



Hamilton

CITY OF HAMILTON

CORPORATE SERVICES DEPARTMENT
Information Services Division

TO: Chair and Members Audit, Finance and Administration Committee	WARD(S) AFFECTED: CITY WIDE
COMMITTEE DATE: April 15, 2013	
SUBJECT/REPORT NO: Wi-Fi in Municipal Buildings and City Wide Parks (FCS13033) (City Wide) (Outstanding Business List Item V)	
SUBMITTED BY: Mike Zegarac Acting General Manager Finance & Corporate Services	PREPARED BY: Filipe Janicas (905) 546-2424 ext. 5703 Fred Snelling (905) 546-2424 ext. 6509
SIGNATURE:	

RECOMMENDATION

- (a) That the following be referred to the 2014 Budget Capital Budget process for consideration:
 - (i) That public facing Wi-Fi be installed in 26 City Recreation Centres, Community Centres and Arenas at a one-time implementation cost of \$128,000 with an annual operating impact of \$39,000 and 0.25 FTE;

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- (b) That public facing Wi-Fi be installed in all Municipal Service Centres at a one-time implementation cost of \$7,000 to be funded from existing capital project number 2050757701;
- (c) That City parks not be considered for public facing Wi-Fi, at this time, due to cost versus benefit received;
- (d) That all City installed public facing Wi-Fi be branded and marketed as a service offered by the City of Hamilton and promoted in all suitable City promotional publications, at a one-time cost not to exceed \$3,000 for marketing and branding, to be funded from existing capital project number 2050757701;
- (e) That the item, respecting Wi-Fi in Municipal Buildings and City Wide Parks, be considered complete and removed from the Audit, Finance & Administration Committee's Outstanding Business List.

EXECUTIVE SUMMARY

The term Wi-Fi is used extensively throughout this report. Wi-Fi is the name of a popular wireless networking technology that provides wireless high-speed Internet and network connectivity. The availability of Wi-Fi makes high speed access to the internet possible for anyone with a Wi-Fi enabled laptop, tablet, camera, iPad, e-reader, game consoles and/or smart phone.

At the December 12, 2012, Council meeting, Report FCS09028(a) resulted in approval of the recommendation to dismantle the Wi-Fi infrastructure created through the Wireless Hamilton initiative. Wireless Hamilton ceased to provide public facing Wi-Fi as of March 1, 2013.

Council, at this same meeting, approved the following motion:

"That staff be directed to report back to the Audit, Finance and Administration Committee with a plan that seeks to address Wi-Fi capabilities in Municipal buildings and regional (City wide) parks."

The recommendations in this report shifts the strategic focus of the public facing wireless offering in the downtown core to one based on City facilities (i.e., recreation centres and administration buildings). The shift in strategy aligns with our comparator municipalities, as per the background research, which can be found in Appendix A of report FCS13033.

To meet the needs of various business units, or as part of Capital upgrades, the City currently has implemented public facing Wi-Fi in the following City facilities:

- All Fire Stations*
- Beasley Recreation Centre
- City Hall – Lobby, Council Chambers, Board Rooms
- Dundas Town Hall
- Facility Services – 330 Wentworth North
- Hamilton Street Railway Upper James Terminal*
- HECFI Facilities
- Lister Building
- Macassa Lodge
- MacNab Street Transit Terminal*
- Morgan Firestone Arena
- North Wentworth Twin Pad Arena
- Riverdale Recreation Centre**
- Rosedale Arena and Senior Centre**
- Sir Wilfrid Laurier Recreation Centre**
- Standard Life Boardrooms
- Stoney Creek Recreation Centre
- Traffic Operations
- Wentworth Lodge
- Westmount Recreation Centre

*Wi-Fi technology was installed in these locations to facilitate a specific business need and increase efficiency. For example, for Transit, Fire and EMS, when the vehicles enter the terminal or station, information is downloaded from the vehicle to a central database, eliminating the need for manual data entry. For transit, the system also downloads information from the Presto fare collection service. At the same time, information is uploaded to the equipment on the vehicles with no personal intervention. This includes software upgrades, security patches etc. for the computers on board.

** Currently underway, will be operational in March 2013.

The majority of the above locations provide Wi-Fi to both staff and the public. These locations are also accessible to staff that work in a mobile manner such as the various inspectors and public health nurses. These hotspots provide a location where staff can stop in during the day with their mobile device and check emails, enter data, access the corporate network for information etc., without having to return to the office.

The majority of the public facing Wi-Fi in the community centres/arenas above is a result of either new facilities being built or upgrades being conducted on existing facilities with the implementation of public facing Wi-Fi included in the capital construction costs.

Alternatives for Consideration – See Page 9

FINANCIAL / STAFFING / LEGAL IMPLICATIONS (for Recommendation(s) only)

Financial: Recreation Centres, Community Centres and Arenas – Recommendation (a)

To implement public facing Wi-Fi in recreation centres, arenas and community centres outlined in Appendix B of report FCS13033 would incur a one-time cost of \$128,000. Appendix B of report FCS13033 provides cost details for both the purchase and installation of an appropriate number of access points to address public needs for the locations addressed by recommendation (a). The complete project would be implemented over a 3 year period. Once these Wi-Fi access points are installed they will take advantage of the existing fibre infrastructure in each facility eliminating any additional data transmission costs. There is also a need to add \$39,000 to the 2014 Information Services Division operating budget for on-going sustainability and support. A portion of this amount is for an additional .25 FTE for the Information Services Division of the Corporate Services Department for implementation and support of the new infrastructure.

Municipal Service Centres – Recommendation (b)

To implement public facing Wi-Fi in the Municipal Service Centres would incur a one-time cost of \$7,000 as outlined in Appendix C of report FCS13033. Once these Wi-Fi access points are installed they will take advantage of the existing fibre infrastructure in each facility eliminating any additional data transmission costs.

Parks designated as ‘City Wide Parks’ – Recommendation (c)

The direction from Council was to investigate the feasibility of providing Wi-Fi in what were referred to as Regional Parks. These parks are now referred to as City Wide Parks. Appendix D of report FCS13033 provides a map and Appendix E for report FCS13033

provides a list of the 23 parks designated as City Wide parks which are also listed below in Table 1:

Bayfront Park	Beverly Community Park
Brian Timmins Stadium	City Hall
Confederation Park	Courtcliffe Community Park
Dieppe Veterans' Memorial Park	Dundas Driving Park #1
Gage Park	Glanbrook Sports Complex
Gore Park	Heritage Green Sports Park
Ivor Wynne Stadium	Joe Sams Leisure Park
Macassa Bay Walkway	Mohawk Sports Park
Olympic Sports Park #1	Pier 4 Park
Robert E. Wade Ancaster Community Park	Sam Lawrence Park
Turner Park	Valley Park
William Connell Park	

Table 1 - Parks Designated as City Wide Parks

There are a number of different technical solutions that can be used to implement a Wi-Fi solution in open spaces. In order to provide an accurate cost, each site would need to be evaluated on an individual basis, to acquire specific information such as the exact coverage area, appropriate technical solution, availability of fibre connectivity and backhaul costs.

A single access point provides coverage to a 150 metre radius from the access point. Multiple access points would be required in these parks to provide full park coverage, which would impact the installation cost significantly. Appendix F of report FCS13033 provides an indication of the costs to implement a single access point in parks, requiring different install scenarios, to implement multiple access points and the backhaul data costs.

Staffing: The IS Division will require .25 FTE for the design, implementation and on-going support and maintenance of the new Wi-Fi infrastructure. The initial phase of Wireless Hamilton was an unsupported service which resulted in public dissatisfaction with the service. If we are to move ahead with public facing Wi-Fi, it is essential that a support model be put in place to ensure the needs of the public are addressed in a timely manner.

Legal: Public Wireless Acceptable Use Policy, that has been approved by Legal Services, is already in place. This Policy is attached as Appendix H of report FCS13033.

HISTORICAL BACKGROUND (Chronology of events)

Report number FCS06102 was presented to the Committee of the Whole and approved at the September 27, 2006, Council meeting. This report was a joint submission by the City of Hamilton and FibreWired (since purchased by Rogers) to the Future Fund for \$501,102.98 to develop a wireless (Wi-Fi) infrastructure in the downtown area (bordered by Barton Street, Main Street, Victoria Avenue and Queen Street), as well as, five 'hotspots' (high-speed public wireless internet access locations) in strategic locations throughout the City. This request for funding, from the Future Fund, was for the initial phase of a multi-phase wireless project and the approval for the initial phase was for a 1 year period commencing January 2008.

Through Report FCS09028(a), Council at the December 12, 2012, meeting approved the recommendation to dismantle the existing Wireless Hamilton infrastructure to eliminate the provision of public facing Wi-Fi in open spaces.

Council, at this same meeting, also approved the following motion:

"That staff be directed to report back to the Audit, Finance and Administration Committee with a plan that seeks to address Wi-Fi capabilities in Municipal buildings and Regional (City wide) parks."

The Corporate wide focus group established to discuss the future of public facing Wi-Fi in Hamilton, discussed additional needs for future consideration of public facing Wi-Fi. This included suggestions such as:

- Employment and Income Support – Patrons could use the Wi-Fi for job search activities and save their purchased cell phone or data usage for personal use. It would also allow them to view case updates;
- Transit – way stations that would display bus arrival/departure times at major locations;
- Public Health Clinics – enhance public service;
- Mobile Access Point(s) – moved to locations throughout the City for events such as James Street Art Crawl, Around the Bay road race and other city festivals;
- Housing Services – in shelters and drop in centres.

On-going requests for public facing Wi-Fi are being addressed as funding comes available.

POLICY IMPLICATIONS/LEGISLATED REQUIREMENTS

Public Wireless Acceptable Use Policy is already in place – attached as Appendix H of report FCS13033.

RELEVANT CONSULTATION

Community Services	District Recreation Operations
Community Services	Recreation Division Director
Community Services	Community Services I.T. Steering Committee
Public Works	Facilities Management & Capital Programs
Corporate Wide	Corporate Wide Focus Group
Corporate Wide	Information Services Working Committee (ISWC)

ANALYSIS / RATIONALE FOR RECOMMENDATION

(include Performance Measurement/Benchmarking Data, if applicable)

Recommendation (a)

That the following be referred to the 2014 Budget Capital Budget process for consideration:

- (i) That public facing Wi-Fi be installed in 26 City Recreation Centres, Community Centres and Arenas at a one-time implementation cost of \$128,000 with an annual operating impact of \$39,000 and 0.25 FTE.

The City currently has public facing Wi-Fi in the following City recreation centres, arenas and community centres:

- Ancaster Rotary Centre
- Beasley Recreation Centre
- North Wentworth Arena
- Riverdale Recreation Centre *
- Rosedale Arena *
- Sir Wilfrid Laurier Recreation Centre *
- Stoney Creek Recreation Centre
- Westmount Recreation Centre

** Currently underway, will be operational in March 2013.*

The public facing Wi-Fi in the Recreation Centres, Community Centres and arenas above is a result of either new facilities being built; upgrades being

conducted on existing facilities with Wi-Fi included in the capital construction costs; or a specific need was being addressed as funding became available.

Staff research definitely indicates this is a trend in the various Municipalities across the country – see Appendix A of report FCS13033. The Cities of Burlington and Mississauga and the Town of Oakville already have public Wi-Fi in all Municipal arenas, community centres and recreation centres. The majority of the cities surveyed, indicated they have already implemented Wi-Fi in recreation facilities or planning to do so is underway.

According to our research and input from stakeholders, public facing Wi-Fi in Community Centres, Recreation Centres and arenas would allow:

- A better user experience for the public. While the children are participating in the various recreation programs guardians can catch up on unfinished tasks, read a book on their e-reader, browse the internet, communicate with others;
- Additional service for facility rentals. A growing number of customers expect internet to be available when they rent space in a City facility;
- Internet access should these facilities be needed as emergency evacuation centres;

Wi-Fi is quickly becoming a customer service standard. Recreation customers expect easy, fast and reliable access to information as well as the ability to stay in touch while they enjoy everything recreation facilities have to offer.

Staff in the Recreation Division of the Community Services Department have reviewed the list of facilities they administer and have developed a phased approach to implementing public facing Wi-Fi in their facilities. Appendix B of report FCS13033 outlines a 3 year implementation plan along with the costs associated with each facility. Appendix B of report FCS13033 also includes facilities that are not being recommended for public facing Wi-Fi at this time as these facilities will be addressed by future capital projects or, in some cases, the future of the facility is under discussion.

The operating impact associated with the above-noted capital investment totals approximately \$39,000. This consists of \$14,875 for controller maintenance, \$22,500 for .25 FTE and \$1,500 for licenses. This request for an additional .25 FTE is for the implementation and on-going maintenance and management of any new Wi-Fi infrastructure. IS staff currently manage and maintain all Wi-Fi technology in the facilities listed in Appendix G of report FCS13033, as well as, the Wi-Fi that is available in 21 of the Hamilton Public Library branches.

Recommendation (b)

That public facing Wi-Fi be installed in all Municipal Service Centres at a one-time implementation cost of \$7,000 to be funded from existing capital project # 2050757701.

The Municipal Service Centres, along with City Hall, are the locations where the public interact with the local level of government. Staff are recommending providing public facing Wi-Fi in these locations as these facilities are also used by local community groups as meeting or gathering places. Appendix C of report FCS13033 provides details on the cost of providing Wi-Fi in the various Municipal Service Centres.

Recommendation (c)

That City Wide designated parks not be considered for public facing Wi-Fi at this time due to cost versus benefit received;

As outlined in Appendix F of report FCS13033 and as experienced through the Wireless Hamilton initiative, providing Wi-Fi in outdoor locations, is expensive. The access points are more costly than those required for an indoor solution, the annual data backhaul expenses are \$4,200 per location, and fibre installation in some of the City Wide Parks is felt to be cost prohibitive based on the benefits received. Part of the rationale for disbanding Wireless Hamilton was the annual cost of data transmission.

Some of the City Wide parks have a fibre connection within the park boundaries and installation would be less costly than those parks that do not currently have a fibre point of presence. There are a number of different technical solutions to address the provision of Wi-Fi in open spaces. Appendix F of report FCS13033 provides some indication of the expected costs for Wi-Fi in open spaces; however, in order to get a more exact cost additional staff investigation would be required to establish the exact cost to acquire fibre connectivity and determine the number of access points to provide adequate coverage. Appendix A of report FCS13033 which provides the status of Wi-Fi in other Municipalities, indicates that most Municipalities are not providing public facing Wi-Fi in open areas.

Recommendation (d)

That all City installed public facing Wi-Fi be branded and marketed as a service offered by the City of Hamilton and promoted in all suitable City promotional publications, at a one-time cost not to exceed \$3,000 for marketing and branding, to be funded from existing Capital.

Whether the City continue using the “Wireless Hamilton” branding or establish a new brand for public facing Wi-Fi, it is important to let the public know this service is available and being provided by the City for their use. The initial phase of Wireless Hamilton did not include funding for branding and usage suffered because of it. Some suggestions for a brand are “Hamilton Connects” or “Connected Hamilton”.

Staff are also investigating a program similar to “Keep Hamilton Blooming” which would be marketed to potential sponsors as “Keep Hamilton Connected”. Staff will investigate the feasibility and interest in this type of initiative which would provide promotional signage to a sponsor in a specific facility while off-setting some of the operational costs.

ALTERNATIVES FOR CONSIDERATION

(include Financial, Staffing, Legal and Policy Implications and pros and cons for each alternative)

An alternative to Recommendations (a) and (b) would be to address these facilities, one at a time, either when a capital project is involved for upgrading a facility or when a specific business need arises and funding is available. This alternative means that some recreation facilities may never be addressed with public facing Wi-Fi while other neighbourhoods are being addressed. This is not being recommended as other comparator municipalities are providing public facing Wi-Fi in their recreation facilities and not providing Wi-Fi may have a negative impact on perception of the city as a technology enabler and on public participation in programs if a similar service is not offered.

Financial: The costs associated with this alternative would depend on the facilities being addressed. Appendix B and C of report FCS12033 provide the cost for an individual facility.

Staffing: At some point with growth in the Wi-Fi infrastructure an additional staff resource would be required. To address the 26 recreation centres would require an additional .25 FTE in the Information Services Division.

Legal: N/A

An alternative to recommendation (c) would be that one or two highly utilized City Parks be investigated further to establish exact costs for the implementation and maintenance of public facing Wi-Fi in outdoor spaces. A report would be brought

back to the Audit, Finance and Administration Committee with detailed costs and pilot criteria allowing Council to determine if staff would proceed with a pilot implementation in City wide parks or other public gathering places.

Financial: To provide exact financial information on a specific park additional effort would be required to determine coverage area, number of access points required, availability of a fibre connection, and technology solution. Some estimates are provided in Appendix F of report FCS13033.

Staffing: At some point with growth in the Wi-Fi infrastructure an additional staff resource would be required. An increase in staff compliment would not be required to pilot public facing Wi-Fi in a couple of City Wide Parks.

Legal: N/A

ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN:

Strategic Priority #1

A Prosperous & Healthy Community

WE enhance our image, economy and well-being by demonstrating that Hamilton is a great place to live, work, play and learn.

Strategic Objective

1.2 Continue to prioritize capital infrastructure projects to support managed growth and optimize community benefit.

1.5 Support the development and implementation of neighbourhood and City wide strategies that will improve the health and well-being of residents.

Strategic Priority #2

Valued & Sustainable Services

WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.

Strategic Objective

2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.

2.2 Improve the City's approach to engaging and informing citizens and stakeholders.

2.3 Enhance customer service satisfaction.

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APPENDICES / SCHEDULES

- Appendix A – Status of Wi-Fi in other municipalities
- Appendix B – Detailed costs for public facing Wi-Fi in Recreation facilities
- Appendix C – Detailed cost for public facing Wi-Fi in Municipal Service Centres
- Appendix D – Map of Parks designated as City Wide Parks
- Appendix E – List of Parks designated as City Wide Parks and Fibre availability
- Appendix F – Detailed Costs for City Wide Parks
- Appendix G – Existing municipal locations with public facing Wi-Fi
- Appendix H – Public Wireless Acceptable Use Policy

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Status of Wi-Fi in other municipalities			
Municipality	Municipality Funded	Privately Funded	Notes
London	Public Wi-Fi in locations such as City Hall, Convention Centre and libraries.	A not for profit group London Area Wireless Network (LAWN) have a number of sites in the downtown core providing free public Wi-Fi. Funded by the Downtown London Business Association with local business providing the internet backbone. londonlawn.ca	So popular is the not for profit network that within an hour after the first connection was made, 19 people had already used the service, before board members on a task force charged with looking at the issue even knew the installation had been complete. Averaging close to 2,000 individual users per week. Over 3,400 unique users each month.
Mississauga	Public Wi-Fi in all arenas, recreation centres, libraries and administration buildings. Some Parks also have public Wi-Fi		
Quebec City	Public Wi-Fi available in all libraries.	Zone d'Access Public (ZAP) not for profit group that provides extensive Wi-Fi coverage in public spaces.	Some funding provided by University of Sherbrooke and Bishops University. Businesses pay for the hardware and make their internet available to ZAP. Business pay \$5.00 per month for support. ZAP Quebec has created 45 free wireless access points serving more than 50,000 users. Similar to Wireless Toronto
Edmonton	Public Wi-Fi in recreation centres, arenas, libraries, city hall and some public spaces.		
Calgary	RFP to be released to have an internet provide free Wi-Fi in city facilities. The city will pay this private company for their services and make it available to the public at no cost. Currently public Wi-Fi in all libraries.	For profit group providing Wi-Fi in public spaces	Shaw cable is building an infrastructure in public spaces available at no cost for Shaw customers. Others will incur a fee.
Vancouver	Public Wi-Fi in recreation centres and libraries. Also in council chambers and the media room in city hall.	Shaw cable will be providing free public Wi-Fi to Shaw customers. Other will incur a fee.	
Ottawa	Public Wi-Fi in libraries, however,	Federal Capital Commission	

Status of Wi-Fi in other municipalities			
Municipality	Municipality Funded	Privately Funded	Notes
	access requires user to have a library card.	has created public Wi-Fi in the downtown core. Restricted to 15 minutes of use – meant for access to a tourism application. Ottawa-Gatineau Wi-Fi is a not for profit organization creating Wi-Fi coverage areas for public use.	
Toronto	Public Wi-Fi in libraries	OneZone provides Wi-Fi for a fee in the downtown core Wireless Toronto is a not-for profit organization offering free Wi-Fi in parks and large public spaces.	OneZone was originally owned by Toronto Hydro and now owned by Cogeco. Wireless Toronto relies on donated bandwidth from local businesses similar to London.
Greater Sudbury	Public Wi-Fi in all arenas, recreation centres, libraries and administration buildings.		
Winnipeg	Public Wi-Fi in Libraries and one pool.	Shaw Cable is providing free Wi-Fi to all customers in recreation centres, arenas and libraries	
Montreal	Public Wi-Fi available in all libraries.	Ile Sans Fil (Wireless Islands) not for profit group that provides extensive Wi-Fi coverage in public spaces. Old Port Corporation provides free Wi-Fi in the promenade. Bell provides 30 minutes of free public Wi-Fi in the downtown core.	Some municipal funding for staff to manager the volunteers. Over 250 Hot Spots in public places under branding of Ile Sans Fil
Waterloo	Public Wi-Fi Internet service is available at 18 City of Waterloo facilities and public spaces including a cemetery. Further expansion is planned for the		Waterloo had public Wi-Fi service offered for a fee by Atria Networks. This was cancelled when Rogers purchased Atria Networks. Atria Networks provided free internet in public spaces.

Status of Wi-Fi in other municipalities			
Municipality	Municipality Funded	Privately Funded	Notes
	balance of the recreation centres and arenas. All libraries also provide free public Wi-Fi.		
Moncton	Public Wi-Fi in large portion of the down core plus large public spaces/parks. Also available in all libraries, and arena/community centres. Moncton provides Wi-Fi on their buses also.		This is the only City I could find that provides Wi-Fi on their buses.
Oakville	Public Wi-Fi in all arenas, recreation centres, libraries and administration buildings. Some Parks also have public Wi-Fi		
Burlington	Public Wi-Fi in all arenas, recreation centres, libraries and administration buildings.		In 2006 and 2007, Burlington was named one of a select few Smart21 communities worldwide by the Intelligent Community Forum, a non-profit think tank that focuses on job creation and economic development in the broadband economy. Using Wi-Fi, Burlington can also enhance city services such as field inspections, bylaw enforcement and emergency response.
St. Catharines	Public Wi-Fi in all libraries		
Vaughan	Public Wi-Fi in all libraries.		
Brantford	Public Wi-Fi in 2 Recreation Centres/Arenas. The balance is planned for 2013.		

DETAILED COSTS FOR PUBLIC FACING Wi-Fi in PROPOSED RECREATION CENTRES, ARENAS, AND COMMUNITY CENTRES

Location	# of Access Points**	Hardware Cost	Installation Cost	One Time Cost	Planned Year for Installation
Ancaster Rotary Center	Public facing Wi-Fi already in place				
Ancaster Seniors Achievement Centre	2	\$2,200.00	\$600.00	\$2,800.00	2014
Ancaster Aquatic Centre	5	\$5,500.00	\$1,500.00	\$7,000.00	2015
Beasley Recreation Centre	Public facing Wi-Fi already in place				
Bennetto Recreation Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Beverly Arena	3	\$3,300.00	\$900.00	\$4,200.00	2016
Brewster Pool	2	*Further review required			
Carlisle Arena	3	\$3,300.00	\$900.00	\$4,200.00	2016
Central Memorial Recreation Centre	4	\$4,400.00	\$1,200.00	\$5,600.00	2014
Chedoke Twinpad Arena	6	\$6,600.00	\$1,800.00	\$8,400.00	2015
Coronation Arena	3	\$3,300.00	\$900.00	\$4,200.00	2016
Dalewood Recreation Centre	3	*Further review required			
Dundas Arena	3	* Further review required.			
Dundas Community Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Dundas Pool	3	\$3,300.00	\$900.00	\$4,200.00	2015
Eastwood Arena	3	*Further review required			
Glanbrook Arena	3	\$3,300.00	\$900.00	\$4,200.00	2015
Hill Park Recreation Centre	4	\$4,400.00	\$1,200.00	\$5,600.00	2015
Huntington Park Recreation Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Inch Park Arena	3	\$3,300.00	\$900.00	\$4,200.00	2015
Jimmy Thompson Pool	3	*Further review required			
Lawfield Arena	3	\$3,300.00	\$900.00	\$4,200.00	2016
Mountain Arena & Skating Centre	6	\$6,600.00	\$1,800.00	\$8,400.00	2015
Pinky Lewis Recreation Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
North Wentworth Arena	Public facing Wi-Fi already in place				

Location	# of Access Points**	Hardware Cost	Installation Cost	One Time Cost	Planned Year for Installation
Olympic Ice Rink	3	\$3,300.00	\$900.00	\$4,200.00	2016
Parkdale Arena	3	\$3,300.00	\$900.00	\$4,200.00	2015
Riverdale Recreation Centre	Public facing Wi-Fi already in place				
Rosedale Arena	Public facing Wi-Fi already in place				
Ryerson Recreation Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Sackville Seniors Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Saltfleet Arena	3	\$3,300.00	\$900.00	\$4,200.00	2016
Stoney Creek Arena	6	\$6,600.00	\$1,800.00	\$8,400.00	2016
Scott Park Arena	3	*Further review required			
Sir Allen MacNab Recreation Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Sir Wilfrid Laurier Recreation Centre	Public facing Wi-Fi already in place				
Sir Winston Churchill Recreation Centre	3	\$3,300.00	\$900.00	\$4,200.00	2014
Stoney Creek Recreation Centre	Public facing Wi-Fi already in place				
Westmount Recreation Centre	Public facing Wi-Fi already in place				
Valley Park Community Centre and Arena	5	\$5,500.00	\$1,500.00	\$7,000.00	2014
Totals	109	\$101,200 (Hardware)	\$27,600 (installation)	\$128,800 (Total Cost)	
2014 cost		\$38,500	\$10,500	\$49,000	
2015 cost		\$36,300	\$9,900	\$46,200	
2016 cost		\$26,400	\$7,200	\$33,600	

Total Expense to implement public facing Wi-Fi in above listed Recreation Centres, Arenas and Community Centres	\$128,800
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*The facilities that indicate 'Further review required' need further discussion. These are the facilities that will be having future capital projects or their future is unclear. For example Scott Park Arena may be removed from our inventory if the school board builds their new secondary school on that site.

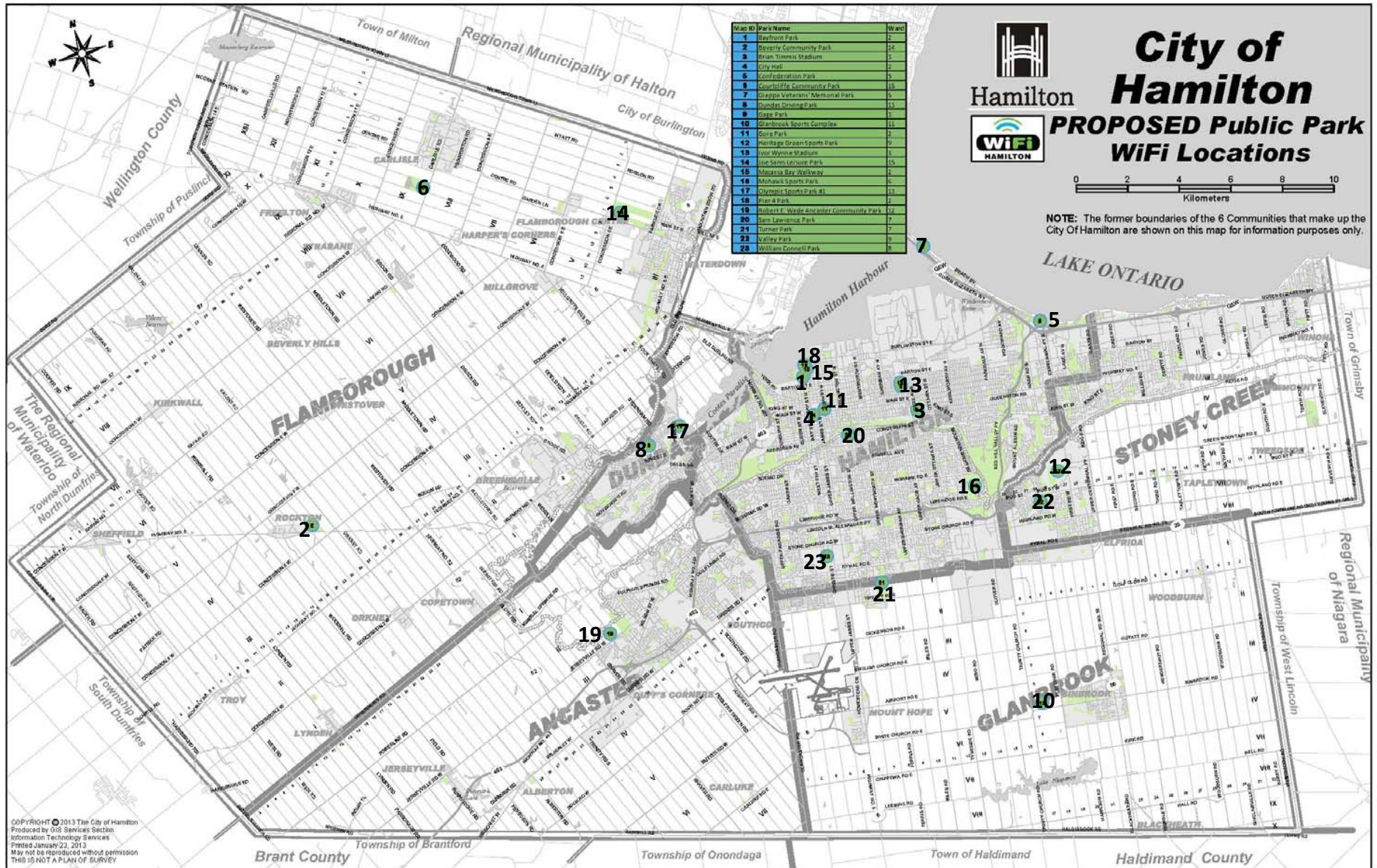
**Each Access Point covers a 50 foot radius and provides appropriate access speed for approximately 25 people.

**DETAILED COSTS FOR PUBLIC FACING WI-FI
IN MUNICIPAL SERVICE CENTRES**

Location	# of Access Points	Hardware Cost	Installation Cost	One Time Cost	Annual Data Backhaul Cost
Ancaster	1	\$1,100	\$300	\$1,400	\$0.00
Dundas	1	\$1,100	\$300	\$1,400	\$0.00
Flamborough	1	\$1,100	\$300	\$1,400	\$0.00
Glanbrook	1	\$1,100	\$300	\$1,400	\$0.00
Stoney Creek	1	\$1,100	\$300	\$1,400	\$0.00
Totals	5	\$5,500	\$1,500	\$7,000	\$0.00

Total cost to provide public facing Wi-Fi to Municipal Service Centres	\$7,000
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Parks Designated as City Parks (Regional Parks)



CITY WIDE PARKS & FIBRE AVAILABILITY

#	City Wide Park	Fibre Availability
1	Bayfront Park	Exists at Children's Play area
2	Beverly Community Park	No fibre in place
3	Brian Timmins Stadium	No fibre in place
4	City Hall	Fibre exists inside City Hall
5	Confederation Park	No fibre in place
6	Courtcliffe Community Park	No fibre in place
7	Dieppe Veterans' Memorial Park	No fibre in place
8	Dundas Driving Park #1	No fibre in place
9	Gage Park	Exist at Greenhouse
10	Glanbrook Sports Complex	No fibre in place
11	Gore Park	No fibre in place
12	Heritage Green Sports Park	No fibre in place
13	Ivor Wynne Stadium	No fibre in place
14	Joe Sams Leisure Park	No fibre in place
15	Macassa Bay Walkway	No fibre in place
16	Mohawk Sports Park	No fibre in place
17	Olympic Sports Park #1 (Dundas)	Exists in Arena
18	Pier 4 Park	No fibre in place
19	Robert E. Wade Ancaster Community Park	No fibre in place
20	Sam Lawrence Park	No fibre in place
21	Turner Park	Exists at Works Yard and Skate Park
22	Valley Park	Exists in Arena
23	William Connell Park	No fibre in place

ESTIMATED COSTS FOR CITY WIDE PARKS

City Wide Park	Installation Type	Installation Cost	Hardware Cost	Total One-Time Cost	Annual Data Back Haul Cost
Turner Park	Single Access Point* (fibre at skate park)	\$1,000	\$4,000	\$5,000	\$4,200
Turner Park	Full Park Coverage (10 Access Points)	\$10,000	\$40,000	\$50,000	\$4,200
Gage Park	Single Access Point* (fibre at greenhouse)	\$1,000	\$4,000	\$5,000	\$4,200
Gage Park	Full Park Coverage (17 Access Points)	\$17,000	\$68,000	\$85,000	\$4,200
Valley Park	Single Access Point* (fibre at Arena)	\$1,000	\$4,000	\$5,000	\$4,200
Valley Park	Full Park Coverage (9 Access Points)	\$9,000	\$36,000	\$45,000	\$4,200
Olympic Park	Single Access Point* (Fibre at the Arena)	\$1,000	\$4,000	\$5,000	\$4,200
Olympic Park	Full Park Coverage (4 Access Points)	\$4,000	\$16,000	\$20,000	\$4,200
Confederation Park**	Single Access Point (no fibre exists)	\$60,000**	\$4,000	\$64,000	\$4,200
Confederation Park**	Full Park Coverage (11 Access Points)	\$71,000	\$11,000	\$82,000	\$4,200

*A Single access point covers a 150 metre radius from the access point.

**representative of the installation cost where a fibre connection is not currently available

EXISTING CITY OF HAMILTON LOCATIONS WITH WI-FI

To meet the needs of business units the City currently has implemented public facing Wi-Fi in the following city facilities:

- North Wentworth Twin Pad Arena
- Stoney Creek Recreation Centre
- Westmount Recreation Centre
- Morgan Firestone Arena
- Beasley Recreation Centre
- Wentworth Lodge
- Macassa Lodge
- Dundas Town Hall
- Facility Services – 330 Wentworth North
- Traffic Operations
- Standard Life Boardrooms
- Lister Building
- MacNab Street Transit Terminal*
- Hamilton Street Railway Upper James Terminal*
- All Fire Stations*
- City Hall – Lobby, Council Chambers, Board Rooms
- HECFI Facilities
- Riverdale Recreation Centre **
- Sir Wilfrid Laurier Recreation Centre **
- Rosedale Arena and Senior Centre **

*Wi-Fi technology was installed in of these locations to improve efficiency and ensure data was captured at the first possible opportunity. For Transit and Hamilton Emergency Services, when the vehicles enter the terminal or station, information is downloaded from the vehicle to a central database, eliminating the need for manual data entry. For Transit, the system also downloads information from the Presto fare collection service. At the same time, information is uploaded to the equipment on the vehicles with no personal intervention. This includes software upgrades, security patches etc. for the computers on board.

** Currently underway, will be operational in March 2013

Information Services Division staff currently support the Wi-Fi technology in all facilities listed above as well as the Wi-Fi infrastructure for 21 branches of the Hamilton Public Library providing public facing Wi-Fi.

Public Wireless Acceptable Use Policy

Terms of Use of Wireless Network and Disclaimer

The City provides wireless network access and use as a privilege, not a right. **By logging on to the City of Hamilton's wireless network you are agreeing to be bound by the current version of these Terms of Use. Please read these Terms of Use carefully. You will be asked to accept or reject them before you are permitted access to this wireless network. Your access or use of the network is conditional upon your accepting these Terms of Use.** It is your responsibility to review the Terms of Use for any changes.

Any person who accesses or uses the wireless network is personally responsible and liable for his or her own actions and use. **ACCESS AND USE OF THE INTERNET AND ALL INTERNET SERVICES SUCH AS EMAIL SHALL BE AT YOUR OWN RISK.**

Your access to the wireless service is at the complete discretion of the City of Hamilton, and your access to the Service may be blocked, suspended, or terminated at any time for any reason including, but not limited to, violation of these Terms of Use or actions that may lead to liability for the City of Hamilton. The City of Hamilton may revise these Terms of Use at any time.

Scope

This policy applies to all wireless network devices utilizing the City of Hamilton's IP address range (including private IP address space) and all network users of such devices. Printer access is not directly available via the wireless network. City employee may access printing services by connecting to the internal City network.

The Network Support section within the City's Information Technology Services is responsible for the configuration and maintenance of the wireless network infrastructure, up to and including wireless access points, authentication and security provisions for wireless access.

The City is not responsible for supporting connections to the wireless network made by the Public. Technical support (staff assistance) will not be provided for non-City standard equipment.

Where the City has tried to ensure wireless access is available in the area designated users may encounter occasional "dead zones" possibly as a result of a weak signal or too many users connected.

No Warrantee: THE SERVICE AND ANY PRODUCTS OR SERVICES PROVIDED ON OR IN CONNECTION WITH THE SERVICE ARE PROVIDED ON AN "AS IS", "AS AVAILABLE" BASIS WITHOUT WARRANTIES OF ANY KIND. ALL WARRANTIES, CONDITIONS, REPRESENTATIONS, INDEMNITIES AND GUARANTEES WITH RESPECT TO THE CONTENT OR SERVICE AND THE OPERATION, CAPACITY, SPEED, SECURITY, FUNCTIONALITY, RELIABILITY, QUALIFICATIONS, OR CAPABILITIES OF THE SERVICES, GOODS OR PERSONNEL RESOURCES PROVIDED HEREUNDER, WHETHER EXPRESS OR IMPLIED, ARISING BY LAW, CUSTOM, PRIOR ORAL OR WRITTEN STATEMENTS BY The City of Hamilton, OR OTHERWISE (INCLUDING, BUT NOT LIMITED TO ANY WARRANTY OF SATISFACTORY QUALITY, MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT) ARE HEREBY OVERRIDDEN, EXCLUDED AND DISCLAIMED. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OF CERTAIN WARRANTIES, SO THE ABOVE EXCLUSIONS MAY NOT APPLY TO YOU.

Limitation of Liability: UNDER NO CIRCUMSTANCES SHALL EITHER THE CITY OF HAMILTON OR ITS SUPPLIERS BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, OR SPECIAL DAMAGES OF ANY NATURE, OR FOR ANY LOST REVENUES, LOST PROFITS OR LOSS OF

BUSINESS REGARDLESS OF THE CAUSE OF ACTION, AND WHETHER OR NOT FORESEEABLE. IN NO EVENT SHALL THE CITY OF HAMILTON OR ITS SUPPLIERS' CUMULATIVE LIABILITY EXCEED THE FEES PAID BY CUSTOMER THROUGH THE MONTH IN WHICH THE CLAIM AROSE EVEN IF THE CITY OF HAMILTON IS INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. In addition, the City of Hamilton and its suppliers will not be responsible for any damages, losses, expenses or costs that Customer suffers AS A RESULT OF: (i) any interruption or failure of the Services OR Products; (ii) the downloading or use of any information, data or materials obtained via the Services OR FROM THE Internet; (iii) any failure to complete a transaction on the Internet OR USING THE SERVICES or ANY loss of data due to delays, non-deliveries, mis-deliveries, or Service interruptions; (iv) ANYTHING BEYOND THE REASONABLE CONTROL OF THE CITY OF HAMILTON, INCLUDING BUT NOT LIMITED TO any interruption or failure of a third party's services, software, equipment or network; (v) any unauthorized use or modification of Services or Products or combination of Services or Products with other services, products or equipment; (VI) viruses, worms, trojan horses, or other undesirable data or software; or (vii) the attempt by unauthorized users (e.g., hackers) to obtain access to Customer's data, web-site, computers, or networks.

Indemnity: You agree to hold harmless and indemnify the City of Hamilton, their representatives, employees, agents, affiliates, suppliers and licensors from and against any third party claim arising from or in any way related to your use of the City of Hamilton's wireless network, including any liability or expense arising from all claims, losses, damages (actual and consequential), suits, judgments, litigation costs and attorneys' fees, of every kind and nature.

Compatibility: Each user is responsible for ensuring the proper equipment is setup for wireless connectivity. Access to the City's wireless network requires a wireless access card supporting IEEE Wi-Fi standard 802.11b or 802.11g.

The City is not responsible for and cannot guarantee use of the wireless network with each user's equipment.

Access and Authentication: All City employees will be required to provide authentication credentials (username and password) when using the wireless network to access internal network services. Access to Internet services using the wireless network requires you to accept these Terms of Use however does not require a username and password be provided.

Privacy: Messages sent over the Internet may not be private. Encryption technology is available to help secure communications but is the responsibility of the user to install and configure the software if required. The City accepts no liability for the user's equipment or network falling prey to 'hackers' or interception of communications. The City does not recommend users of any wireless network transmit any sensitive personal information, passwords, or credit card information over the wireless network.

Subject to privacy laws the City is authorized to collect information about you and your use of the wireless network. The information collected will be used to determine usage patterns and other associated planning activities and will not be shared with any other organization without your prior informed permission.

Fees, Charges and Payment: There is no fee or charge associated with access to the City of Hamilton's wireless network, therefore there is no guarantees, warranties or service level assurance associated with the wireless network.

Internet Content May Be Unreliable, Offensive, etc.: The Internet offers access to a wealth of material that can be personally and professionally enriching. Be warned, however, that it is an unregulated environment containing information and opinions that range in scope from reliable and authoritative to harmful, controversial, extremely offensive or inflammatory. Some information found on the Internet may not be accurate, complete, or current and may be subject to change without notice. Reliance upon any material on the Internet shall be at your sole risk: all such material should be verified independently before you use or rely on it. The City is not responsible or liable for the content or quality of material retrieved and makes no warranty, express or implied, as to any material found on the Internet. In addition, the City shall not be held responsible or liable for server, hardware, or software settings, Internet transmission, monitor settings or website design and construction that produce incomplete or inaccurate data, material and information that maybe received and/or displayed on your Internet browser.

Parents Responsible for Supervising Their Minor Children's Internet Use: The City recognizes the concerns about the potential harm caused to minor children when they are exposed to criminal, obscene or hate material on the Internet. However, the supervision of minor children using the Internet is the responsibility of their parents or guardians. Parents and guardians are expected to be, and shall be responsible for providing guidance and control of a minor child's access to and use of the wireless network, email and the Internet. Any restriction or prohibition of a minor's access and use of the wireless network, email or Internet that is beyond the scope of these Terms of Use shall be the responsibility and liability of the minor child's parent or guardian.

Internet and Wireless Network Are Not Secure: You are warned that (a) the Internet is not a secure medium and third parties may be able to obtain information about user activities; and (b) the wireless network is not secure and other users may be able to gain unauthorized access to, and contaminate, interfere with or otherwise harm your hardware or software. You shall accept responsibility for ensuring the use of current operating system patches, anti-virus and anti-spy-ware products, computer firewall, and other protective hardware and software while accessing and using the wireless network. The City shall not be responsible or liable for the security or privacy of your access and use of the wireless network or for any unauthorized access and/or resultant harm to your hardware or software.

Third Party Sites: References, links, hyperlinks and advertising contained on any City, or third party website are not approval, endorsements, or support of either the City for the third party or for the third party's goods and/or services. The City shall not be responsible or liable nor is any responsibility or liability assumed for incompatibility, loss of privacy, invasion of privacy, privacy disputes, non-suitability, viruses, loss of service, or any other problem of any kind arising from or in connection with the third party, the third party's website or the third party's goods and/or services.

Compliance with Laws: Internet users are subject to federal, provincial and municipal laws regulating Internet use including, but not limited to, the provisions of the Criminal Code regarding obscenity, child pornography and incitement of hate and sedition. Internet users are also subject to decisions, orders, policies or other requirements of the Canadian Radio-television and Telecommunication Commission (CRTC) or any other regulatory body with jurisdiction over wireless Internet service.

The copying or distribution of material found on the Internet may infringe on copyright or other intellectual property rights and the City shall not be responsible or liable for such activities. Use of the wireless network for illegal or unethical purposes is prohibited and may result in civil and/or criminal prosecution. By logging on to the wireless network, you agree to comply with all laws and regulations applicable to you, including but not limited to, the laws already referred to in this paragraph and all confidentiality, privacy and security laws.

Prohibited activities: Users are prohibited from, without limitation;

- Misrepresenting themselves as another user including the forging of message or packet headers whether in whole or in part.
- Attempting to modify or gain access to files, passwords, or data belonging to others.
- Attempting to collect or maintain any information about other users on the City's network, including wireless users.
- Damaging or altering City, or other user's data, databases, information, hardware or software.
- Interfering with network integrity or security including modifying, adapting translating or reverse engineering any portion of the City of Hamilton's network.
- Willfully disrupting network services of this or any other network.
- Gaining unlawful access to any site, network or host,
- Posting unlawful content, downloading software, applications, files, pictures, videos, music including viruses.
- Distributing of any Internet viruses, worms, ping, flooding, mail bombing, denial of service attacks, defects, Trojan horses or other items of a destructive nature
- Accessing illegally or without authorization computers, accounts, equipment or networks belonging to the City of Hamilton or another party, or attempting to penetrate security measures of another system. This includes any activity that may be used as a precursor to an

attempted system penetration, including but not limited to port scans, stealth scans or other information gathering activity.

- Using this wireless service for any unlawful, harassing, abusive, criminal or fraudulent purpose. We have the right to monitor, intercept and disclose any transmissions over or using our facilities, and to provide user information, or use records, and other related information under certain circumstances (for example, in response to lawful process, orders, subpoenas, or warrants, or to protect our rights, users or property).
- Sending spam or bulk or threatening emails or to hack websites, networks (including wireless), servers or computers or other devices.
- Contaminating any other computer, device, hardware or software with viruses, worms, spyware, phishing, or in any other way.
- Engaging in any activity that infringes or misappropriates the intellectual property, publicity, privacy or other proprietary rights of others, including patents, copyrights, trademarks, service marks, trade secrets, or any other proprietary right of any third party, or that is defamatory, objectionable, unlawful or promotes or encourages illegal activity.
- Transferring technology, software, or other materials in violation of applicable export laws and regulations.
- Reselling any aspect of the wireless service provided by the City of Hamilton.
- Behaving disruptively or threatening to others.
- Conducting yourself inappropriately on the Internet.

Obey Rules: You and all other Internet users must comply with these Terms of Use and any other rules posted in the City regarding use of this network, including rules about time restrictions (where applicable). The City reserves the right, at its sole and absolute discretion, to terminate or drop or disconnect an Internet session at any time and for any reason whatsoever. Misuse of the Internet and/or misuse of your access and use of the network, including, but not limited to, your failing to comply with these Terms of Use, may result in any or all of the following: temporary or permanent expulsion from the facility, loss of network privileges, and/or civil and/or criminal prosecution.

All users are expected to use the City of Hamilton's wireless network in a legal and responsible manner.

These Terms of Use constitute the entire agreement between the parties and supersedes and replaces all prior understandings or agreements, written or oral, regarding the City of Hamilton's wireless service. Any waiver of any provision of the Terms of Use will be effective only if in writing and signed by the City of Hamilton.