

CITY OF VAUGHAN

EXTRACT FROM COUNCIL MEETING MINUTES OF FEBRUARY 19, 2013

Item 2, Report No. 8, of the Committee of the Whole (Working Session), which was adopted without amendment by the Council of the City of Vaughan on February 19, 2013.

2

**POTENTIAL PROGRAMS AND TECHNOLOGIES
FOR THE 2014 MUNICIPAL AND SCHOOL BOARD ELECTIONS**

The Committee of the Whole (Working Session) recommends:

- 1) That Clauses 1, 2, 3 and 5 contained in the following report of the City Clerk, dated February 12, 2013, be approved;**
- 2) That In light of the fact that elections are a critical and central part of our democratic process;and**

Recognizing the importance of civics education as part of our educational system; and

Recognizing that engagement in the election process is an important component of our democratic system;

It is recommended that the Province of Ontario be requested to declare municipal voting day 2014 as a professional development day for all schools in the province, and that that day be focused on getting involved in our democratic process; and

Failing action by the Province, that the two school boards as well as the various private schools in York Region be formally approached by this Council asking them to implement a civics curriculum prior to the voting day and that a professional development day be scheduled on that day to allow involvement in the election process by all participants in our school system;

- 3) That the Contribution Rebate Program be continued in 2014 based on the principles set out in Section 5.5 , Attachment 1 of the City Clerk's report, dated February 12, 2013, as follows:**
 - 1. Participation is optional for all candidates;**
 - 2. Participating candidates are required to file audited financial statements;**
 - 3. Candidates, spouses and family members are ineligible to claim rebates for contributions to the family member candidate;**
 - 4. Rebates apply only to eligible electors residing in the City of Vaughan;**
 - 5. Corporations, trade unions and non-resident electors are ineligible;**
 - 6. Minimum contribution of \$50; and**
 - 7. The maximum rebate be \$150 per eligible contributor, regardless of the number of contributions made; and**
- 4) That staff consider and report back, before the Summer recess, on the possibility of improving advance polls, considering a 2-day advance poll (within the period of Friday, Saturday and Sunday) before election Monday, utilizing Community Centres and Malls.**

Recommendation

The City Clerk recommends:

- 1) That the report attached as Attachment '1', *Potential Programs And Technologies For The 2014 Municipal and School Board Elections (A Review Of Internet Voting, Vote Centres And Campaign Contribution Rebates)*, be received;**

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Item 2, CW(WS) Report No. 8 – Page 2

- 2) That the presentation by the City Clerk be received;
- 3) That internet voting not be introduced for the 2014 general municipal and school board elections;
- 4) That direction be provided regarding the continuation of the Contribution Rebate Program in 2014; and
- 5) That the City Clerk be authorized to license the 'This is Your Space' election media campaign to other election jurisdictions on terms which include the following:
 - a. \$5000 licensing fee;
 - b. \$100 annual administration fee, up to five years;
 - c. A requirement that the City of Vaughan be given public credit;
 - d. Restrictions against use of the campaign in such a way as to diminish the brand, or bring it into disrepute; and
 - e. Restrictions against sub-licensing without specific authorization.

Contribution to Sustainability

The administration of fair elections in an impartial manner is a fundamental statutory responsibility of Municipal Clerks in Ontario. The highest priority for Municipal Clerks is to carry out their duties in accordance with the provisions of the *Municipal Elections Act, 1996* ("the Act") and an established set of election principles as described in the attached report. It is also the responsibility of election administrators to manage expenditures and other resources in a manner which contributes to the financial and operational sustainability of the municipality.

Economic Impact

Based on research and information provided by municipalities already engaged in Internet Voting, were the City to employ internet voting for the advance voting, taking into consideration the hard and soft costs, the additional impact to the election budget for 2014 would amount to approximately \$400,000.00 in hard and soft costs.

Implementation of innovative models of election delivery such as the Vote Centre model being explored may reduce the extent of future increases in contributions to the election reserve account.

The Contribution Rebate Program distributed \$61,717.50 in rebates to eligible contributors for the 2010 elections. The program's economic impact will vary depending upon whether Council directs staff to discontinue or modify the program in 2014.

Licensing the City's 'This is Your Space' media campaign concept to other municipalities will result in \$5000 in revenue plus \$100 for each year of the license, per licensee.

Communications Plan

In addition to appearing on the public agenda for Committee of the Whole (Working Session), this report will be posted on the vaughanvotes.ca web site. A detailed communications plan will be required to inform citizens of the City of Vaughan prior to the 2014 elections, particularly in regard to the location of voting facilities, the availability of early voting, and the provision of other services and accommodations.

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EXTRACT FROM COUNCIL MEETING MINUTES OF FEBRUARY 19, 2013

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Purpose

This report is provided in response to requests for information by City Council on the subjects of internet voting and the 2010 Contribution Rebate Program. It also introduces the concept of Vote Centres as a new potential option for the delivery of electoral services for the 2018 municipal and school board elections. In addition, the report seeks Council's authority to license the City's election media campaign to other election jurisdictions.

Background - Analysis and Options

On May 17, 2011 the City Clerk presented a report to Committee of the Whole (Working Session) titled *Learning from the Election: Preparations for the 2014 Municipal and School Board Elections*, describing outcomes and lessons learned from the 2010 municipal and school board elections [Item 2, Report No. 29 of Committee of the Whole (Working Session), adopted in Council on May 24, 2011]. The purpose of the report was to advise Council of the successes and challenges experienced during the election cycle and to propose several areas for improvement to pursue for the 2014 elections. In furtherance of the report the City Clerk was requested to report on:

- a. The potential for the use of internet voting in 2014;
- b. The results of the contribution rebate program;
- c. A proposed budget for the 2014 elections;
- d. Recommendations for election-related decisions to be made by Council, such as advance vote dates and times, the use of languages other than English and French, and voting hours in retirement/nursing homes; and
- e. Procedural modifications to be employed for the 2014 elections.

The attached report, *Potential Programs and Technologies For The 2014 Municipal And School Board Elections (A Review Of Internet Voting, Vote Centres And Campaign Contribution Rebates)* provides an assessment of internet voting technologies and the 2010 Contribution Rebate Program. The report also presents research conducted on the development of a Vote Centre model for the City of Vaughan. This model addresses some of the challenges identified during the 2010 elections through structural changes to the traditional subdivision model and the use of modern information technology to enable superior service and enhanced integrity at a potentially lower cost.

Election Media Campaign Licensing

The City has been approached by an Alberta municipality seeking to use the 'This is Your Space' election branding campaign developed for the 2010 elections in Vaughan. The campaign centres on the concept of voters marking the appropriate space on a ballot – and from that small act shaping the course of their municipality.

Licensing the campaign will have several benefits. In addition to a small financial return, the City will be able to make use of any innovations made to the concept for use in future Vaughan elections. In addition, the City will receive public credit for the concept, particularly if a resulting media campaign receives an award. Restrictions would be put in place to ensure that the brand concept is not diminished or brought into disrepute, sub-licensed without specific authority, or used in a way which might conflict with the City's own election media campaigns.

Future Reports

Recommendations on a proposed budget for the 2014 elections and on date/times/hours and other issues within Council's purview will follow at a later date, closer to the elections. This report and its attachment will facilitate discussion on the use of internet voting and on continuation or modification to the contribution rebate program. It will also inform Council on the potential future implementation of a new model for polling place distribution and election management.

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EXTRACT FROM COUNCIL MEETING MINUTES OF FEBRUARY 19, 2013

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Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the City's Vision, Mission and Values, and the Strategic Goals and Objectives set out by Council in the *Vaughan Vision 2020* Strategic Plan, specifically:

Service Excellence: Pursuing Excellence in Service Delivery

Management Excellence: Enhance Productivity, Cost Effectiveness & Innovation, and Ensure Financial Sustainability

Regional Implications

N/A

Conclusion

This report provides an update on three potential opportunities for the 2014 municipal and school board elections. Based on the findings of the research presented, internet voting is not being recommended at this time. Nor is implementation of a Vote Centre model and poll distribution. Both approaches will continue to be evaluated for contemplation in future elections. Direction is requested from Council regarding whether to continue the Contribution Rebate Program for the 2014 elections.

Attachments

1. Report titled: Potential Programs And Technologies For The 2014 Municipal and School Board Elections (A Review Of Internet Voting, Vote Centres And Campaign Contribution Rebates)

Report prepared by:

Donna Winborn
Elections Coordinator

Alexander Harras
AMCTO Municipal Management Intern

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)

COMMITTEE OF THE WHOLE (WORKING SESSION), FEBRUARY 12, 2013

POTENTIAL PROGRAMS AND TECHNOLOGIES FOR THE 2014 MUNICIPAL AND SCHOOL BOARD ELECTIONS

Recommendation

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Report prepared by:

Donna Winborn
Elections Coordinator

Alexander Harras
AMCTO Municipal Management Intern

Respectfully submitted,

Jeffrey A. Abrams
City Clerk

POTENTIAL PROGRAMS AND TECHNOLOGIES
FOR THE 2014 MUNICIPAL AND SCHOOL BOARD ELECTIONS
(A REVIEW OF INTERNET VOTING, VOTE CENTRES AND CAMPAIGN
CONTRIBUTION REBATES)

Presented to:

Committee of the Whole (Working
Session)
February 12, 2013

Report prepared by:

Donna Winborn
Election Coordinator

Alexander Harras
AMCTO Municipal Management Intern

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1 **1.0 *Executive Summary***

2 After each general election a review is conducted to determine the potential for
3 improvements that might be made to election implementation and policy.
4 Though the 2010 general election experience was generally positive, there were
5 noteworthy delays at some polling locations and other deficiencies, such as the
6 availability and quality of external elections staff, that called for improvements or
7 remediation.
8

9 The 2010 election review was reported to the May 17, 2011 meeting of
10 Committee of the Whole (Working Session) [Item 2, Report 29 adopted in
11 Council on May 2, 2011] at which time further reports on the subjects of internet
12 voting, the 2010 Contribution Rebate Program, and procedural modifications for
13 the 2014 Elections were requested. The contents of this report summarize the
14 research conducted to date by the City Clerk's Office.
15

16 Internet voting remains a subject of much study among election professionals
17 both nationally and abroad. Currently, 44 municipalities in Ontario have deployed
18 internet voting systems, many of which have reported success in previous
19 elections. There remain, however, serious concerns regarding the security and
20 integrity of these systems, and there is little evidence to support the suggestion
21 that internet voting increases voter turnout. Moreover, such systems are a
22 significant investment in addition to the city's typical municipal election budget. It
23 is estimated that implementing internet voting in Vaughan solely for advance
24 voting purposes would cost approximately \$400,000. Despite this, those that
25 have used the service have been highly satisfied with its ease of operation and
26 convenience for voters. Ultimately, internet voting is a service that provides
27 increased convenience for a small number of voters at the potential expense of
28 the integrity and security of the voting process. As such, the City Clerk does not
29 recommend proceeding with internet voting for the 2014 elections but will
30 continue to monitor the evolution of the technology for potential future use.
31

32 In response to some of the successes and challenges identified in the May 17,
33 2011 report, research has been conducted into alternative electoral designs for
34 the 2014 municipal and school board elections. In particular, the City Clerk's
35 Office has identified a potential new model, referred to as 'Vote Centres,' as a
36 viable alternative that would address many of the challenges experienced in
37 2010. Vote Centres are consolidated polling locations that are capable of
38 servicing a much larger number of voters at any given time and are placed in
39 geographically dispersed locations across the City. By expanding Vaughan's
40 existing Electronic Voter List technology to Election Day, voters may attend any
41 Vote Centre in the city to cast their ballot, rather than being limited to their
42 assigned polling location under the traditional model. Coupled with the addition of
43 two Advance Vote days just prior to Election Day the Vote Centre model can be

1 used to create an entire weekend of flexible voting hours and locations. While
2 there are no examples of this model being used in Canada, several states such
3 as Colorado, Indiana, and Texas have successfully deployed Vote Centres since
4 as early as 2003. Implementing such changes would require a comprehensive
5 communications and marketing campaign to ensure voters take advantage of the
6 convenience afforded to them under the new model. Unlike internet voting, Vote
7 Centres do not sacrifice security for convenience: the security and integrity of the
8 vote is maintained throughout the process, while convenience to voters is
9 increased. This model could represent a genuine improvement in electoral
10 systems but given the potential that a large number of voters might still cast their
11 votes during traditional voting hours (in particular late on Election Day), and the
12 relative lack of ideal Vote Centre locations in Vaughan, the model is not being
13 recommended for implementation at this time.
14

15 The 2010 Contribution Rebate Program was generally successful. Eighty-one
16 percent of all applicants were deemed eligible, generating \$61,717 in distributed
17 rebates. Confusion regarding eligibility was common and significant time and
18 resources were consumed in managing the program. Several other Ontario
19 municipalities currently use a similar rebate program, including Toronto,
20 Markham, Ottawa, Oakville, and Ajax.
21

2.0 Legislative Context

Pursuant to Section 11 of the *Municipal Elections Act, 1996* ("the Act"), the Clerk of a local municipality is responsible for conducting municipal and school board elections. That responsibility includes:

- (a) Preparing for the election and/or by-elections;
- (b) Preparing for and conducting a recount in the election; and
- (c) Maintaining peace and order in connection with the election.

The general powers of the Clerk are set out in section 12 of the *Act*:

12. (1) A clerk who is responsible for conducting an election may provide for any matter or procedure that,

- (a) Is not otherwise provided for in an Act or regulation; and
- (b) In the Clerk's opinion, is necessary or desirable for conducting the election.

(2) The power conferred by subsection (1) includes power to establish forms, including forms of oaths and statutory declarations, and power to require their use.

(3) The power conferred by subsection (1) includes power to require a person, as a condition of doing anything or having an election official do anything under this Act, to furnish proof that is satisfactory to the election official of the person's identity or qualifications, including citizenship or residency, or of any other matter.

13.(1) Any notice or other information that this Act requires the Clerk to give shall be given in a form and manner and at a time that the Clerk considers adequate to give reasonable notice or to convey the information, as the case may be.

(2) The Clerk shall provide electors, candidates and persons who are eligible to be electors with information to enable them to exercise their rights under this Act.

Additionally, the *Act* specifies that the decision regarding the dates and hours of Advance Vote days is the responsibility of Council.

43.(1) At least 30 days before voting day, the council of a local municipality shall pass a by-law establishing,

- (a) one or more dates for an advance vote; and

1 (b) the hours during which voting places shall be open on that date or
2 dates.

3
4 Other Council responsibilities include:

- 5 • A decision to put a question on the ballot;
- 6 • A decision to use languages other than English in notices and forms;
- 7 • A decision to use alternative voting methods such as vote tabulators; and
- 8 • A decision to reduce the hours of voting at institutions and retirement
9 homes.

10
11 Administration of the election is similarly informed by general election principles
12 which have been developed over time and endorsed by the Courts:

- 13
14 1. The integrity of the process should be maintained throughout the
15 election;
 - 16 2. The secrecy and confidentiality of individual votes is paramount;
 - 17 3. The election should be fair and non-biased;
 - 18 4. The election should be accessible to the voters;
 - 19 5. There should be certainty that the results of the election reflect the
20 votes cast;
 - 21 6. Voters and candidates should be treated fairly and consistently
22 within a municipality; and
 - 23 7. A proper majority vote decides the election by ensuring, so far as
24 reasonably possible, that valid votes are counted and invalid votes
25 are rejected.
- 26

27 3.0 ***Internet Voting***

28 In considering new opportunities for voters, each option should be evaluated to
29 ensure that the principles of the *Act* are upheld and that citizens' democratic
30 rights are protected. The City of Vaughan's election processes protect these
31 rights by ensuring that:

- 32
33 • Electors have many opportunities to vote;
 - 34 • Electors can cast their vote without interference or coercion;
 - 35 • The secrecy of the ballot is maintained;
 - 36 • Processes can be audited and re-created in the event of a dispute;
37 and
 - 38 • Stakeholders trust the system and therefore the outcome of the
39 vote.
- 40
41
42
43

3.1 Background

The following recommendation was approved at the May 17, 2011 meeting of Committee of the Whole (Working Session) and subsequently endorsed by Council through its adoption of Item 2, Committee of the Whole (Working Session) Report No. 29 on May 24, 2011.

That the City Clerk & Returning Officer be requested to submit further information on:

a. The potential for the use of internet voting in 2014.

3.2 E-Voting Technologies

A new generation of voting options, referred to as E-counting and E-voting, are being piloted and used world-wide.

E-counting refers to an automated or electronic vote tabulation system. The system is designed to accept a ballot, tabulate and record votes, then process and store election results. Although E-counting is considered to be part of a new generation of voting options, it has been successfully used by the City of Vaughan since the introduction of central optical scan vote tabulators for the 1991 municipal elections. Vaughan currently makes use of Dominion Voting Systems' e-counting tabulators at every polling location.

The term E-voting, also known as Electronic Voting, describes many different voting options, including:

Internet voting

Also known as Remote E-Voting, voters cast an electronic ballot from a dedicated website through the use of a personal computer, mobile phone or tablet. In this model, voting is not supervised by any government agency or authority, though several electronic security measures are used to mitigate risk. The voter accesses their ballot using their personal secure access code or personal government issued identification card. Once confirmed as the eligible voter, the voter marks the electronic ballot, their choice is confirmed, the vote is transferred digitally, the individual's vote is scrambled to ensure secrecy of the vote, and the results are added to the tabulation. Internet voting can have a paper ballot created for auditing purposes or it can be stored as a PDF, but generally the results are counted in a results database.

Electronic ballot

A form of E-Voting where a voter registers to vote and is sent a ballot electronically, typically through e-mail. The voter then prints the ballot, marks

1 their choice on the ballot and returns the marked ballot to a designated address.
2 The paper ballot is placed in its secrecy envelope and is deposited into a secure
3 ballot box. The results from all ballots received can either be counted manually or
4 with tabulators.

5 6 7 *Telephone voting* 8

9 A form of E-Voting where a registered voter is provided with a secure access
10 code to access their ballot by telephone. The telephone system allows the voter
11 to make their choices through the use of prompts. The voter can either say their
12 choice into the telephone or use the keypad on the telephone to make a
13 selection. After voting is complete, the voter confirms and submits their choices
14 and their votes are transmitted to a results database.

15 16 3.3 National & International Examples 17

18 One might assume, given the success of internet services such as electronic
19 banking, that internet voting is easily deployed and administered. In reality,
20 Internet voting is markedly different than other electronic services because there
21 are far greater security requirements to ensure the integrity of the vote.
22 Additionally, unlike electronic banking or purchasing where the identity of the
23 user must be confirmed, internet voting must guarantee the anonymity of the
24 voter. Various local and international governments have implemented or are in
25 the process of implementing internet voting; their experiences have shown that it
26 is not as straightforward as providing other services on-line.

27
28 In a presentation to the International Foundation for Electoral Systems in May of
29 2011, senior electoral advisor Ben Goldsmith indicated that internet voting and E-
30 counting technologies are being used increasingly around the world. In 2005,
31 Estonia became the first country to implement internet voting in a nationwide
32 election. Additionally, countries such as Indonesia, Tunisia, the Ukraine, Norway,
33 Russia, and the United States are at various stages of piloting or partially using
34 E-Voting and E-Counting technologies. Some countries are moving in the
35 opposite direction, however.

36
37 On January 26, 2010, an Elections Canada workshop held at Carlton University
38 brought together academics, technical experts, parliamentarians, government
39 officials, electoral administration authorities and other professionals from
40 Canada, the United States and Europe. The workshop panelists advised
41 participants that more legally binding municipal elections have taken place in
42 Canada using remote internet voting options than anywhere else in the world.

43
44 At present, there are 44 municipalities in Ontario and two municipalities in Nova
45 Scotia offering internet voting. In Ontario, some of those are the municipalities of
46 Markham, Peterborough, Burlington, Stratford and Brockville, while Truro and

Halifax Region in Nova Scotia have introduced internet voting as well. These municipalities have reported that their elections using internet voting options were generally successful.

Locally, numerous municipalities have filed reports on internet voting and have made recommendations regarding whether and how to proceed. Richmond Hill and Kitchener have recommended against implementing internet voting for 2014 on the basis that the technology is not consistent with the principles of transparency and accountability in elections. Milton, Hamilton, Brampton and Kingston have provided assessments of the benefits and risks but have not made any recommendations regarding whether to pursue implementation. Other communities such as Edmonton, AB, and Cambridge, ON, have recommended proceeding with internet voting on the grounds that it will be complementary to traditional voting methods.

Generally, internet voting options in Canada have not been used to replace traditional voting methods, but rather to provide voters with an additional voting option during the Advance Vote. The City of Truro, Nova Scotia, is one of very few municipalities to conduct their entire vote online.

Elections Canada is considering rolling out an internet voting pilot in 2015; Elections Ontario considered a pilot project for 2013 and created an RFP for internet voting, however the RFP was never released.

3.4 Potential for use in Vaughan

1. Is there a need for another voting option? Will internet voting benefit Vaughan voters?

Currently Vaughan Voters can take advantage of:

- Advance Voting anywhere in the City;
- On-site voting opportunities in senior's residences and long term care facilities;
- Accessible voting machines; and
- Voting in two major malls

While it is generally beneficial to offer more options to voters, it is not clear that internet voting will fulfill a particular need among the electorate that is currently not met by other alternative voting options. Specifically, it has not been demonstrated that internet voting increases voter turnout; those that choose to use internet voting would likely do so as a substitute for other voting options.

2. Is there support from stakeholders for the use of internet voting?

1 On April 14, 2012, the City Clerk's Office in conjunction with the market research
2 firm Pollara conducted focus group sessions that included questions on using
3 "On-line Voting." Distillation of the comments received revealed this sentiment:
4 "We are not ready yet for internet voting due to security concerns, but eventually
5 yes."

6
7 *3. Can an internet voting application be successfully integrated into the existing*
8 *elections system?*
9

10 Dominion Voting Systems, Vaughan's current vendor for vote tabulators, also
11 supports internet voting.

12
13 An internet voting application must meet current technical requirements and be
14 adaptable to meet any future legislative and technological changes and/or
15 enhancements. It must also meet or exceed information technology security
16 requirements.

17
18 Time must be given for careful, extensive planning and process development as
19 well as testing and piloting in order to mitigate as much risk as possible. Global
20 experience provides valuable examples: At the January 2010 Elections Canada
21 workshop, Tom Hawthorn from the Electoral Commission, United Kingdom, told
22 participants that the UK experience revealed that moving too quickly or trying to
23 do too much all at once can be problematic. There was consensus among the
24 participants at the workshop that the implementation of internet voting should not
25 be rushed. How much time is required to implement any E-Voting option is
26 dependent upon application choice, implementation requirements, stakeholder
27 communication and budget.

28
29 Experience from Markham suggests that a municipality requires two years of
30 dedicated planning to deploy internet voting for the first time, and one and a half
31 years of planning for each subsequent use thereafter. Edmonton recently
32 completed their "2012 Jelly-bean Internet Mock Election" test and invited the
33 world to participate. After the mock election, a jury of 18 randomly selected
34 citizens heard from technical experts, scholars and municipal administrators in
35 order to weigh the pros and cons of internet voting. The jury recommended
36 internet voting 17-1 and Council will decide in January 2013 on whether to deploy
37 internet voting in their next election, effectively reducing their implementation
38 timeframe to less than two years.

39
40 While a similar timeframe for Vaughan may be feasible, it would prove
41 challenging if Council directed the development of multiple E-Voting options for
42 2014 (for example, internet voting and telephone voting together). The time
43 needed to develop, plan and test those options would extend well beyond
44 October of 2014.
45

1 4. What are the challenges presented by internet voting and how can they be
2 mitigated?

3
4 Any new voting option must be *secure, transparent, reliable/auditable*, and
5 *preserve the secrecy and integrity of the vote*.

6
7 Security

8
9 Any vendor of internet voting services must be able to meet or exceed all
10 expectations of the City regarding security and functionality of the system. For
11 example:

- 12
13 • The vendor must have well established tools and techniques for
14 detecting and eliminating attempted attacks. The documentation
15 must show each type of potential attack, how the application would
16 recognize it, and how it would address it; and
- 17
18 • The vendor must be able to demonstrate how a potentially
19 successful attack can be remediated.

20
21 Attacks can generally be categorized as either against the integrity of the system
22 or against the integrity of the vote. Denial of Service (DoS) attacks attempt to
23 harm the integrity of the system by flooding servers with erroneous requests for
24 information. If executed successfully, DoS attacks could temporarily disable the
25 servers responsible for accepting votes, effectively stopping the provision of the
26 service. Not only would such an attack harm the accessibility of the voting
27 process, it may lead some voters to doubt whether their vote was successfully
28 counted. By contrast, attacks against the integrity of the vote would seek to
29 manipulate the outcome rather than disable the service. Examples include voting
30 multiple times or voting on behalf of others. A successful attack against the
31 integrity of the vote would invalidate many or all ballots filed electronically.

32
33 Transparency

34
35 Transparency is particularly challenging with the use of internet voting. With a
36 traditional election, transparency is maintained through the use of internal
37 processes and the ability of candidates to appoint scrutineers to observe the
38 voting processes being conducted; these mechanisms are not feasible with
39 internet voting. Candidates and voters must have implicit trust in the integrity of
40 an internet voting system because security measures are not outwardly visible.

41
42 In a presentation at the January 2010 Elections Canada workshop, Peter Wolf
43 from the International Institute for Democracy and Electoral Assistance
44 emphasized the importance of trust and transparency. Panelists at the Elections
45 Canada workshop all agreed that a key component in the successful

1 development of internet voting is an assurance that stakeholders trust the
2 system. Wolf suggests that instilling stakeholder confidence in internet voting
3 options requires that stakeholders be involved and educated so that they
4 understand the technology being used.

5
6 Auditing and Recount
7

8 Internet voting systems have not yet gained universal acceptance, and the
9 potential exists that electronic-only recounts or other forms of audit may not be
10 seen as sufficient should circumstances demand them. Accordingly, internet
11 voting systems should also be able to print complete ballots (or proxies for them)
12 for auditing or recount purposes. Such recounts would likely involve manual
13 recounts of ballots cast electronically, not merely a repetition of the electronic
14 result already provided. Currently, the City's recount procedure follows the same
15 processes in place at voting locations: a paper ballot would be counted by a
16 tabulator.

17
18 Outside auditors are generally hired to conduct independent tests of an internet
19 voting system.

20
21 Voter Secrecy and Integrity
22

23 As of 2009, The *Municipal Elections Act, 1996* requires eligible voters to provide
24 acceptable forms of identification prior to receiving a ballot. This requirement, in
25 conjunction with any other technology requirements, must be taken into account
26 when deciding what procedures will be undertaken to ensure a voter's security
27 and anonymity.

28
29 Authentication of a voter's identity and preserving the secrecy of the ballot are
30 considerable areas of concern with any internet voting system, but there is no
31 consistent best practice in use by Ontario municipalities. For example, in
32 Markham, all eligible voters receive on-line registration packages but voters are
33 still required to pre-register to E-vote as an additional security precaution. Upon
34 registering, voters receive a Personal Identification Number ("PIN") and are
35 required to create a security question. Both the PIN and the response to the
36 unique security question are required to match prior to the voter being provided
37 with the ballot. Peterborough deploys a similar system.

38
39 Halifax does not require voters to pre-register prior to using the internet voting
40 option. This decision was partly based on the UK's experience where it is viewed
41 that pre-registration greatly reduces participation. All voters on the voters' list are
42 provided a PIN by mail along with a letter explaining the process. At any time
43 during the E-vote opportunity, voters can go to a secure Web site or call a
44 telephone number and cast their ballot. Voters are required to answer two
45 "shared secrets" and provide their PIN and birth date before voting. Halifax also
46 uses four levels of security checks: A penetration test where an external

1 Information Technology firm tries to break through the vendor's security
2 mechanisms; an analysis is done of the encryption system used in the
3 communication between computer servers; an external audit of the entire voting
4 process is undertaken by an auditing firm; and an analysis of the application's
5 overall security is done.
6

7 Estonia is generally recognized as the world leader in the use of internet voting,
8 having been the first country to hold a binding election using the technology in
9 2005. By 2011, approximately 25% of all votes in parliamentary elections were
10 cast from homes or offices. The key to Estonia's success is its citizen-wide
11 acceptance of a digital identity and electronic chip-enabled ID card. The card is
12 also used to check out library books, pay bus fares, and track medical data. For
13 internet voting, citizens insert their ID into a card reader that is plugged into a
14 computer. Estonia educates their voters extensively about potential viruses and
15 encourages them to check their computers regularly. As a precaution, Estonia
16 can legally call off the internet voting results and require voters to cast paper
17 ballots, though the investment required to use the identity cards makes the
18 enactment of this contingency plan prohibitive. Such a system may not be
19 successful in Canada or the United States where there is greater resistance to
20 support for the use of national databases for such purposes.
21

22 Internet voting is by its nature unsupervised. Concern has been expressed that
23 without the face-to-face interaction that takes place at a traditional voting location
24 some voters may be subjected to untoward pressures to vote in a certain way
25 since the election administrator cannot ensure physical secrecy at the time a vote
26 is registered. Canadian municipalities using internet voting have educated voters
27 on the criminal implications of acts of coercion and intimidation and have
28 introduced the concept of "shared secrets" (allowing the voter to make up the
29 question they are required to answer) to help ensure that only the correct voter
30 casts his/her own ballot. This concept in conjunction with the need to provide
31 acceptable identification when registering can increase assurance that each vote
32 is legitimate, however security considerations of this type are not as effective as
33 the secrecy afforded by a private ballot marking station overseen by election
34 officials.
35

36 Despite the security tools available, it is still possible that some voters might be
37 pressed (and then monitored) to vote in a certain way. It is also possible that PIN
38 information can be obtained through shared mail facilities in circumstances
39 where the answer to a shared secret question might already be known, such as
40 in a family setting.
41

42 In response to concerns surrounding fraud and coercion, Estonia adopted the
43 principle of multiple votes. A voter is able to change their vote as many times as
44 they like and can even cast a paper ballot on Election Day; only the last ballot
45 cast is counted.
46

1 5. *What are the costs associated with the introduction of internet voting? Is it*
2 *financially feasible?*

3
4 Any new voting option comes at a financial cost; internet voting is no exception.
5 Time and money will need to be invested in testing, marketing, advertising and
6 education. Exact costs to implement internet voting would not be known until
7 such time as a final voting option, and a vendor, is chosen. For reference, in
8 2008 Halifax Regional Municipality (the largest of the municipalities using internet
9 voting in Canada) paid their vendor \$487,151.00 to incorporate remote internet
10 and telephone voting as a component of the Advance Vote. This cost was in
11 addition to their regular election budget and does not reflect the costs associated
12 with marketing, advertising, education and mail services.

13
14 The City of Markham Clerk's Office staff revealed that Vaughan could expect
15 hard costs of approximately \$200,000.00 and soft costs of \$200,000.00 for
16 Advance Vote purposes alone.

17
18 Recently, Grande Prairie, Alberta presented a report on internet voting to their
19 Council. Five hundred thousand dollars was identified as the required budget for
20 Internet voting to be piloted in the 2013 Municipal Election Advance Vote.
21 Grande Prairie has approximately 38,000 eligible voters.

22
23 It is possible that cost savings may be realized through consistent use of internet
24 voting. The potential to reduce election costs was an important consideration for
25 both Peterborough and Halifax Regional Municipality. It should be noted that
26 costs associated with internet voting are generally not scalar; software licensing
27 and security costs do not take into account the number of expected voters or the
28 demand for service. Internet voting may offer better value for money in larger
29 communities.

30
31 3.5 Benefits

32
33 Notable benefits include greater convenience for all voters and increased
34 accessibility for voters who may have difficulty attending polling locations. Many
35 jurisdictions that have implemented internet voting, including Markham and
36 Peterborough, cite accessibility as a major contributing factor for their decision.
37 Satisfaction surveys of internet voting options often reveal that voters consider
38 increased convenience to be a major benefit of the service.

39
40 Increased voter turnout has also been used as an argument in favour of internet
41 Voting. However, at the Elections Canada workshop, panelists noted that it is not
42 clear whether internet voting actually increases overall turnout rates or indeed
43 the youth vote. Municipal reviews, including those from Markham, Kitchener, and
44 Richmond Hill note the lack of unequivocal evidence that internet voting
45 produces greater turnout or higher levels of engagement. Internet voting offers

another channel for voting, but not one that necessarily increases the overall number of votes cast.

3.6 Risks

It is hard not to overstate the *potential* threat to internet voting systems. While hundreds of thousands of dollars may be used to protect such systems, there is still no assurance that one individual will not be able to undertake an attack that will undermine the integrity of an election. The essential question is: are the available protections sufficient at this stage of the evolution of internet voting systems?

In October of 2010 the District of Columbia cancelled its online voting plans after University of Michigan computer experts were able to infiltrate the system and remotely change votes. The system was compromised within 48 hours. Many allege that the core technology required for any internet voting system to be genuinely safe and secure does not yet exist.

In a 2011 presentation, Dr. David Jefferson, an internationally recognized expert on voting systems and election technology, advised that, "Internet voting is much more dangerous than other forms of electronic voting because of the possibility that anyone on Earth can attack an internet election from a remote position of safety, and with the possibility of changing the outcome without ever being discovered."

Prior to the 2012 presidential election in the United States, warnings about the dangers of internet voting were growing. In March of 2012, Bruce McConnell, a top cyber-security official with the U.S. Department of Homeland Security, advised a group of election officials, academic and advocacy groups meeting in Santa Fe, New Mexico that "it's premature to deploy internet voting in real elections at this time." He called security around internet voting "immature and under-resourced."

One of the biggest threats to full deployment of internet voting today is a very robust hacker community. A Denial of Service attack (DoS) would be enough to prevent voters from accessing the system, undermining the process – notwithstanding the potential impact of a more sophisticated attack that could hijack or even change votes internally. There have been several DoS attacks in Canada in recent years. During the NDP Leadership vote in March of 2010, a deliberate attack was launched against the voting system, using more than 10,000 computers to issue 10,000,000 erroneous requests. Online voting threats are not limited to DoS attacks. Security experts point to the danger of counterfeit websites, phishing attacks, hacks into the election system, or the insertion of viruses that tamper with election results.

1 A summary of the investigation into the attack on the NDP Leadership vote was
2 reported by the NDP's Acting National Director Chantal Vallerand:

- 3 1. Each of more than 10,000 suspicious IP addresses generated as
4 many as 1,000 requests per minute to the voting system. That
5 works out to roughly ten million abnormal requests occupying the
6 voting system and thus interfering with legitimate voting activities.
- 7 2. Most of the attacking computers were located in Canada, though
8 some were located around the world.
- 9 3. The required organization makes it clear the attack was deliberate.
10 In fact, the pattern of activity suggests the attackers were also
11 following media reports about each round of voting – suspending
12 attack activities between rounds and increasing them during voting.

13 Some people argue that technology-enabled capabilities such as on-line banking,
14 stock trading, and retail purchasing have successfully preceded on-line voting;
15 therefore, internet voting should not be a challenge to implement. However,
16 commercial transactions must be traceable and parties must be authenticated so
17 that neither party can falsely deny transactions, whereas voting is intended to be
18 anonymous. Credit card companies and merchants have a financial interest in
19 verifying the identity of a shopper, but identifying an electronic voter conflicts with
20 the principle of a secret ballot.

21
22 An internet voting system must simultaneously ensure both the privacy and
23 integrity of the ballot. These two requirements are fundamentally in conflict with
24 one another and cannot be reconciled by present-day commercial cryptography.
25 A rush to internet voting, though attractive, may imperil the very democratic
26 principles it hopes to defend.

27
28 According to Members of the U.S. Government Advisory Board Executive Writers
29 Bureau, which includes information technology security experts from government
30 and industry, "Internet voting systems are very attractive targets to would-be
31 attackers who are even more emboldened by the ability to act anonymously.
32 Unless we are willing to compromise our entire democratic process for the sake
33 of convenience, we must effectively address the identified threats."

34
35 In a report released on July 25, 2012 entitled, "Counting Votes 2012: A State by
36 State Look at Voting Technology Preparedness", Susannah Goodman of
37 Common Cause's Voting Integrity Campaign states, "Internet voting is not ready
38 for prime time. The security environment is not what it needs to be to cast ballots
39 over the Internet." The report claims that electronically submitted ballots cannot
40 be independently audited, are prone to being hacked, and that electronic voting
41 leaves nothing to recount in a dispute.

42
43 Douglas Jones and Barbara Simons, authors of the recent book, "Broken Ballots:
44 Will Your Vote Count" note that, "people running pilots are likely to declare

success, in spite of any problems that crop up. However it is dangerous to draw conclusions from what appears to be a successful internet voting pilot. If the election is insignificant, there is little to no motivation to sabotage the election."

3.7 Conclusion (Internet Voting)

The fundamental question for election administrators is whether the security and integrity of the vote can be sufficiently protected while offering greater convenience for voters through internet voting. While there may be increasing anecdotal demand for remote e-voting, public perception of the security and integrity of these systems may not be accurate. Pat Calhoun, a Senior Vice President and General Manager of Network Security at McAfee (an Intel Company) says the technology exists, but unless a national government-run digital identity card is instituted – a digital representation of an individual that is signed and validated by the government that cannot be replicated and cannot be forged – there will continue to be concern about security.

Local, national and global jurisdictions are developing examples of practices and processes to follow (or avoid) for any government considering internet voting. While Election Administrators are always trying to find ways to make voting convenient, there is ample evidence to suspect that internet voting is insecure and risky. It is not recommended that the City pursue internet voting for the 2014 general elections, but instead monitor developments elsewhere and report to Council again in the future with recommendations on how best to approach internet voting, once it becomes a more mature channel for voting.

3.8 Attachments

Appendix I: E-Voting Use by Country.

3.9 Resources

Additional resources available upon request from the Clerk's Department.

City of Cambridge. October 15, 2012. "Item 10 Voting Method Options for the 2014 Municipal Elections," *General Committee Meeting*, pg. 197-234:
http://www.cambridge.ca/cs_pubaccess/download_minutes.php?doc_id=6084

City of Hamilton. November 12, 2012. "Alternative Voting Solutions for Municipal Elections (FCS12046) (City Wide)," *Audit Finance and Administration Committee*: http://www.hamilton.ca/NR/rdonlyres/1A4397F0-0AD4-464F-B923-2DB99B0FEBD1/0/Nov12EDRMS_n372246_v1_8_4_FCS12046.pdf

City of Kingston. August 14, 2012. "Preliminary Remote Voting Alternatives for the 2014 Municipal Election," *Council Meeting 19*:
http://www.cityofkingston.ca/pdf/council/agenda/2012/COU_A1912-12260.pdf

- 1
2 City of Kitchener. December 10, 2012. "Report: Alternative Voting – Internet
3 Voting," *Finance & Corporate Services Committee*:
4 [http://icalendar.esolutionsgroup.ca/Public/GetDocument.ashx?DocumentId=4](http://icalendar.esolutionsgroup.ca/Public/GetDocument.ashx?DocumentId=44706165-c0ea-4fb1-84b2-201689ed567d&IsShare=True)
5 [4706165-c0ea-4fb1-84b2-201689ed567d&IsShare=True](http://icalendar.esolutionsgroup.ca/Public/GetDocument.ashx?DocumentId=44706165-c0ea-4fb1-84b2-201689ed567d&IsShare=True)
6
- 7 City of Markham. November 13, 2012. "Markham Votes 2014 – Internet Voting
8 Program," *Special General Committee Meeting*:
9 [http://www2.markham.ca/markham/ccbs/indexfile/Agendas/2012/General/gc1](http://www2.markham.ca/markham/ccbs/indexfile/Agendas/2012/General/gc121113/Internet%20Voting%20Presentation.pdf)
10 [21113/Internet%20Voting%20Presentation.pdf](http://www2.markham.ca/markham/ccbs/indexfile/Agendas/2012/General/gc121113/Internet%20Voting%20Presentation.pdf)
11
- 12 Elections Canada. January, 2010. *E-Voting Workshop, Summary of Proceedings*:
13 http://www.elections.ca/res/rec/tech/ivote/summary_e.pdf
14
- 15 Elections Canada. February, 2010. "A Comparative Assessment of Electronic
16 Voting," *Canada-Europe Transatlantic Dialogue*:
17 http://www.elections.ca/res/rec/tech/ivote/comp/ivote_e.pdf
18
- 19 Elections Ontario. 2012. *Network Voting Research Summary*:
20 [http://www.wemakevotingeasy.ca/media/Network_Voting/Network_voting_su](http://www.wemakevotingeasy.ca/media/Network_Voting/Network_voting_summary_ENG.pdf)
21 [mmary_ENG.pdf](http://www.wemakevotingeasy.ca/media/Network_Voting/Network_voting_summary_ENG.pdf)
22
- 23 Esteve, J.B., Goldsmith B., & Turner, J. 2012. "International Experience with E-
24 Voting: Norwegian E-Vote Project," *International Foundation for Electoral*
25 *Systems*: [http://www.regjeringen.no/upload/KRD/Prosjekter/e-](http://www.regjeringen.no/upload/KRD/Prosjekter/e-valg/evaluering/Topic6_Assessment.pdf)
26 [valg/evaluering/Topic6_Assessment.pdf](http://www.regjeringen.no/upload/KRD/Prosjekter/e-valg/evaluering/Topic6_Assessment.pdf)
27
- 28 Goldsmith, B. 2011. "Electronic Voting and Counting Technologies: A Guide to
29 Conducting Feasibility Studies." *International Foundation for Electoral*
30 *Systems*:
31 [http://www.ifes.org/~media/Files/Publications/Books/2011/Electronic_Voting](http://www.ifes.org/~media/Files/Publications/Books/2011/Electronic_Voting_and_Counting_Tech_Goldsmith.pdf)
32 [and_Counting_Tech_Goldsmith.pdf](http://www.ifes.org/~media/Files/Publications/Books/2011/Electronic_Voting_and_Counting_Tech_Goldsmith.pdf)
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- 34 Goodman, S., Mulder, M., & Smith, P. 2012. "Counting Votes 2012: A State by
35 State Look at Voting Technology Preparedness," *Verified Voting Foundation,*
36 *Common Cause, & Rutgers School of Law*:
37 <http://countingvotes.org/sites/default/files/CountingVotes2012.pdf>
38
- 39 Goodman, N., Pammett, J.H., & DeBardeleben, J. 2010. "Internet Voting: The
40 Canadian Municipal Experience," in *The Canadian Parliamentary Review*,
41 Vol. 33, No. 3: http://www.revparl.ca/33/3/33n3_10e_Goodman.pdf
42
- 43 Halifax Regional Municipality. January 10, 2012. "Item 11.1.2 Request for
44 Proposal #11-077 – Integrated Telephone & Internet Voting," *Halifax Regional*
45 *Council Meeting*: <http://www.halifax.ca/council/documents/c120110.pdf>
46

1 Jefferson, D. 2011. "If I can shop and bank online, why can't I vote online?"
2 *Verified Voting Foundation*: [http://electionlawblog.org/wp-](http://electionlawblog.org/wp-content/uploads/jefferson-onlinevoting.pdf)
3 [content/uploads/jefferson-onlinevoting.pdf](http://electionlawblog.org/wp-content/uploads/jefferson-onlinevoting.pdf)
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5 Simons, B. 2011. *Internet Voting an Idea whose time has NOT come*:
6 [http://www.isi.fraunhofer.de/isi-](http://www.isi.fraunhofer.de/isi-media/docs/t/de/veranstaltungen/C_Simons_EuroParlTalk.pdf?WSESSIONID=d1ac02a42a5b1a70e902965f1325584f)
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8 [=d1ac02a42a5b1a70e902965f1325584f](http://www.isi.fraunhofer.de/isi-media/docs/t/de/veranstaltungen/C_Simons_EuroParlTalk.pdf?WSESSIONID=d1ac02a42a5b1a70e902965f1325584f)

9 Town of Richmond Hill. December 3, 2012. "Item 12 - Internet Voting
10 (SRCFS.12.079)," *Committee of the Whole Meeting*:
11 [http://www.richmondhill.ca/documents/meetings/cow/12_3_2012_16_30/Item](http://www.richmondhill.ca/documents/meetings/cow/12_3_2012_16_30/Item%2012.pdf)
12 [%2012.pdf](http://www.richmondhill.ca/documents/meetings/cow/12_3_2012_16_30/Item%2012.pdf)
13

14 U.S. Election Assistance Commission. 2011. *A Survey of Internet Voting*:
15 <http://www.eac.gov/assets/1/Documents/SIV-FINAL.pdf>
16

4.0 Vote Centres

Clerks in Ontario are obliged by statute to make voting convenient. "Convenience" is not defined – giving rise to the question whether geographically convenient neighbourhood voting locations can potentially be replaced with larger but more dispersed voting centres where the overall voting experience can be made more convenient. Genuine improvements to the voting process occur when service quality can be improved without any corresponding sacrifices to the security and integrity of the vote. The concept of Vote Centres is an emerging idea among election officials in the United States who conduct their elections using the traditional "precinct-based" (subdivision) model with the intention of improving both the voting experience for citizens and the integrity of the electoral process. The model was pioneered in Larimer County, Colorado in 2003. Since then, Vote Centres have spread to other states including Arizona, Indiana, Michigan and Texas.

4.1 Background

The City Clerk presented a report on May 17, 2011, to Committee of the Whole (Working Session), titled *Learning from the Election: Preparations for the 2014 Municipal and School Board Elections*, describing outcomes and lessons learned from the 2010 elections. The purpose of the report was to advise Council of the successes and challenges experienced during the election cycle and to propose several areas for improvement. Notable successes and challenges were identified as follows:

Successes:

1. Communications and Branding

The communications strategy used a variety of media to effectively communicate voting times and locations to citizens. The online website and campaign "This is Your Space" delivered strong brand awareness and information for voters.

2. Electronic Voter List

The use of an Electronic Voter List enabled residents to vote from any polling location during the Advance Vote. This was the first time this technology was introduced and it proved very successful by allowing voters to attend any Advance Vote location to cast their ballot. It also allowed election administrators to monitor and troubleshoot voting issues in real time. It was well received by both voters and candidates though it did not increase overall advance vote turnout compared to the previous election (perhaps because it was held too far in advance of Election Day).

1 3. Vote tabulators

2 The vote tabulator technology procured from Dominion Voting
3 Systems Inc. was tested before and after the election and was
4 found to perform accurately. Many precautions were taken to
5 ensure the equipment operated as required and was easily used
6 and understood by voters. These precautions included using city
7 staff to supervise tabulators and offer customer service to voters,
8 providing training online through the website "This Is Your Space,"
9 and offering demonstrations to voters if required.

10
11 4. Accessibility

12 All voting locations in 2010 were physically accessible, and
13 Advance Vote locations were equipped with sophisticated
14 accessible voting equipment to enable voters with disabilities to
15 cast a ballot independently. While this technology was not widely
16 used during the election, it was nonetheless invaluable towards
17 promoting the principles of fairness and accessibility during the
18 election.

19
20 *Challenges:*

21
22 1. Training inadequacies and staffing levels

23 There were significant issues with training and the performance of
24 rudimentary tasks by externally recruited elections staff,
25 contributing to a substantial decline in service quality and exposing
26 the process to delays during peak hours at some locations.
27 Additionally, problems arose from tardiness and absenteeism for
28 both pre-election training and Election Day staffing. By the time
29 voting opened on Election Day no spare staff was available for
30 deployment. Challenges with the recruitment and deployment of
31 externally recruited election staff are part of a broader trend
32 identified by many York Region municipalities.

33
34 2. Service capacity during peak hours

35 Voter turnout was higher in 2010 than 2006, with 40.55% of eligible
36 voters attending the polls. Many voters did not cast their ballot until
37 the evening of Election Day, creating delays, long line ups, and
38 shortages of resources at some polling locations. Efforts to
39 encourage voters to attend during the Advance Vote dates were not
40 effective in reducing the 'bottleneck' experienced on Election Day.

4.2 What is a Vote Centre?

A Vote Centre is different from a traditional polling location in that it is able to accommodate many more citizens at any given time and utilizes a network of computers to access an Electronic Voter List. They are typically larger, have a voter population greater than 10,000, are better staffed, and feature more resources to process votes efficiently. By capitalizing on the success of Vaughan's 'Vote Anywhere' strategy implemented in 2010, voters would be able to attend any Vote Centre across the City to cast their ballot.

Vote Centres would be geographically distributed to provide access within a maximum nine minute drive from virtually any location within the City. Ideally these locations would be well-known facilities such as community centres and schools with accommodation for high traffic and parking. Under current projections, it is estimated that 19 Vote Centres could service the entire City of Vaughan (compared to just over 100 traditional polling places). These locations vary in geographic dispersion and capacity based on local needs, and would be sized to accommodate expected traffic in those locations (See Appendix II: Preliminary Map of Vote Centre Distribution).

4.3 Advance Polling

Fundamental to the Vote Centre proposal is the ability to schedule Advance Vote days directly prior to Election Day.

Under a Vote Centre model, advance voting would take place during the two days prior to Election Day at *all* Vote Centres. The objective of this change would be to encourage voters to avoid overcrowding on Election Day by treating all three days (Election Day plus the two Advance Vote days) as if they were all Election Day. Additionally, continuous voting, commencing with the finalization of the ballot, would be made available through the City Clerk's Office at City Hall and potentially at a location in the east and west ends of the City. These measures would provide a high level of convenience to voters by offering a high degree of flexibility for when and where they may choose to vote.

In order to achieve this goal, a sophisticated communications and marketing plan would be required to communicate these changes to the citizens of Vaughan and encourage them to attend a Vote Centre during the Advance Vote.

4.4 International Examples

There are currently no Canadian examples of the Vote Centre model.

The first true Vote Centre was deployed in Larimer County, Colorado, in 2003, when 143 precinct polling locations were consolidated into 22 Vote Centres. The locations were chosen for their high traffic and parking capacity, geographic

1 dispersal within an urban setting, and high visibility such as commercial and
2 business facilities. The system relied on an Electronic Voter List to track voters
3 over all locations. The county reported increased voter turnout due to greater
4 convenience and lower costs from reduced staffing requirements.

5
6 The state of Indiana expressed interest in Colorado's Vote Centre experiment
7 and praised the system for its improvements to accessibility, cost effectiveness,
8 and use of technology. As a result, the counties of Tippecanoe, Wayne and Cass
9 opted to consolidate their precincts into Vote Centres in 2007. Studies of these
10 counties have revealed that Vote Centres may have a positive effect on turnout
11 and have a noticeable positive impact on election costs. The study also found
12 that the best candidate communities for implementing Vote Centres were those
13 of moderate size, high growth, and high numbers of registered voters. Since
14 then, other counties have adopted the model, including Vanderburgh, which
15 developed a smartphone app to direct voters to Vote Centres and inform them of
16 average wait times. Vanderburgh reduced its elections staffing levels from 800
17 poll workers to 185.

18
19 These examples remain the clearest and best-documented to date. Other states,
20 such as Michigan, Washington, and Arizona are either experimenting with or are
21 passing legislation to enable Vote Centres. It should be noted that research into
22 this model is preliminary, though results are encouraging.

23 24 4.5 Benefits

25 There are a several benefits of the Vote Centre model which can be broadly
26 categorized as savings, voter convenience, superior quality service, and the
27 promotion of democratic principles.

28 29 Savings

30
31 Savings under the Vote Centre model would occur through reductions in staff
32 and resource expenditures needed to operate additional voting locations. To
33 address the difficulties that were experienced in 2010 regarding elections staff
34 reliability and training, consolidating voting locations into Vote Centres would
35 improve management and oversight, reduce the total number of staff required,
36 and allow the City to be more selective in its hiring decisions. These savings will
37 be partially offset by the deployment of staff for three consecutive days during the
38 advanced voting period. Preliminary estimates suggest that three days of voting
39 can be had for approximately the cost of one day of voting under the traditional
40 model.

41 42 Voter Convenience

43
44 The most exciting opportunity presented by a Vote Centre model is the potential
45 for a greatly enhanced voting experience. Voters will have more control over

where they vote, as the use of the Electronic Voter List enables them to vote at any polling location. They will also have more control over when they vote, as scheduling the Advance Vote days on the weekend prior to Election Day enables voters to choose a time most convenient to them.

Through economies of scale the Vote Centre model can provide for:

- Streamlined voting through balanced voter registration lines and additional tabulation equipment;
- Dedicated areas for adding voters to the voters' list, and for troubleshooting; and
- Enhanced customer service attributes such as display boards within the Vote Centre, and ample parking without.

Superior Quality Service

A Vote Centre model would likely improve staffing competence through higher hiring standards resulting from the lower number of external staff required. Additionally, Vote Centres will be better equipped than traditional polling locations to manage peak periods of demand, ensuring faster and higher quality service. City staff responsible for overseeing elections proceedings will also be better able to supervise and manage elections staff without the need to travel between multiple locations. Overall, the Vote Centre model would present a more efficient means of deploying limited resources resulting in a better experience for the voter.

4.6 Risks

Despite its perceived advantages, the potential that voters will not take advantage of the additional voting opportunities so close to Election Day represents a serious risk to the integrity of a municipal election.

The success of the Vote Centre model is dependent upon the ability to spread voter turnout over the three scheduled days for voting (plus continuous voting opportunities). Should voters not vote in significant numbers on the weekend days immediately preceding Election Day (Monday), the surge of voters late on Election Day could lead to unprecedented line-ups and parking issues.

4.7 Conclusion (Vote Centres)

The Vote Centre model offers an innovative and unique approach to municipal elections. It embraces modern technology, increases convenience and service quality for voters, reduces costs, and improves the efficiency of the voting process. It builds upon the successes noted during the 2010 elections while attempting to meet and overcome the challenges experienced. Above all, it

strongly promotes the election principles held by the City of Vaughan, particularly related to accessibility, fairness, and integrity.

While there are significant benefits to implementing the model, there are also potential risks, which are primarily derived from expectations and attitudes held by voters about how, where, and when to vote. In order to be successful, a comprehensive marketing and communications strategy would be required to educate voters. Given the right amount of time and dedication, the Vote Centre model can offer significant improvements over previous years and achieve gains in voter convenience without sacrificing the security or integrity of the elections.

The model, since it is dependent on improved voter experience, requires that Vote Centres be adequately sized to handle large numbers of Voters (and their vehicles). Our preliminary studies show that a minimum of 19 Vote Centres would be required to adequately serve Vaughan's population. Unfortunately, many of the available locations are too small to adequately handle a large or surging turnout were it to occur late on Election Day. For these reasons, Vote Centres are not being recommended for implementation with the 2014 elections – however the concept will be piloted where possible with a view to potential city-wide implementation in 2018, perhaps in conjunction with internet voting.

4.8 Attachments

Appendix II: Map of Potential Vote Centres

4.9 Resources

Additional resources available from the Clerk's Department upon request

Indiana State Government. 2010. "Vote Centers and Election Costs: A Study of the Fiscal Impact of Vote Centers in Indiana," *Indiana Fiscal Policy Institute*: <http://www.in.gov/sos/elections/files/Summary.pdf>

Hall, S., Losco, J., & Scheele, R. 2012. "Convenient Turnout: A Case Study of the Indiana Vote Center Pilot Program," *International Journal of Business and Social Science*: http://www.ijbssnet.com/journals/Vol_3_No_8_Special_Issue_April_2012/36.pdf

Mattingly, Kara. October 31, 2012. "State Officials Taking Notice of Vanderburgh vote centers," *14 News, WFIE*: <http://www.14news.com/story/19970296/state-officials-taking-notice-of-vanderburgh-vote-centers>

Pew Center on the States. November 27, 2012. "Vote Centers, Long Lines, and Provisional Ballots in Galveston County, Texas"

1 [http://www.pewstates.org/research/analysis/vote-centers-long-lines-and-](http://www.pewstates.org/research/analysis/vote-centers-long-lines-and-provisional-ballots-in-galveston-county-texas-85899432525)
2 [provisional-ballots-in-galveston-county-texas-85899432525](http://www.pewstates.org/research/analysis/vote-centers-long-lines-and-provisional-ballots-in-galveston-county-texas-85899432525)
3

4 Stein, R.M., & Vonnahme, G. 2008. "Engaging the Unengaged Voter: Vote
5 Centers and Voter Turnout," *The Journal of Politics*, Vol. 70, No. 2:
6 [http://128.42.206.130/publications/POL-pub-](http://128.42.206.130/publications/POL-pub-SteinVonnahmeUnengagedVoter-042008.pdf)
7 [SteinVonnahmeUnengagedVoter-042008.pdf](http://128.42.206.130/publications/POL-pub-SteinVonnahmeUnengagedVoter-042008.pdf)
8

9 Scheele, R.H., Losco, J., Crawley, G., & Vasicko, S.J. 2009. "Improving Election
10 Administration With Vote Centers: Toward a National Model," *Western*
11 *Political Science Association annual meeting, March 19, 2009:*
12 [http://cardinalscholar.bsu.edu/bitstream/123456789/194945/1/wpsa09Vancou](http://cardinalscholar.bsu.edu/bitstream/123456789/194945/1/wpsa09VancouverPaper.pdf)
13 [verPaper.pdf](http://cardinalscholar.bsu.edu/bitstream/123456789/194945/1/wpsa09VancouverPaper.pdf)
14

5.0 Contribution Rebate Program

Subsection 82(1) of the *Municipal Elections Act, 1996* authorizes Ontario municipalities to pass by-laws to provide rebates to campaign contributors. Contribution Rebate Programs encourage citizens to donate to candidates in exchange for a subsidy provided by the municipality. The program enhances the democratic process by enabling all candidates to raise funds from their supporters more easily, ensuring that more candidates have the resources needed to operate successful campaigns. It is also thought that by making a contribution, voters will become more deeply engaged in the election process and in the affairs of their municipality.

5.1 Background

- At the May 17, 2011 meeting of Committee of the Whole (Working Session), the following motion was passed:

That the City Clerk & Returning Officer be requested to submit further information on:

b. The results of the contribution rebate program.

5.2 Program Summary

All rebate applications have been processed in accordance with By-law 273-2009. The deadline for the receipt of applications was December 31, 2011 but was extended to January 4, 2012 due to the Festive Closure.

Any applications received from applicants who made a contribution to a candidate in default of election financial filing requirements were not processed other than to advise them by letter of the candidate's default with the consequence that the applicant would not be eligible for a rebate.

Applicants were limited to a maximum rebate of \$150.00. Table 1 below shows that although 537 applications were received, only 434 were eligible for rebate. Of the 103 ineligible applications, some were received from eligible applicants that erroneously submitted multiple applications, some were from contributors living outside Vaughan, and others were from business owners/corporations. Applications were returned to applicants if the receipt was made out to two individuals but only one had signed the application, the applicant was not on the Voters' List, the names on the receipt form did not match the names on the application, or the address of the applicant did not match the address on the Voters' List.

Table 1: Summary of Contributions and Rebates

	Number Contributions	of \$ Amount
Contributions	537	\$169,765.00
Rebates	434	\$61,717.50

5.3 Challenges

The following concerns were identified during the program:

Cost/Resources:

In addition to direct costs, the administration of the program involved ongoing detailed reviews to ensure applications for rebates were processed in accordance with the provisions of the by-law.

Program Confusion:

Despite the information included on the application form and the website, there were many phone calls and counter inquiries regarding the rebate program. When applications were denied, significant time was spent explaining the problem. Other clarifications, including assistance to contributors in completing applications, was similarly time consuming.

5.4 Provincial Examples

Other Ontario municipalities which authorized the use of contribution rebate programs for the 2010 elections include Toronto, Ottawa, Markham, Ajax, and Oakville. Eligibility criteria varied slightly: Oakville and Ajax only permitted residents of the municipality to apply, while Toronto, Ottawa, and Markham allowed any resident of Ontario to qualify for a rebate. The following table summarizes contribution rebate programs employed in 2010:

Table 2: Contribution Rebate Programs in 2010

Municipality	Minimum Contribution Required	Maximum Rebate Amount
Toronto	\$25	\$1,000
Ottawa	\$50	\$187.50
Oakville	\$100	50% of total
Ajax	\$25	\$150
Markham	\$50	\$350
Vaughan	\$50	\$150

5.5 Conclusion

The program was generally successful. Despite higher than expected resource requirements and confusion over eligibility, 81% of all applications were processed successfully. Staff is requesting direction regarding whether Council wishes to continue the Campaign Contribution Rebate Program for the 2014 Municipal Election.

If Council wishes to continue the program for the 2014 elections, it is recommended that the following principles of the 2010 Program be maintained:

1. Participation is optional for all candidates;
2. Participating candidates are required to file audited financial statements;
3. Candidates, spouses and family members are ineligible to claim rebates for contributions to the family member candidate;
4. Rebates apply only to eligible electors residing in the City of Vaughan;
5. Corporations, trade unions and non-resident electors are ineligible;
6. Minimum contribution of \$50; and
7. The maximum rebate be \$150 per eligible contributor, regardless of the number of contributions made.

5.6 Resources

Additional resources available from the City Clerk's Office upon request.

City of Hamilton. November 2, 2009. "Election Campaign Contribution Rebates," *Audit and Administration Committee meeting*:
<http://www.hamilton.ca/NR/rdonlyres/A66DBF3B-03C2-4118-B612-C803268AEBC2/0/Nov04CL09006aElectionCampaignContributionRebates.pdf>

City of London. September 30, 2009. "Municipal Election Campaign Contribution Rebate Program," *Board of Control meeting*:
<http://council.london.ca/meetings/Archives/Agendas/Board%20Of%20Control%20Agendas/Board%20of%20Control%20Agendas%202009/2009-09-30%20Agenda/Item%2021.pdf>

City of Ottawa. 2012. "Contribution Rebate Program," *Elections Office*:
<http://ottawa.ca/en/city-hall/your-city-government/elections/contribution-rebate-program>

City of Toronto. 2012. "Campaign Contributions," *Elections Services*:
<http://www.toronto.ca/elections/contribution-info.htm>

1 Town of Oakville. 2012. *By-Law 2012-060*:

2 <http://secure.t.oakville.ca/eams/cache/107/3432jh55pttvq4q22pt3yw45/217732>
3 [12182012092125650.PDF](http://secure.t.oakville.ca/eams/cache/107/3432jh55pttvq4q22pt3yw45/217732)
4

5 Town of Richmond Hill. December 7, 2009. "Municipal Election Rebate
6 Programs," *Committee of the Whole meeting*:

7 [http://www.richmondhill.ca/documents/meetings/council/11_23_2009_19_30/](http://www.richmondhill.ca/documents/meetings/council/11_23_2009_19_30/tem%206.pdf)
8 [tem%206.pdf](http://www.richmondhill.ca/documents/meetings/council/11_23_2009_19_30/tem%206.pdf)
9

10 Town of Whitby. September 14, 2009. "2010 Municipal Election Overview,"

11 *Operations Committee meeting*: [http://www2.whitby.ca/asset/cs-report_CS56-](http://www2.whitby.ca/asset/cs-report_CS56-09-sep142009.pdf)
12 [09-sep142009.pdf](http://www2.whitby.ca/asset/cs-report_CS56-09-sep142009.pdf)
13

6.0 Overall Summary & Conclusion

In pursuing service and management excellence at the City of Vaughan through the encouragement of continuous improvement, the City Clerk's Office has examined programs and processes used during the 2010 municipal elections. This report has explored programs and technologies that expand on the successes experienced in 2010, while also addressing some of the challenges that were identified.

Internet voting remains popular among municipalities that have implemented the technology, though it is still regarded with skepticism by some security experts. The research presented in this report suggests that many municipalities in the GTA are hesitant to commit to internet voting and are waiting for more secure systems to enter the market, though it is unclear whether new or better systems will allay the fears of electoral administrators completely. Cost also remains an issue, though there is a general consensus that internet voting is an inevitable advancement that will take place when the time is appropriate. Given the marginal impact internet voting has on overall voter turnout, it is advisable to wait until the technology becomes mainstream before the tool, and its attendant potential risks to election integrity, are adopted.

Vote Centres are a new and innovative concept for Canadian municipal elections, and although there is a limited amount of research and practical examples in the field, the literature and case studies to date offer a very positive outlook. In many respects, Vote Centres are the logical extension of the Electronic Voter List already successfully deployed in Vaughan. By applying the technology across all voting locations, the city can reduce its elections staffing and resource requirements while simultaneously improving service quality and voter convenience. Unfortunately, the distribution of large voting locations in Vaughan is such that full implementation of the Vote Centre model at this time carries too high a risk that large numbers of voters will vote late on Election Day and overwhelm the voting locations.

Lastly, the Contribution Rebate Program deployed in 2010 was largely successful, although new tools are required to lessen the burden of administering the program.

These programs and technologies were examined in order to advance discussion on ways to improve service quality for voters and to protect the integrity of the vote. Through the study of new ideas and concepts the City of Vaughan strives to meet the growing challenges of election administration.

APPENDIX I: E-VOTING USE BY COUNTRY*

Project	Number of Elections	Discontinued Use
Australia	3	
Austria	1	
Britain	0	2007
Canada	7	
Estonia	5	
Finland	1	
France	6	
Germany	0	2009
Ireland	0	2004
Netherlands	2	2008
Norway	0	
Paraguay	0	2008
Portugal	1	
Spain	1	2011
Sweden	0	
Switzerland	36	
United States	12	
Total	75	

*As of September 2011

APPENDIX II: PRELIMINARY MAP OF VOTE CENTRE DISTRIBUTION



Ward 1

Maple Community Centre
 Maple High School
 Kleinburg Public School
 Teston Village Public School
 Father John Kelly Grade School

Ward 2

Woodbridge College
 Al Palladini Community Centre
 Father Ermanno Community Centre
 St. Angela Merici Grade School

Ward 3

Chancellor Community Centre
 Vellore Village Community Centre
 St. Gregory the Great Grade School
 St. Mary of the Angels Grade School

Ward 4

North Thornhill Community Centre
 Herbert Carnegie Public School

Ward 5

Dufferin Clark Community Centre
 Garnet Williams Community Centre
 Westmount Collegiate
 St. Elizabeth High School