



City of Richmond

Report to Committee

To: Community Safety Committee
From: John McGowan - Fire Chief
 Renny Nessel - OIC, RCMP Detachment

Date: August 19, 2016
File: 99-Fire Rescue/2015-
 Vol 01

Re: Voluntary Building Access Program

Staff Recommendation

That a Voluntary Building Access Program, using an electronic signal for building access (Option 2) as described in the staff report titled "Voluntary Building Access Program" dated August 19, 2016, from the Fire Chief and OIC be approved.

John McGowan
 Fire Chief
 (604-303-2734)

Renny Nessel
 OIC, Richmond RCMP Detachment
 (604-278-1212)

Att. 1

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Law	<input checked="" type="checkbox"/>	
RCMP	<input checked="" type="checkbox"/>	
Information Technology	<input checked="" type="checkbox"/>	
Risk Management	<input checked="" type="checkbox"/>	
Building Approvals	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

This report recommends to Council a Voluntary Building Access Program to reduce delays that are encountered by Richmond Fire-Rescue (RFR) and Richmond RCMP when responding to calls for service in secure properties.

This report supports Council's 2014-2018 Term Goal #1 A Safe Community:

Maintain emphasis on community safety to ensure Richmond continues to be a safe community.

- 1.2. *Program and service enhancements that improve community safety services in the City.*
- 1.4. *Effective interagency relationships and partnerships.*

Background

The goal of emergency responders is to provide effective and efficient service to the citizens of Richmond. Entry into secure buildings is becoming more problematic with increases in the number of secure buildings that do not have on location building managers. The delays with accessing buildings and limiting the movement of emergency responders within the building, creates a safety concern for the public and first responders when responding to emergencies in buildings.

RFR and Richmond RCMP frequently encounter delays when entering buildings in response to an emergency. When the fire alarm system is not activated there are no building safety systems that automatically activate to unlock doors, or notify the building manager. Currently, when RFR and RCMP respond to a medical or police emergency in a secure building, first responders use the intercom to contact the unit or suite requesting assistance, if there is no answer – first responders call multiple units until another resident in the building answers and unlocks the front doors.

Richmond RCMP requires rapid entry into buildings to respond to calls for service where the health and safety of the public is at risk. Often the entry time is the difference between a successful resolution and an unsuccessful one. At times, Richmond RCMP responds to buildings for 911 calls, where a quick, tactically silent approach is required for a positive response. Without free access to move around inside a building, situations may arise where Richmond RCMP cannot gain access to the required areas. This may result in innocent people being hurt, hostages being taken, or excessive property damage.

Without easy access, civilians may become involved in providing access, or entry ways may have to be breached. The cost of these breaches is borne by the landowner. The physical breach presents an increased risk to public and first responder's safety. For these priority calls, a matter of minutes can mean the difference in saving lives and resolving incidents.

Since the early 1980s across Canada and the United States, lockbox programs have been an integral part of emergency response plans. In most cases landowners register for the lockbox program voluntarily.

A lockbox is a small, wall-mounted safe that contains building key(s), access cards or fobs to allow first responders to move freely throughout the building in emergency situations, but no master suite keys are included. To access the buildings quickly; minimize delays in emergency services; mitigate forced entry damage and protect emergency responders and citizens from injury, local first responders would have master keys or electronic access cards to all lockboxes in their response area, so the first responders can quickly enter a building without having to force entry.

Historically, Richmond had a lockbox program with cast aluminum surface mounted boxes that were unsecure. In the 1990s the lockboxes were changed to a steel tube which was cored into concrete and mounted flush to the wall, which provided a more secure system.

In 2002, the City of Richmond along with a number of other lower mainland municipalities, experienced security breaches of their lockbox systems where keys were removed and buildings entered, illegally. Given this risk, the City decommissioned its lockbox program. Currently, there are 12 local Fire Departments that are operating a lockbox program using varying types of key systems.

Analysis

Buildings through their construction and design are becoming increasingly more secure. The demand for security management solutions within buildings is a primary consideration as organizational and personal threats or risks are increasing. Access control systems may include the following items; door controllers, access cards and tags (including Smart Cards and proximity cards) and biometric technologies, such as fingerprint door locks. All apartment buildings and commercial properties whether rental or strata owned and properties that have a fire alarm system or an automatic fire sprinkler system, would be accepted as part into this building access program. Communication of the program would be delivered directly to property managements companies, property owners and would be made available through the City website. As the focus of the program is on safety and security of buildings, it is estimated that there would be approximately 50% enrollment in the program from property managers and owners.

There are two types of lockboxes for the Volunteer Building Access Program:

Type 1: Physical key to access all lockboxes in the City (not recommended);

This system uses a hardened box that is securely mounted on an external wall or a cylinder that is cored and mounted flush on an external wall. Access to all lockboxes in the City is provided through a key that is obtained from an accredited locksmith provider. The specialized key is kept securely on fire trucks for immediate access when required. The Vancouver Fire Department uses a key while the Saanich Fire Department uses a combination of keys and access cards.

Pros:

A key to access a lockbox does not require electricity or battery power to operate and there are no ongoing maintenance costs for owners associated with this program.

Cons:

A key is a single point of failure. If the key to a lockbox program is lost, stolen or copied, an unauthorized person could gain access to any building that had a lockbox within the City. Many lockbox programs report problems with keys going missing or lockboxes being compromised which often leads to the lockbox cylinders being re-keyed with the cost borne by the City.

Type 2: Electronic signal to access the lockbox (Recommended);

This system uses a hardened box that is securely mounted on an external wall or a cylinder that is cored and mounted flush on an external wall. A smartphone with an installed electronic key app and Bluetooth technology communicates with the lockbox to unlock and allow access the building. The Calgary Fire Department use a web based database that communicates to fire crews on scene through their smartphone app to unlock a lockbox door.

Electronic Lockbox Program framework;

When a building owner volunteers to be part of the Building Access Program, the owner would contact a locksmith or other company to procure a lockbox, install and conduct regular maintenance inspections on the lockboxes as per the Building Access Program Guideline (Attachment 1).

Pros:

The electronic lockbox would be Underwriter Laboratories (UL) certified for attack resistance for anti-theft devices and would also store records of access and record usage. The building owner would arrange and manage the installation and maintenance for the lockbox.

First responders, using a smartphone, would access a lockbox using a unique PIN code through an electronic key app. Unlike a key, this app leaves a comprehensive audit trail to verify site access. Cellular coverage is not required at a site to open lockboxes. Smartphones can be immediately disabled remotely if missing, lost or stolen and re-activated if found.

A record of the lockbox entry is uploaded to a secure, web based database by the smart phone app which transmits activity data to the online server. The database has a number of reporting features with a choice of options including automatic, daily, weekly or monthly delivery.

An example of the additional benefits of this type of system was demonstrated during the 2013 Calgary floods. The downtown core of Calgary was evacuated due to flooding; high-rise buildings were without power and generator power was used to protect the buildings from water. Buildings were in an unsafe state with the electrical and gas systems unprotected. The Calgary Fire Department engaged several contracting professionals and activated the smartphone electronic key app to allow access to enter specific buildings. This action allowed the contractors to keep the building systems safely

running (such as re-fuelling electrical generators, to keep sump pumps operational in parking garages) or to shut off all unsafe electrical and gas services. As the incident was mitigated and contractors were de-mobilized, their electronic keys were disabled and the database had records of all lockbox building entries for each contractor.

Cons:

Building owners would incur operating costs for an approved contractor/accredited locksmith to provide lockbox and key maintenance, twice per year.

Options:

Option 1: Status Quo

First responders would continue to make every effort to make entry into a secure building as quickly as possible (as required in City Bylaw No. 8306).

First Responders will continue to experience delays in entry to secure buildings and these delays will impact effectiveness in emergency operations. As security systems become more sophisticated, many secure buildings limit movement between floors, which creates operational and safety hazards to both RFR and Richmond RCMP. There may be additional costs to property owners for any damage that may occur from first responders gaining access to the building in an emergency.

Option 2: Implementation of a Voluntary Building Access Program. (Recommended)

Building owners would voluntarily enrol in the Building Access Program and arrange for the installation of a lockbox that has electronic access. The building owner would also manage the lockbox, keys, access cards and fobs as set out in the Building Access Program Guideline (*Attachment 1*).

Pros:

- Increase in public and responder safety
- Increase in responder effectiveness and efficiency
- System tracks access to the lockbox
- System has reporting capabilities
- Limit damage to secure building through emergency responder forcible entry procedures

Cons:

- Financial impact to building owners

The cost to each property owner would be approximately \$700 to \$850 for the lockbox and installation of the lockbox would be approximately \$150 to \$300 per building, thus the total cost to purchase and install the lockbox is \$850 to \$1,150. The annual cost for the property owner would be approximately \$150 to \$250 per year to conduct maintenance inspections on the lockbox.

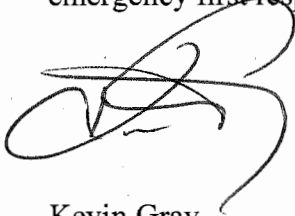
Financial Impact

RFR currently deploys smartphones on all front line emergency response teams and will not require any additional equipment to operate the program. Richmond RCMP does not currently use smartphones with the ability to access external networks. The total financial impact of \$6,000 for the RCMP would include the capital purchase of five (5) new City smartphone devices at a total cost of \$2,000 and the related data plan at \$4,000 per year. These costs can be covered within the existing budget.

Conclusion

The voluntary Building Access Program will provide RFR and Richmond RCMP with the tools to more effectively and efficiently gain access to the interior of secure buildings with minimal delays through the provision of a rapid entry system for all emergency responses.

This program would provide greater safety to the citizens of the City of Richmond and emergency first responders.



Kevin Gray
Deputy Fire Chief
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KG:mt

City of Richmond
Voluntary Building Access Program Guideline

Electronic Rapid Entry System

Lockbox devices are to be Underwriter Laboratories (UL) certified to resist attack and vandalism, and all devices are to be programmed with a system code which is accessible only by the installation company, Richmond Fire Rescue and Richmond RCMP.

Voluntary Building Access Program

Purchase:

There shall be only one lockbox at a civic address. The property owner or representative shall arrange with a lockbox installation company to order, install and maintain a lockbox.

Installation:

In accordance with the manufacturer's recommendations, every lockbox installed shall be securely installed to:

- an exterior structural wall of the building; or
- a structural post in proximity to the gate of the premises.

Every lockbox shall be installed within 3 metres of the main entrance of the premises at a height between 1.5 metres to 1.9 metres above the ground or floor.

A 3 inch "LB" (lockbox) decal (provided by Richmond Fire-Rescue), shall be affixed on the top left or top right of main entrance door to indicate a lockbox is present and which side of the main entrance door the lockbox is located.

Maintenance:

The property owner or representative shall arrange with a lockbox installation company to perform maintenance twice a year which shall include:

- opening the lockbox door; and
- validating and testing all keys, swipe cards, or FOBs in the lockbox and identified as set out in below.

Operations:

Keys, cards or FOBs within the lockbox shall be attached to a 1" stainless steel split ring and shall be identified with the address of the premises and their function with a color identifier;

Front Entrance – Green

Fire Alarm Panel – Red

Sprinkler Control Room – Blue

Stairwells/Roof – Orange

Service Rooms (Elevator, Electrical, etc...) –
Black