events Advisory Team (S.E.A.T.) to provide a consistent approach in determining the eligibility for funded waste management services at festivals and special events;
- (b) That during the 2009 budget deliberations, Corporate Services staff include for Council’s consideration, amendments to the Community Partnership Program (CPP) to include funding for provision of full waste management services (recycling, organics and garbage) to all community events held on City property and approved by the Special Events Advisory Team;
- (c) That the additional \$40,000 required to fully fund the provision of waste management services at approved festivals and special events be referred to the 2009 budget for further consideration;
- (d) That special events held at City-owned facilities, which are not eligible for funding, be required to provide recycling and green cart containers and the costs be fully funded by the event organizers.
- (e) That user fees for festival waste management services be established for 2009 including a \$1,000 refundable security deposit from each event receiving services for container damage and diverted material integrity and the costs per event set out in Appendix “D” attached hereto;
- (f) That recycling and organics collection services be made available for special events held at non City-owned facilities on a fee for service basis, subject to availability of resources;
- (g) That no change be made to the waste management service level provided to festivals and special events in 2008.

13. LINC and RHVP Enhanced Roadside and Median Naturalization (PW08079) (City Wide) (Item 8.3)

That pending further consideration by Council, current service levels for roadside and median grass mowing shall be maintained with the exception of a median test plot for background assessment work required in the preparation of a staff report.

14. City Hall Renovations – Integrated Team Approach (ITA) Process (PW08080) (City Wide) (Added Item 8.4)

That Report PW08080 respecting City Hall Renovations – Integrated Team Approach (ITA) Process, be received.

15. Temporary Outdoor Boulevard Café Application Approvals for Businesses affected by Balfour Building Collapse on King William Street, Hamilton

That, as a result of extenuating circumstances, being the collapse of the Balfour Building on King William Street in April, 2008, and in order to provide those existing businesses that front onto King William Street between James Street North and Hughson Street North that have been negatively affected by the collapse, with the opportunity restore themselves to the position they would have been in prior to the collapse, for the 2008 summer season and for one season only:

- (a) That the existing policy and process respecting the usual administration and approval of outdoor boulevard café applications resulting in a temporary single season permit be suspended for this one occasion by:
 - (i) The requirement for these applicants to pay the application fee not be waived for the 2008 summer season, where such applicants are not-for-profit corporations;
 - (ii) The requirement for the application to be circulated in advance of its approval, including circulation to public utilities, internal departments and to the neighbourhood in a 400' radius be waived for the 2008 summer season;
 - (iii) The requirement that a standard technical review of the application be waived for the 2008 summer season, despite known clearance deficiencies impacting operation of mobility devices;
 - (iv) The requirement that a report to Council authorizing an individual application be waived for the 2008 summer season;

- (b) That for the 2008 summer season, Council provide staff with the delegated authority to approve the affected outdoor boulevard café applications upon their receipt, and that staff be further directed and authorized to enter into the appropriate legal agreements with the applicants so that they may be registered on title.

FOR THE INFORMATION OF COUNCIL:

(a) CHANGES TO THE AGENDA (Item 1)

The Clerk reported the following changes to the agenda:

- (i) Additional Delegation Requests to Appear from
 - (aa) Mark Giavedoni, Solicitor on behalf of Paul Watkins, respecting Proposed Permanent Closure of a Portion of a Public Unassumed Alley at Rear of 11 Hollywood Street North, Hamilton (PW08073) (Ward 1) (Item 5.5 of June 16 agenda)
 - (bb) Dan Rodrigues, Hamilton Chamber of Commerce, to present the Chamber's position regarding rapid transit development
- (ii) Additional Information Report respecting City Hall Renovations – Integrated Team Approach (ITA) Process (PW08080) (City Wide)

On a motion, the agenda was approved, as amended.

(b) DECLARATIONS OF INTEREST (Item 2)

None.

(c) APPROVAL OF MINUTES (Item 3)

The Clerk noted that the Minutes have been amended to reflect that Councillor B. Bratina was "Absent with Regrets" on City Business.

On a motion, the Minutes of the June 2, 2008 meeting of the Public Works Committee were received and adopted, as amended.

(d) DELEGATION REQUESTS (Item 4)

- (i) Request to appear before the Committee respecting the North End Traffic Management Study from Bill Curran, Chair of the Hamilton Society of Architects and North End Resident:**

On a motion, the request from Mr. Curran was approved. Mr. Curran will be advised of the appropriate date accordingly.

- (ii) Request to Appear from Mark Giavedoni, Solicitor on behalf of Paul Watkins, respecting Proposed Permanent Closure of a Portion of a Public Unassumed Alley at the Rear of 11 Hollywood Street North, Hamilton**

On a motion, Mr. Giavedoni was permitted to address the Committee at today's meeting as a report on this issue was before the Committee for consideration.

- (iii) Request from Dan Rodrigues, Hamilton Chamber of Commerce, to present the Chamber's position regarding rapid transit development**

On a motion, Mr. Rodrigues was permitted to address the Committee at today's meeting as a report on this issue was before the Committee for consideration.

(e) CLEAN CITY LIAISON COMMITTEE – MAY 1, 2008 (Item 5.1(c))

Mayor Eisenberger requested that staff communicate with the Clean City Liaison Committee and the Hamilton Police Service to look at signage and implementing significant fines for individuals who litter throughout the City, and specifically along the LINC and Red Hill Valley Parkway. Committee requested staff to provide an information update to the Committee as soon as possible.

Councillor Ferguson requested that the on and off ramps of Hwy 403 be included.

(f) DRIVEWAY SNOW CLEARING (PW08069) (City Wide)

The motion to receive the report **CARRIED** on the following recorded vote:

Yeas: Eisenberger, Powers, McCarthy, Ferguson, Mitchell, Collins,
Merulla, Bratina

Total Yeas: 8

Nays: Jackson

Total Nays: 1

(g) DELEGATIONS**(i) Presentation – Hamilton Light Rail**

Nicholas Kevelhan of Hamilton Light Rail gave a power point presentation which included a showing of the light rail system in Bordeaux, France. The presentation also included cities in the United States where light rail is used, such as Portland, Oregon, Kenosha, Wisconsin, Little Rock, Arkansas and Tampa. Light rail is proven technology and is right for Hamilton because of its lower, more predictable lifecycle costs, the potential to attract billions in investment and generate millions in new taxes. It would also be a possible economic multiplier for Hamilton's manufacturing industry. His presentation also included figures related to ridership and cost and return on investment as related to light rail vs bus rapid transit.

On a motion, the presentation by Nicholas Kevelhan, on behalf of Hamilton Light Rail, was received.

(ii) Mark Giavedoni, Solicitor on behalf of Paul Watkins, respecting Proposed Permanent Closure of a Portion of a Public Unassumed Alley at the Rear of 11 Hollywood Street North, Hamilton

Mark Giavedoni, solicitor on behalf of Paul Watkins, appeared before the Committee to respond to the recommendation of staff to deny Mr. Watkins' application to permanently close and purchase a portion of the public unassumed alley at the rear of 11 Hollywood Street North, Hamilton. He asked the Committee to consider several questions before considering the staff recommendation and stated that there was no legal justification for the City to deny Mr. Watkins' application.

On a motion, the presentation was received.

On a motion, the staff recommendation was approved on the following recorded vote, subject to staff providing photos of the affected area to members of the Committee prior to the June 25, 2008 Council meeting:

Yeas:	Eisenberger, Powers, McCarthy, Ferguson, Jackson, Collins, Merulla, Bratina
Total Yeas:	8
Nays:	Mitchell
Total Nays:	1

(iii) Dan Rodrigues, Hamilton Chamber of Commerce, to present the Chamber's position regarding rapid transit development

Dan Rodrigues appeared before the Committee on behalf of the Hamilton Chamber of Commerce to report the Chamber has adopted the position that light rail transit for rapid transit development be utilized. The Chamber is also requesting that full integration for growth development, employment development and comprehensive goods movement, be included.

The Hamilton Chamber of Commerce is in full support of a light rail transit system.

On a motion, the presentation was received.

(h) STAFF PRESENTATIONS

(i) Rapid Transit Feasibility Study – Public Consultation Update (PW08043(a)) (City Wide) (Item 7.1)

Jill Stephen, Manager, Strategic Planning, gave a power point presentation on the Rapid Transit Feasibility Study (RTFS) – Public Consultation Component:

- Background
- RTFS corridors
- Technologies studied – Bus Rapid Transit/Light Rail Transit
- Schedule of public consultation timeline, consultation results and comments
- Internal City consultation (on-going)
- Public consultation summary and discussions with Metrolinx (on-going)
- Overall summary, recommendations and next steps.

The Committee was also distributed with an updated Schedule “B” to the report which included public opinion summary tables to June 12, 2008.

A copy of the power point presentation and updated Schedule “B” was distributed to the Committee and has been retained in the Office of the City Clerk for the public record.

On a motion, the recommendation contained in Report PW08043(a) were approved as amended, with the addition of sub-section (d) as shown in Item 6 of this report.

(ii) **Metrolinx Regional Transportation Plan Process and “Quick Win” Service Enhancements - “A-Line” and “B-Line” (PW08074) (City Wide) (Item 7.2)**

Don Hull, Director of Transit, gave a power point presentation on the Metrolinx Regional Transportation Plan Process: A-Line and B-Line Service Improvements, including

- Introduction – \$29,800,000 funding from the Province and Ministry of Transportation
- Review of staff recommendations in Report PW08074
- Higher order transit; improvements to service, facility, vehicle and value added through technology
- Service improvements – Phase 1 and Phases 2/3
- Opportunities to address transportation deficiencies in the areas of education, co-operation and co-ordination, integrated transit systems, sustainable funding, availability of capital and operating funding, economic development
- Rapid transit 2009-2013.

A copy of the power point presentation was distributed to the Committee and has been retained in the Office of the City Clerk for the public record.

On a motion, Recommendations (b) to (d) of Report PW08074, which read as follows, were deferred until such time as additional information is provided to the Committee on the implementation of Stages 2 and 3 of the A-Line and B-Line:

- “(b) That the General Manager of Public Works be authorized and directed to increase the complement of Transit Bus Operators by three (3) at such time as Stage 2 of the “A-Line” is ready to be implemented;
- (c) That the General Manager of Public Works be authorized and directed to increase the complement of Transit Bus Operators by two (2) at such time as Stage 3 of the “A-Line” is ready to be implemented;
- (d) That the General Manager of Public Works be authorized and directed to increase the complement of Transit Bus Operators by six (6) at such time as Stages 2 and 3 of the “B-Line” improvements are ready to be implemented.”

The Motion, as amended, **CARRIED.**

(iii) Accessible Pedestrian Signals (PW08077) (City Wide) (Item 7.3)

Hart Solomon, Manager, Traffic and Engineering Operations, gave a power point presentation on Audible/Accessible Pedestrian signals, including:

- Background (purpose of the report)
- Major updates from 1991 standard
- Current Audible Signal Standard
- Revised Standard – Accessible pedestrian signal; finding the push-button; orientation; using the APS; typical APS operation; APS sounds; beacon APS operation
- APS implementation program and financial impacts.

The report is as a result of a request from the City's Advisory Committee for Persons with Disabilities, as well as the Accessibility for Ontarians with Disabilities Act and revised Canadian guidelines from the Transportation Association of Canada.

A copy of the power point presentation was distributed to the Committee and has been retained in the Office of the City Clerk for the public record.

(iv) Use of Roundabouts in the City of Hamilton (PW08078) (City Wide) (Item 7.4)

Ron Gallo, Supervisor of Signals and Systems, gave a power point presentation on the use of roundabouts in the City of Hamilton and citing that there is a lack of understanding and confusion from the public surrounding roundabouts. The presentation included:

- Photos showing modern roundabouts or traffic circles
- Safety i.e., fewer conflict points in modern roundabouts
- Environmentally responsible
- Pedestrian and cyclist safety
- Cost of constructing roundabouts
- Aesthetics
- Assessment of traffic control section
- Neighbourhood mini roundabouts
- Outline of recommendations in Report PW08078.

The Committee requested staff to provide information with respect to the cost of a mini roundabout.

A copy of the power point presentation was distributed to the Committee and has been retained in the Office of the City Clerk for the public record.

(v) **Property Purchase - CP Rail Trail (PW08068/PED08143) (Ward 1) (Item 7.5)**

A power point presentation on this issue prepared by staff was distributed to the Committee and has been retained in the Office of the City Clerk for the public record.

(i) **LINC AND RHVP ENHANCED ROADSIDE AND MEDIAN NATURALIZATION (PW08079) (City Wide) (Item 8.3)**

Moved by Mayor Eisenberger, seconded by Councillor Bratina:

- (i) That sub-section (a) be deleted in its entirety;
- (ii) That sub-section (b) be deleted in its entirety and replaced with the following in lieu thereof:
 - “(b) That all mowing activities of the LINC median and roadsides, other than that which is required for safety purposes, be suspended.”;
- (c) That staff be directed to conduct public consultation

The amending motion **LOST** on the following recorded vote:

Yeas:	Eisenberger, McCarthy, Bratina
Total Yeas:	3
Nays:	Powers, Ferguson, Mitchell, Jackson, Collins, Merulla
Total Nays:	6

Moved by Councillor Merulla, seconded by Councillor Collins:

That sub-section (a) of Report PW08079 be deleted in its entirety and sub-section (b) be approved as presented.

The motion, as amended, **CARRIED** on the following recorded vote:

Yeas:	Ferguson, Mitchell, Collins, Merulla, Bratina
Total Yeas:	5
Nays:	Eisenberger, Powers, McCarthy, Jackson
Total Nays:	4

(j) GENERAL INFORMATION/OTHER BUSINESS (Item 11)**(i) Outstanding Business Items**

- (aa) Gore Park Pedestrian Plaza/Correspondence from T. Bullock, Downtown Hamilton BIA, respecting removal of buses from Gore Park Area
Due Date: June 16, 2008
Revised Due Date: July 9, 2008 (Committee of the Whole)
- (bb) Extension of 5A/5C Delaware Bus Route
Due Date: June 16, 2008
Revised Due Date: September 15, 2008
- (cc) Specialized Transit Fleet Tender
Due Date: June 16, 2008
Revised Due Date September 15, 2008
- (dd) Town of Northeastern Manitoulin and the Islands Resolution respecting Ownership of All Municipal Drinking Water Systems within the Province

Staff advised that given the size of the City, the resolution from the Town of Northeastern Manitoulin and the Islands Resolution respecting Ownership of All Municipal Drinking Water Systems within the Province would not apply. As a result of this explanation, the Committee received the advice and by motion, approved to remove this item from the Outstanding Business List.

On a motion, the Outstanding Business List was amended accordingly.

(ii) Gypsy Moth Update

Bryan Shynal reported that aerial spraying in all of the previously-approved areas has been completed. Staff received a high level of co-operation from the Hamilton Police Service in terms of establishing road closures for the helicopter aerial spraying. Preliminary reports from the consultants indicate that there is 100% effectiveness and that there will be very minimal defoliation in the sprayed areas; however, staff will be providing a further report on this at a later date. With respect to other areas of concern, they have been listed and will be monitored into the Fall.

(iii) Glanbrook Landfill Site – Contract Renewal/Tender

Councillor D. Mitchell submitted a petition to the Clerk signed by 125 residents in the area of the Glanbrook Landfill Site expressing their appreciation to Ron Wright of Canadian Waste and Canadian Waste, for an excellent job in the operation of the Glanbrook Landfill Site, and for responding to their requests and dealing with their concerns in a timely fashion. The petition also requested that the City of Hamilton recognize the level of service and give credit for it during the tendering/renewal process

A copy of the petition was also provided to the Director of Waste Management.

(k) PRIVATE AND CONFIDENTIAL**Approval of Minutes of Closed Session Meeting held on June 2, 2008**

On a motion the Minutes of the Closed Session of the Public Works Committee meeting of June 2, 2008 were received. These Minutes will remain confidential and restricted from public disclosure in accordance with exemptions provided in the Municipal Freedom of Information and Protection of Privacy Act.

On a motion, the Committee to moved into Closed Session at 2:15 p.m. on a matter which pertains to a proposed or pending acquisition or disposition of land for municipal or local board purposes and on another matter for the receiving of advice that is subject to solicitor-client privilege, including communications necessary for that purpose.

On a motion, the Committee reconvened in Open Session at 2:30 p.m.

(i) Purchase of Properties on Cherry Beach Road, Stoney Creek (PW08071) (Ward 10)

Direction given to staff In Camera.

(ii) Temporary Outdoor Boulevard Café Application Approvals for Businesses affected by Balfour Building Collapse on King William Street, Hamilton

See Item 15 for disposition of this item.

(I) REQUEST FOR INFORMATION RESPECTING PARKLAND DEDICATION

On a motion, staff was directed to provide an update with respect to the parkland acquisition fund, with a view to replenishing the fund going into the 2009 budget deliberations.

There being no further business, the Committee adjourned at 2:35 p.m.

Respectfully submitted

Councillor R. Powers
Chair
Public Works Committee

Carolyn Biggs
Legislative Assistant
June 16, 2008

Title	Installation of Modern Roundabouts
Number	

1. Description and Purpose

This policy document provides guidelines for the use of modern roundabouts on arterial and collector roadways. Modern roundabouts have been increasing in popularity in North America, primarily based on their aptitude to improve traffic safety. The unique circular design characteristics of roundabouts reduce the number of conflict points by 75% over traditional intersection design and therefore results in lowering collision experience.

Modern roundabouts can be utilized as an alternative form of intersection traffic control rather than the use of all-way stops or traffic signals which currently are the most common form of traffic control at major intersections. Their design encourages slower vehicle speeds and the yield on entry control allows circulating traffic to have the right-of-way which minimizes congestion resulting in a more efficient operation with fewer delays. As a result, vehicle greenhouse gas emissions are significantly reduced. Furthermore, roundabouts can be used as aesthetic gateways into communities or to provide a transition zone from a rural to an urban setting to accommodate the required reduction in vehicle speeds.

The overall goal for implementing modern roundabouts is to provide an intersection control which improves safety, efficiency and environmental impacts for all affected users.

2. Scope

The Traffic Engineering and Operations Section, through a consultative process with the public, internal and external agencies, and Ward Councillors, will be responsible for investigating, evaluating and recommending to Committee and Council for their consideration, modern roundabout installations in the City Of Hamilton. A comprehensive feasibility study will accompany all proposed locations to ensure that roundabouts are workable.

When designing roundabouts, one size does not fit all. The size and shape of a roundabout will vary according to the traffic demand, type of traffic, geometry and classification of intersection. As a general design guideline the City of Hamilton will be referencing two documents as guidelines for best practice. The USA based Federal Highway Administration publication named “Roundabouts: An Informational Guide” (FHWA-RD-00-067) will be utilized in conjunction with the “Synthesis of North American Roundabout Practice”, soon to be released by the Transportation Association of Canada (TAC). Staff will also be soliciting assistance from Canadian and American Municipalities which have had experience in the installation of roundabouts, in addition to working with expert consultants on detailed design. The preferred software to aid in designing is RODEL which is an empirical based modeling program. In the case of development related roundabout installations, staff will provide typical design standards for the corresponding roadway right-of-way widths.

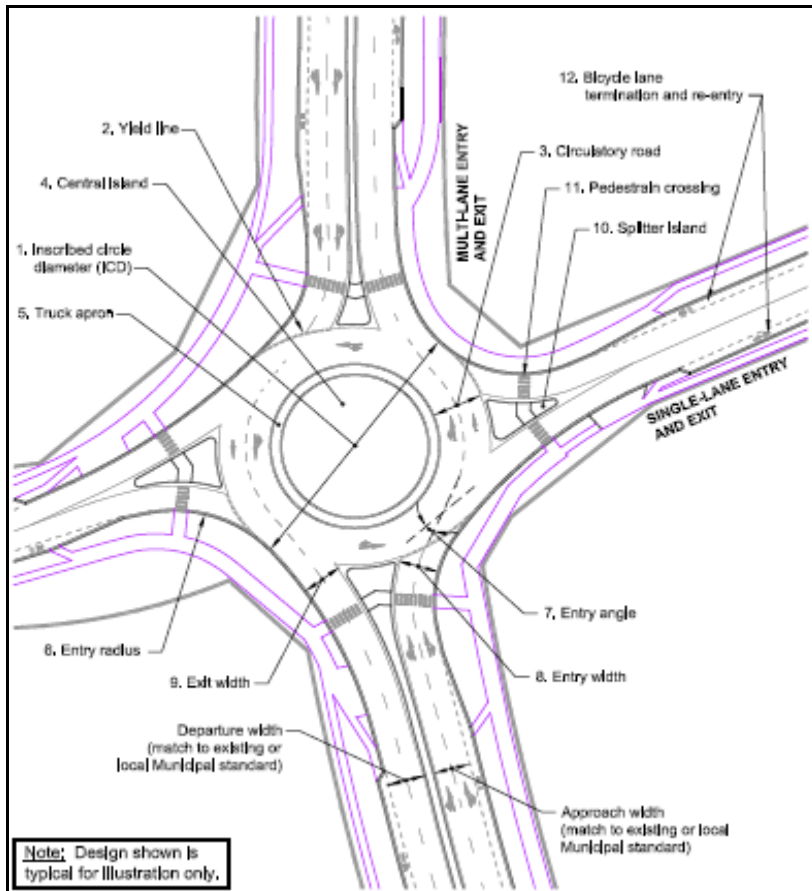
Applies to: All sections *or* Roads Parks Forestry Traffic Horticulture Cemeteries Business Services

3. Definitions

The following is a partial list of more commonly used definitions associated with modern roundabouts installation:

Modern Roundabouts – a circular intersection varying in size depending on traffic volumes and roadway geometry, and typically found on major roadways. The key elements include a raised central island placed at the center of an intersection, raised splitter islands located at each entry to the intersection, counter clockwise circulation, yield control at all approaches to the intersection. They may have a single or multiple circulating lanes of traffic. Roundabouts are generally used in place of traffic signals on major roadways. The benefits of roundabouts are that they slow traffic and reduce the number of right-angle and turning movement collisions, while providing a more efficient and environmentally-friendly operation.

Features described below illustration:



Inscribed Circle Diameter – Measure of the size of a roundabout. Governed by number of entry and exit lanes, size of design vehicle, and property constraints.

Yield Line – Denotes where entering drivers give way to circulating traffic, and generally inscribes the outside diameter of the roundabout.

Circulatory Road – The minimum width is equal to the widest entry. In multi-lane roundabouts pavement markings in the circulatory road are usually used to denote lane use, recognizing that trucks may need to take up more than one lane.

Central Island – A central non-overrun area. Sightlines shall be maintained around the outside, but blocked through the middle using landscaping or other means.

Truck Apron – An overrun area for trucks. Usually necessary for single-lane roundabouts to avoid a very wide circulatory road or small central island.

Entry Radius – The smallest curb radius before or at the yield line. Not the same as entry path radius or deflection.

Entry Angle – Half the angle between the entry and the next exit. A higher angle means the entry is more perpendicular to the circulatory road. If the angle is too flat entering drivers will have to turn too much to the left to see circulating traffic.

Entry Width – Width at the roundabout entry, measured to curb face. Must be sized to accommodate design vehicle, yet not be overly large at single-lane roundabouts. The distance over which the approach widens to the entry is the flare length.

Exit Width – Width at the roundabout exit, measured to curb face. Two exit lanes can reduce to one lane over a 15:1 to 20:1 taper depending on volume and speed of traffic.

Splitter Island – Directs drivers to circulate counter-clockwise, and provides refuge area for pedestrians.

Pedestrian Crossing – Two-stage crossing located one car length, or multiple behind the yield line.

Bicycle Lane Termination and Re-Entry – Forces bicyclists to choose between navigating roundabout as a vehicle by taking the traffic lane, or as a pedestrian by providing access to a sidewalk.

4. Responsibility

The Traffic Engineering and Operations Section of the Public Works Department will be responsible for overseeing the evaluation and implementation of roundabout installations. The Capital Planning and Implementation Division will continue to spearhead all major Environmental Assessments and neighbourhood traffic studies with input from the Traffic Engineering and Operations Section. A formal EA is no longer required but public consultation is still a key element of this process. Where roundabouts are considered at new intersections identified as potential sites as part of a capital project. These intersections are identified and screened by Traffic Engineering and Operations in consultation with Strategic and Environmental Planning. Where roundabouts are considered through the Planning or Development review process, these intersections are identified and screened by Traffic Engineering and Operations in consultation with Community Planning and Design and Development Engineering staff.

5. Policy Details

- a) **Modern roundabouts will be installed wherever possible, where a study confirms they are feasible, appropriate and advantageous in terms of traffic flow, traffic safety, community design functions or environmental considerations, under the following conditions:**
- (i) Capacity or safety problems have been identified at existing intersections necessitating substantial improvements.
 - (ii) Traffic signals or all-way stops are warranted or expected to be warranted in the near future at existing or proposed intersections.
 - (iii) As part of a larger capital project, suitable intersections are identified as potential sites.
 - (iv) When, through planning approvals, new intersections are to be created.

An evaluation process as listed in sections (b) and (c) below will be undertaken to determine feasibility of roundabouts. A life cycle cost comparison table as shown in 'Table 2' of the report will be generated to present a snapshot comparison of overall costs for the various alternatives.

b) Implementation of Roundabouts Resulting from Safety Problems, Capacity Issues, Signal Warrants, All-way Stop Warrants to be Processed Through the Capital Projects Program.

Screening Criteria:

Roundabouts should be considered where safety problems, capacity issues and signal or all-way stop warrants dictate intersection improvements. Locations scheduled for capital projects should be included in such evaluations. Those which qualify and are recommended for roundabout installation can be scheduled as future capital projects with associated funding. An initial screening is required to confirm whether a roundabout is feasible. Following the screening process, an intersection control study (ICS) is conducted by Traffic Engineering and Operations or an outside consultant to compare a roundabout and other types of traffic control. If a roundabout is selected as the preferred alternative, then Traffic Engineering and Operations asks for comments from other departments on the location and design of the roundabout concept as proposed through the ICS. Although roundabouts are not specifically subject to the Class Environmental Assessment (EA) process, stakeholders will be contacted and the public advised of any roundabouts planned as part of a capital project. Public information centres (PIC) should be held to allow for public input until such time that Committee and Council has the comfort level to proceed with notifications of intersection improvements only.

Criteria useful for an initial screening of roundabouts at existing or new intersections as part of a capital project include:

1. Right-of-way: Is there enough space for a roundabout, or is additional right-of-way or property required? The size of a roundabout will depend on the design vehicle to be accommodated, and traffic flows that dictate whether the roundabout is single-lane or multi-lane.
2. Intersection geometry: Does the intersection have an offset, high skew angle, or more than four legs? Roundabouts can accommodate unusual geometry if there is sufficient right-of-way.
3. Safety: Are there high numbers of angle and turning movement collisions that could be mitigated with a roundabout?
4. Delays or queues: Are there high delays or long vehicle queues being experienced that could be mitigated with a roundabout?
5. Traffic flows: Are existing or forecast traffic flows relatively balanced between approaches? (Unbalanced flows do not necessarily mean a roundabout is not a suitable alternative, as there are other benefits to roundabouts such as safety.) Is there a high percentage of turning movements? High left turn flows, for instance, favours roundabouts because of signal lost time.
6. Nearby structures or traffic control: Is the location near a structure? A roundabout may not require additional approach lanes, and therefore not require that a nearby overpass or underpass be widened. Is it near a signalized intersection where queues may spill back into the roundabout? Is it located near a railway crossing, where queues may block the railway tracks? Traffic signals can be interconnected with a railway crossing, but not a roundabout.
7. Nearby driveways: Do any driveways need to be relocated because of splitter islands?
8. Land use context: Is there a land use transition where a roundabout could notify motorists of a change in the road environment? Can they be used at either end of a commercial corridor to accommodate U-turns, allowing access driveways to be right turns only? This can mean more commercial sites served with driveways spaced closer together.

9. Traffic calming: Are high traffic speeds being experienced, or likely, due to the design of the road and the surrounding land uses?
10. Vulnerable road users: Does the intersection have high numbers of bicyclists, or are there visually impaired pedestrians? Traffic signals are sometimes preferred in these cases.
11. Technical constraints: Are there any steep grades, unusual drainage, possible difficulties with meeting sight distance requirements, etc. that may preclude a roundabout?

If a roundabout passes an initial screening a more detailed evaluation is undertaken for existing or new intersections, not subject to the development review process, through an Intersection Control Study. An ICS is a technical comparison of traffic signals and a roundabout at a given location so that a preferred alternative can be selected.

The following table shows example performance measures for a minimum study and an in-depth study. Traffic Engineering and Operations will determine the level of study effort in consultation with stakeholders.

Performance Comparison Measures

Performance Measure	Priority and Level of Effort	
	Minimum Study	Additional In-Depth Study
Quantitative Criteria		
Safety	Collision Frequency Reduction (Injury + Fatal Crashes/Year)	Present Value of Annual Collision Savings
Capacity	Level of Service Delay, Queue Reach	Delay vs. Time Cost
Construction	Construction Year Costs	Economic Analysis With Project Life Cycle Assessment
Right-of-way	Cost Assessment	Future Development Opportunities
Maintenance	Signals Maintenance vs. Roundabout Marking, Lighting	Present Value of Life Cycle Cost
Construction Staging	Cost/Complexity	Detailed Planning and Costing
Geometry	Design Vehicle Space, Stopping Sight Distance, Intersection Sight Distance, etc.	
Railways	Queuing Distance, Crossing Duration	Equipment Costs
Access Management	Driveway Location and Restrictions	Development Yield impacts
Qualitative Criteria	Minimum Study	Additional In-Depth Study
Users	Pedestrians, Bicyclists, Mobility or Visually Impaired Persons	
School Sites	Crossing Guard Requirements, Crossing Locations	
Transit	Stop Locations	
Emergency Services	Ease of Response	
Air Quality	Emissions Based on Delay Comparison	Cost of Fuel and Pollution Load Comparison
Environmental Impacts	Natural, Social Impacts	Detailed Environmental Inventories
Aesthetics	Cost and Visibility	

c) Implementation of Roundabouts Through Planning and Development Review Process

Roundabouts should be considered where new intersections are introduced through the development review process. A formal intersection control study is not required for site selection in new development, but a screening is still appropriate as described in section (b).

When a roundabout is proposed by an applicant, the process will be as follows:

- For Official Plans, Zoning or Site Plans, Community Planning and Development Engineering asks for comments from other departments on the suitability of the roundabout in terms of several screening criteria (discussed in the next section). In the case of official plan or zoning applications, Community Planning also advises the applicant of the potential need for road widenings or additional right-of-way to accommodate the roundabout. Typical roundabout design standards, as provided by Traffic Engineering and Operations will determine the amount of land required to fit a properly designed roundabout within the intersection right-of-way.
- For Draft Plans of Subdivision, Community Planning and Development Engineering asks for comments from other departments on the suitability of the roundabout in terms of several screening criteria (as above).
- If Traffic Engineering and Operations determines the roundabout is suitable at the proposed location, then the engineering drawings are reviewed to determine compliance with the City's standard drawings and good design principles for roundabouts.

When no roundabouts are proposed, but are asked to be considered through comments received from other departments, the recommended process is as follows:

- Traffic Engineering and Operations determines if a roundabout is suitable at the subject location through an initial screening using the screening criteria (as above). In many cases the initial request to consider a roundabout will originate with Traffic Engineering and Operations.
- If the location passes the initial screening, Community Planning or Development Engineering provides the applicable standard drawings and requests that the applicant consider roundabouts by setting aside property or right-of-way, and relocating driveways as necessary.
- Once a roundabout is accepted by the applicant and shown on the engineering drawings, the drawings are reviewed to determine compliance with the City's standard drawings and good design principles for roundabouts.

7. Associated Documents

The following is a list of resource material used in the development of this policy document.

- The TAC/ITE Canadian Guide to Neighbourhood Traffic Calming; MUTCDC; OTM
- The Ontario Highway Traffic Act
- Federal Highways Administration publication: "Roundabouts: An Informational Guide"
- City of Hamilton Traffic Calming Policy

8. Revision History – this is a new policy; hence there is no revision history.

Revision Number	0		Revision Date	
Developed By	Ron Gallo		Title	Senior Project Manager, Signals and Systems
Approved By	Hart Solomon		Title	Manager of Traffic Engineering and Operations
Signature			Date	May 5, 2008
Fiscal Implications?	No			
If 'Yes', approved by		Title		Date

Policy

Title	Installation of Neighbourhood Mini-Roundabouts
Number	

1. Description and Purpose

This policy document outlines prerequisites, minimum criteria and the selection process for neighbourhood mini-roundabouts on local and minor collector roadways. The primary use of neighbourhood mini-roundabouts is for the purposes of traffic calming and as such, this policy will be consistent with that of the “Traffic Calming/Traffic Management” Policy.

Most current intersection controls such as all-way stops and traffic signal controls are not, nor are they intended as, an effective method for traffic calming. The Traffic Calming Policy, although it defines roundabouts, covers mainly the mid-block type traffic calming features such as chicanes, curb extensions, speed humps etc. Studies of unwarranted all-way stop controls in the City have indicated a violation rate of over 80% is commonplace. Extensive use of unwarranted all-way stop controls have generated numerous complaints from residents who feel that pedestrian safety, in particular, may be at higher risk as a result of motorists not obeying the stop controls. While all-way stops are relatively benign for motorists, collision records do, in fact, indicate that pedestrians have a higher likelihood of being involved in a collision at an all-way stop intersection rather than a two-way stop controlled intersection. Furthermore, all-way stops increase air pollution and create nuisance noise in the immediate area due to the high number of vehicle stops/starts.

The goal of introducing neighbourhood mini-roundabouts is to provide a viable intersection control which will assist in reducing speeds, improving overall safety and reducing the impacts on the environment.

2. Scope

The Traffic Engineering and Operations Section, in consultation with residents, Emergency Services, the Hamilton Street Railway, the Ward Councillor(s), and other relevant agencies, will be responsible for investigating, evaluating and recommending to Committee and Council for their consideration, neighbourhood mini-roundabout installations on residential and minor collector streets.

Applies to: All sections *or* Roads Parks Forestry Traffic Horticulture Cemeteries Business Services

3. Definitions

The following is a partial list of more commonly used definitions associated with neighbourhood mini-roundabouts installation.:

Neighbourhood Mini-Roundabouts – varying in size, at the neighbourhood level, have features that are consistent with modern roundabouts more typically found on major roadways. The key elements may include raised or mountable islands placed at the center of an intersection, raised or mountable splitter

islands located at each entry to the intersection, counter clockwise circulation, yield control at all intersection legs . Roundabouts in neighbourhoods are generally used in place of all-way stop control or traffic signals with lower volumes. The benefits of roundabouts are that they slow traffic and reduce the number of right-angle and turning collisions, while providing a more efficient and environmentally-friendly operation, compared to stop signs. They reduce the number of potential conflict points at an intersection from 32 down to only 12, increasing safety.

85th Percentile Speed – is the speed at which 85 percent of the motorists travel at/or below on a given road.

Heavy Vehicles – Large trucks which have a minimum gross vehicle weight of 4,500 kilograms.

4. Responsibility

The Traffic Engineering and Operations Section of the Public Works Department will be responsible for overseeing the evaluation and implementation of neighbourhood mini-roundabout installations on local residential or minor collector roadways. The Capital Planning and Implementation Division will continue to spearhead all major Environmental Assessments and neighbourhood traffic studies with input from the Traffic Engineering and Operations Section. A formal EA for minor traffic calming projects is no longer required but the public consultation process is still a key element of this process.

5. Policy Details

- a) **Prerequisites:** The prerequisites (i. through vi.) inclusive must **all** be met in order for a **neighbourhood mini-roundabout** request to proceed to the data collection stage.
 - i) An informal survey/poll conducted by the Ward Councillor or a petition indicating a reasonable level of support must be submitted by the abutting residents on the subject section of street indicating support for neighbourhood mini-roundabouts.
In order to even begin the process of evaluation, which uses staff time and/or contract resources, it is reasonable to expect a minimum starting level of public acceptance of any traffic calming measures. Therefore, it is necessary to gauge and obtain consent or consensus from the abutting residents on the subject street.
 - ii) The subject intersection must be located on a local residential street or minor collector roadway.
A parallel program for larger dimensioned modern roundabouts requiring reconstruction will be considered on major collector and arterial streets which are designed to carry larger volumes of traffic. A full intersection control study must be undertaken in such cases to properly determine whether a modern roundabout is feasible.
 - iii) Must have support from EMS, HSR and Road Maintenance Divisions.
Neighbourhood mini-roundabouts will not be supported on streets that may pose a problem on primary EMS response routes, HSR routes or where maintenance would be difficult to carry out.
 - iv) The roadway gradient must not exceed 5%.
Due to possible inclement winter weather conditions, neighbourhood mini-roundabouts should not be used on roadways with grades exceeding 5%.
 - v) A minimum stopping distance visibility approaching the mini roundabouts must be maintained. The stopping sight distances will be based on the speed limit of each roadway.

The intersection must be clearly visible and recognizable to approaching drivers, cyclists and pedestrians. This will ensure that users have sufficient time to react and to properly judge their course of action.

- vi) If one or more of the approaches to the intersection has more than one lane it will require a reduction to a single lane approaching the roundabout.
Neighbourhood mini-roundabouts are designed to have a single lane entering the roundabout. In some cases neighbourhood collector roadways have been designed and constructed with four lanes of traffic (two per direction) in anticipation of future growth. In many cases, the expected traffic volume increases have not been realized. This may provide an opportunity to reduce the overall number of through lanes while maintaining a centre turning lane and adding bike lanes. A careful review must be undertaken by staff to determine whether reduction from two approach lanes to one lane is feasible.
- b) **Technical Criteria for Neighbourhood Mini-Roundabouts:** Technical criteria (i. through vi.) must **all** be met for a street to be considered for ***neighbourhood mini-roundabouts***.
- i) The minimum 24 hour intersection volume on the subject street must be at least 750 vehicles per day (vpd) for a local road and between 2,500 – 5,000 vpd for a minor collector roadway and minor street volume is not less than 15% of major street volume.
The “industry standard” is between 750 and 1,500 vehicles per day before traffic calming measures are considered. Hamilton’s policy will use the lower standard in determining this warrant. Residential, local or minor collector streets should be carrying a minimum of 750 vehicles per day to justify the impacts of neighbourhood mini-roundabouts
- ii) The 85th percentile speed must be at least 8 km/h above the posted or default speed limit. In cases where the 85th percentile speed is at least 15 km/h above the posted speed, no minimum volume threshold is required.
In order for neighbourhood mini-roundabouts to be effective as traffic calming measures, there must be a documented speeding problem. The “industry standard” has been that the 85th percentile speed must be 8 to 15 km/h above the posted speed limit. Hamilton’s policy will use the lower standard in determining this warrant.
- iii) There must be a sidewalk on at least one side of the road.
To ensure pedestrian safety, there should be a continuous sidewalk on at least one side of the roadway where neighbourhood mini-roundabouts are proposed. If no sidewalk exists, consideration should be given to proving a sidewalk on at least one side of the road before implementation.
- iv) The minimum public approval criteria of a positive response from 70% of all directly affected. The “affected” areas will be determined by staff in consultation with the Ward Councillor(s).
Experience has shown that citizens often do not truly understand what the impacts of a new intersection control such as neighbourhood mini-roundabouts are. Issues such as yield on entry, parking or emergency service impacts are not recognized until after implementation. The minimum approval criteria requires that 70% of residents abutting the subject street or residents that have no alternative to using the street in question to access their homes, must indicate support. This ensures a high likelihood of success.
- v) Where there is a high proportion of heavy vehicles (20% or greater) a neighbourhood mini-roundabout should not be considered.

A constant flow of heavy vehicles would be negatively impacted by mini-roundabouts as they would not typically have sufficient turning radii to accommodate proper turning within the circulating roadway. Drivers of large trucks would normally select to make left turns to the left of the central island, which could potentially cause safety problems of pedestrians and other motorists.

- vi) Where there is a high pedestrian or cyclist volume a neighbourhood mini-roundabout should not be considered. Staff will determine through studies and observations whether a neighbourhood mini-roundabout can sustain existing volumes.
In cases where there is high pedestrian and/or cyclist volume a full redesign and reconstruction may be required. A feasibility study will determine whether there is sufficient land to accommodate a properly designed roundabout for such unique locations.
- c) Warrant Scoring: In order to prioritize or rank candidate *neighbourhood mini-roundabout* locations which have met the criteria detailed in Sections a) and b) and a warrant scoring system has been established. Every location will be scored out of 100 maximum points.
- **Stop Control** (max. 30 points) - an unwarranted all-way stop control will score 30 points. While a warranted all-way stop will score 20 points. A one or two-way stop control will score 15 points.
 - **Signal Control** (max. 15 points) - an unwarranted traffic signal will score 15 points while a warranted signal will score 10 points.
 - **Consistency** – (5 points) - where other mini-roundabouts exist at adjacent intersections.
 - **Speed Warrant** (max. 20 pts) – 1 point will be awarded for every km/h the 85th percentile speed is above 50 km/h to a maximum of 30 points. Where there is an existing all-way stop, the studies prior to its installation will be used. In the absence of such studies, approach speeds, on the major roadway, 75 metres in advance of the intersection will be measured.
 - **Volume Warrant** (max. 20 pts) – 2 points will be awarded for every 100 vehicles of daily traffic for local roads and 2 points for every 250 vpd over 2,500 on minor collector roadways to a maximum of 20 points in either case.
 - **Collision Warrant** (max. 10 pts) – 2 points will be awarded for every reported preventable collisions in the past 3 years at the subject intersection.
- d) Priority Setting: It is necessary to prioritize or rank candidate *neighbourhood mini-roundabout* locations which have met the criteria. Ranking will be in descending order of the point ratings. Projects will be implemented in this order subject to the availability of funds. Only if two projects have identical ratings will the original date of the request be considered. In that case, the oldest request will have priority. The only exception will be a street that qualifies near the top of the list, and is on the capital construction list for resurfacing or reconstruction. In that case, if significant cost savings might be realized by coordinating the *neighbourhood mini-roundabout* installation with the construction project, the priority might be increased.

7. Associated Documents

The following is a list of resource material used in the development of this policy document.

- The TAC/ITE Canadian Guide to Neighbourhood Traffic Calming; MUTCDC; OTM

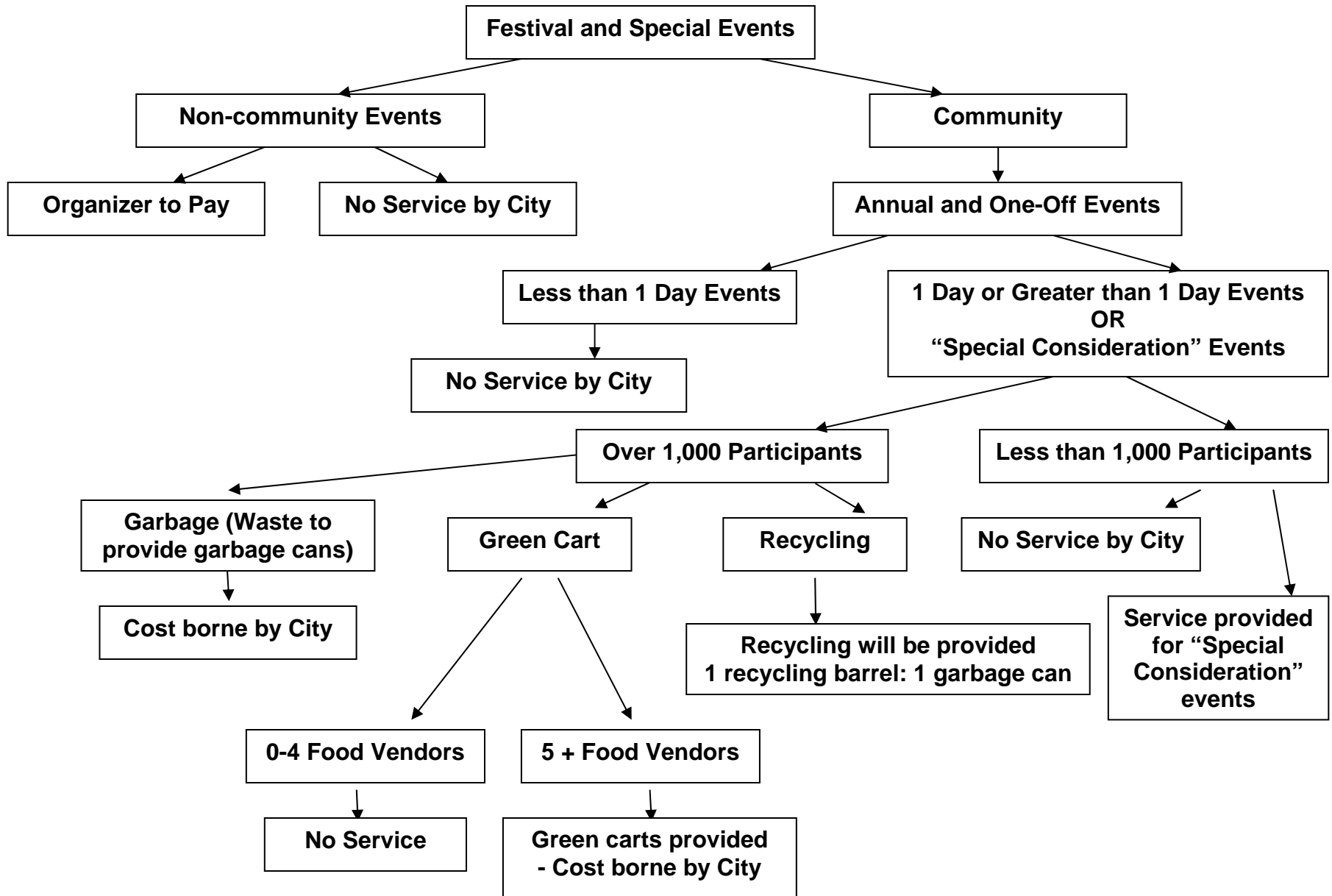
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Developed By	Ron Gallo		Title	Senior Project Manager, Signals and Systems
Approved By	Hart Solomon		Title	Manager of Traffic Engineering and Operations
Signature			Date	May 5, 2008
Fiscal Implications?	No			
If 'Yes', approved by		Title		Date

**FESTIVAL AND SPECIAL EVENTS
WASTE MANAGEMENT SERVICE**
Revised: April 8, 2008

Appendix "C" to Item 12 of
Public Works Committee Report 08-011



Costing Model for Festival and Special Event Waste Services for Larger Events

Recycling Collection

- Deliver and remove recycling barrels to the event (work to be completed under contract with National Waste Services Inc.)
- National Waste Services Inc. would be responsible for collecting recyclables after the event and delivering these materials to the Materials Recycling Facility
- City staff would be responsible for cleaning and storing recycling barrels

Approximate cost per event \$1,200

Organics Collection

- Waste Management staff would be responsible for the delivery and removal of green carts to the event as well as cleaning the carts after the event
- Green carts will be emptied using curbside collection vehicles by City forces
- Organic waste will be processed at the Central Composting Facility

Approximate cost per event \$535

Garbage Collection

- If the event produces less than twenty-five (25) bags of garbage, the event is eligible for curbside waste collection services. Garbage will be collected by City forces or National Waste Services Inc. depending on the waste collection zone. Events will be required to use special coloured bags.
- If the event produces more than twenty-five (25) bags of garbage, the event will require a roll-off bin. Waste Management's contractor will deliver and remove the roll-off bin to the event and deliver garbage to the City's Transfer Station.
- Waste Management would be responsible for the delivery and removal of garbage containers to the event as well as cleaning the containers after the event

Approximate cost per event \$600

Cost per event based on 2008 estimated costs

Recycling	\$1,200
Organics	535
Garbage	600
* Administrative	115
Total	\$2,450

*Includes staff time, miscellaneous operating expenses, containers, labels