SUBJECT: Accessible Pedestrian Signals (PW08077) - (City Wide)
Public Works Outstanding Business List

RECOMMENDATION:

(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.
EXECUTIVE SUMMARY:

The Advisory Committee for Persons with Disabilities (ACPD) presented a report to Committee and Council in 2006 recommending universal implementation and retrofit of Accessible Pedestrian Signals (APS). APS are the successor to the “bird-call” audible signals now in use in Hamilton. APS provide a system of audible indications to the visually impaired (and in some cases visually impaired persons with hearing impediments as well) with a full range of information and indications as to the location of the push button, the response of the push button, which walk to cross and when to cross.

New, significantly revised, Canadian guidelines have been developed through the Transportation Association of Canada (TAC), with City of Hamilton staff as part of the development team. Staff have been waiting for the final approval of the standard before recommending implementation. The standard is now approved by TAC and is awaiting publication. It is therefore appropriate to proceed with the development of a new program based on the new guidelines.

The APS-style equipment has been available in the marketplace for a while, but only a few Canadian cities, notably Toronto, have used the equipment prior to the endorsement of the new Canadian standard. There will now be a trend to the new operational style across Canada, so that a visually impaired person will have a consistent message across the country.

The Accessibility for Ontarians with Disabilities Act has not yet provided standards or implementation schedules for indications for the visually impaired at traffic signals. However, there have been parallel, similar, AODA initiatives which indicate that it is possible that APS will eventually be mandated.

This report recommends a program which would implement APS in a universal manner at new and heavily revised intersections, and proposes an annual program of retrofits based on available capital funding.

BACKGROUND:

The information/recommendations contained within this report has City wide implications.

In a report to the August 9, 2006, Committee of the Whole, the City’s ACPD presented the following recommendations:

“(i) That, effective immediately, audible signals be installed with all new traffic signal installations and, upon request, in a complaint process;
(ii) That priority be given to intersections at schools, hospitals, community centres and agencies dealing with persons with disabilities;
(iii) That a plan be developed so that by 2025 all traffic signals be converted with audible signals in accordance with the Accessibility for Ontarians with Disabilities Act standards.”

Staff responded to this report by reporting to members of Council via an Information Update in October of 2006 and recommended a delay in response until such time as the new Canadian guidelines were completed and were approved by TAC. The guidelines are now complete and have been approved. Some minor details have held up publication of the standard, but staff can now estimate installation and maintenance
costs and recommend a program. The key difference is that installation costs for the
new systems, which are much more extensive and complicated than the current audible
signal systems, will be significantly higher. The complexity will also lead to much
greater maintenance demands.

Inherent in the ACPD request is the concept that APS should be supplied at all
intersections that are equipped with pedestrian signals for sighted persons. Although
visually impaired citizens will not necessarily cross at all intersections, it is felt that the
concepts of fairness and equity require that such equipment be provided. The
prioritization of the installation of the signals and decisions on which crosswalks will be
equipped at each subject location will be done in conjunction with ACPD and other
groups that are knowledgeable about the needs and walking patterns of the visually
impaired, such that the first installations would be the ones which are most heavily used
by visually impaired persons. Ultimately, however, the intent is to have APS at all
locations in the City.

The Accessibility for Ontarians with Disabilities Act, which was passed in 2005, has
begun to set out a framework for removing barriers for the members of our community
with various disabilities. At this point in time the Act has not addressed APS. It is
expected that at some time in the future that will be the case. At this point in time there
is no explicit obligation to install APS at all intersections, but that may become the case
at some point in the future.

**ANALYSIS/RATIONALE:**

APS are compatible with the AODA and the concept of equitable access. They will
provide the visually-impaired community with greater mobility and safety.

Based on the plan presented between 200 and 300 of the City’s existing 500 signalized
intersections would be retrofitted with APS in the 20 year timeframe. As well, all new
locations would be equipped. If the AODA requires all locations to be equipped, or it is
determined that more APS are required for mobility, the funding applied will have to be
increased. This can be evaluated once the program has been in operation.

**ALTERNATIVES FOR CONSIDERATION:**

The City could choose to reduce the program scope to only new installations, which are
much easier to install. The City could also choose to commence a retrofit program but
only at locations where there is known and proven demand for visually impaired
crossings. Each of these options would reduce the overall cost and, providing that the
AODA did not ultimately dictate that the City install APS at all intersections, would offer
an intermediate position. However, these are contrary to the spirit and intent of the
ACPD request and the AODA and are not recommended.

The City could also choose to commit immediately to a defined retrofit completion date.
This may be premature until more experience has been gained by the visually-impaired
community as to the need and value of the new APS and by staff in financial and
operational impacts.

The requirement for a current budget increase is based primarily on the requirement for
additional materials and supplies for repairing and replacing damaged APS units. If the
current budget funding for maintaining APS is not provided along with capital funding,
there will be insufficient funding for essential materials for other traffic signal
maintenance activities or the APS will have to be left in a damaged state. The alternative will be to discontinue expanding the APS program until proper maintenance funding can be established.

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

The new APS is more complicated, and therefore significantly more expensive, both to install and to maintain, than existing audible signals. More experience is needed, but initial estimates place the cost of a new installation at about $12,000 and a retrofit installation at about $18,000, but this could be much higher if poles have to be relocated to meet the standards.

This equipment is quite complex, and has high exposure to weather and vandalism, since much of the technology is contained within the button assembly located on the pole. Given that the equipment must be maintained to a high standard, and the expected lifespan before complete replacement is likely ten years or less, the annual maintenance costs will be high. Therefore, as equipment is added, 12% of initial installation cost will be required to be added to the base budget, to ensure sufficient resources to keep the equipment in good order and to provide for long-term replacement as required.

The expected annual costs of this program, if approved as recommended, would be approximately:

- $50,000 from City capital funds for APS at new signals, plus an increased cost charged to development charges or the developers for signals related to new commercial or industrial traffic signals
- $50,000-100,000 from City capital funds for APS at locations upgraded through road reconstruction projects
- $100,000 from City capital funds for retrofitting traffic signals not in the two categories directly above
- $24,000-30,000 increase in the current budget funding supplied for traffic signal maintenance, depending on the number of APS installed in the previous year

Total costs to equip all new and existing intersections in the City, over a twenty year or longer time frame, will be about $10 million. At completion, the annual maintenance cost will exceed $1 million, although advances in equipment design may reduce this cost and extend the life of the equipment.

A key issue is the need for training of the visually impaired community on the meaning and use of the new signals. There are more features and a new, different sound, so this is critical. In the past, the City has depended on the Canadian National Institute for the Blind to provide advice on the applicability and installation of our current form of audible signals, a similar arrangement is also deemed appropriate in this initiative. For future installations, we will propose a more formal arrangement with the CNIB or whichever organization is supported by the ACPD. The City will not proceed with APS installations unless this training can be assured.

**POLICIES AFFECTING PROPOSAL:**

The Public Works Strategic Plan, “Innovate Now”, recognizes that one of our core values is equal services for all citizens. This initiative reflects that core value and our goal of “services adapted to differences in communities”, which while not one of the first
four goals chosen for immediate action, is one of the basic seventeen Public Works goals.

**RELEVANT CONSULTATION:**

Staff consulted with the ACPD and provided the Committee with the 70% draft of the proposed Transportation Association of Canada APS guidelines for their review. The ACPD comments were incorporated into the TAC guidelines. A particular concern expressed by the ACPD was in regard to one of the tones used in the current system of audible pedestrian signals, and this has been replaced with a totally different sound (the “Canadian Melody”) in the new standard. A City staff member was co-chair of the TAC committee, with members from across Canada, overseeing the development of the new guidelines.

Municipalities with experience using the proposed type of equipment were consulted for information about operational details and costs.

Public Works’ Capital Planning & Implementation Division and Corporate Services were consulted in preparation of this report.

The ACPD were consulted specifically about the recommendations contained in this report. At their May 13 meeting, the ACPD passed a formal resolution reiterating their 2006 recommendations and indicating that the Committee endorses the report, that the report addresses the requests in the 2006 recommendations and that the Committee strongly recommends to the Public Works Committee the provision of sufficient funding to ensure a full program of installation and maintenance.

**CITY STRATEGIC COMMITMENT:**

By evaluating the “Triple Bottom Line”, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

**Community Well-Being is enhanced.**  ☑ Yes  ☐ No
Provides increased mobility and safety for a vulnerable group of citizens

**Environmental Well-Being is enhanced.**  ☐ Yes  ☑ No

**Economic Well-Being is enhanced.**  ☑ Yes  ☐ No

**Does the option you are recommending create value across all three bottom lines?**  ☐ Yes  ☑ No

**Do the options you are recommending make Hamilton a City of choice for high performance public servants?**  ☑ Yes  ☐ No