



Internal Memo

October 16, 2019

To: Mark Meyers, City Administrator
From: Robert Gagnon, Fire Chief
Subject: Key Box Program

Summary of September work session:

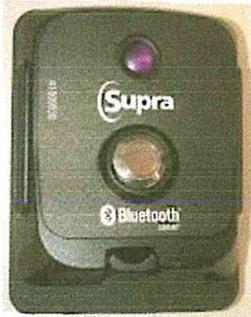
Chapter 5 of the International Fire code authorizes the fire code official to require a key box for life safety or firefighting purposes. The intent is to provide an immediate nondestructive manner to enter structures during emergency response. The current key box system, Supra Tracess, has been in place since the inception of the program in the early 2000's. Due to newer Bluetooth technology, Supra Tracess is discontinuing support for the PIN code access pads which opens 90% of the key boxes currently in use.

Council concerns from the the September work session:

- 1) Lithium batteries within the key box lid.
 - A) In the time period from 9/25/2018- 9/25/2019 key boxes were opened 209 times. This equates to the average box being opened 2.2 times/year. Only 8 of the 425 boxes were opened more than 5 times.
 - B) The oldest Bluetooth keys were purchased on 8/14/2015. Remaining battery life in these units range from 83% to 88%. Annually this equates to 4.25% battery life loss. Using these numbers a box currently at 83% has another 19 years of battery life.
 - C) The manufacturer estimated battery life in a real estate application at 7 years / 2,500 uses. Fire department light usage substantially alters the timeframe. Using the numbers above estimated battery life will be 20 + years.
- 2) Cost
 - A) As discussed in the September 2019 work session the current Key box system has been in place for approximately 20 years. In that time frame an estimated \$180,000 of key box infrastructure has been placed in the cities of Norton Shores and Roosevelt Park. This has been done at the expense of the business and residential community. Changing systems will not only result in the loss of the current investment, but additional infrastucture expense will be incurred.
- 3) Accountability
 - A) When key boxes are installed the accountability of the system is explained. The Fire Department has received only positive comments on both the trackability and security of the current system.

OPTIONS EXPLORED:

1) SUPRA TRACESS SYSTEM – CURRENT SYSTEM



This will require an upgrade to the newer Bluetooth technology carried by Supra Tracess. This would also require replacing 387 of the 425 existing commercial key box lids at a cost of \$273 ea. or \$105,651 and 30 residential boxes at a cost of \$176 ea. or \$5,280.

PROS

- 20 + years of infrastructure in Place
- 2015 International Fire Code compliant - Meets UL 1037 security standard
- Superior Key security and accountability system
- No Exposure to lost Master key issues or expense
- Data base capability; This feature made data for this memo possible

CONS

- Battery lid / residential box replacement – estimated 20 year life based NSFD usage data
- Additional cell phones will be required to access boxes

2) SUPRA KIDDE KEY BOX SYSTEM



This system utilizes a manual key with no incorporated accountability system. Both Muskegon and Muskegon Township use this system and both entities have experienced lost key issues. The Supra Kidde boxes are of noticeable lesser grade construction than the Supra Tracess and Knox systems. Lastly, it's difficult to have a direct price comparison as the Kidde boxes are not compliant with the fire code UL 1037 security requirement where the Supra Tracess and Knox systems are. Replacement costs are:

- Replace 298 surface mount boxes (70% of boxes in use) @ \$204 each or \$60,792.
- Replace 127 recessed mount boxes (30% of boxes in use) @ \$218 each or \$27,886.
- Replace 30 residential boxes @ \$100 each or \$3,000.

PROS

No Batteries

Price

Additional Box size option - not available with current Supra Tracess system

CONS

Current Infrastructure Investment loss

Does not meet UL 1037 2015 International Fire Code Requirements

Lower grade construction than Knox or Supra Tracess models

No data base capability

No key accountability

Exposure to lost keys

Replacement lid cost (2HS MODEL) –	<u>LID COST</u>	<u>CURRENT BOXES</u>	<u>REPLACEMENT COST</u>
	\$190	425	\$84,575

3) KNOX COMPANY KEY BOX SYSTEMS

Moving to the Knox Box system would require an investment in not only hardware and software, but also the replacement of all current key boxes in Norton Shores and Roosevelt

Park (425 Commercial 30 Residential). Knox has two box options with the major differences being the barrel and the accountability systems.

A) KNOX E LOCK SYSTEM

The E lock system features an electronic key with total accountability. It also features a manual key for mutual aid or other like use. The system is cloud based and requires a hardware/software apparatus. The installation of all commercial and residential boxes fitted with the E lock key barrel is estimated as follows:



- Replace 298 surface mount boxes (70% of boxes in use) @ \$579 each or \$172,542. After one year surface mount price increases to \$662 ea.
- Replace 127 recessed mount boxes (30% of boxes in use) @ \$632 each or \$80,264. After one year the recessed mount price increases to \$704 ea.
- Replace 30 residential boxes @ \$423 each or \$12,690.

PROS

Batteries in E Key in

2015 International Fire Code compliant - Meets UL 1037 security standard

Superior Key security and accountability system

Data base capability

No Exposure to lost Master key issues or expense

CONS

Current Infrastructure Investment loss

High Investment cos - \$18,000-\$20,000 hardware / new key boxes

Limited key accountability/security

Limited exposure to lost keys – replacement of E key (\$375)

B) KNOX KEY SECURE 5 SYSTEM

This system utilizes a manual key that has limited accountability. The system is cloud based and requires a hardware/software investment of approximately \$16,136 to outfit all apparatus. Installation of all commercial and residential boxes utilizing the manual key is estimated as follows:



Manual Key Only

- Replace 298 surface mount boxes (70% of boxes in use) @ \$432 each or \$128,736

- Replace 127 recessed mount boxes (30% of boxes in use) @ \$472 each or \$59,944
- Replace 30 residential boxes @ \$187 each or \$5,610

PROS

No Batteries
 2015 International Fire Code compliant - Meets UL 1037 security standard
 Key Box price roughly \$50 less expensive vs. current

CONS

Current Infrastructure Investment loss
 Requires \$18,000-\$20,000 hardware investment
 Limited key accountability/security
 Exposure to lost keys

Replacement cylinder cost –	<u>CYLINDER COST</u>	<u>CURRENT BOXES</u>	<u>TOTAL COST</u>
	\$36	425	\$15,300

OTHER OPTIONS:

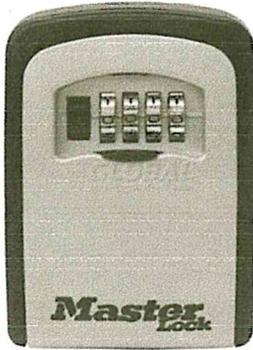


FJM Security KeyGuard Surface Mount Key Storage Lock Box SL-590 - Keypad Lock,

The SL-590 Key Guard Pro lock box is the perfect solution for home owners, realtors, property management, vacation rentals, and emergency access for the elderly or anyone needing to store their keys. Holds 1-5 Keys

Price: \$23.50

<https://www.globalindustrial.com/>



Master Lock® No. 5401D 4-Digit Locking Combination Wall Mount Keylock Box - Holds 1-5 Keys

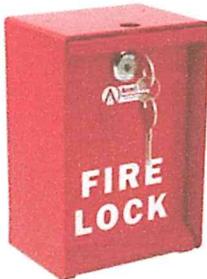
Wall mount key safe

Holds up to 5 keys for house or car in a convenient location for regular use

Wall mount design for permanent installation

Price: \$23.50

<https://www.globalindustrial.com/>



Fire Lock Box - FAAC FLB100

Details

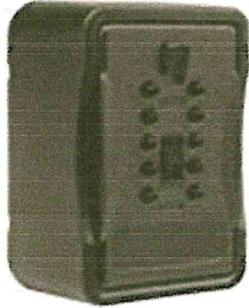
Universal fire lock box for Knox and padlock applications.

Features

- Universal design fits Knox Locks and/ or padlocks
- Lockable hinged door
- Vandal resistant steel housing
- Fire red paint for high visibility

Price \$51.46

FAST GATE OPENERS
Part of the DF Supply, Inc. family



Kidde 1267 KEYSAFE PRO S7 PUSH BLACK KeySafe Pro Multiple Key, Pushbutton, with Cover, Black

Easy-to-use heavy-duty commercial push button combination lock

Key safe has over 1,000 possible combinations available for locking the safe

Extra-large key lock box is big enough to accommodate access cards and multiple keys

Guaranteed never to rust; perfect for rental properties, commercial or home use

Amazon Price: \$41.71

PROS

No Batteries

Price

CONS

Current Infrastructure Investment loss

Does not meet UL 1037 2015 International Fire Code Requirements

Lower grade construction

No key accountability

Minimal security

Exposure to lost keys / replacement key costs

Initially, businesses were required to purchase their lock boxes, while residential use was optional. We are seeking input from City Council as to how we should proceed with the lock box program. Do we pass the upgrade cost to the owners or should the city replace the lock boxes? Does the city share the cost? Does the city cover the costs?

I would be available to discuss this at the upcoming City Council work session.