



Staff Report

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Report To:	General Government Committee	
Date of Meeting:	November 29, 2021	Report Number: ESD-004-21
Submitted By:	Mariano Perini, Director of Emergency Services	
Reviewed By:	Andrew C. Allison, CAO	By-law Number:
File Number:	[If applicable, enter File Number]	Resolution#:
Report Subject:	Master Fire Plan	

Recommendation:

1. That Report ESD-004-21 be received for information.

Report Overview

Pomax Consulting Inc. was awarded a contract to prepare a Master Fire Plan. The Plan is now complete (see Attachment 1) and is being presented to Committee.

1. Background

- 1.1 The Organizational Structure Review conducted by Grant Thornton in 2019 identified the need for an external review of Emergency and Fire Services. Pomax Consulting Inc. was awarded a contract on November 24, 2020 to develop and deliver a Master Fire Plan.

2. Discussion

- 2.1 After a competitive bid process, Pomax Consulting Inc. was awarded a contract to complete the review and prepare a report.
- 2.2 After consultation with municipal stakeholders and analysis of information collected, a report has been prepared and is attached to this Report (Attachment 1).
- 2.3 A virtual presentation will be provided to Council on the outcomes of the Master Fire Plan by Mr. Jon Hambides, Pomax Consulting Inc.

3. Concurrence

Not Applicable.

4. Conclusion

It is respectfully recommended that Council accept this Report for information purposes.

Staff Contact: Mariano Perini, Director, Emergency and Fire Services, 905-623-5126 ext 2802 or mperini@clarington.net.

Attachment:

Attachment 1 - Master Fire Plan report

Interested Parties: Jon Hambides, Pomax Consulting

Choose appropriate wording.



Municipality of Clarington

A Fire Master Plan for Clarington Emergency and Fire Services

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1. Introduction

This is a master plan probably unlike most other fire master plans. Most fire master plans delve into the requirements of legislation and regulation, directives from the Office of the Fire Marshal and Emergency Management Ontario, standards within the National Fire Protection Association and other documents.

This one doesn't. Not because the legislation, standards, etc. should be ignored but because Clarington is meeting legislated requirements and are sufficiently close to accomplishing many of the other standards (which are not standards unless adopted by the Authority Having Jurisdiction [federally, provincially and, usually, municipally]). However, as part of the master plan process, we evaluated Clarington Emergency and Fire Services' ability to adequately protect the municipality within the scope of legislation and standards and have included the data in Appendix A: Historical Information. We would be pleased to have a detailed discussion about the data results within anyone who is interested.

The purpose of the fire master plan, as stated in the request for proposals, was to be progressive, creative, and innovative. At the same time, the request for proposals wanted the master plan to address the traditional role of fire services which includes

- fire suppression,
- apparatus and equipment,
- fire stations,
- emergency planning,
- vehicle replacement,
- etc.

We believe this master plan meets the requirements of progressive, creative, and innovative. It is founded in evidence and research and approaches the plan from a strategic perspective because fire departments have become emergency services and 'fire response' is fortunately relatively infrequent.

This report endeavours to move the Clarington Emergency and Fire Services from a department changing organically, to one with a focus on being a single organization made up of career (full time) and part-time personnel with a united focus on prevention and education and improving value to the public.

The fire administration was nothing short of delightful to work with throughout this project. Chief Gord Weir, Deputy Bill Hesson, and Deputy Randy Cowan were exceedingly helpful and responsive, and Administrative Assistant Jo-Ann Macdonald and clerks Catherine Purkott and Pamela Murdy offered us all the assistance and information we needed.

But times are changing at Clarington Emergency and Fire Services. Chief Weir has recently retired, and Chief Mariano Perini has taken the lead into the future. Deputy Hesson has recently retired but has returned to assist the transition to a new chief and a yet to be hired deputy.

It's an opportune time for changes that establish a future strategy and innovation.

The following section briefly discusses the current state of the emergency service and reveals some of our most important recommendations to change the face of this municipal department.

2. Current State of the Department

a. Municipal Responsibilities

Even though we said that this report won't delve into the requirements of legislation and regulation, or directives from the Office of the Fire Marshal and Emergency Management Ontario, or standards within the National Fire Protection Association and other documents, we are going to renege on that to some extent because municipalities should be aware of their responsibilities and those of the fire department. And it is important to note that the legislation and directives sometimes puts onus on municipalities, and sometimes the Chief. They are not one and the same in legislation.

Municipalities in Ontario are required to fulfill legislated responsibilities identified in the *Fire Protection and Prevention Act, 1997*,¹ and the *Occupational Health and Safety Act* (OHSA), R.S.O. 1990.² The *Fire Protection and Prevention Act* identifies the responsibilities of a municipality in providing public fire protection services. The OHSA Section 21 Fire Service Advisory Committee offers guidance on a municipality's responsibilities regarding firefighter health and safety.

Section 9.1 (d) of the *Fire Protection and Prevention Act, 1997* enables the Office of the Fire Marshal and Emergency Management to issue guidelines to municipalities in respect to fire protection and related matters, including guidelines for fire protection such as the development of a fire master plan. Fire master plans should be based on the three lines of defense and should be developed specific to the needs and circumstances of the municipality.

b. Three Lines of Defense

The *Fire Protection and Prevention Act, 1997*, recognizes the importance of the municipal government's responsibility to implement three lines of defense to achieve an acceptable level of safety. The act states:

2 (1) Every municipality shall,

- a) establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and
- b) provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.

The three lines of defense, in priority order as outlined by the *Fire Protection and Prevention Act, 1997*, are

- (i) safety education programming (including a home smoke alarm program),

¹www.ontario.ca/laws/statute/97f04

²www.ontario.ca/laws/statute/90o01

- (ii) safety standards and enforcement (fire prevention inspections and fire code enforcement are the general components of prevention referenced by the Act), and
- (iii) other fire protection services, in the form of emergency response by the local fire department, based upon the needs and circumstances as determined by the municipality.

c. Local Needs and Circumstances

Municipalities are responsible to determine and establish the level of fire protection services to be provided within their community based upon local needs and circumstances.

The Office of the Fire Marshal and Emergency Management has issued Public Fire Safety Guideline (PFSG) 01-01-01, Fire Protection Review Process,³ for municipalities to follow when preparing a fire master plan. This guideline refers to three other public fire safety guidelines to define local needs and circumstances:

1. Public Fire Safety Guideline 02-02-03, Fire Risk Assessment (soon to be replaced with the Community Risk Assessment), addresses issues such as geography and demographics; the history of emergency calls; comparison with like communities; building stock and occupancies; prevention and public education programs; and public and private protection systems.
2. Public Fire Safety Guideline 02-04-01, Capabilities of Existing Fire Protection Services, discusses topics such as the organizational model; services delivered; emergency response and operations; training; vehicles; water supply; risk management planning; and financial planning and management.
3. Public Fire Safety Guideline 02-03-01, Economic Circumstances, focuses on matters such as assessment values; tax rates; municipal debt; total fire protection costs; assets, such as development charge accounts and reserve funds; and potential loss impacts for major employers.

The fire master plan for Clarington Emergency and Fire Services follows the general requirements of these Public Fire Safety Guidelines, with the understanding that they are currently under review.

d. Firefighter Health and Safety

In Ontario, firefighter health and safety are governed by the general provisions of the *Occupational Health and Safety Act, R.S.O. 1990*, with some exceptions related to emergency response. Section 21 of the OHSA provides for the establishment of specific job sector advisory committees. The Ontario Fire Service Section 21 Advisory Committee is the body appointed to advise the Minister of Labour about firefighter health and safety matters and issue Guidance Notes.

³ www.mcscs.jus.gov.on.ca/english/FireMarshal/FireServiceResources/PublicFireSafetyGuidelines/01-01-01.html

Section 21 of the OHS Act states: *"The Ministry of Labour in collaboration with fire service stakeholders develops Guidance Notes. Guidance Notes outline recommended equipment and procedures to be used by workers in the fire service to prevent injury or illness and will comply with the intent and provisions as outlined in the Occupational Health and Safety Act. The Ministry of Labour refers to the guidelines, guidance notes, alerts, etc. for enforcement under the Occupational Health and Safety Act, and is considered by the Ministry in determining if reasonable precautions for the protection of a worker are being taken under Clause 25.2(h) of the Occupational Health and Safety Act."*

The Guidance Notes, which are consolidated in a Section 21 Fire Service Health and Safety Manual available on various websites including the Ontario Association of Fire Chiefs,⁴ The Ontario Professional Firefighters' Association, and the Fire Fighters' Association of Ontario, assist municipalities in their responsibility to "take every precaution reasonable in the circumstances for the protection of the worker," as required by the Act. They provide advice on such matters as incident command; communications; vehicle maintenance; personal protective equipment; training requirements; and documentation of training and procedures for conducting operations. The Section 21 Guidance Notes were reviewed and considered during development of Clarington's fire master plan.

e. Why is this important?

The next (approximately) 30 pages are going to discuss change in the Clarington Emergency and Fire Services and we are going to make a case for strategically preparing for a greater shift to a prevention and education organization even though suppression will, unfortunately, always be a component of fire services.

Clarington Emergency and Fire Services meets all the requirements of the legislation and directives we outlined above, but those are minimum standards and a weightier effort is needed to provide the best level of public protection with respect to the first two lines of defense: education and prevention.

You will read later in this report that the fire service has grown organically but it needs to be organized in such a way so that it can move forward strategically. We have recommended that the Platoon Chiefs should not be part of a suppression crew and that the fire service needs another training officer, a business manager, and a manager of analytics. That sounds like a lot of money but we are not recommending additional fire stations, which means we are not recommending an additional 20 firefighters to staff a station, because we are confident that with the right organization, which includes those positions outlined above, the Chief and Deputies can accomplish public education, prevention activities, training throughout the organization, and using suppression staff to go door to door to educate the public about fire risk and thereby forestall the growth of the service in the future.

⁴ www.oafc.on.ca/section-21

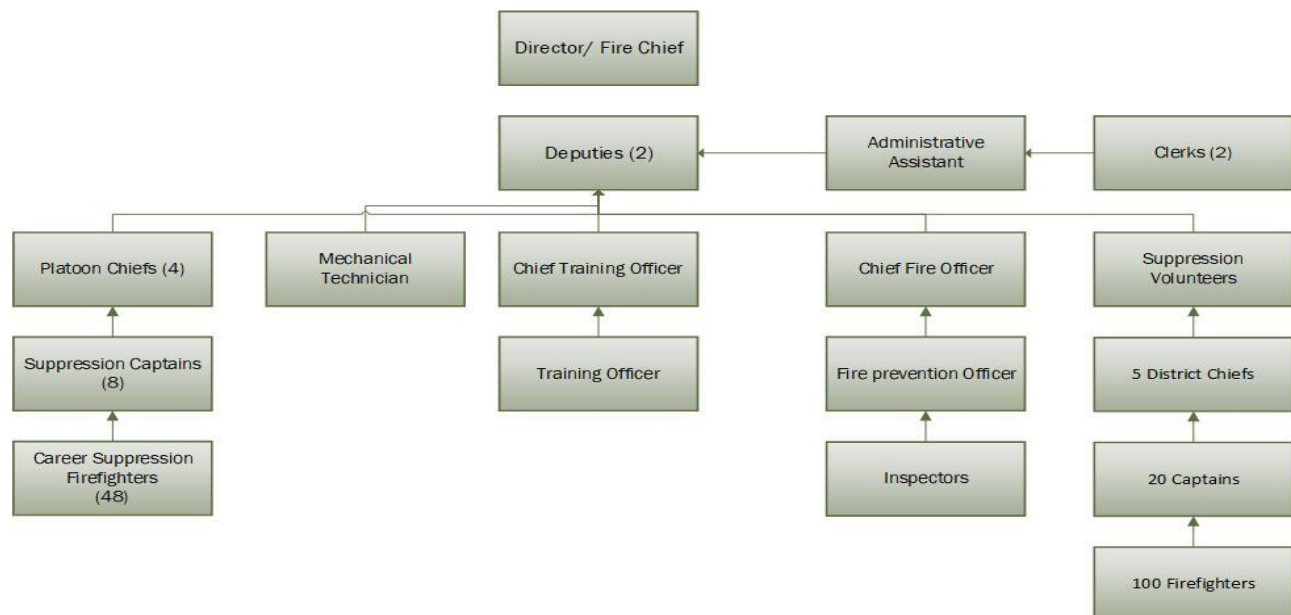
f. The Organization

Exhibit 1 indicates the existing organizational structure. What is notable is that the four Platoon Chiefs work as part of a fire suppression crew. That is, they are one of four firefighters that respond on a fire truck which means they are mostly Platoon Chiefs in name only. They cannot respond to major incidents in any station area unless they take the other three firefighters with them, thus leaving an area without primary response until a replacement truck can be moved into the vacated area. Platoon Chiefs are usually in charge of the department operations during their shifts and are not part of a truck crew, thereby enabling them to travel to any fire station to assess training, equipment, prevention activities, public education, and so on or to attend major incidents that require oversight. Because the Clarington Platoon Chiefs are part of a suppression crew, they can't easily travel to other parts of the municipality to provide emergency oversight, administration, and quality assurance duties.

This is unusual (platoon chiefs being part of a fire crew) and an organizational design we are not aware of at any other fire service. The history is that these platoon chief designations came about as the result of an arbitration award that allocated the title and duties but not the opportunity to perform the coordinating function of a platoon chief.

Our recommendation for the future organization is that the Platoon Chiefs should be replaced by captains on their shifts, and the captains replaced by firefighters, which means that four new firefighters should be hired to round out the staffing on fire trucks. Exhibit 2 shows the recommended future organization.

Exhibit 1: The Current Organization

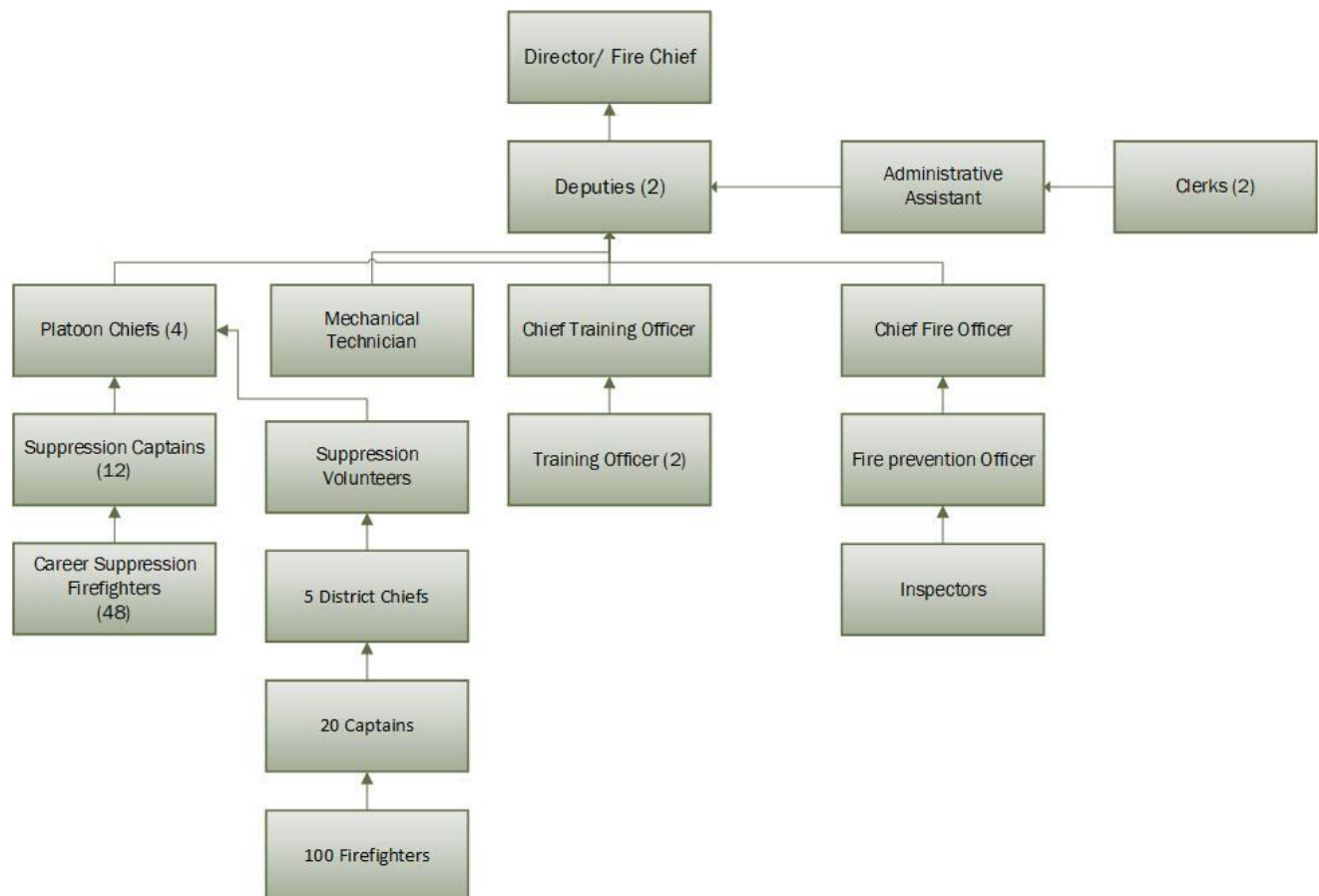


Our recommendation to take the platoon chiefs off the fire trucks isn't because it is an unusual organizational design; it is because Clarington Emergency and Fire Services is very much siloed

and is missing opportunities for being effective and possibly holding the line on response and suppression costs. Platoon chiefs are key to moving the service to a coordinated posture.

There are other changes noted in Exhibit 2. We also recommend another training officer, to reduce siloes and assist with providing training to volunteer firefighters. Additionally, we have moved the relationship of the volunteer firefighters to one of working with the platoon chiefs rather than a separate reporting relationship to the deputies. We realize – and let’s be frank – that some volunteers, the volunteer captains, and the five volunteer district chiefs may not, or will not, be in favour of this organizational change. But Clarington Emergency and Fire Services is a single emergency service, and we recommend the municipality moves to a single organizational model rather than two fire services under one administration.

Exhibit 2: The Recommended Future Organization



We'll provide more justification for these recommendations as the report moves forward. Simply, the platoon chiefs are crucial to allowing the departmental administration to move the department to an integrated, non-siloed business model.

3. Data

Appendix A: Historical Information offers many charts that indicate changes in calls and volume by type, year, day, week, and hour. It is comprehensive and includes 30 pages of charts showing the activity for each fire station for the period 2015 – 2020 inclusive. There is much more data available that is not included in this report because the volume is overwhelming. But it is available to the emergency and fire service, and we are pleased to answer specific questions.

Also included in Appendix A: Historical Information are travel time maps that show the expected travel time of fire trucks from the 5 stations and fires which occurred in 2020. The majority of fires that occurred in the urban area can be reached by two fire trucks within 8 to 10 minutes. Of course, this travel time does not count the time it takes to receive a 9-1-1 call for help or the time it takes to depart the station before travel time comes into play. Volunteers respond from their homes or other location to stations 3 and 5 outside the urban area (these stations are not staffed by full time firefighters), which means that it takes longer, on an overall basis, for those firefighters to reach an incident than it does from one of the full time stations.

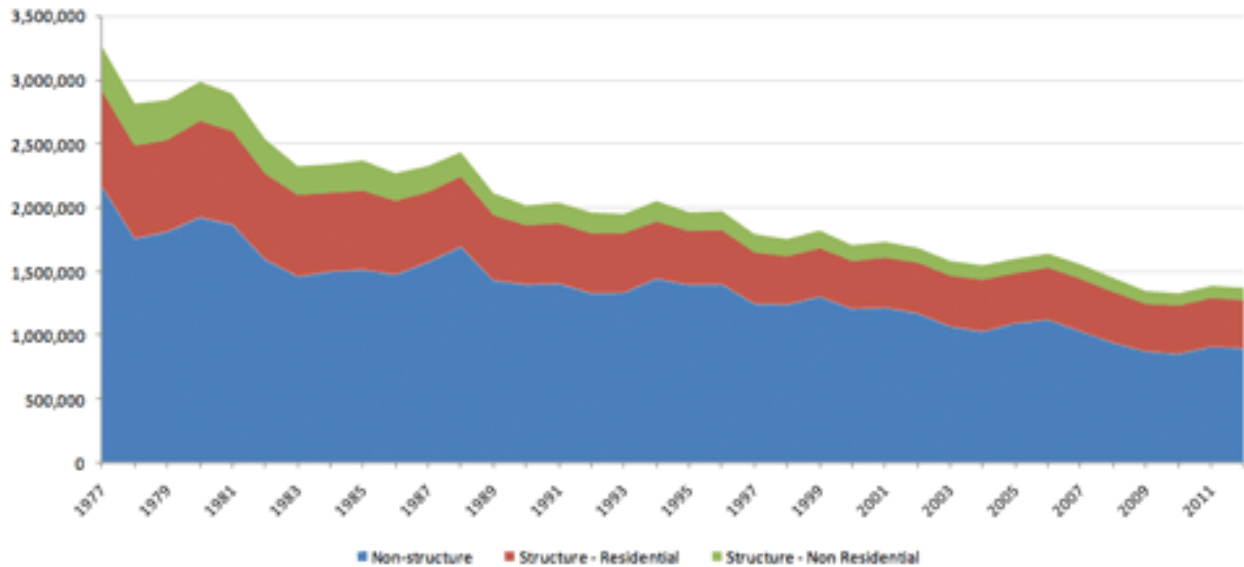
The first two charts within Appendix A show the call taking, turnout time (time that it takes to leave the station after firefighters are alerted to respond), and response or travel time at the 90th and 75th percentiles in 2020. This means that arrival at 90% and 75% of incidents, respectively, are accomplished in the indicated time. 10% or 25% of incidents take longer to arrive.

At present, Clarington is satisfactorily protected, but the thrust of this plan is to ensure protection is enhanced through the means of organization, prevention, and public education over the next 10 years.

g. Trend Analysis

As consultants we look for trends – changes in call volume or category – and we try to discover the reasons for these trends. This is especially pertinent for fire calls. Fires in North America, Canada, and Ontario are trending downwards (Exhibit 3).

Exhibit 3: Fire Service Trends

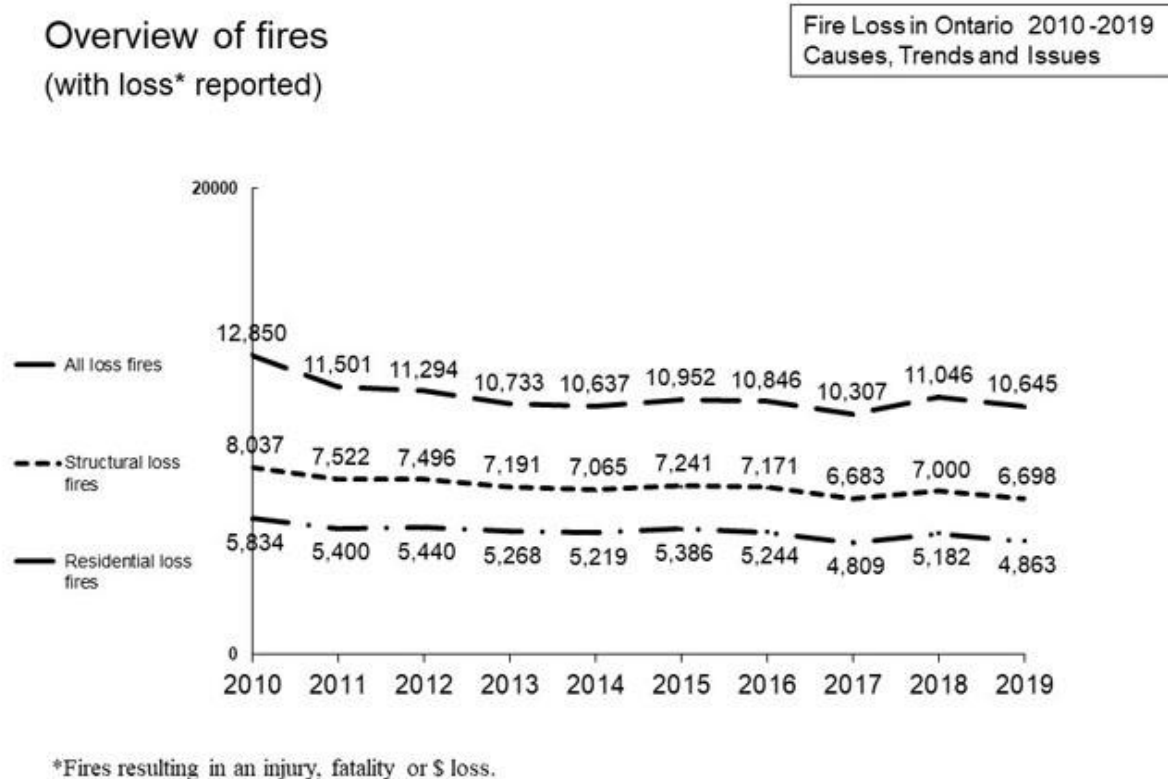


Source: National Fire Protection Association

The Ontario Office of the Fire Marshal gathers statistics from information submitted by fire departments throughout the province. Exhibit 4 shows a downward trend for fire loss in Ontario even while the number of fire service responses have been increasing. The frequency of response is mainly due to fire departments attending more medical calls and vehicle collisions

- Exhibit 4 shows that total fires reported in general have been decreasing, even as population and the number of structures has increased. This does not reflect decreased reporting.
- In Ontario, the total fire and non fire calls have increased from 482,617 incidents reported in 2010 to 534,313 in 2019.
- Loss fires (Exhibit 4) are defined as any fire with an injury, fatality, or dollar loss reported (injuries/fatalities include civilian and firefighter).
- All Loss fires reported have declined from 12,850 in 2010 to 10,645 in 2019.
- Structure fires are about 63% (2019) of the total fires with loss.
- The graph shows a total decline in fires from 8,037 in 2010 to 6,698 in 2019.
- Residential fires account for about 73% (2019) of structure loss fires. These fires had also decreased from 5,834 in 2010 to 4,863 in 2019.

Exhibit 4: Fire Loss in Ontario 2010 – 2019



Feb. 2021

Office of the Fire Marshal and Emergency
Management

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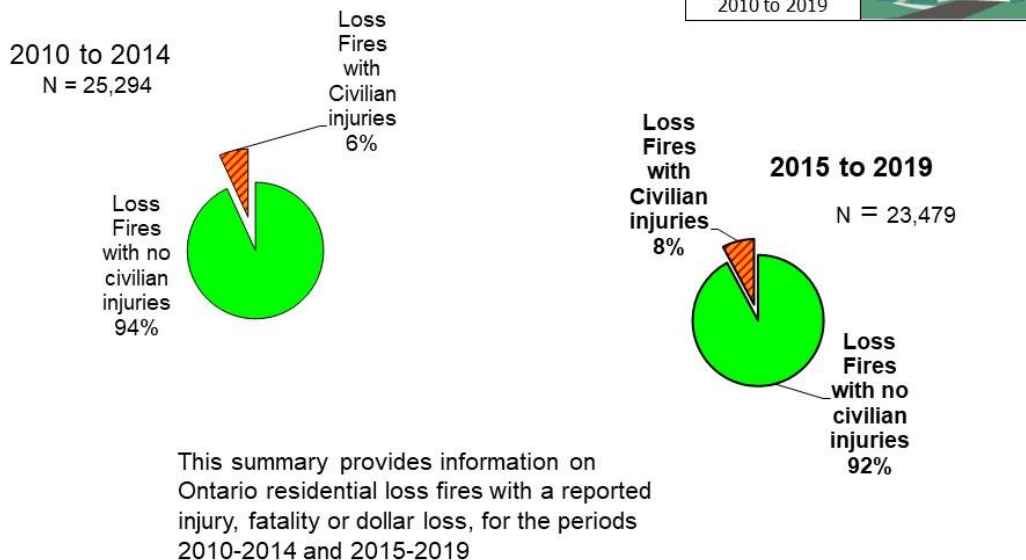
https://www.mcscs.jus.gov.on.ca/english/FireMarshal/MediaRelationsandResources/FireStatistics/OntarioFires/FireLossesCausesTrendsIssues/stats_causes.html

However, while fires have been decreasing, injuries due to residential loss fires have increased slightly.

- Exhibit 5, below, covers fires in residential properties where a loss occurred (that is, dollar loss, injury, or fatality was reported).
- In the five year period from 2010 to 2014, civilian injuries were reported in 6% of residential loss fires, which means injuries occurred at a rate of 1 for every 16 fires.
- For the five year period from 2015 to 2019, civilian injuries were reported in 8% of residential loss fires, meaning that injuries occur at a rate of 1 for every 12 fires.

Exhibit 5: Injuries from Residential Loss Fires

Residential Loss Fires with Injuries



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Office of the Fire Marshal and
Emergency Management

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The exhibits and information above are readily available through the Office of the Fire Marshal and National Fire Protection Association.

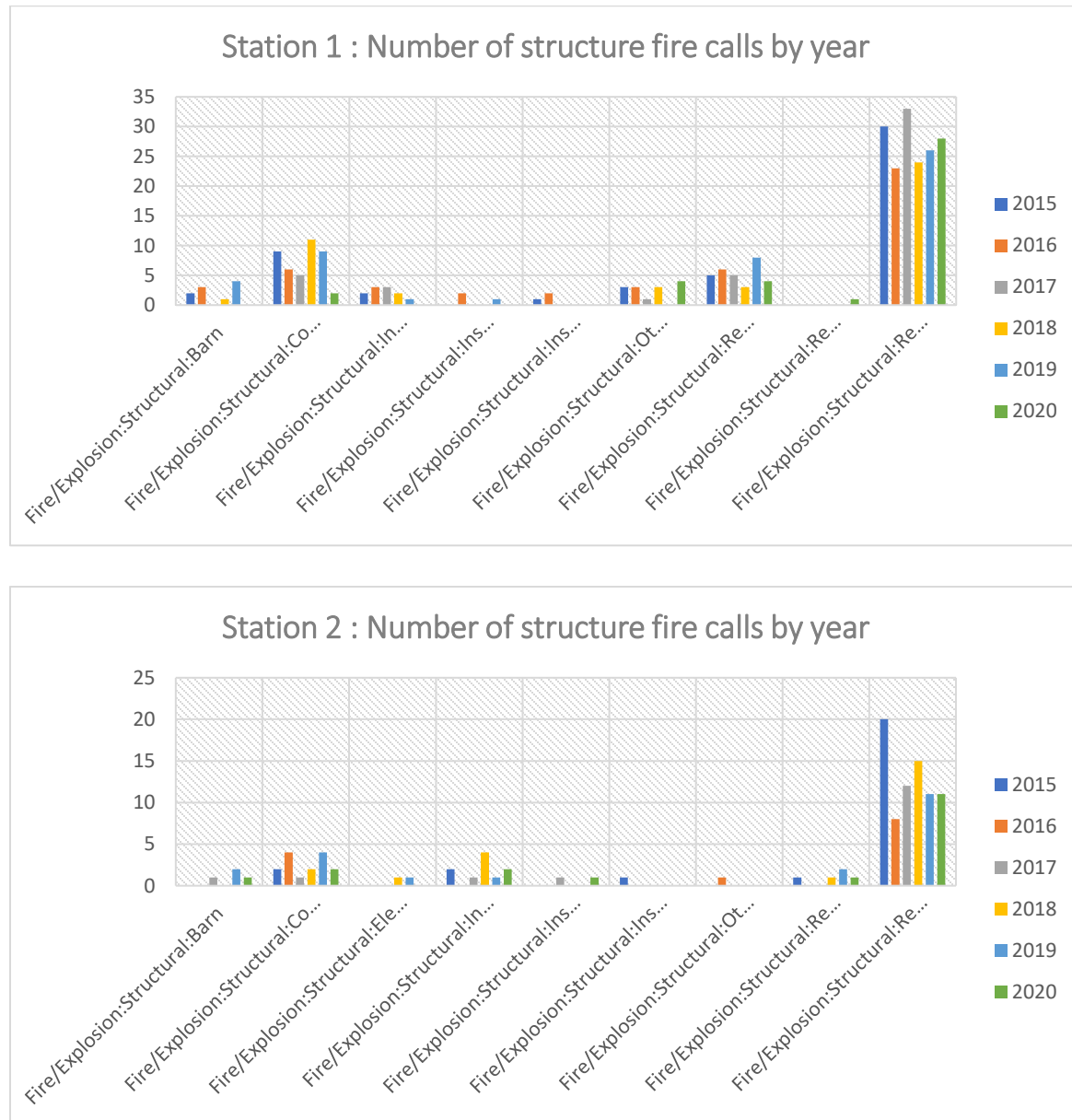
We do observe a slight upward trend in fire responses overall in Clarington (Exhibit 6). It should be noted that these are 'as dispatched' rather than what firefighters found upon arrival. For example, fire departments are sometimes dispatched to a report of a fire only to find it to be steam. We also found that some of the incidents were incorrectly categorized as fires at the dispatch stage, but we found some to be incorrect upon looking at notes and other information.

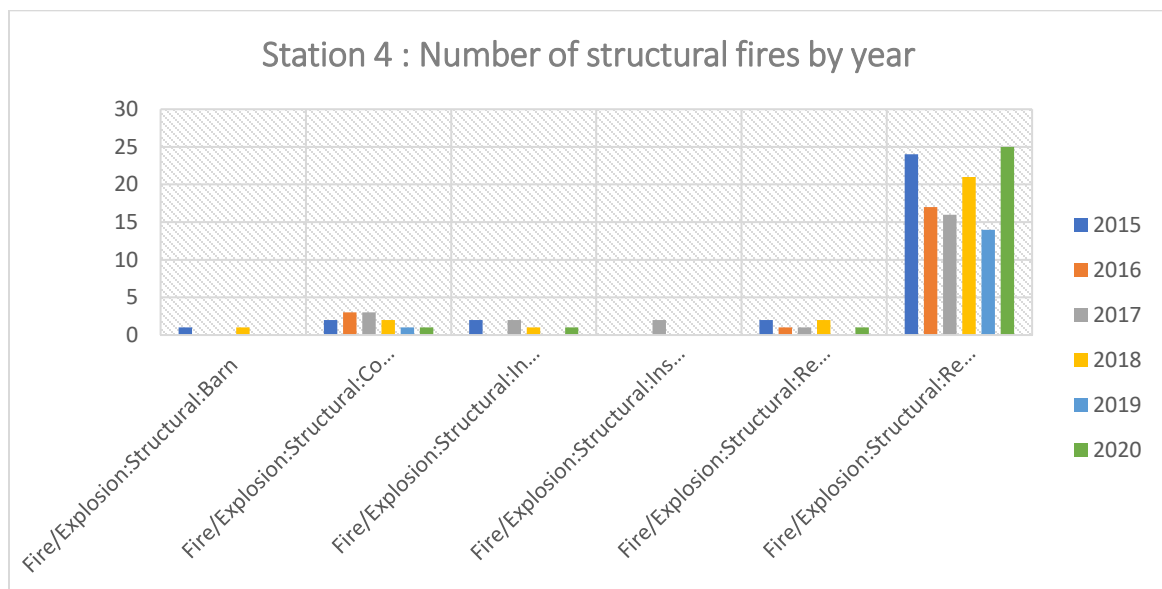
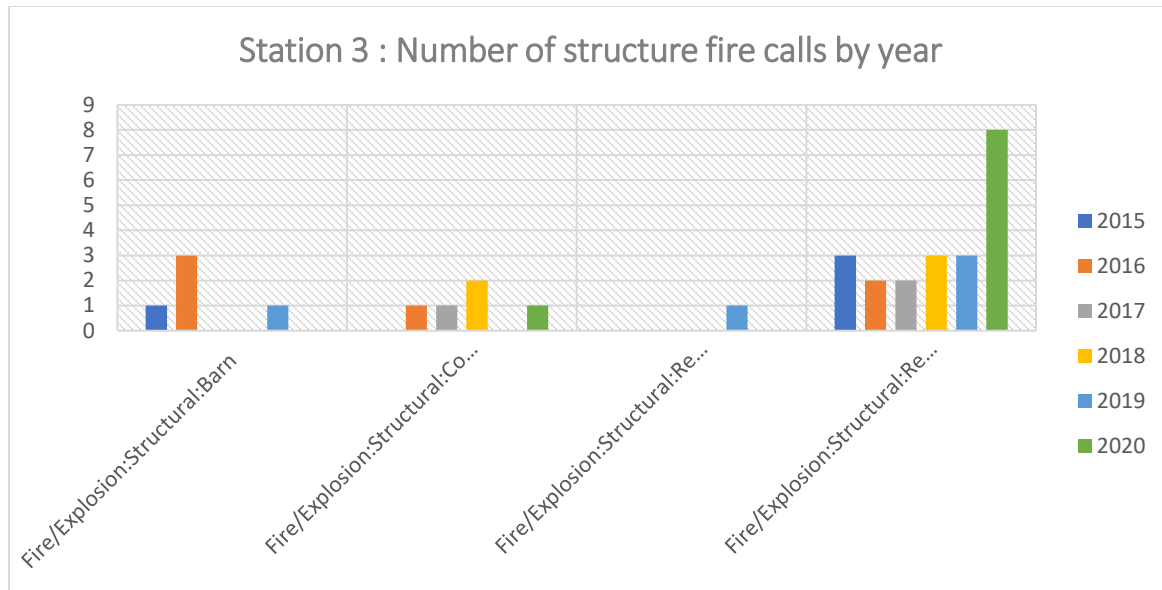
Good data assists decision making and planning. Clarington Emergency Services should work with the fire dispatch to assess the quality of information being entered into the computer aided dispatch and coordinate that data with Clarington's record management system.

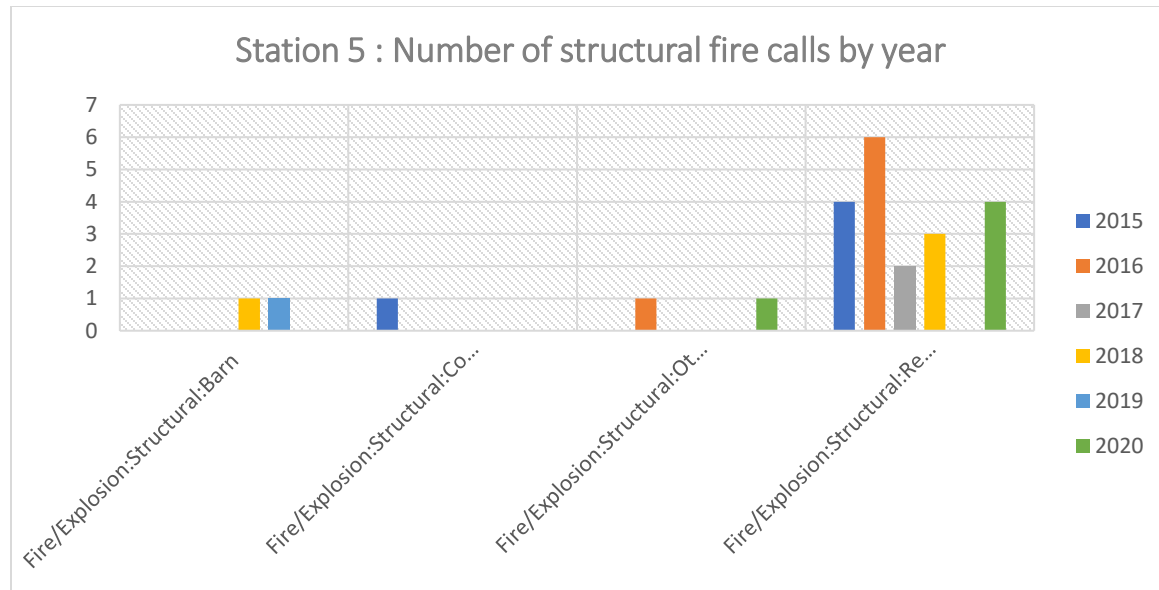
On the surface, questions about coding at the call receiving and dispatch stage may not appear to be serious if it is corrected later at the record management stage. But fire departments respond based on the information they receive from the dispatch centre. A response to an incorrectly assessed incident may mean that two or more fire trucks are sent to the incident, volunteer firefighters are called in to provide backup coverage or response, and portions of the municipality may be left uncovered until the incident is cleared or volunteers arrive. Plus, costs may be driven up inadvertently.

Exhibit 6 shows a slight increase in structure fires since 2015. Often, population growth will be offered as a reason for the increase, but the number of structure fires in a municipality isn't as strongly associated with population change as most may think. Emergency services administration and the fire prevention division should assess the reasons for an apparent upward trend in structure fires.

Exhibit 6: Structure Fires by Year and Station







a. Community Risk Assessment

Pomax assisted the Clarington Emergency and Fire Services Prevention Division with a Community Risk Assessment which is being reviewed by the Director. A community risk assessment is an ongoing endeavour which includes determining prevention and education activities, and the technical and human resources required to support those activities. Clarington is in the early stages of implementing prevention and mitigation activities with respect to community risk. There has been debate within Pomax as to whether we should recommend an additional prevention – public education position but we have decided to leave the review and decision with the Director. We would support an additional prevention public education position.

4. Apparatus Replacement

Assets and apparatus replacement are primary considerations for fire services. Fire trucks and other vehicles are part of the work environment for a firefighter, and they cost a lot of money. They also last 15 to 20 years. So, a \$900,000 truck that lasts 15 years costs \$60,000 plus maintenance and fuel. If it lasts 20 years, the cost is \$45,000, although expected increases in maintenance will add to that annual amount in the last few years of use. A 1.25 million dollar ladder truck is about \$50,000 a year. We acknowledge that these are expensive work environments.

Some ask why these trucks can't be kept longer than 15 or 20 years since the mileage is often low and they are well maintained. Trucking firms keep heavy trucks for hundreds of thousands of kilometres, so why do fire trucks have to be replaced every 15 to 20 years?

National Fire Protection Association standards recommend these replacement timelines and recognize other factors that must be taken into account.

From Annex D of NFPA 1901-16 Annex D

It is generally accepted that fire apparatus, like all types of mechanical devices, have a finite life. The length of that life depends on many factors including vehicle mileage and engine hours, quality of the preventative maintenance program, quality of the driver training program, whether the fire apparatus was used within the design parameters, whether the apparatus was manufactured on a custom or commercial chassis, quality of workmanship by the original manufacturer, quality of the components used, and availability of replacement parts, to name a few.

In the fire service, there are fire apparatus with 8 to 10 years of service that are simply worn out. There are also fire apparatus that were manufactured with quality components, that have excellent maintenance, and that have responded to a minimum number of incidents that are still in serviceable condition after 20 years. Most would agree that the care of fire apparatus while being used and the quality and timeliness of maintenance are perhaps the most significant factors in determining how well a fire apparatus ages.

Annex D is shown in Exhibit 7

a. Maintenance Records

One of the considerations noted in the excerpt above is the maintenance of this expensive equipment. We asked for maintenance records, not to audit the quality of maintenance but to see if records and tracking are at an acceptable level. Maintenance records are not easily

accessible. They can be obtained only with considerable effort since they are manual rather than within a database. Some municipalities use a vehicle software program for maintenance tracking, but that is not available for this emergency service.

Fire apparatus represents a major investment by the municipality, and the apparatus needs to be supported by a searchable database to enable the fire department to track the benefits of keeping vehicles for a reasonable period.

But let's deal with the issue of truck replacement because the decision to replace a truck is often a point of vigorous discussion at many municipal councils. Those who have a concern about the need to replace a fire truck point to low mileage, good maintenance (sometimes maintenance is good), and the fact that trucking companies keep trucks for hundreds of thousands of kilometers. So let's admit that there are many arguments in favour and against keeping a truck as long as possible.

But sometimes it isn't the age of the truck that is as important as maintaining and repairing pumps and hydraulics, or safety improvements, or buying parts off eBay because new replacement parts aren't available (yes, that happens). Safety and ergonomic factors also come into play and, over a 15 year span, many technical and safety improvements occur. It also takes at minimum, six months to buy a fire truck 'off the lot' – one that a manufacturer has available – but most of the time 12 months or more is required to take possession of a fire vehicle.

Our research of journal papers has not revealed any comparisons between the purchase, maintenance, and operation of a fire truck and tractor trailers or delivery vans, likely because they are different animals. At the very least commercial trucks are usually driven near the posted speed limits and are often built with gearing specific to the type of load and driving expected, such as long distance highway.

We point to the above excerpt from Annex D of NFPA 1901 which says

Most would agree that the care of fire apparatus while being used and the quality and timeliness of maintenance are perhaps the most significant factors in determining how well a fire apparatus ages.

But we add, there comes a point that replacing a fire truck becomes a reasonable consideration and the guidelines in NFPA 1901 provide rational information as to those considerations. Nevertheless, our recommendation with respect to caring for apparatus is for the fire service to work with other municipal departments, such as public works, to either establish a municipal vehicle maintenance program and acquire supporting software or procure something specific to the fire department.

- (9) Noise levels in the driving and crew compartment(s) meet the current standard, or appropriate hearing protection is provided.
- (10) All horns and sirens are relocated to a position as low and as far forward as possible.
- (11) Signs are present stating that no riding is allowed on open areas.
- (12) A pump shift indicator system is present and working properly for vehicles equipped with an automatic chassis transmission.
- (13) For vehicles equipped with electronic or electric engine throttle controls, an interlock system is present and working properly to prevent engine speed advancement at the operator's panel, unless either the chassis transmission is in neutral with the parking brake engaged, or the parking brake is engaged, the fire pump is engaged, and the chassis transmission is in pumping gear.
- (14) All loose equipment in the driving and crew areas is securely mounted in accordance with the current standard.

D.4 Proper Maintenance of Fire Apparatus. In addition to needed upgrades to older fire apparatus, it is imperative that all fire apparatus be checked and maintained regularly to ensure that they will be reliable and safe to use. The manufacturer's instructions should always be followed when maintaining the fire apparatus. Special attention should be paid to ensure that the following conditions, which are particularly critical to maintaining a reliable unit, exist:

- (1) Engine belts, fuel lines, and filters have been replaced in accordance with the manufacturers' maintenance schedule(s).
- (2) Brakes, brake lines, and wheel seals have been replaced or serviced in accordance with the manufacturers' maintenance schedule.
- (3) Tires and suspension are in serviceable condition, and tires are not more than 7 years old.
- (4) The radiator has been serviced in accordance with the manufacturer's maintenance schedule, and all cooling system hoses are new or in serviceable condition.
- (5) The alternator output meets its rating.
- (6) A complete weight analysis shows the fire apparatus is not over individual axle rating or total GVWR.
- (7) The fire pump meets or exceeds its original pump rating.
- (8) The water tank and baffles are not corroded or distorted.
- (9) If the apparatus is equipped with an aerial device, a complete test to original specifications has been conducted and certified by a certified testing laboratory.
- (10) If so equipped, the generator and line voltage accessories have been tested and meet the current standard.

D.5 Refurbishing or Replacing Fire Apparatus. Fire department administrators and fire chiefs should exercise special care when evaluating the cost of refurbishing or updating an apparatus versus the cost of a new fire apparatus. Apparatus that are refurbished should comply with the requirements of NFPA 1912. A thorough cost-benefit analysis of the value of upgrading or refurbishing a fire apparatus should be conducted. In many instances, it will be found that refurbishing costs will greatly exceed the current value of similar apparatus.

Some factors to consider and evaluate when determining whether to refurbish or replace a fire apparatus include the following:

- (1) What is the true condition of the existing apparatus? Has it been in a major accident, or has something else happened to it that would make spending significant money on it ill advised?
- (2) What advancements in design, safety, and technology have improved the efficiency and safety of personnel?
- (3) Does the current apparatus meet the program needs of the area it is serving? Is it designed for the way the fire department operates today and is expected to operate in the foreseeable future, or is the apparatus functionally obsolete? Can it carry everything that is needed to do the job without being overloaded?
- (4) If the apparatus is refurbished, will it provide the level of safety and operational capability of a new fire apparatus? It should be kept in mind that in many cases, refurbishing does not mean increasing the GVWR, so it is not possible to add a larger water tank or additional foam agent tanks or to carry massive amounts of additional equipment. Enclosing personnel riding areas might add enough weight to the chassis that existing equipment loads need to be reduced to avoid overloading the chassis.
- (5) What is the anticipated cost per year to operate the apparatus if it were refurbished? What would the cost per year be for a new apparatus? Insurance costs, downtime costs, maintenance costs, depreciation, reliability, and the safety of the users and the public all have to be considered. At what rate are those costs rising each year? Are parts still readily available for all the components on the apparatus? A refurbished 15-year-old apparatus still has 15-year-old parts in it. How long could the fire department operate without the apparatus if it suddenly needed major repairs?
- (6) Is there a current trade-in value that will be gone tomorrow? Most apparatus over 12 years old have little trade-in value. Are there creative financing plans or leasing options that can provide a new fire apparatus for little more than the cost of refurbishing or maintaining an older apparatus?

D.6 Conclusion. A fire apparatus is an emergency vehicle that must be relied on to transport fire fighters safely to and from an incident and to operate reliably and properly to support the mission of the fire department. A piece of fire apparatus that breaks down at any time during an emergency operation not only compromises the success of the operation but might jeopardize the safety of the fire fighters relying on that apparatus to support their role in the operation. An old, worn-out, or poorly maintained fire apparatus has no role in providing emergency services to a community.

Annex E History of NFPA 1901

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

E.1 History of Specification. A report of the NFPA Committee on Fire Engines adopted at the 1906 NFPA Annual Meeting included many of the provisions and test procedures since followed in standards for fire department pumping apparatus.

In 1911, at the convention of the International Association of Fire Engineers, the Committee of Exhibits conducted

5. Administrative Services

As part of our evaluation of administrative services duties, Pomax, in conjunction with emergency services' executive, worked with administrative services staff to step through the tasks associated with burn permit processing, payroll for volunteers and full time staff, and two forms of invoice processing. The process maps can be found in Appendix B.

We are cautious in how we make this next statement; We found creating the process maps and following the steps unclear. There was the pervading sense of "Isn't there a better way of doing this?" We do not suggest that staff didn't know what they were doing. In fact, we were impressed by their capability. But the burn permit process is mostly automated at other fire services; it should be in Clarington also, or at least the possibility should be investigated.

We also found that there was an element of work in the tasks that we studied that needs further evaluation in the form of an effective and efficiency assessment. Often, we will complete an AS-IS component of process mapping and a TO-BE module to suggest to our client the efficiency suggestions to consider. We were unable to complete the TO-BE portion because of the significant time commitment that would be required from all parties, including the Director/Chief and deputies.

We recommend that all aspects of the administrative process, including the parts that the deputies become involved with, be closely evaluated by someone working with the administrative staff for three to four weeks on a regular basis.

It warrants repeating this statement: This recommendation recognizes and supports the capability of the administrative staff. Our conclusion is that the administrative processes have grown organically and it is probably the right time to assess structure and duties.

*Organically: something that happens or **develops naturally** over time, without being forced or planned*

6. Prevention Division

As with the administrative services, we processed mapped three primary services provided by the Fire Prevention Division: 1) the inspection process; 2) the investigation process; and 3) the pre-planning process. These maps can be found at the end of [Appendix A](#).

There are some enthusiastic members of this division who believe in preventing fires and who are doing their utmost to promote that idea. But they are working in a silo – apart from other members of the fire service – and some, perhaps, are happy to be working that way. The Prevention Division needs to be brought back into the fold of the emergency services department and work with the suppression division to promote prevention and education.

Most importantly, this division needs to work with other sections of emergency and fire services to improve prevention and public education. This is partially where the platoon chiefs become an important part of the future success of emergency services. We will explain further later in the document.

7. Training

The training division consists of a training officer and chief training officer. The chief training officer is new to the position as of May 2021 and has shown great promise in raising the bar on training – and it was required.

There is no formal training program – or was not in place as of May 2021 – and we recommend that a formal training program is something that should be established for full and part time staff.

Other observations about the training program (prior to May 2021) include

- The Training Officers do not have an assigned Administrative Support person, which means they undertake much of their support which is not a good use of time. It is better for them to be out in the field offering training sessions or planning training programs
- The Training Officers do not have position/job descriptions; however, department policy 2.108 lists the following certifications in a 'Flow Chart' for Training Officer:
 - NFPA 1041 I & II
 - Designated courses i.e., Fire Dynamics, High Rise Fires, Industrial Firefighting
- Training for Clarington Emergency and Fire Services personnel is not a Core Service listed in the Establishing and Regulating By-law (please see [Appendix D](#)). Training is obliquely mentioned in some areas of the E&R By-law (Appendix A Core Services 1.3, 1.4, 1.6, 1.7, 2.3, 3.3)
- There is no formal training program. A 'Training Statement' was issued in 2020 by Deputy Cowan in a two-page letter reviewing the importance of training.
- There is no clear delineation of firefighter training curriculum (e.g., IFSTA Resource One, Barnes & Noble, etc.)
- There is no robust training program records management system. Courses attained by personnel are currently filed in an Excel sheet.
- Ontario Power Generation offers annual live fire training at their Wesleyville training centre for full time and volunteer firefighters.
- Volunteers currently train once a month at their respective stations. Maintenance type training is/was performed by volunteer firefighter officers (Captains or District Chief if they have one). New and/or specialty training is delivered by the full time training officers.
- New volunteer firefighter recruits receive an initial 100 hour training course.
- There are no formal criteria on the number of hours to be delivered per each 24-hour shift for full time firefighters.

The training division is in the process of being revitalized. There is strong confidence in the current chief training officer, so we have no recommendations other than continued support for the division and, again, the involvement of the platoon chiefs in ensuring that training is delivered to full time and part time firefighters.

A Strategic Approach to Training is included in the draft Community Risk Assessment. We recommend that it be removed and left in the bailiwick of the Chief Training Officer. This is a minor organizational recommendation but should be actioned as soon as possible.

We also recommend the addition of a training officer to support the principle of consistent training to career and part time staff. Our interviews with suppression staff members clearly identified inconsistent and insufficient training as a key concern. By our count, there is about a 1 to 95 ratio of training officers to staff members. A count of 1:50 would be more satisfactory.

In addition, there is no opportunity for succession planning and officer development so that when staff members retire or leave for other reasons, someone is available to take their place and avoid prolonged lapses in training and program development.

We recommend the addition of one training officer to the complement.

8. The Volunteer Cadre

Volunteers – part time firefighters – make up a significant component of the suppression staff. They should be well respected for the time they give to the municipality for a small annual stipend. But we suggest a few changes.

As we have said several times, it is time for change in this emergency and fire service. Organic growth is not a good way to proceed when a strategy is needed. There is little difference in the expectations of volunteers in relation to career staff because of training and regulated requirements for volunteers. It is time for individuals who wish to be part time firefighters to have some basic skills when they volunteer. We recommend that new volunteers be qualified at the basic NFPA 1001 level before they start as a part time firefighter, and any current part time staff who do not have that basic level should achieve it in a reasonable time frame to be determined by the Director.

We were also interested in finding out that when there is a vacancy in the full time fire fighters' ranks, candidates are selected from the volunteer cadre. But volunteers must live within five kilometres from a volunteer station in order to be part time staff.

This suggests to us a restrictive practice. Full time staff are essentially selected from people that live within five kilometres of five stations and who are volunteers.

We recommend that this constricting practice end immediately and full time staff should be selected from an unrestricted area. An added benefit is that new recruits might reflect the multi-national makeup of the area.

9. The Platoon Chief's Role in all Things Fire

With utmost respect to all that has come before in Clarington Emergency and Fire Services, it is an opportune time to reorganize the service to focus on prevention and preparation and take a strategic approach to the next ten years.

The population of Clarington is expected to grow by 45,000 in the next decade. And although we don't expect to see an upturn in emergency incidents parallel with population growth, they will increase. Emergency and Fire Services must plan for the changes that will take place.

Part of that planning includes

- consistent staff training – both full and part time
- good record keeping such as maintenance records, training records, prevention, inspections, and public education,
- administrative support for the Chief and Deputies and prevention and training (prevention and training can't do either if they are providing their own administrative support rather than being out on the job).

We envision the Emergency and Fire Services working as one department rather than in silos. We expect that one of the primary efforts of the chief and deputies will be to establish record keeping as a principal operating component of the department because it is easier to make decisions based on good information than intuition.

We see the role of the platoon chiefs, once they are no longer members of a suppression crew, as being responsible for all activities of the fire service during their shift, encompassing both full and part time staff. Their role will be to ensure that the training programs – particularly on-shift training and education – established by the training division is affected in a timely manner. While the additional training officer we recommended will be responsible for delivering training, particularly to part time firefighters, platoon chiefs will be responsible for the execution of training and quality assurance.

The platoon chiefs will also be responsible for ensuring the suppression division supports prevention, education, and inspection initiatives by taking part in, on a shift by shift basis, door to door public education, pop-up CPR and first aid training, building assessments, and other value-added efforts for the municipality.

These initiatives are expected to aid in the prevention of incidents and avoid future costs in the growth of the emergency services department. The strategy that we recommend here is intended to reduce the incidence of fires and pressure for one or more fire stations as the population grows, even if that growth is planned within the current urban footprint.

The platoon chiefs are key to avoiding future costs. To maintain the existing organizational configuration, where platoon chiefs are part of a fire suppression crew, means that the department will retain its present culture with less chance of successfully preventing incidents.

10. The Fire Chief and Deputies

There are two parts to the roles fulfilled by the chief and deputies. One, of course, is ensuring the public is protected. The second is planning for the future of the fire service.

Our experience throughout this project is that emergency services administration has a strong grasp on the need to protect the public. It is also important to plan for the future and that is going to be difficult to do if the chief and deputies are essentially filling the role of platoon chiefs or logistics personnel – because that is what has been happening to this point. We have seen instances where a deputy has driven trucks for servicing such as changing snow tires and other maintenance. In fact, it seems to be the norm.

All the things we mentioned in the previous section: training, vehicle maintenance, prevention and education, and so on were managed by the chief and deputies. It's hard to make future preparations and put a strategy into place when, day in and out, just running the organization takes up all their time; swamps and alligators come to mind.

The future role of the chief should be to lead strategy, plan, and organize. The role of the deputies should be to oversee training, education, prevention, maintenance, not to be hands-on in those things.

There are many changes to make: a maintenance program, training, assessment of the administration processes, drafting policies and procedures, and the chief has suggested that, during this transition, one or two specialists for short, contracted periods might be judicious rather than hiring into the vacant deputy's position. We agree, sometimes specialists are required.

We would recommend a business manager's position, someone to make sure all the administrative aspects of the department run smoothly. However, the priority is the platoon chiefs acting in a platoon chief's role, and a training officer. We have had a few clients, particularly in British Columbia, with a business manager as part of the senior administration team. Those fire services have a notable organizational ability. We suggest a business manager as a future consideration.

a. The Need for a Statistician

We also recommend a statistician or, as in other fire services, a position responsible for analytics and risk, which would include statistical analysis. It is very difficult to establish a strategy and ensure efficiency and effectiveness based on the sparse data and information available within most fire services, including Clarington. Most private businesses depend heavily on data to form their strategy and planning, become more effective, and reduce costs; why aren't emergency services?

This plan intends to move Clarington Emergency and Fire Services further towards prevention, education, reducing the incidence of fires and accidents, and trying to accomplish that within the existing organizational design is likely ineffectual.

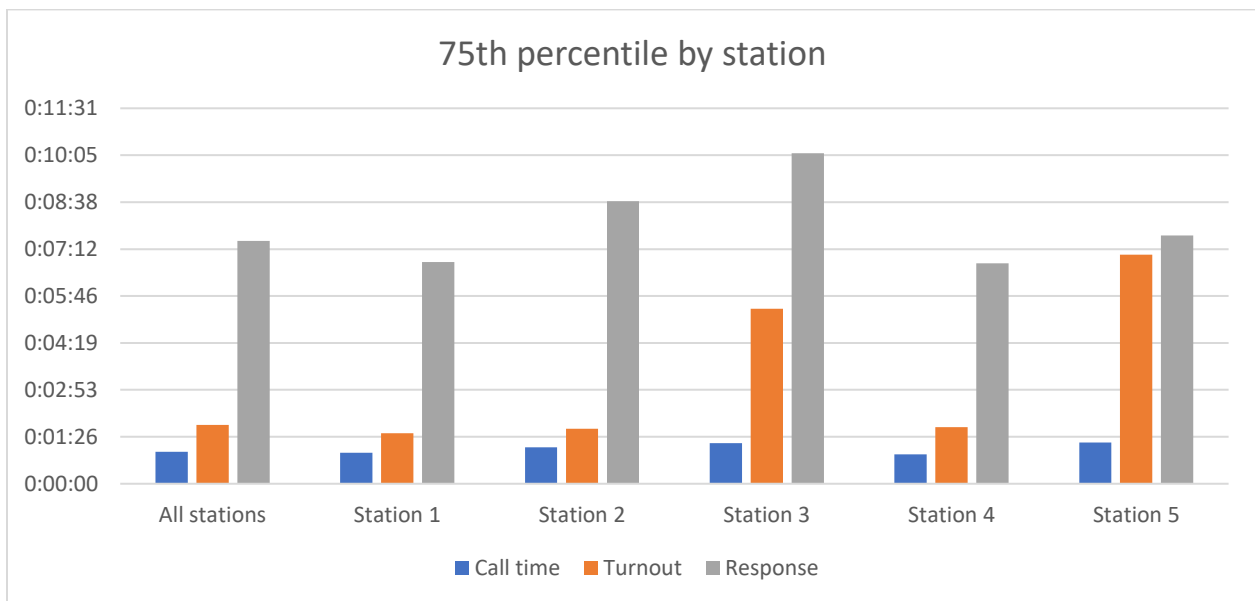
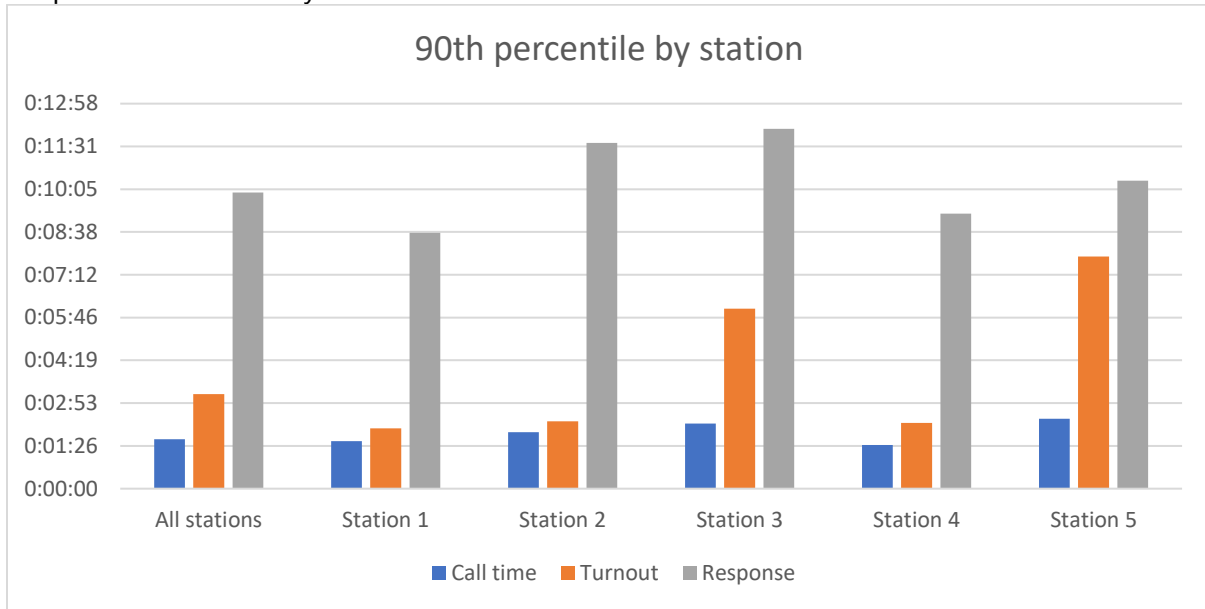
Although these additional staff recommendations

- four additional firefighters, so that platoon chiefs need no longer to be part of a fire crew,
- an additional training officer,
- a business manager in the near future, and
- a position responsible for analytics and risk also in the near future

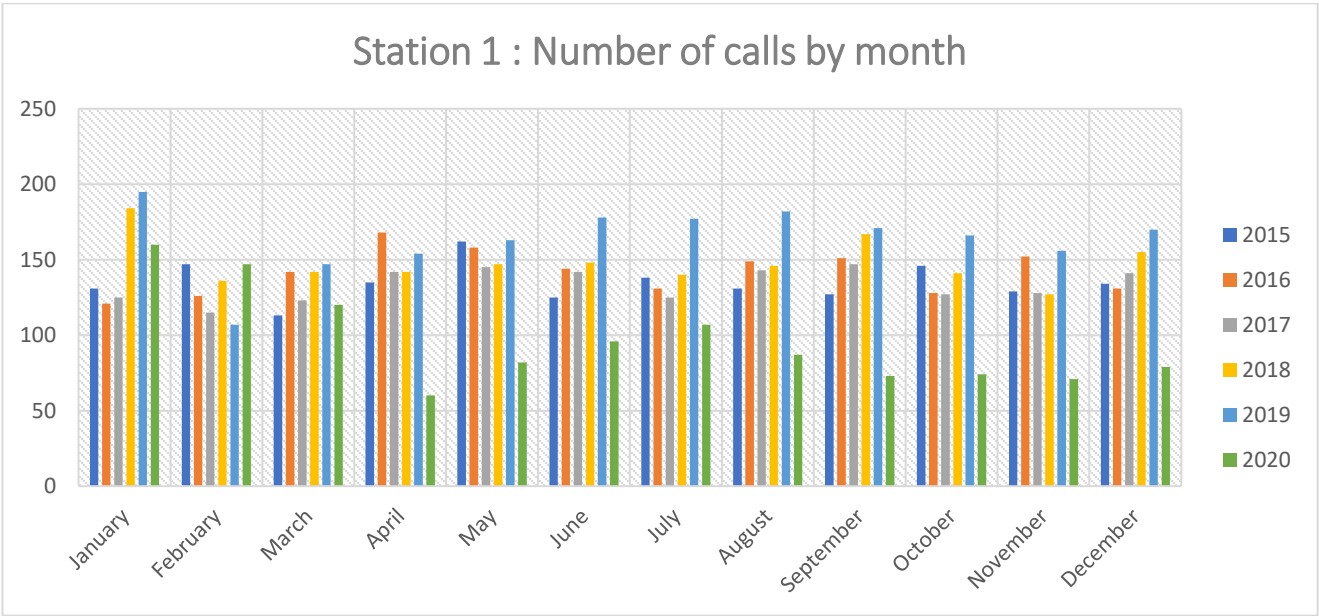
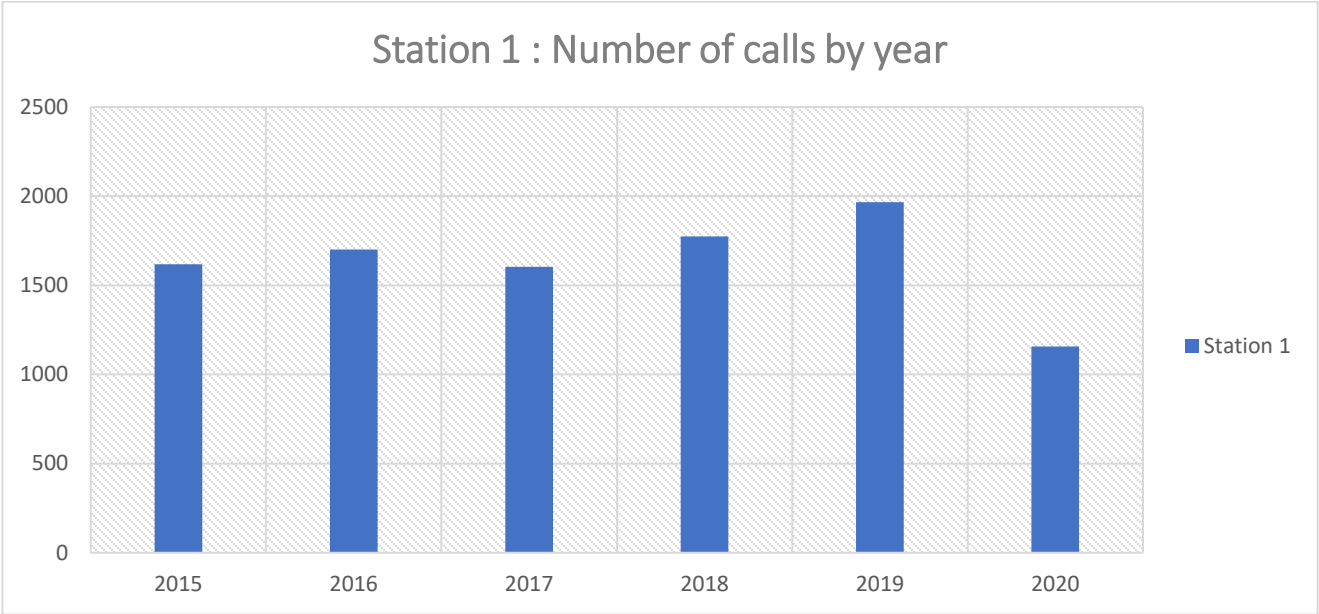
The intent is to move Clarington Emergency and Fire Services away from a suppression centric role to one that is strategically aimed at reducing loss and improving public safety, thus reducing pressure for fire station growth and round the clock suppression staff.

Appendix A: Historical Information

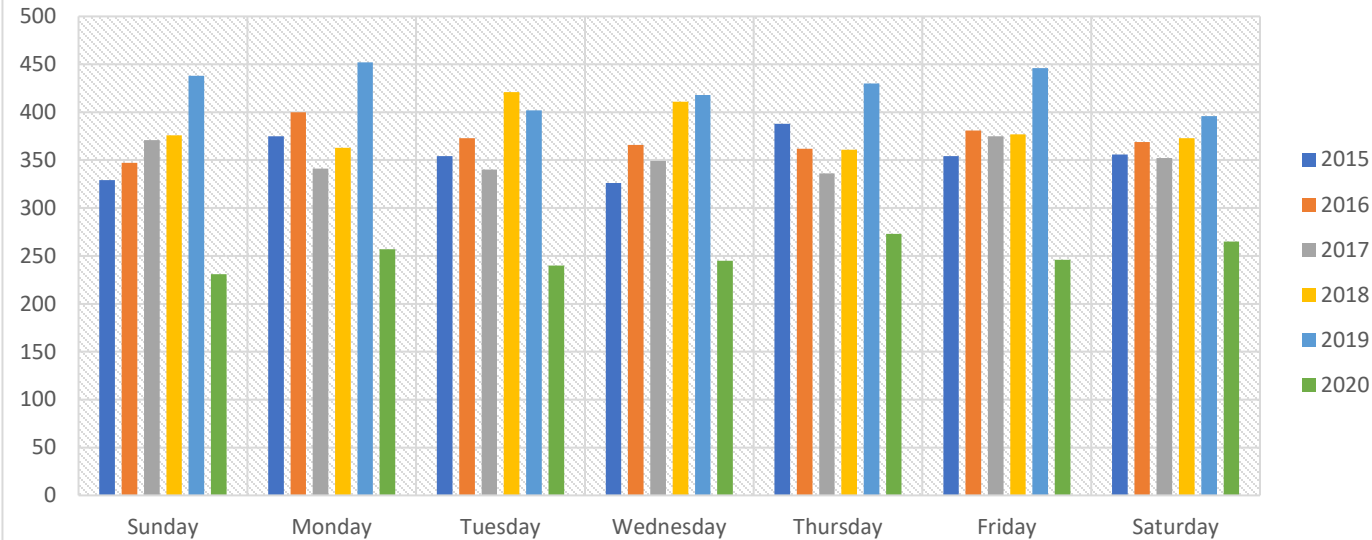
Response Percentiles by Station 2020



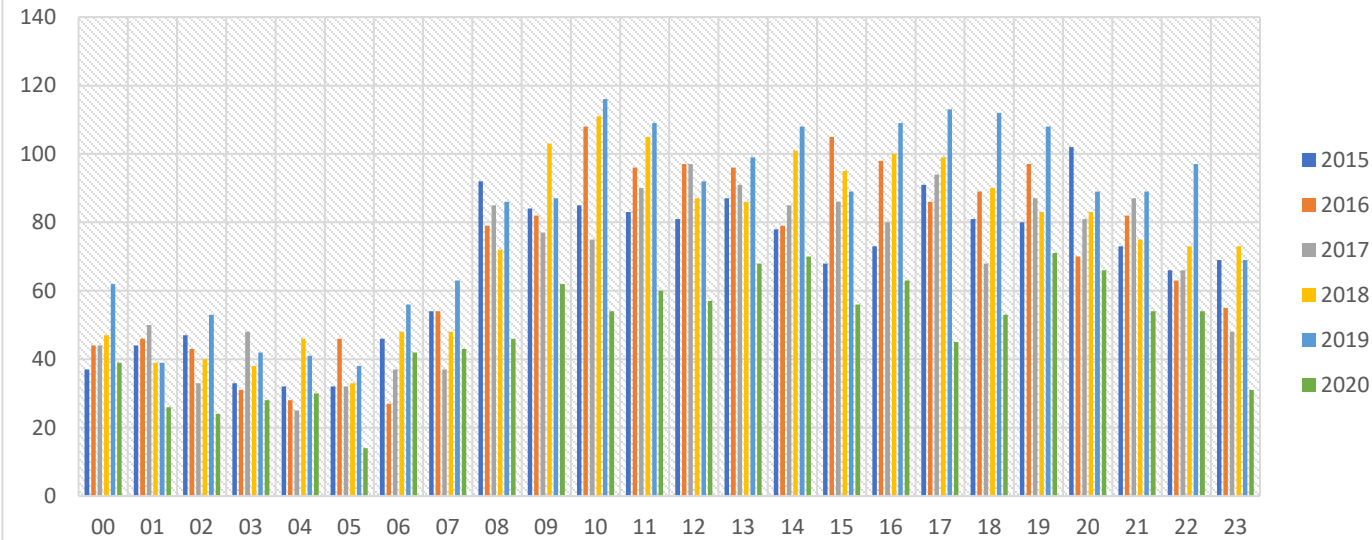
Station 1 Historic Information



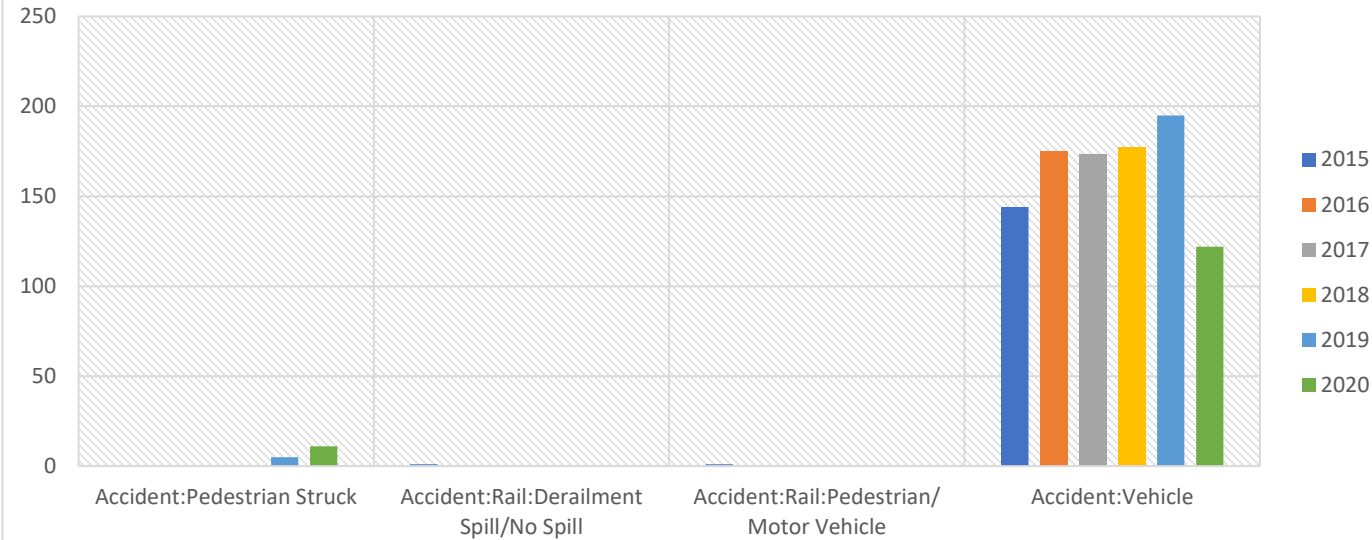
Station 1 : Number of calls by day



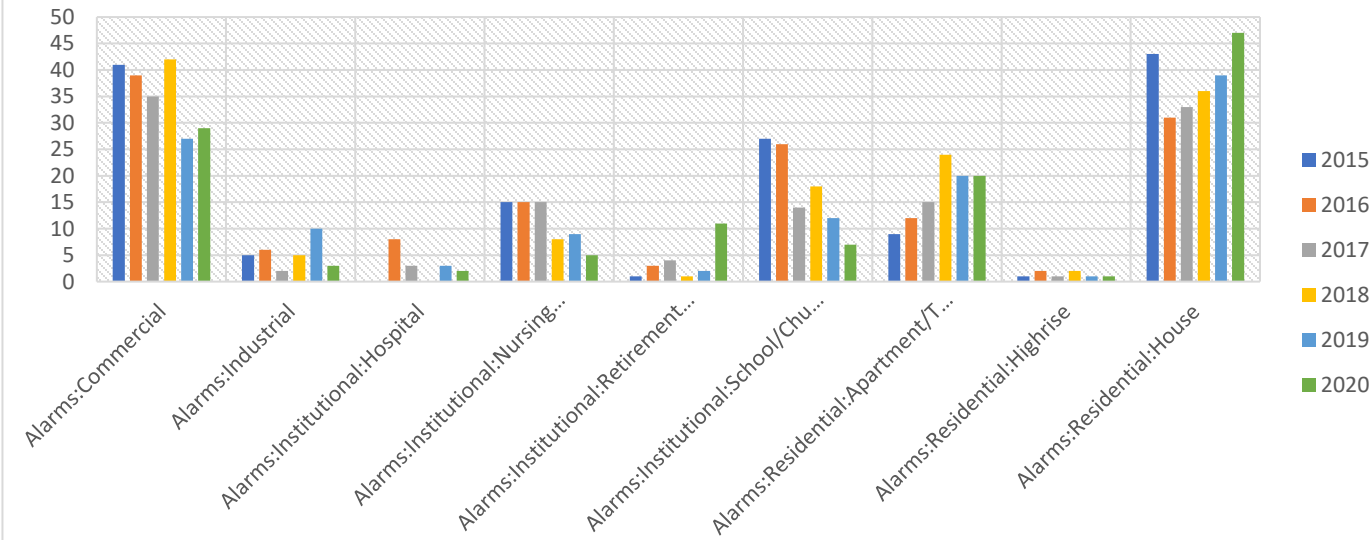
Station 1 : Number of calls by hour



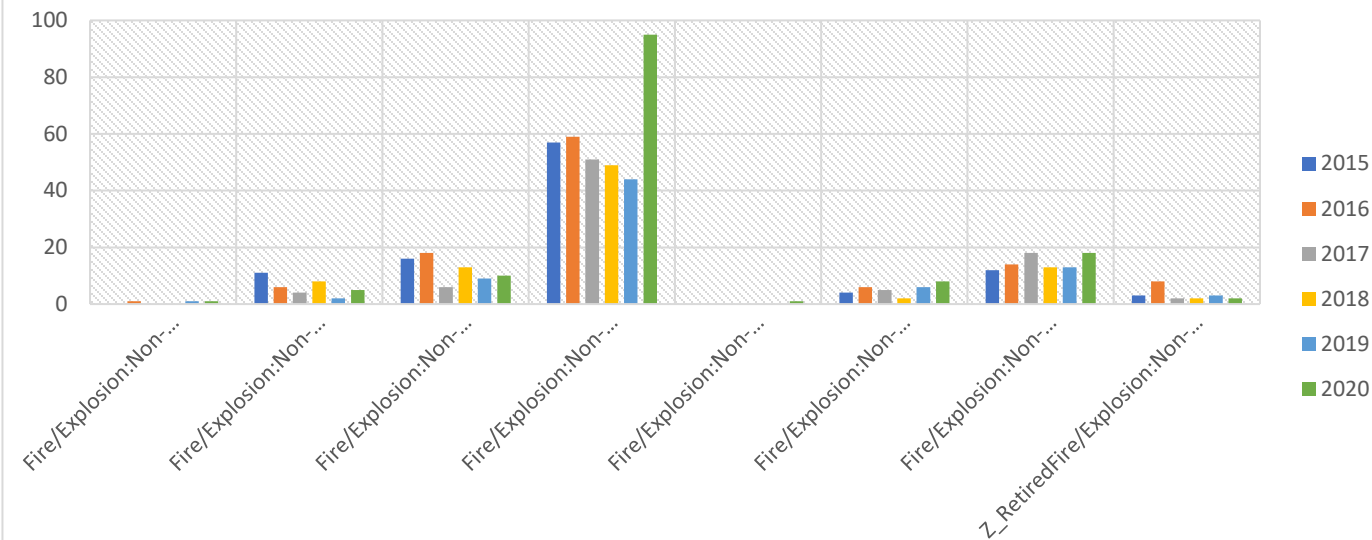
Station 1 : Number of accident calls by year



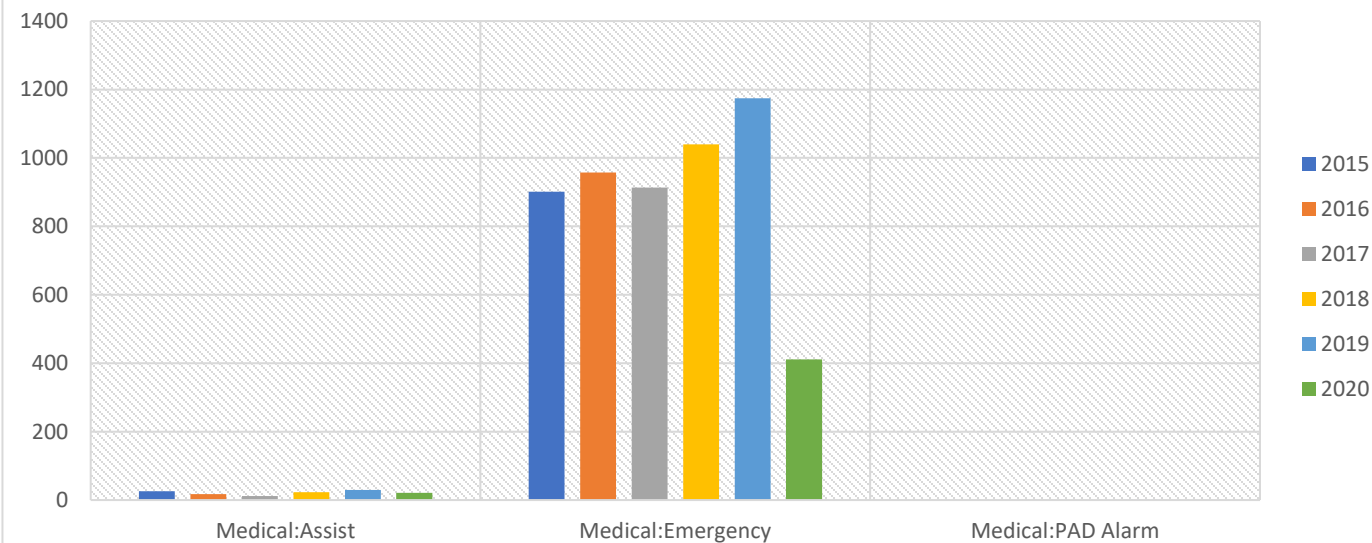
Station 1 : Number of alarm calls by year



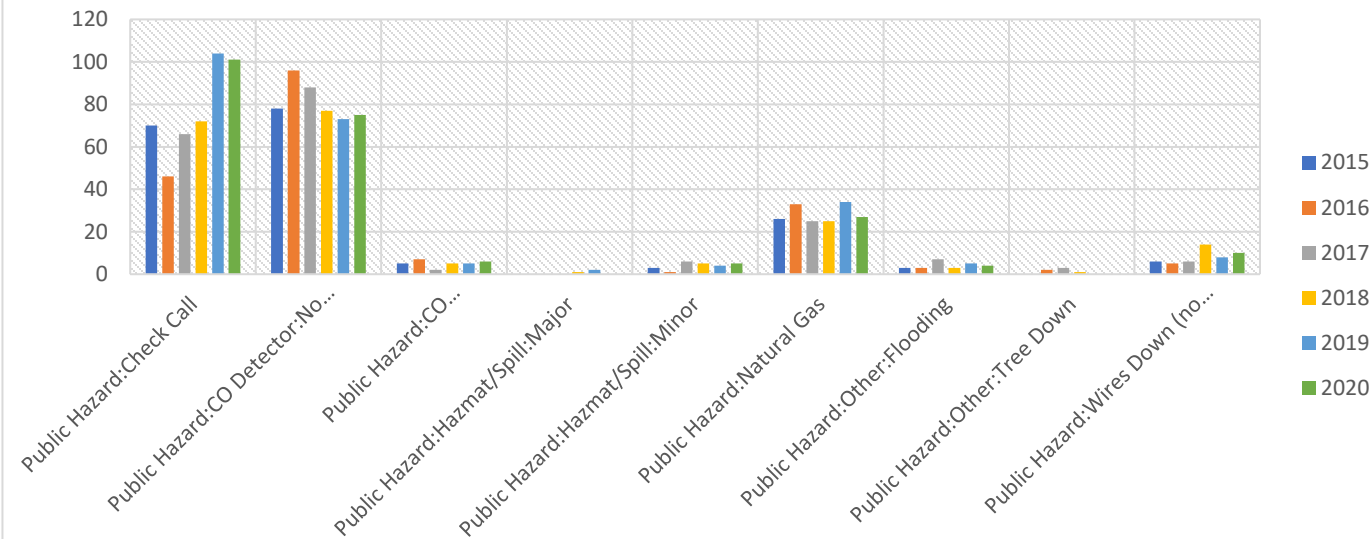
Station 1 : Number of non structural fires by year



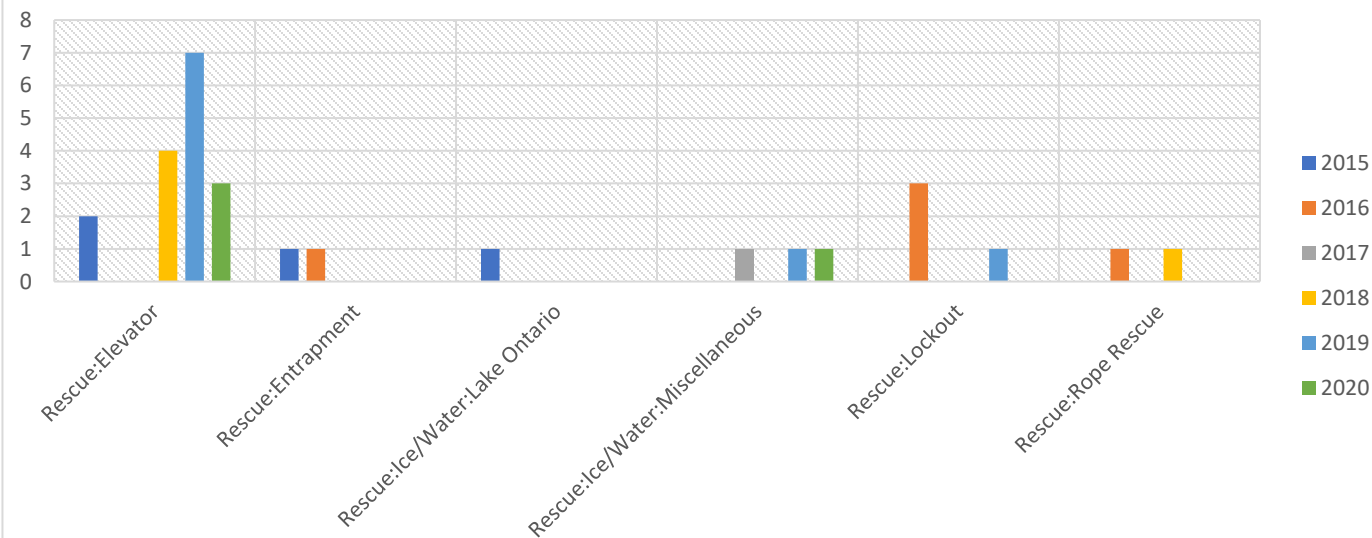
Station 1 : Number of medical calls by year



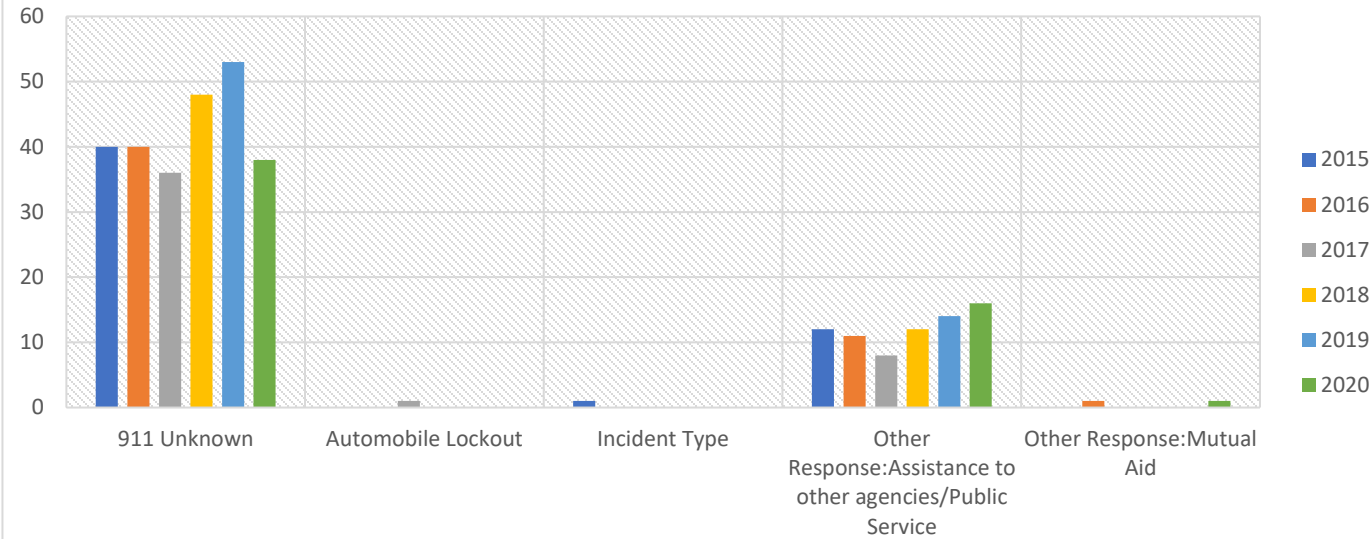
Station 1 : Number of public hazard calls by year



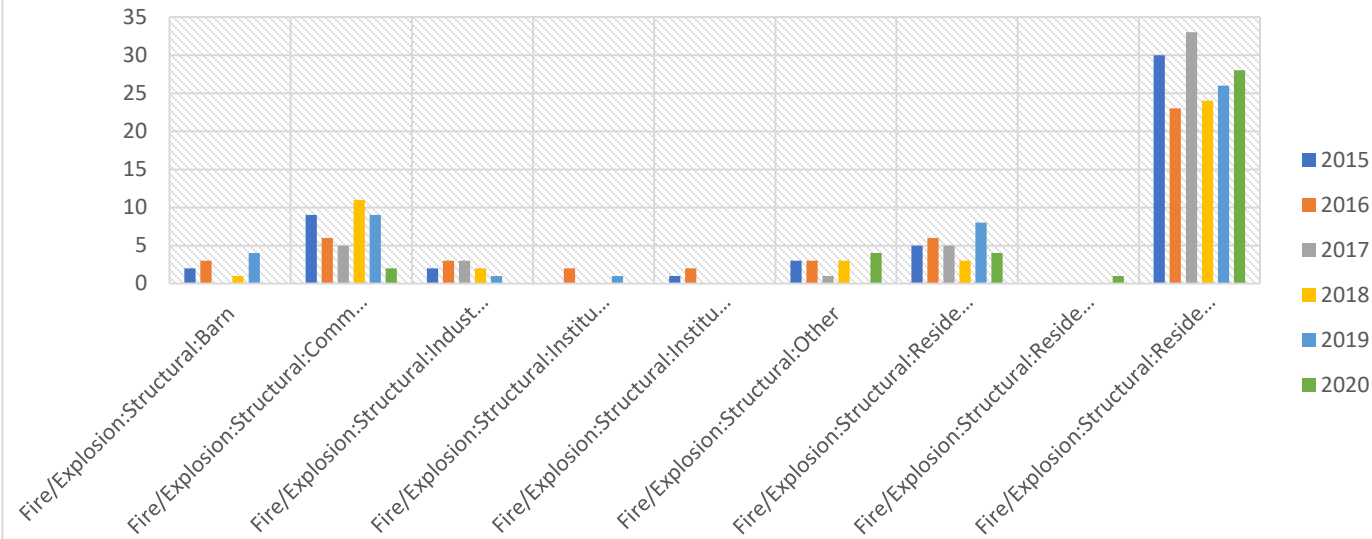
Station 1 : Number of rescue calls by year



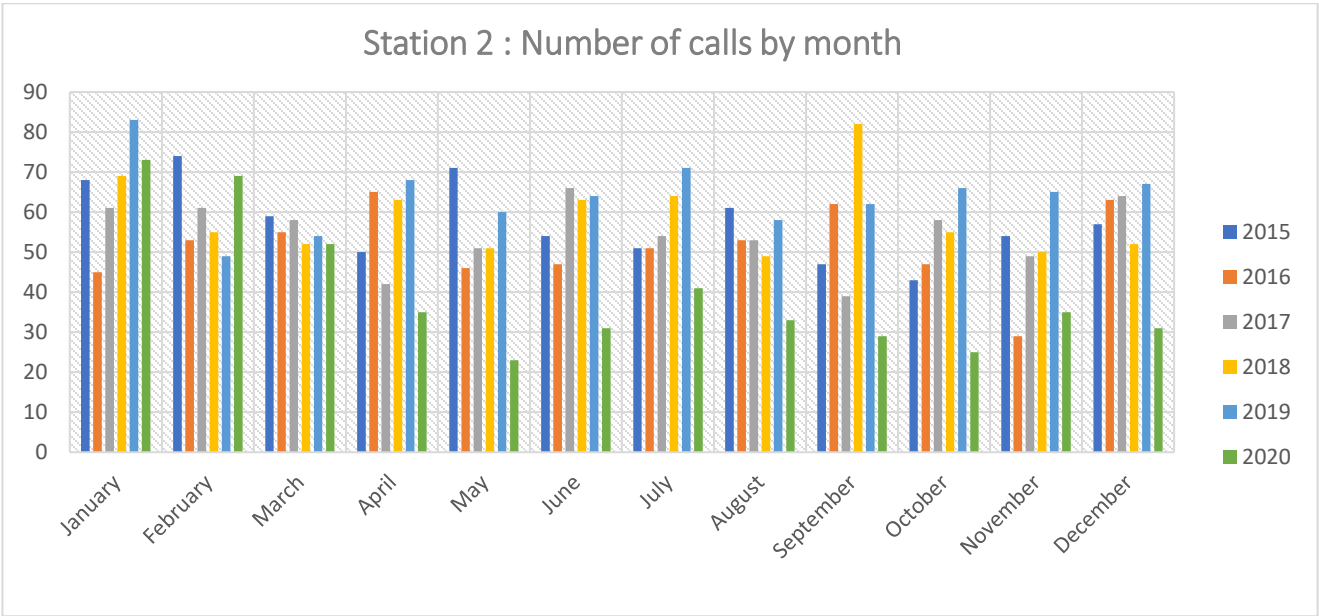
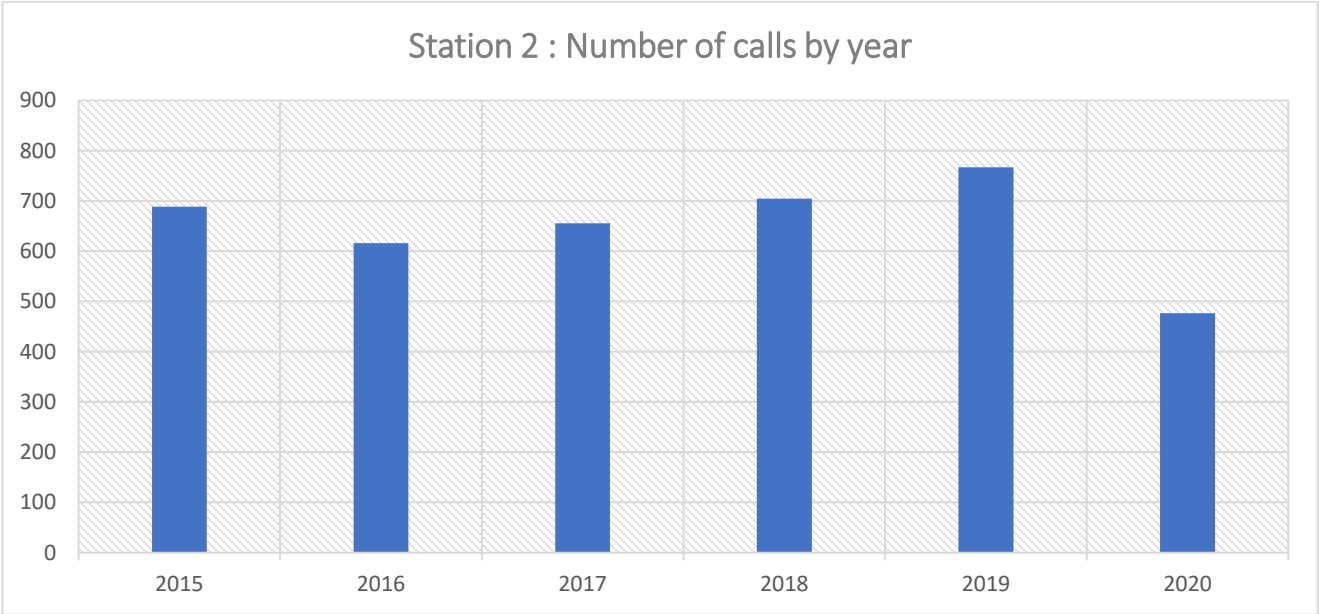
Station 1 : Number of other calls by year



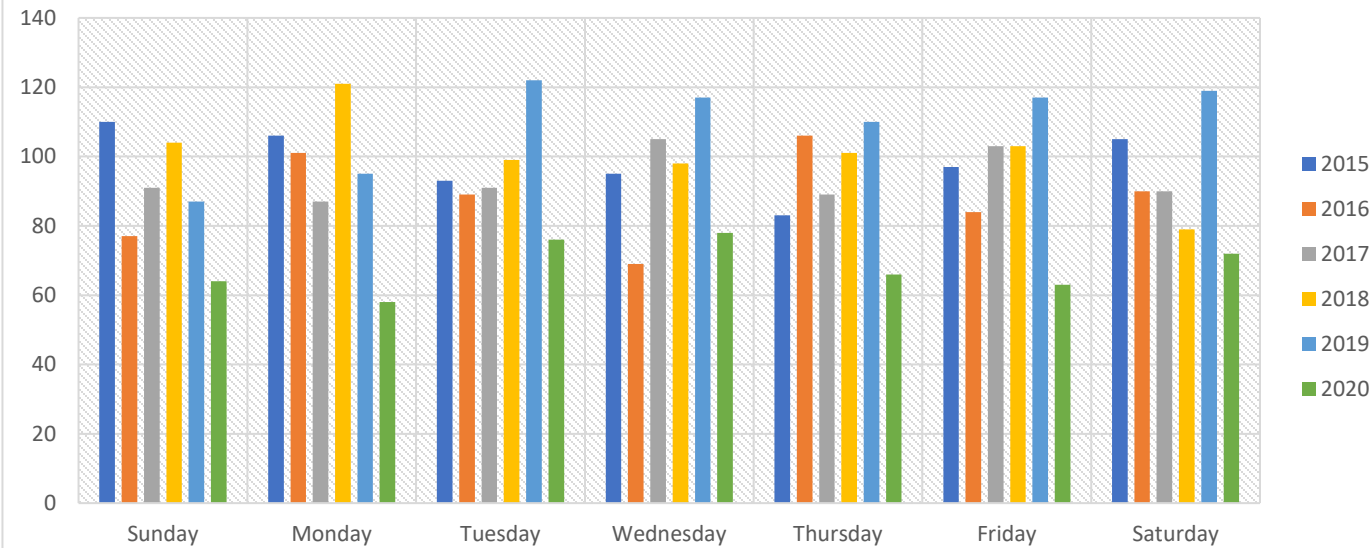
Station 1 : Number of structure fire calls by year



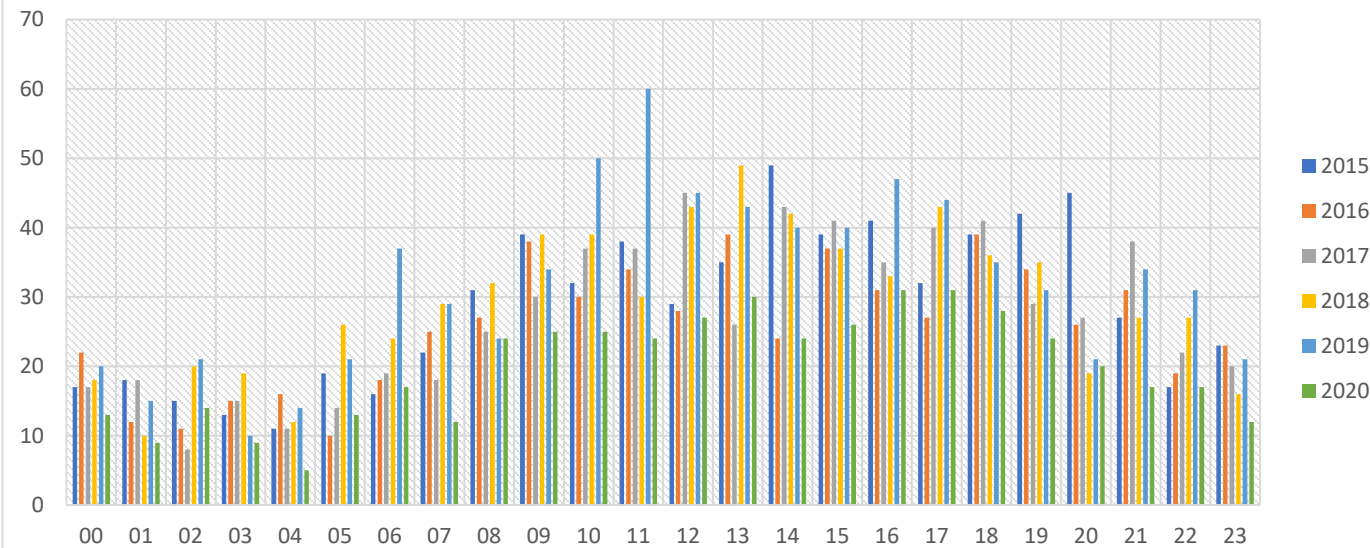
Station 2 Historic Information



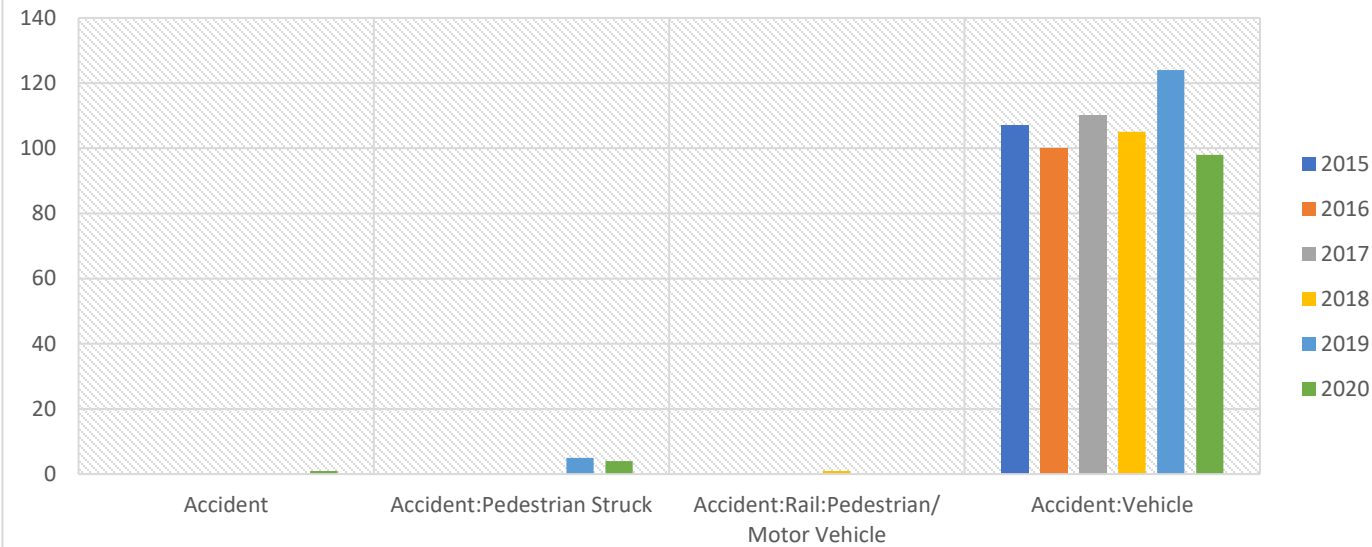
Station 2 : Number of calls by day



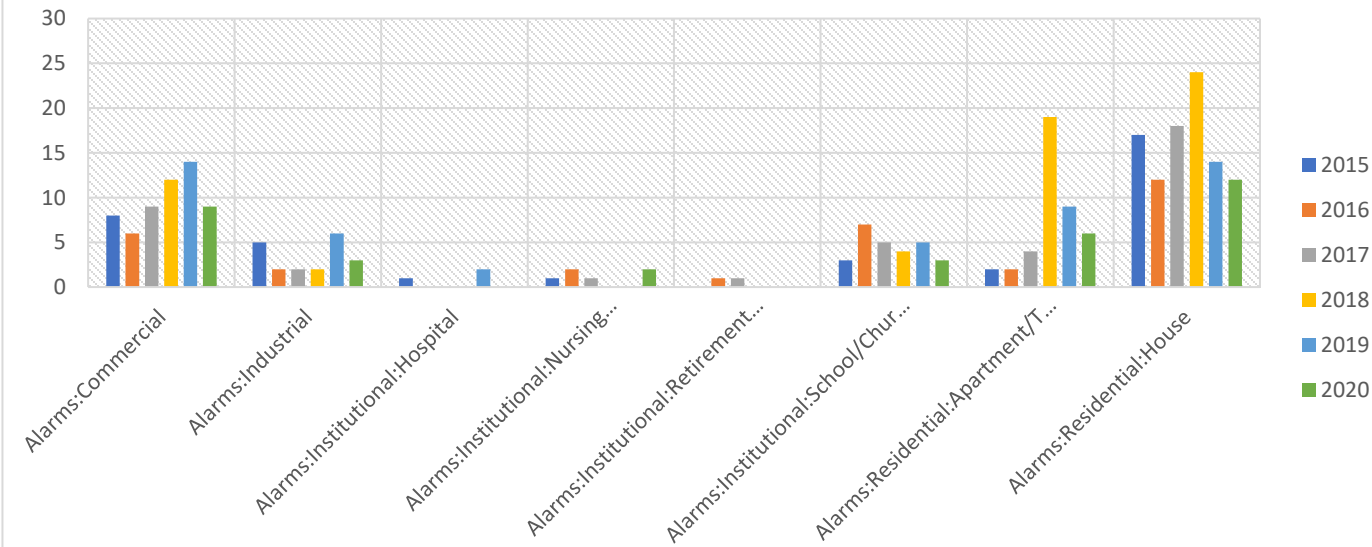
Station 2 : Number of calls by hour



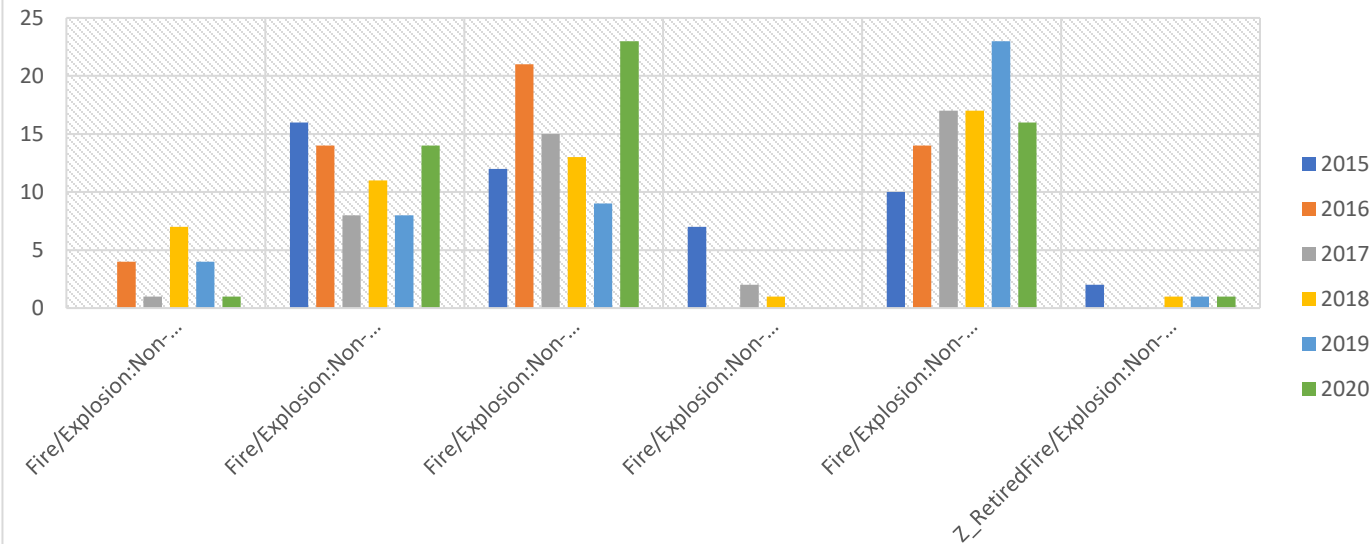
Station 2 : Number of accident calls by year



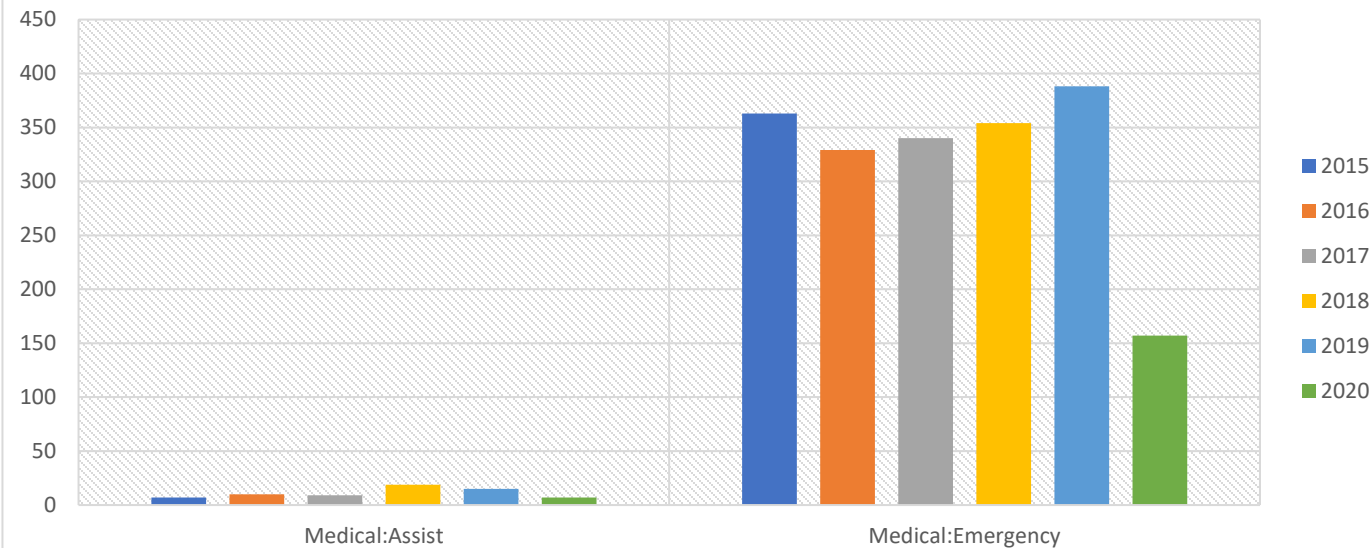
Station 2 : Number of alarm calls by year



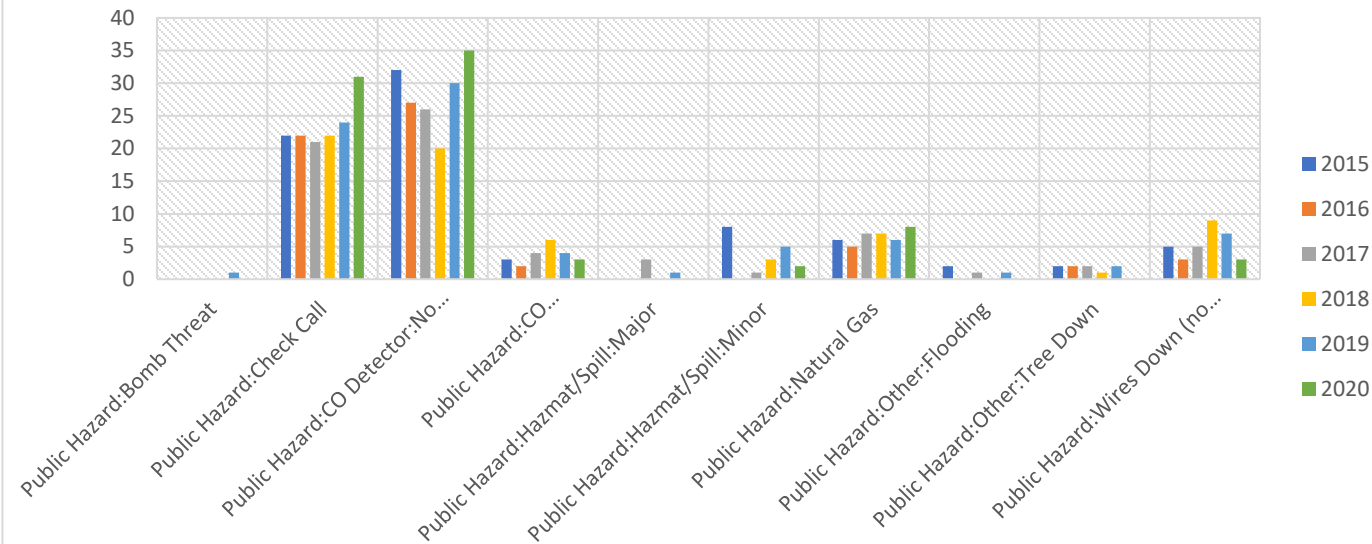
Station 2 : Number of non structural fires by year



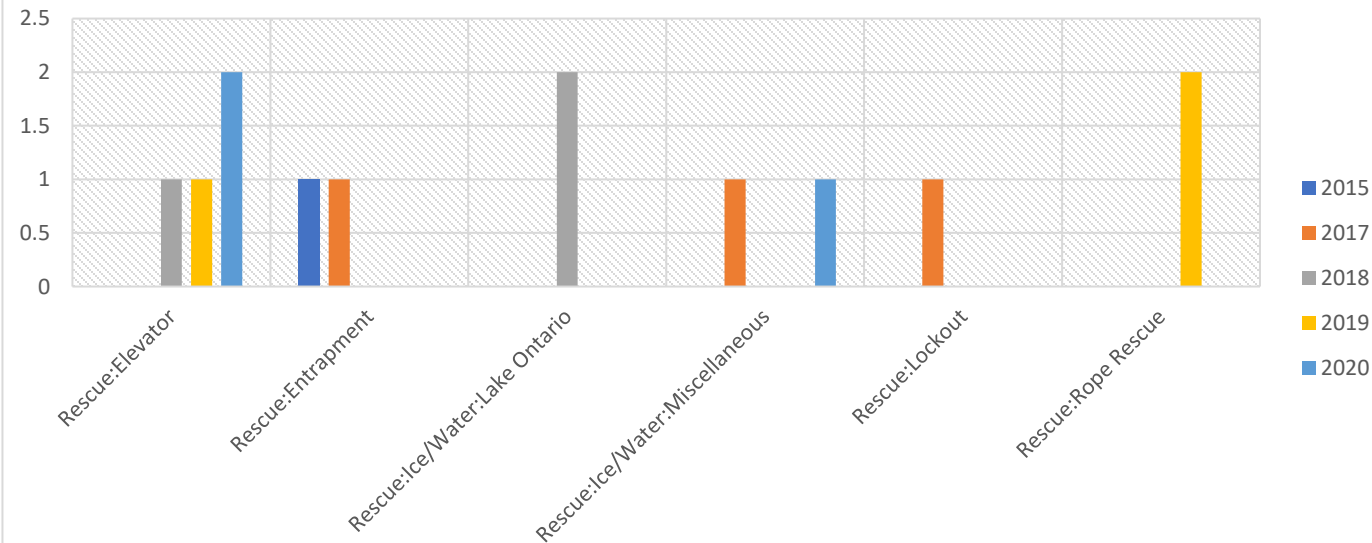
Station 2 : Number of medical calls by year



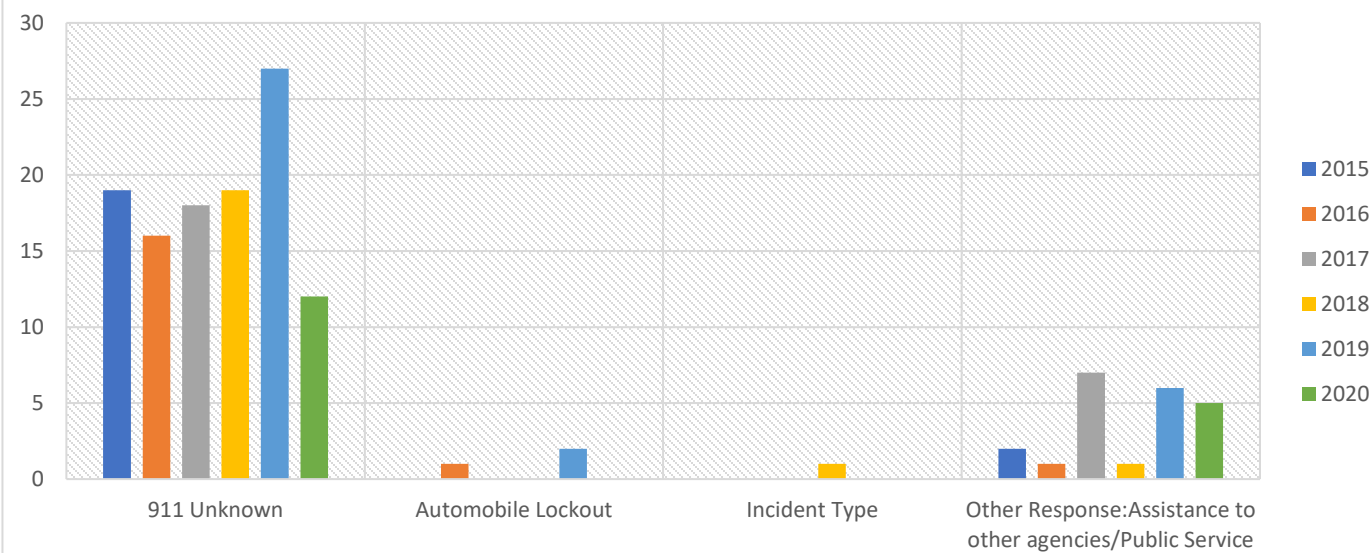
Station 2 : Number of public hazard calls by year



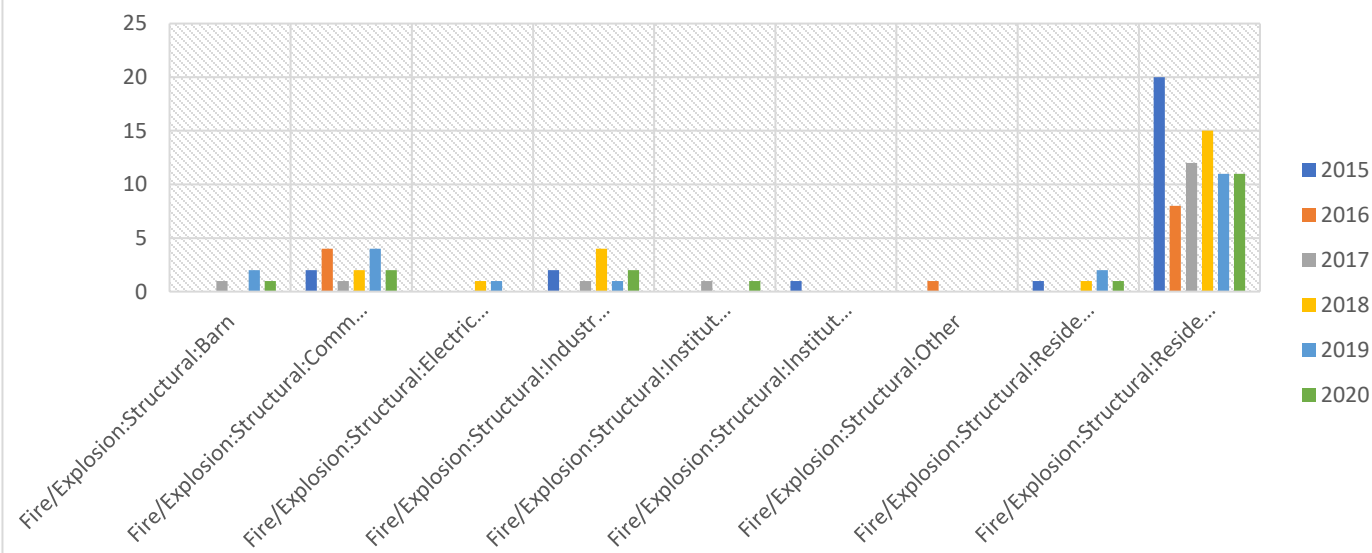
Station 2 : Number of rescue calls by year



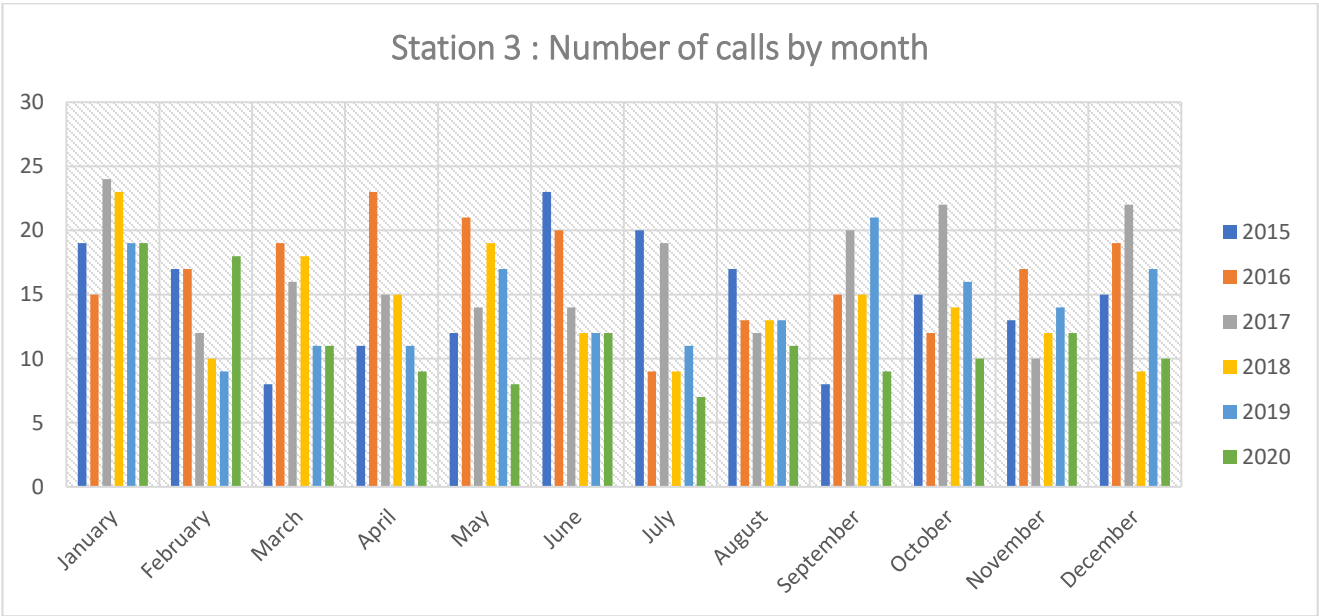
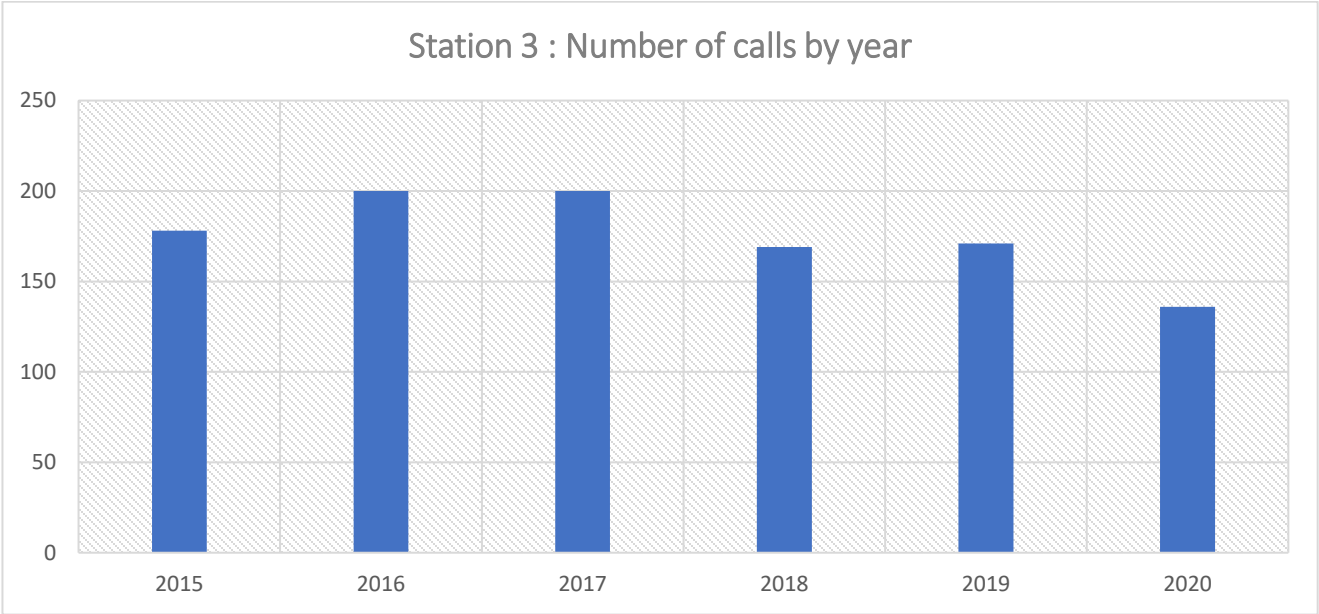
Station 2 : Number of other calls by year



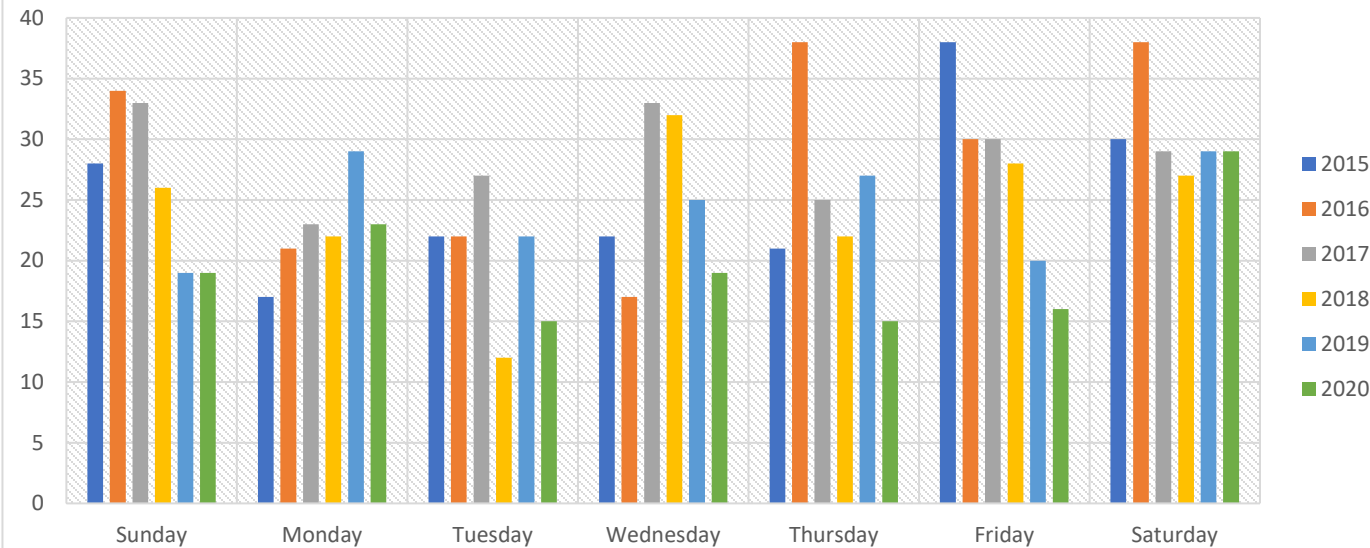
Station 2 : Number of structural fire calls by year



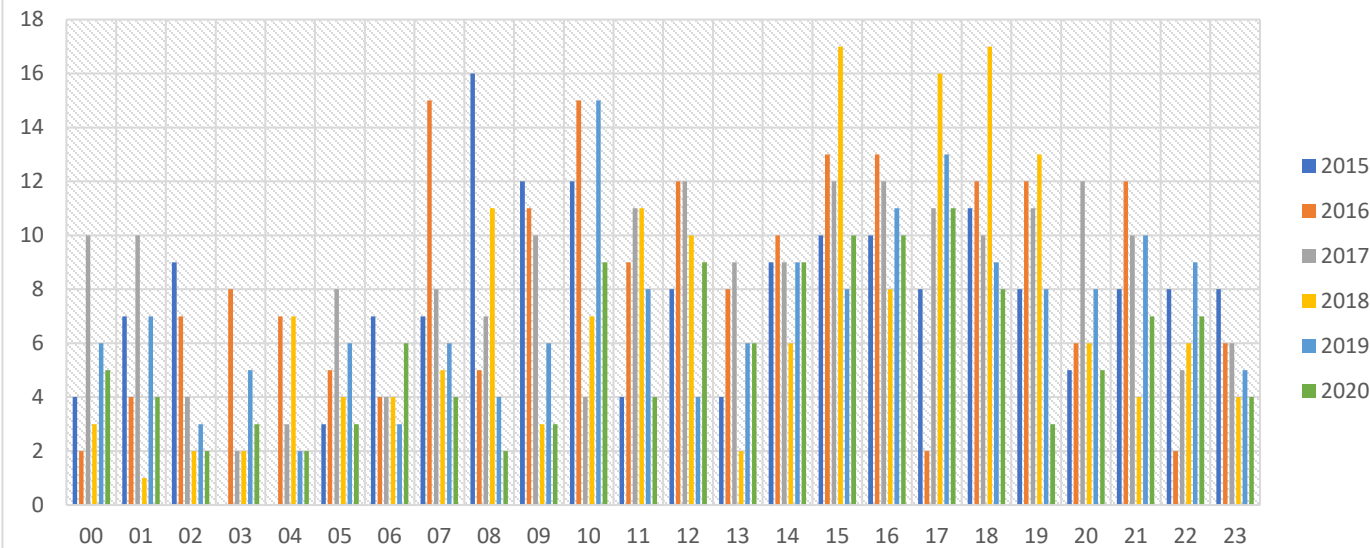
Station 3 Historic Information



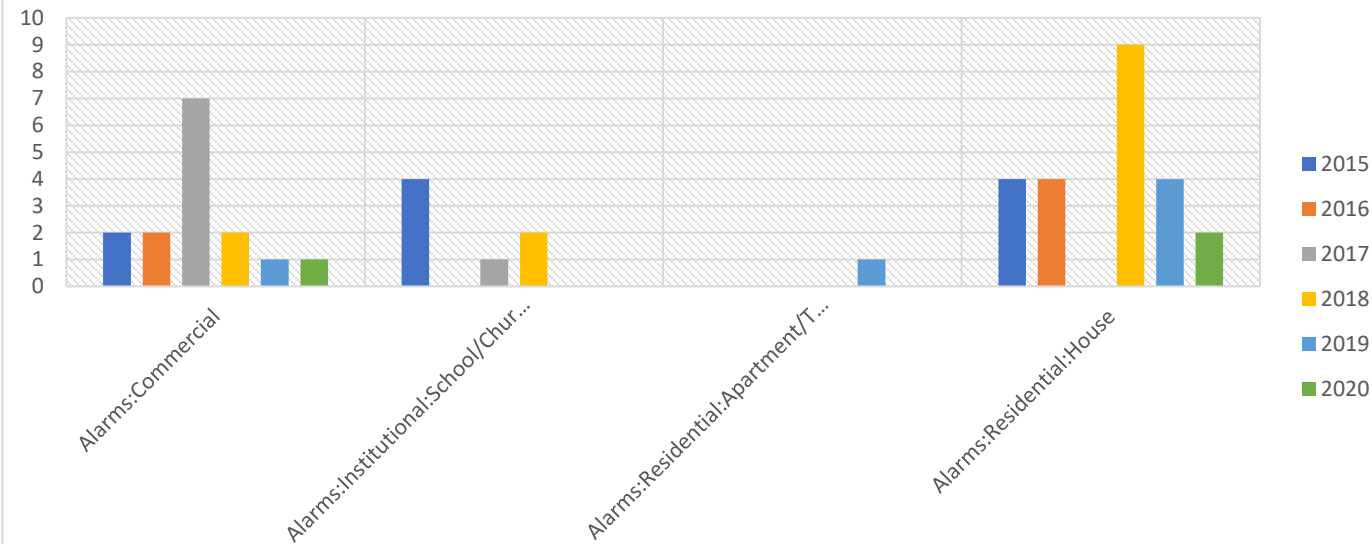
Station 3 : Number of calls by day



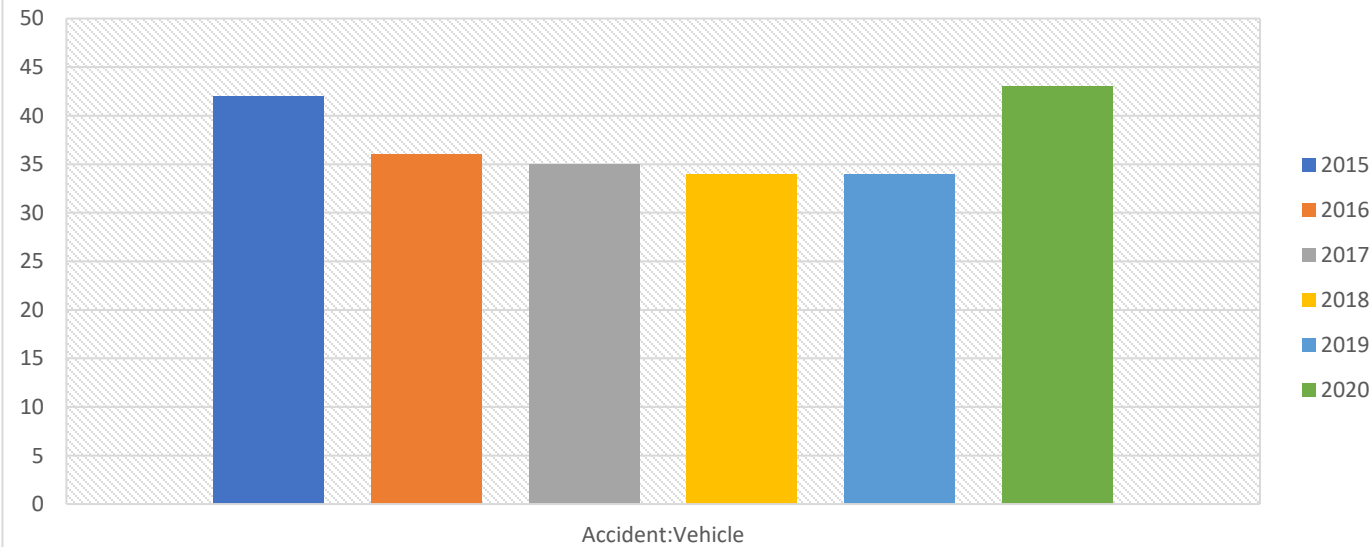
Station 3 : Number of calls by hour

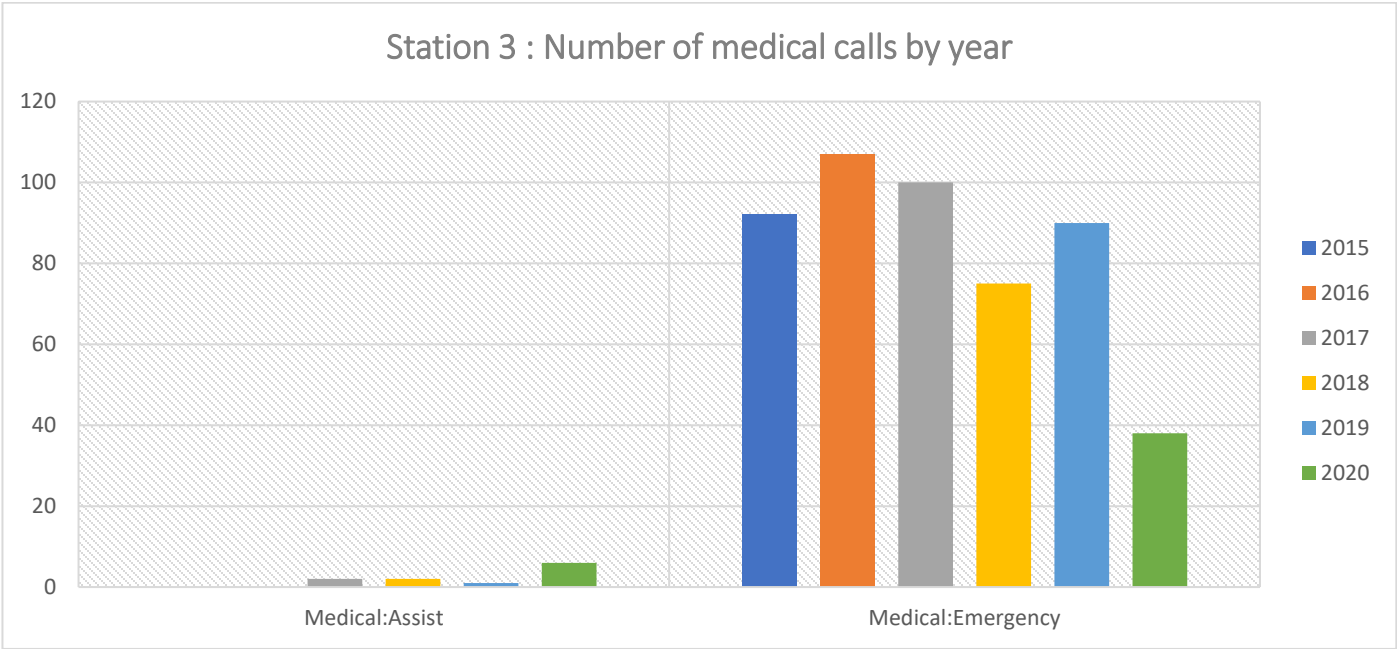
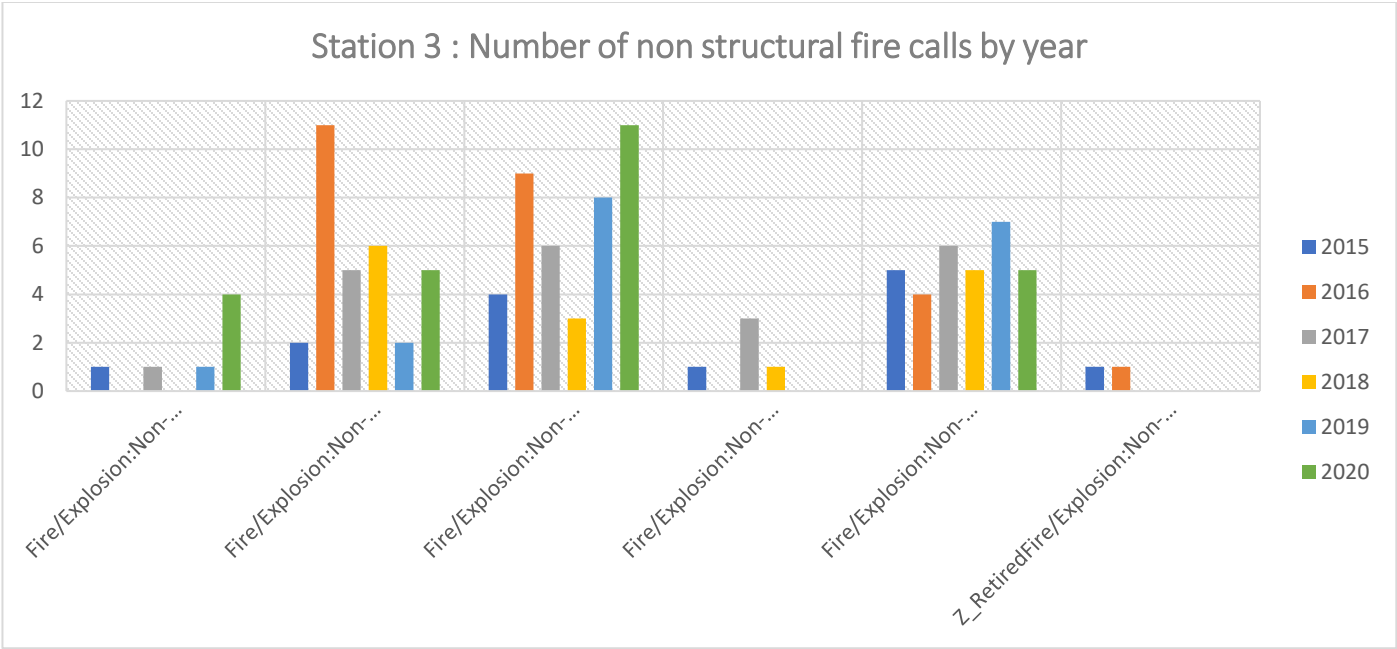


Station 3 : Number of alarm calls by year

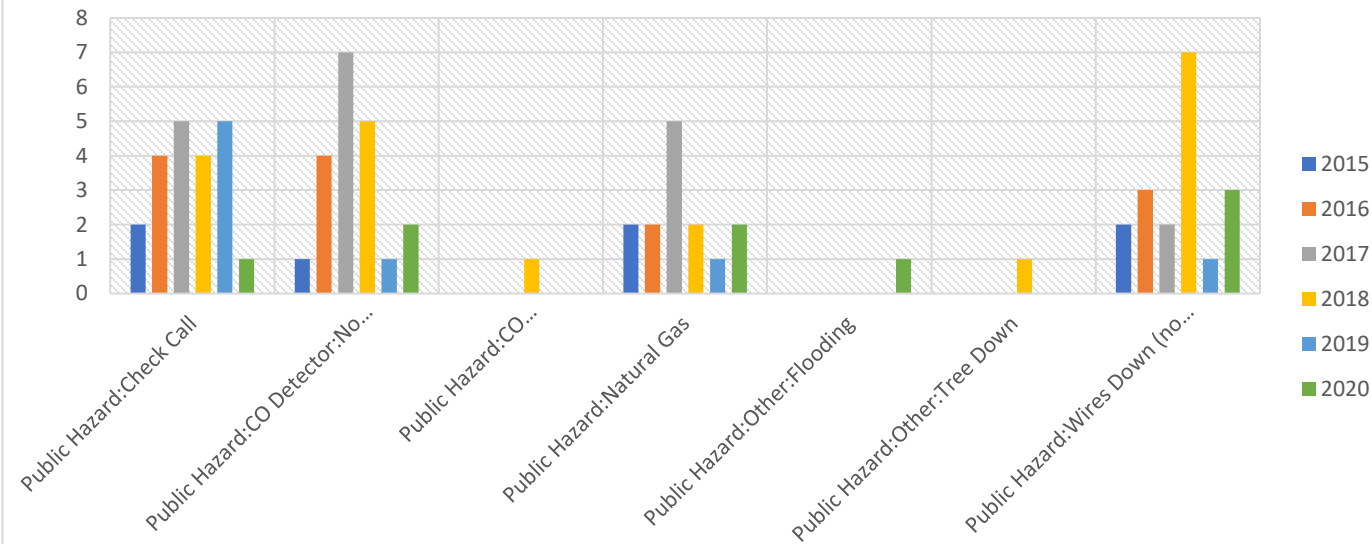


Station 3 : Number of accident calls by year

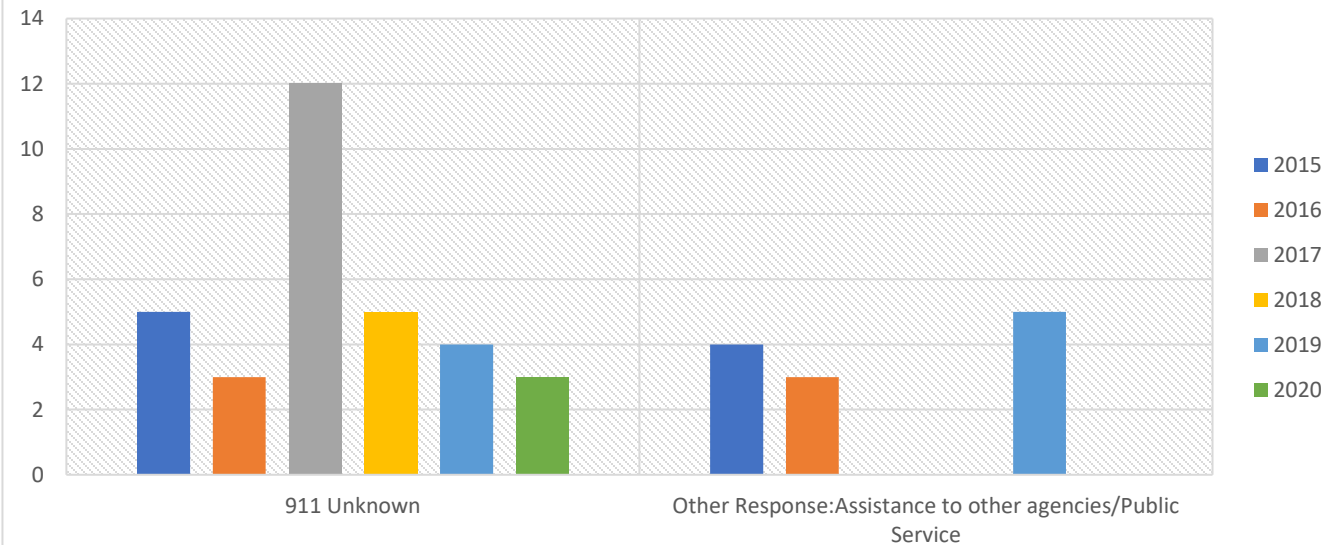


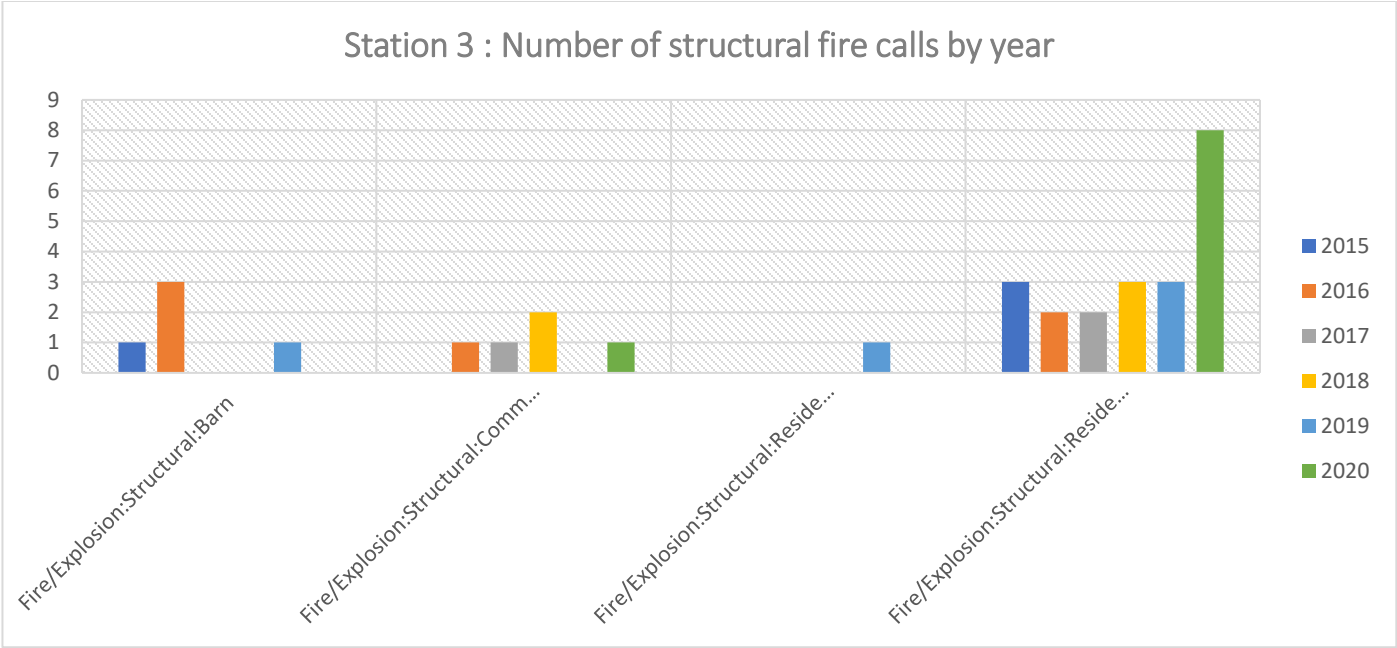


Station 3 : Number of public hazard calls by year

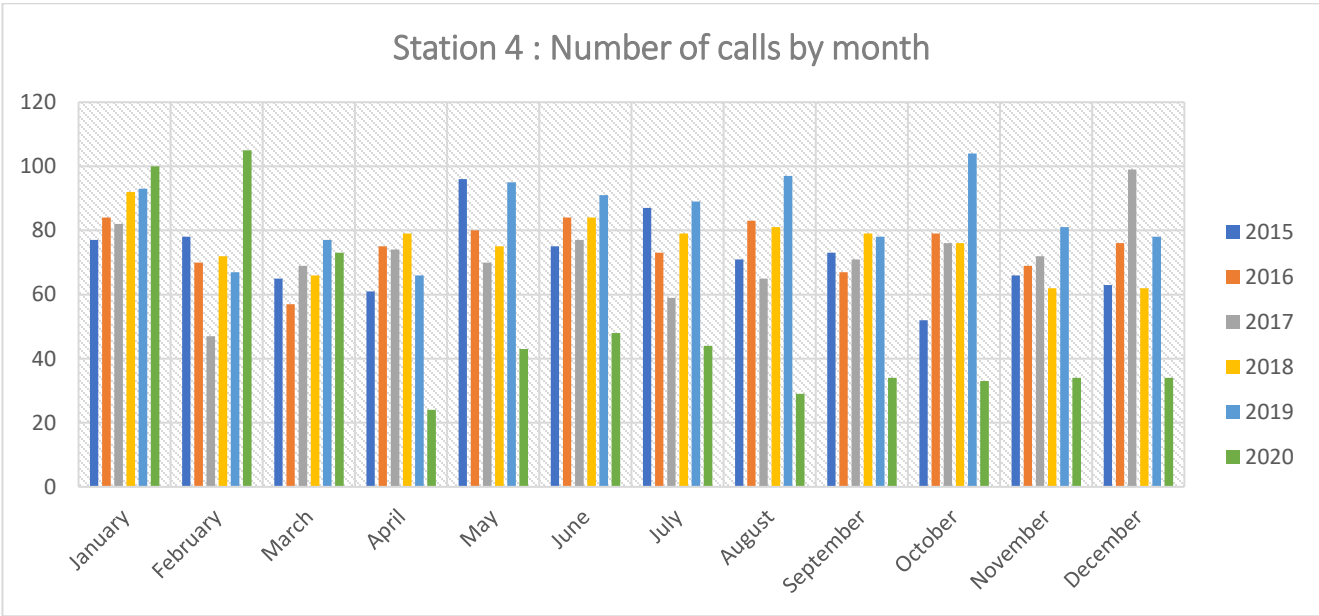
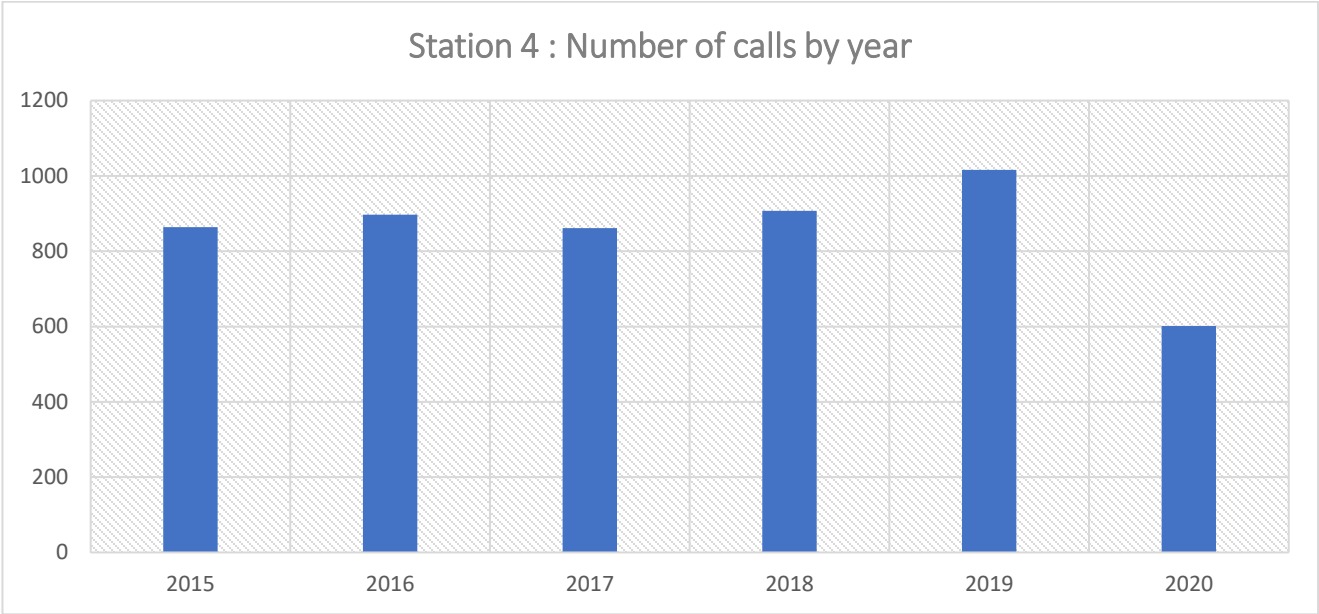


Station 3 : Number of other calls by year

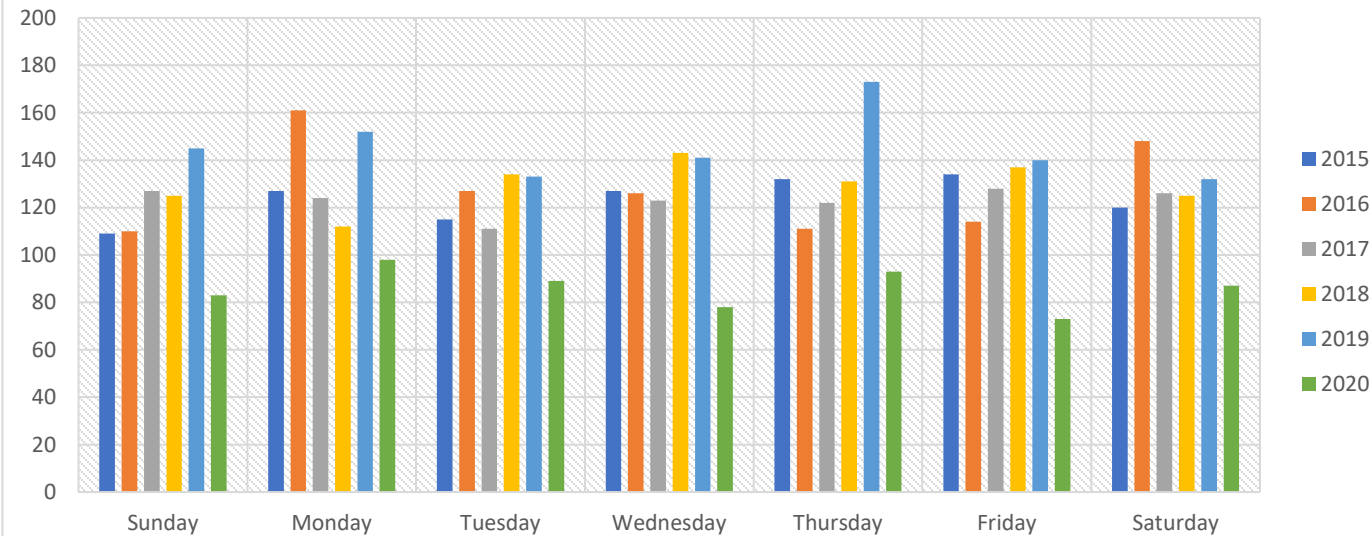




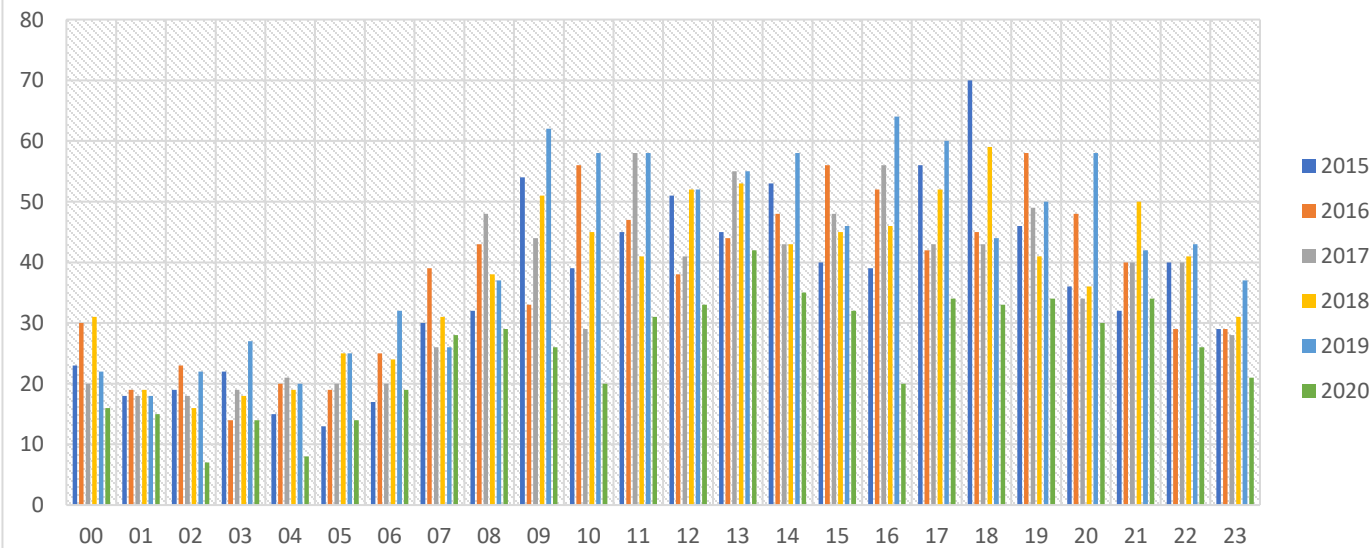
Station 4 Historic Information



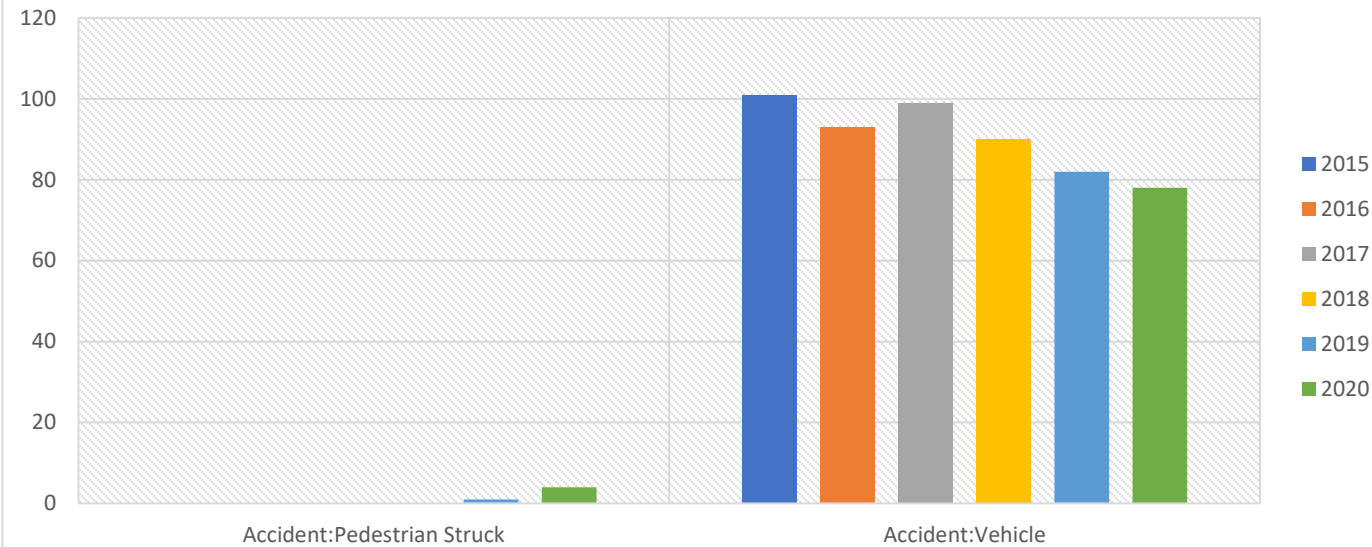
Station 4 : Number of calls by day



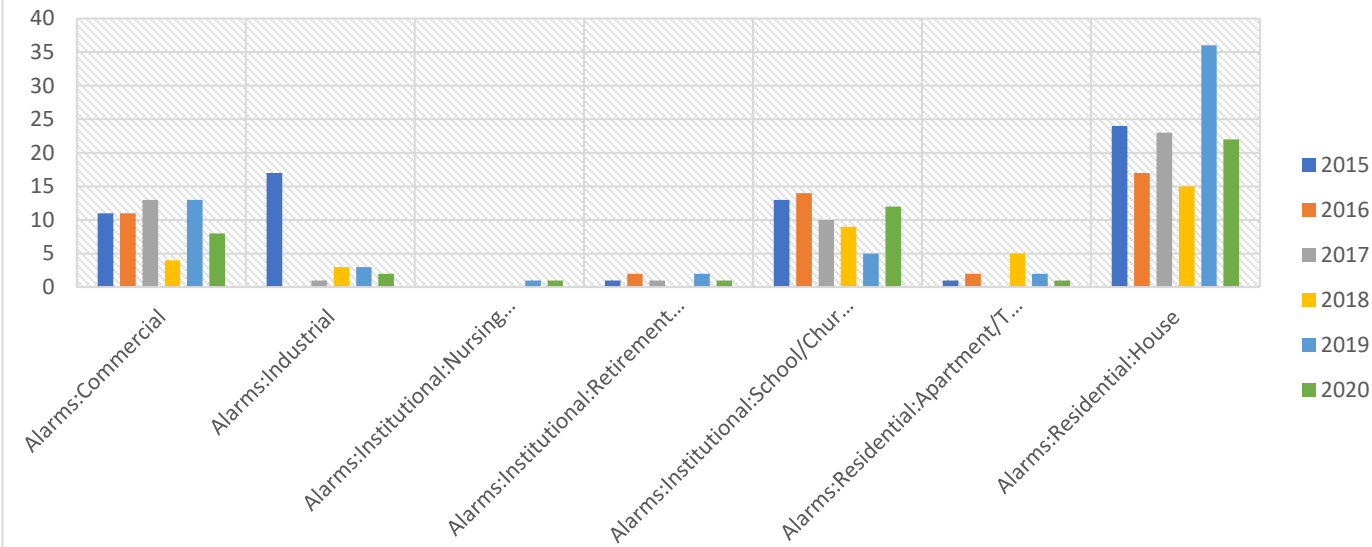
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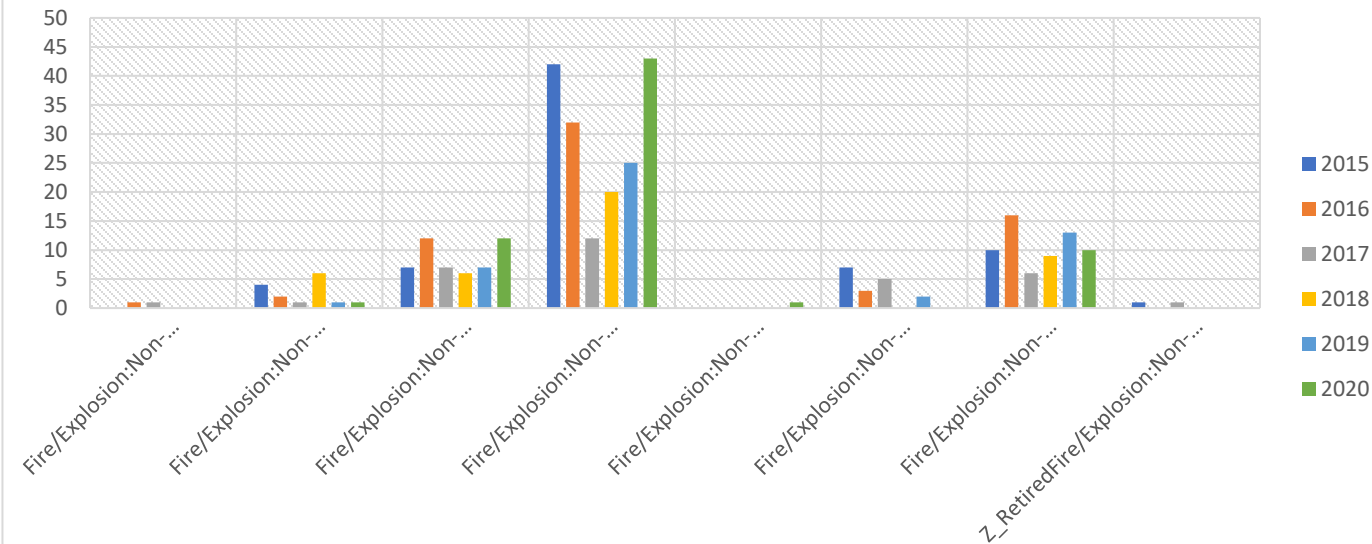
Station 4 : Number of accident calls by year



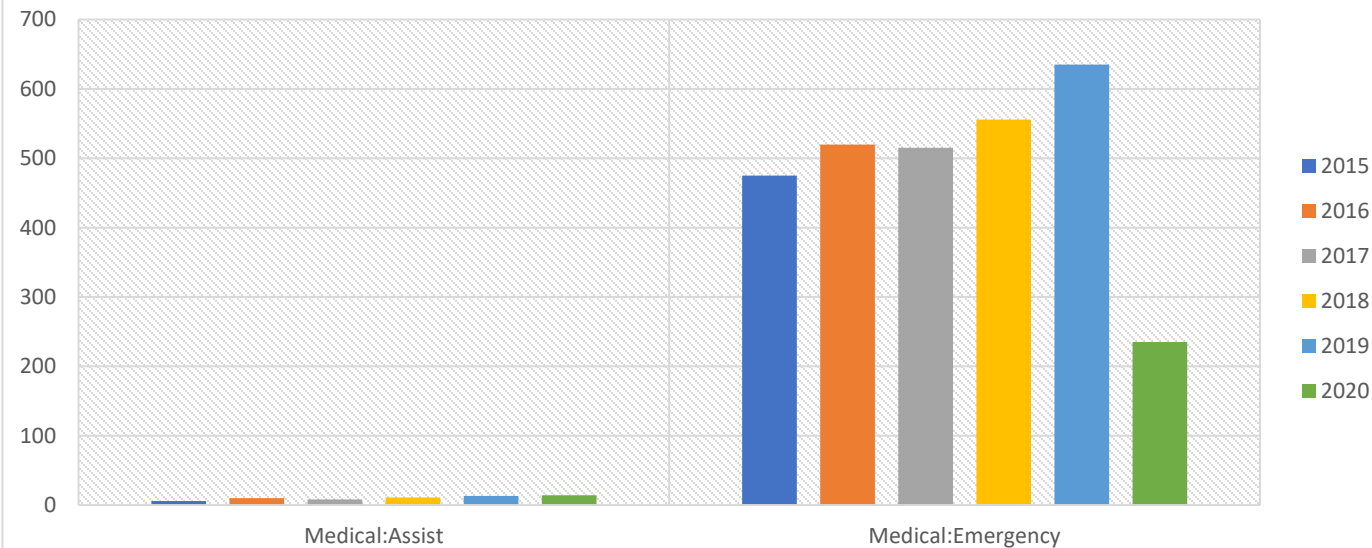
Station 4 : Number of alarm calls by year



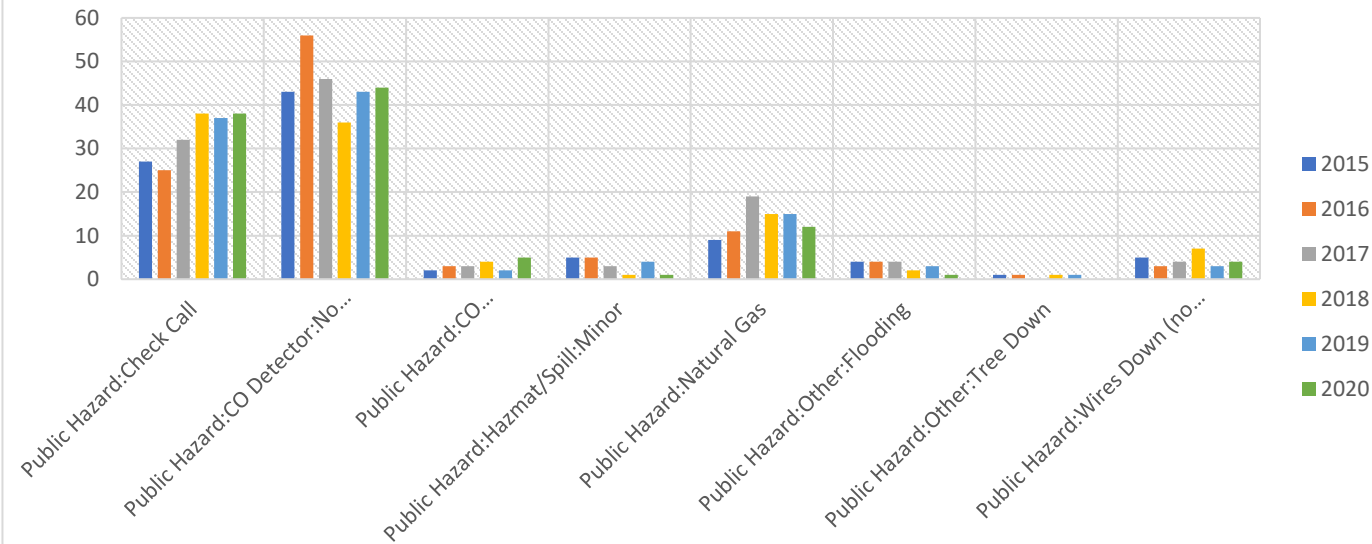
Station 4 : Number of non structural fire calls by year



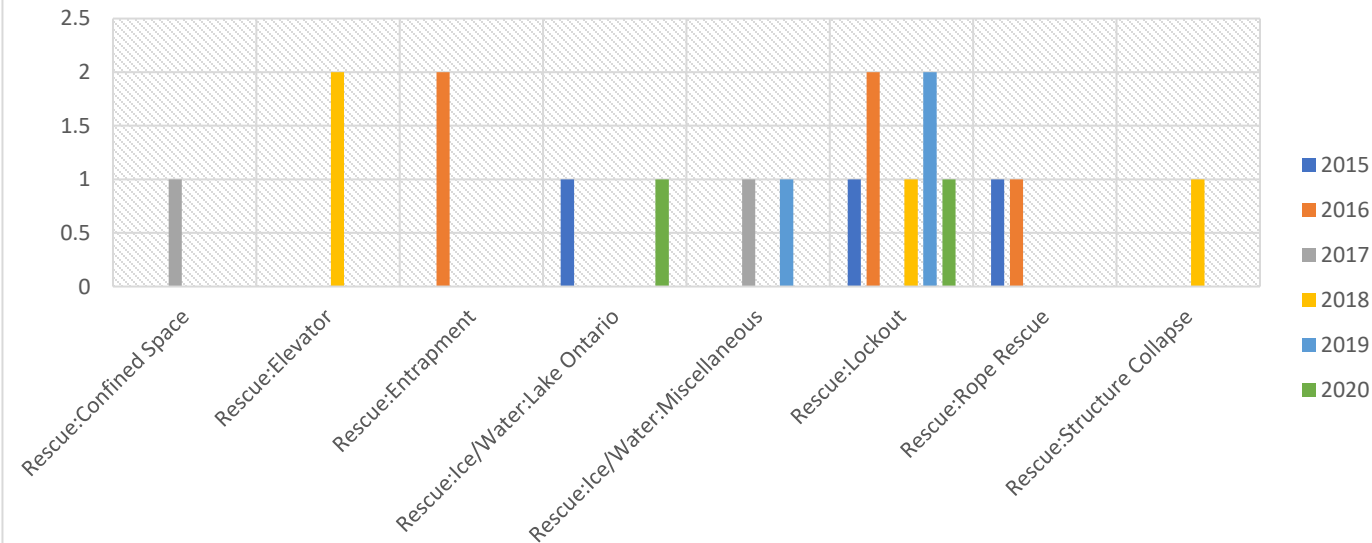
Station 4 : Number of medical calls by year



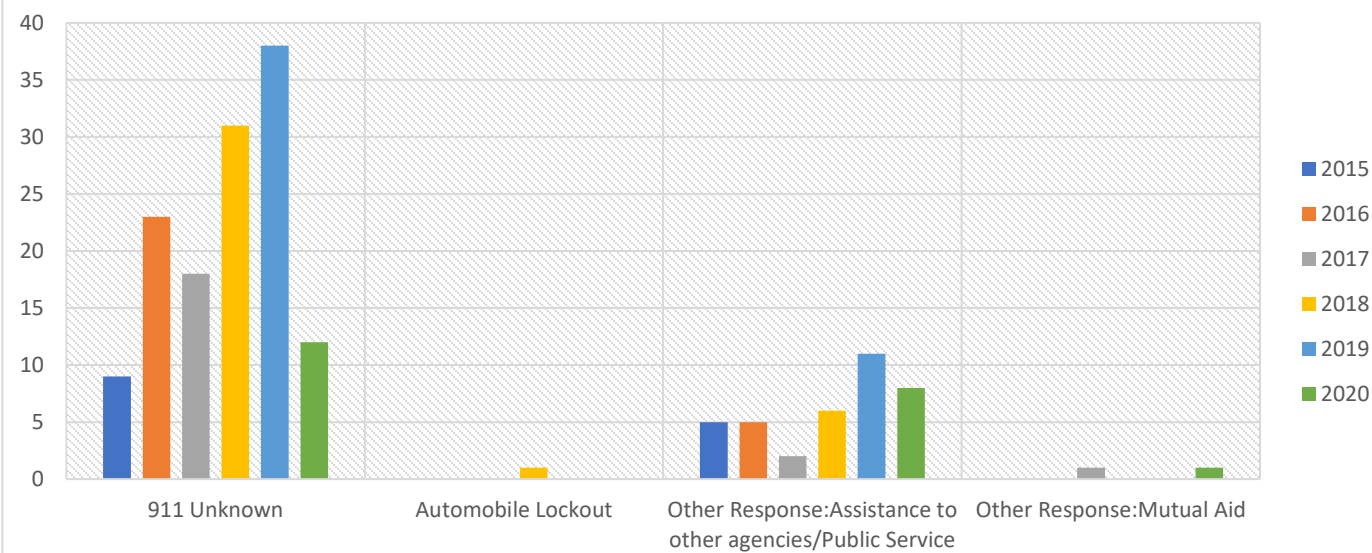
Station 4 : Number of public hazard calls by year



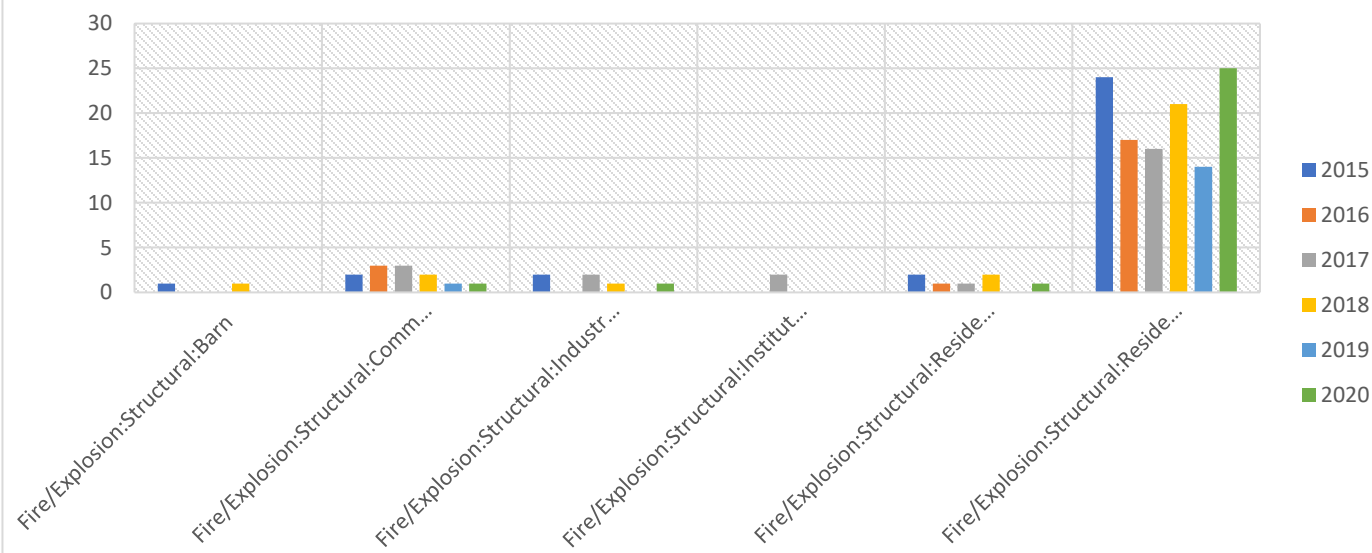
Station 4 : Number of rescue call by year



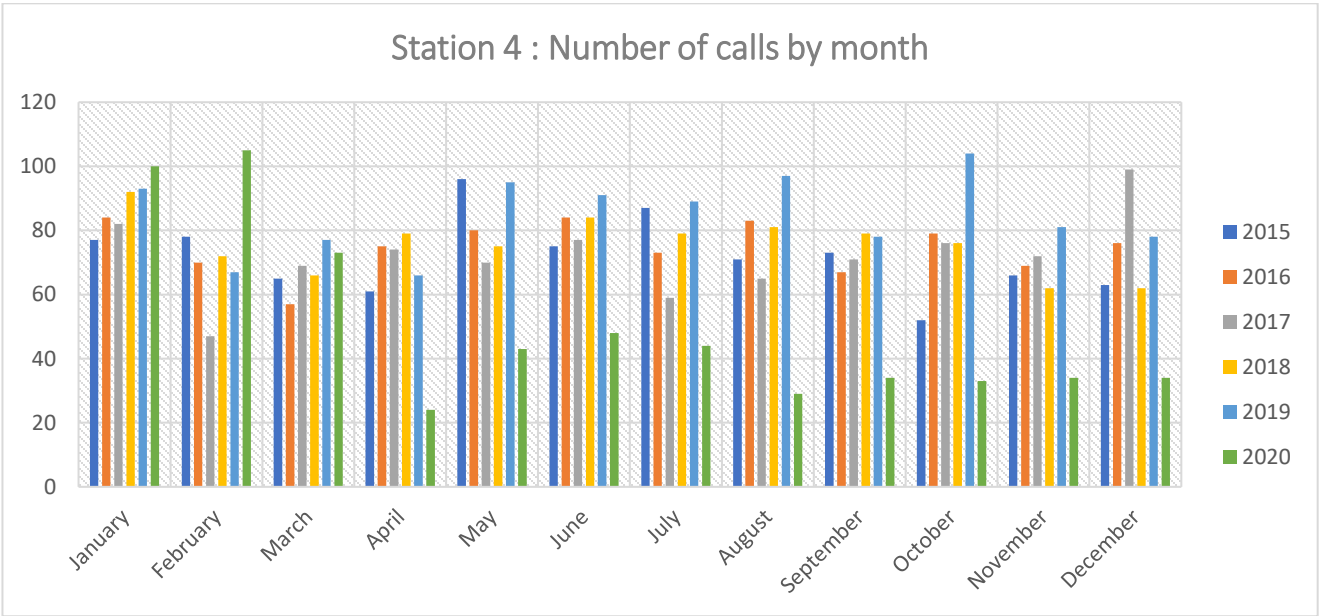
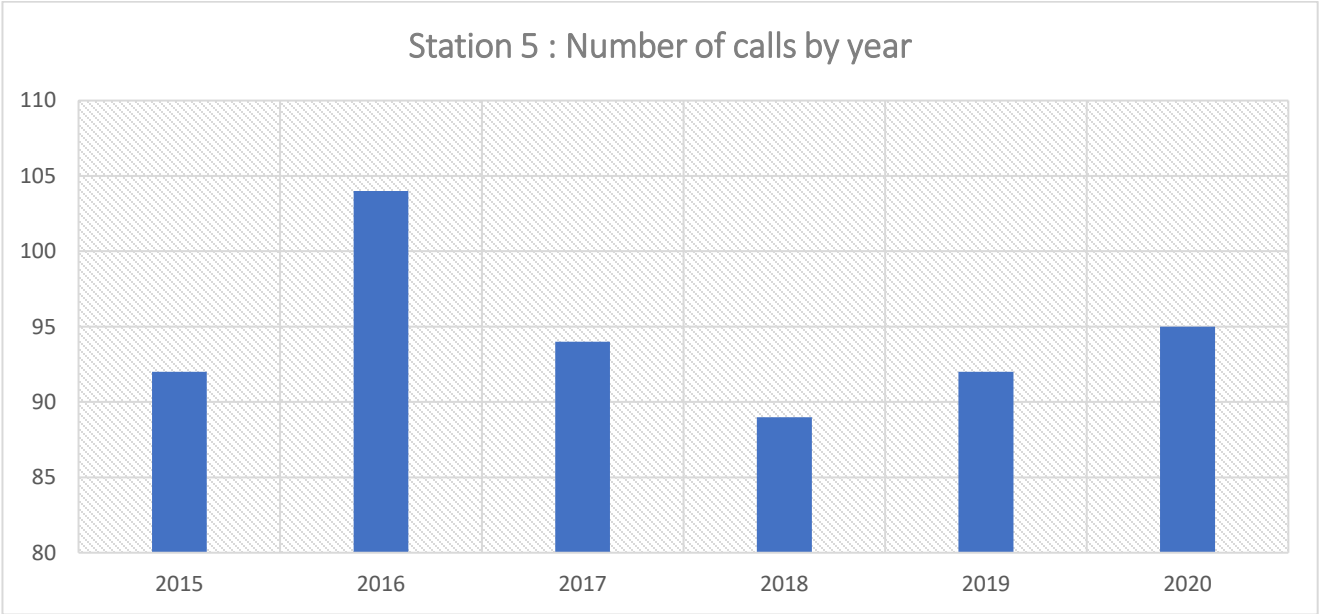
Station 4 : Number of other calls by year



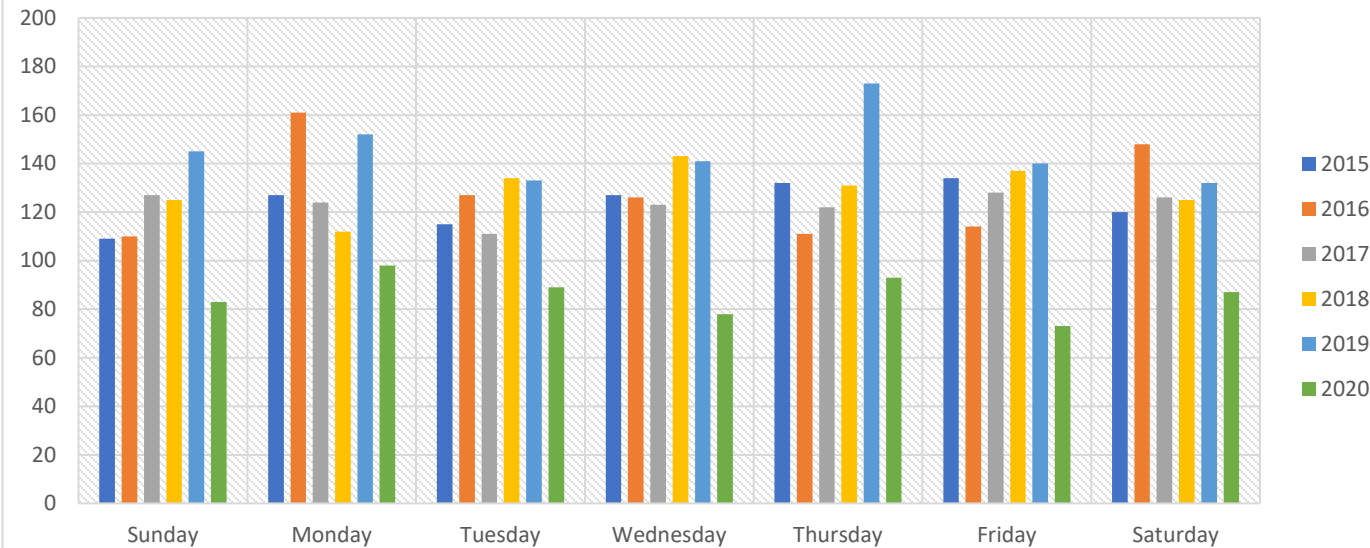
Station 4 : Number of structural fires by year



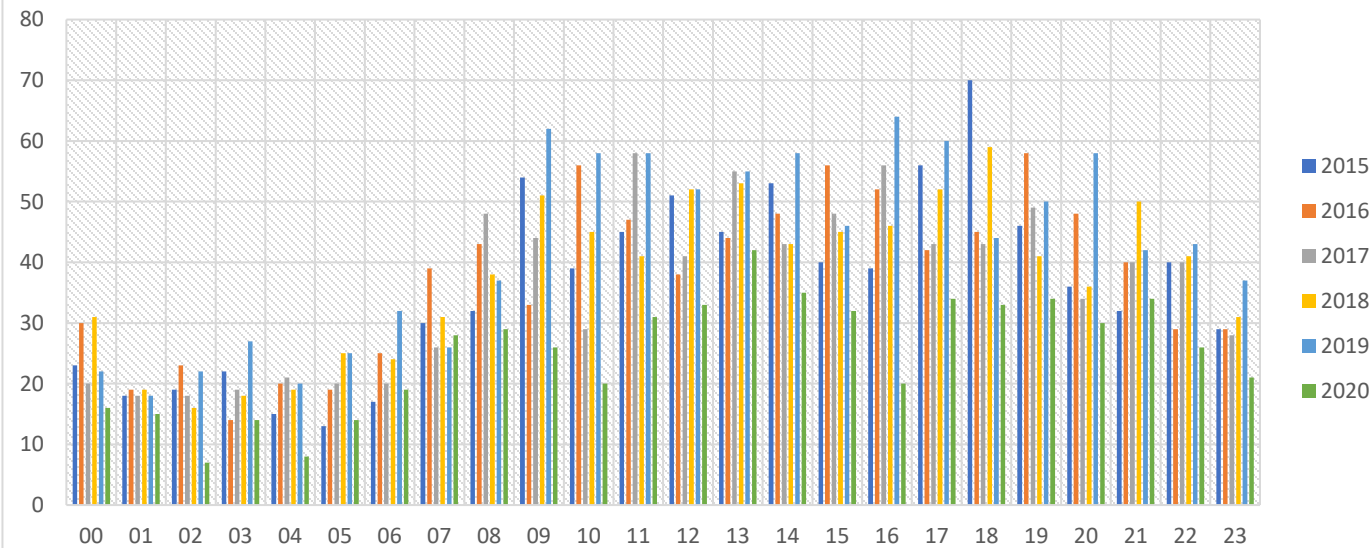
Station 5 Historic Information



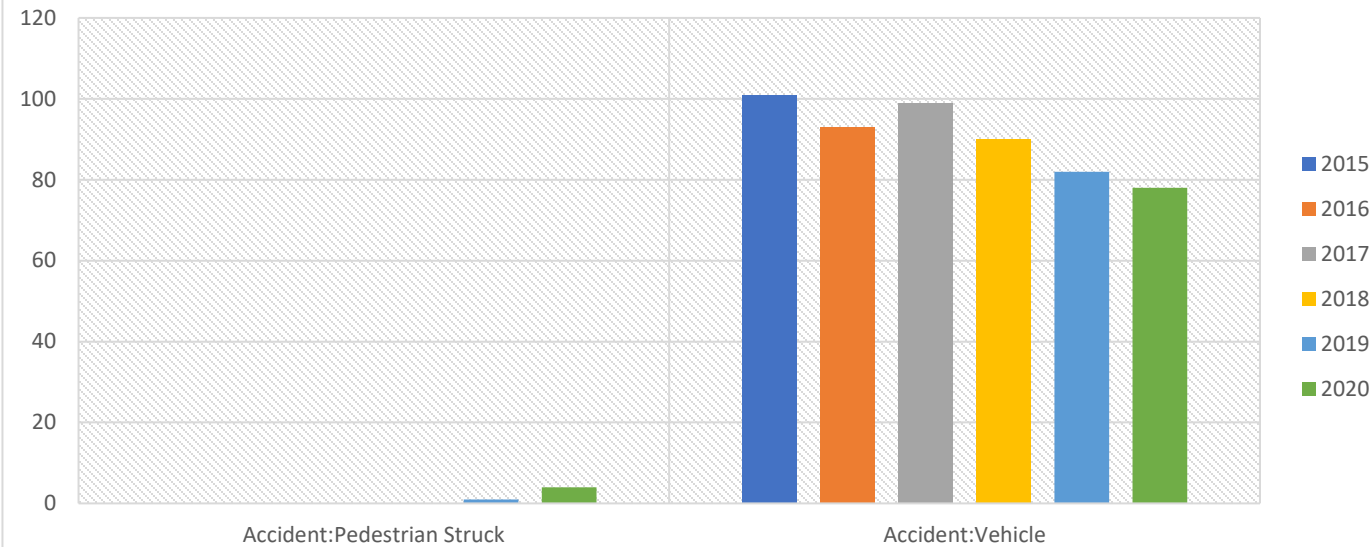
Station 4 : Number of calls by day



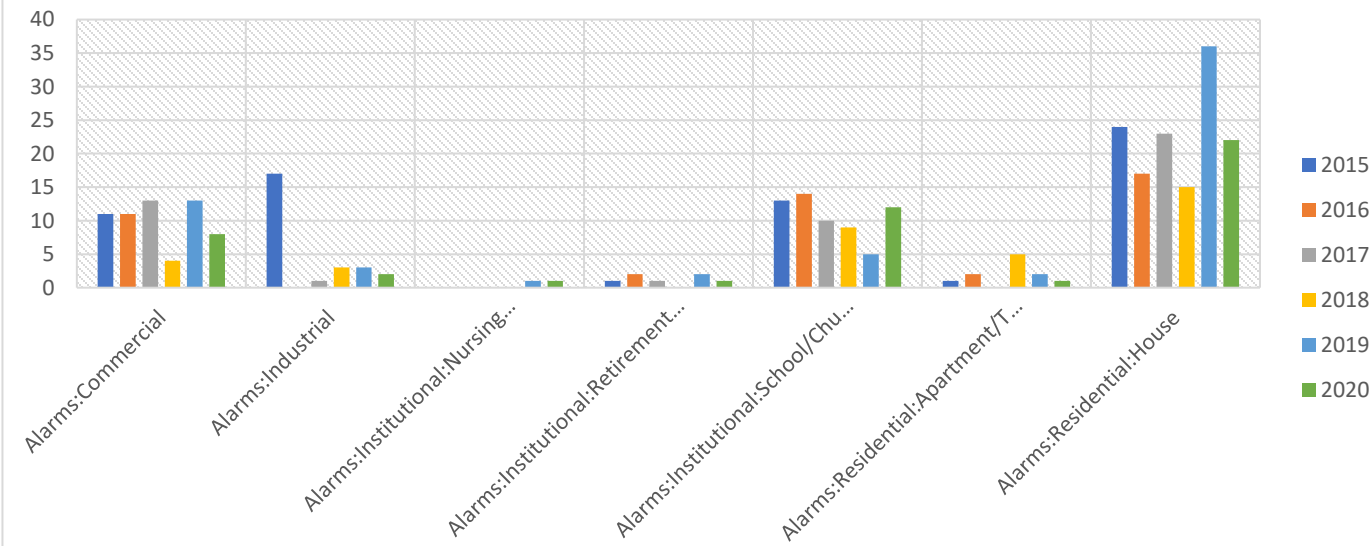
Station 4 : Number of calls by hour



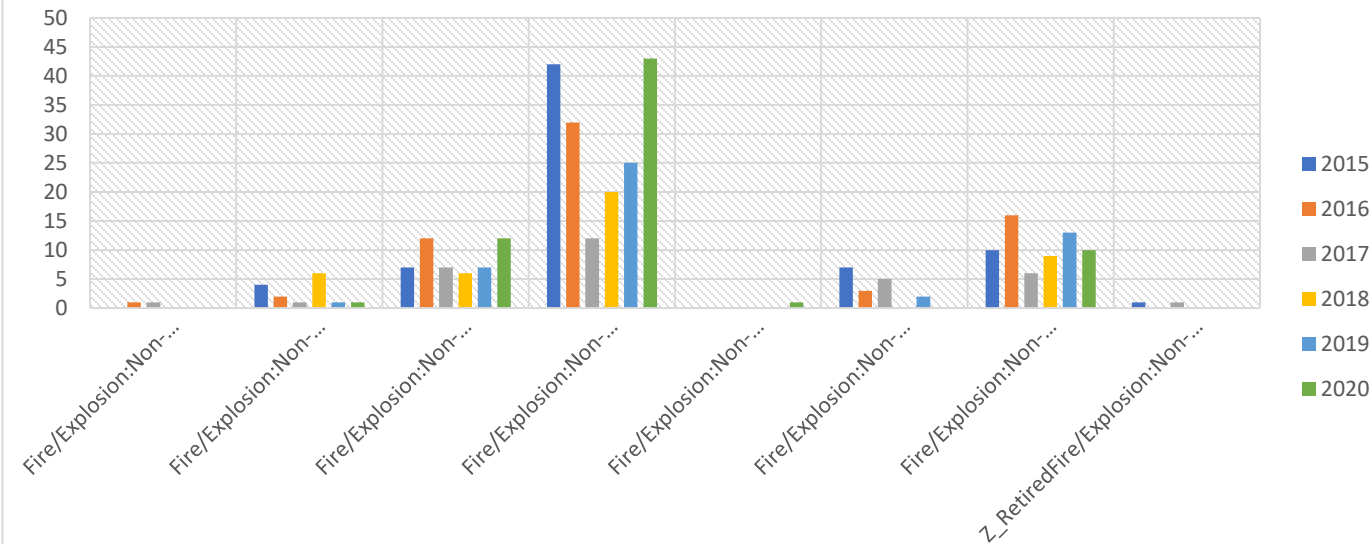
Station 4 : Number of accident calls by year



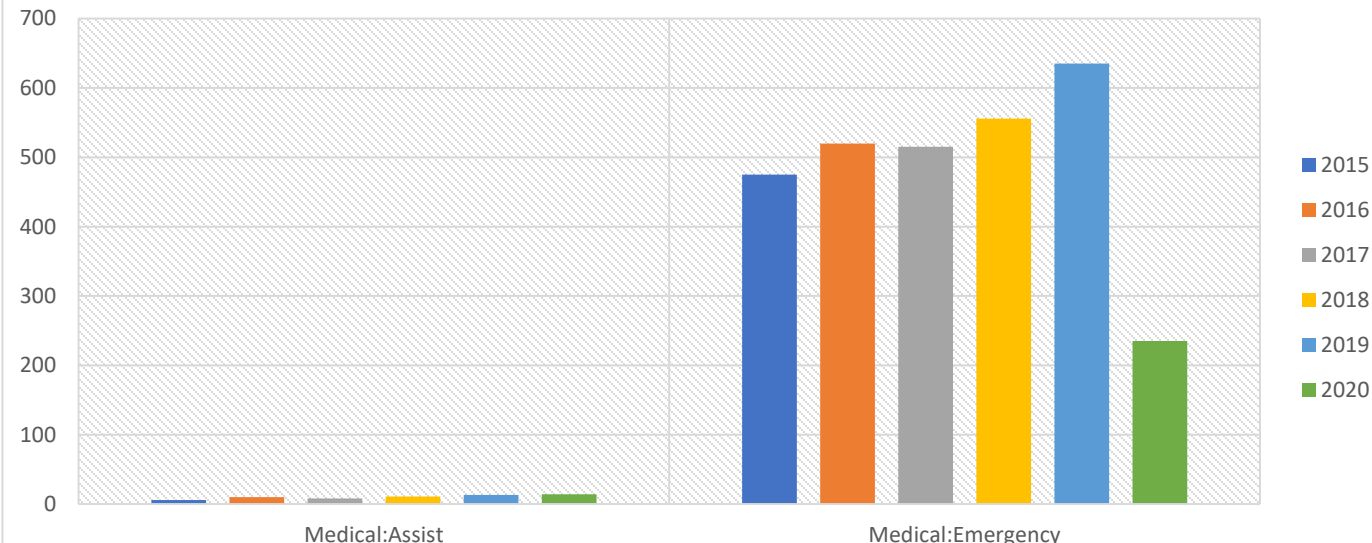
Station 4 : Number of alarm calls by year



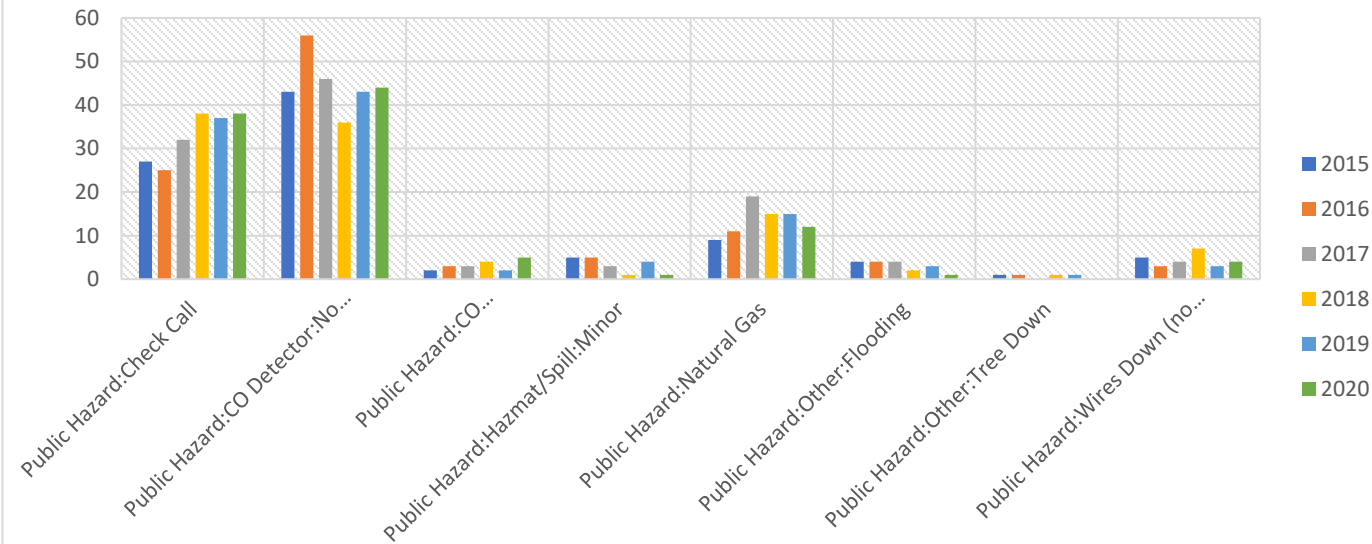
Station 4 : Number of non structural fire calls by year



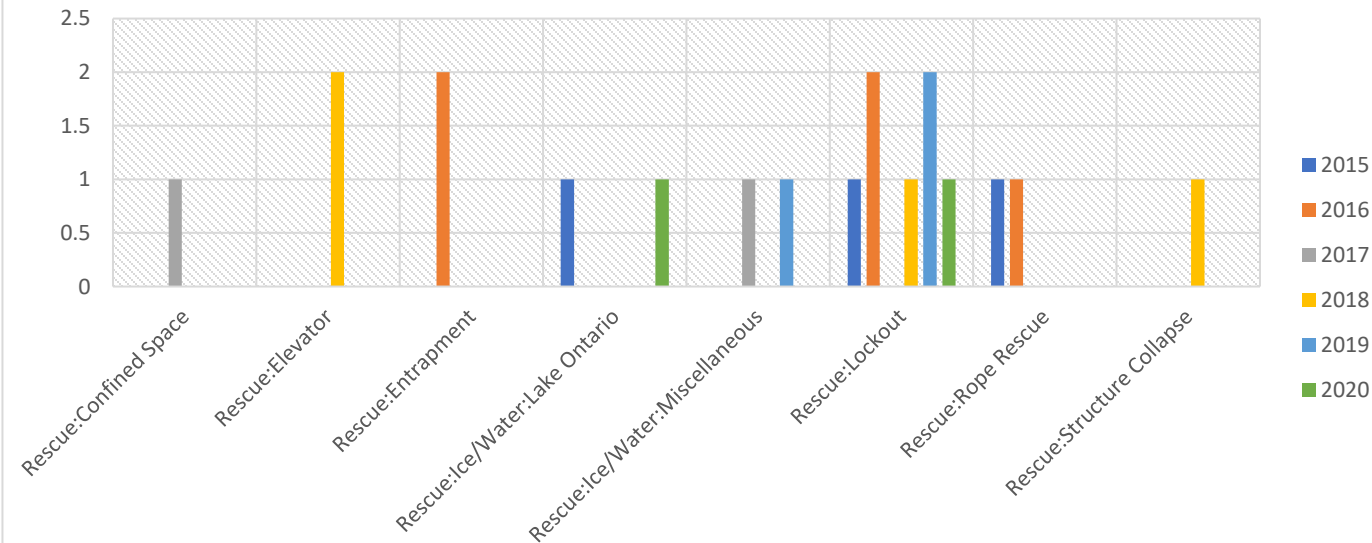
Station 4 : Number of medical calls by year



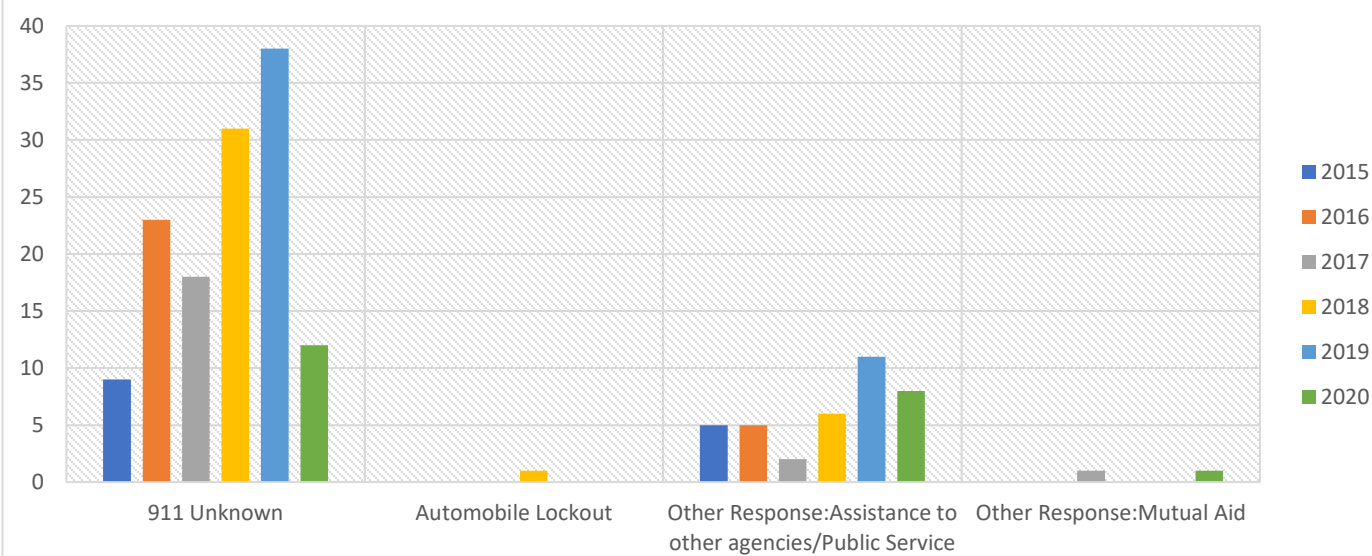
Station 4 : Number of public hazard calls by year



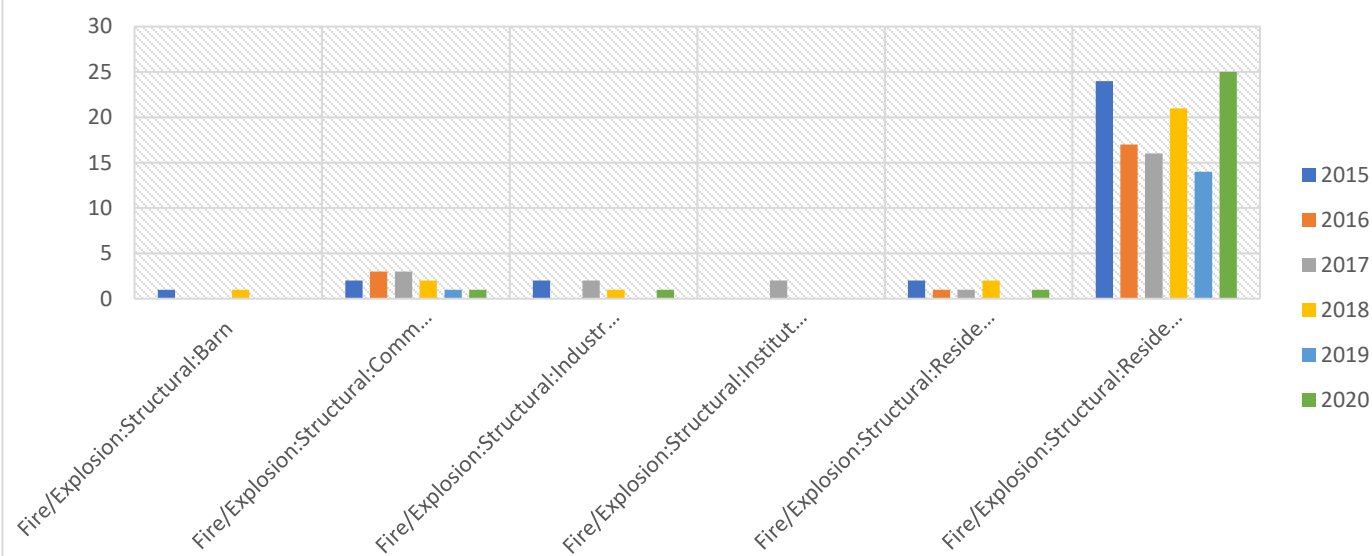
Station 4 : Number of rescue call by year



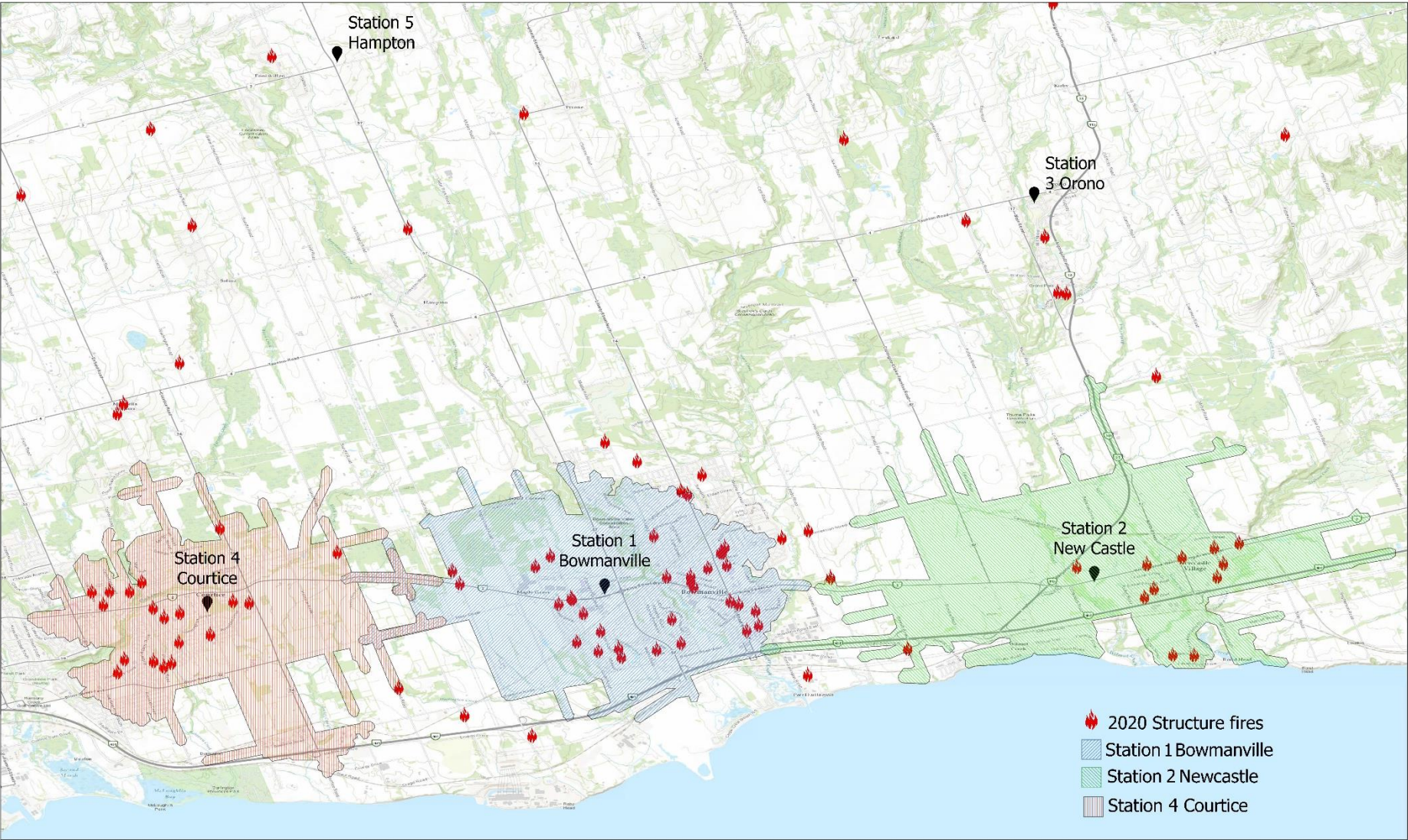
Station 4 : Number of other calls by year



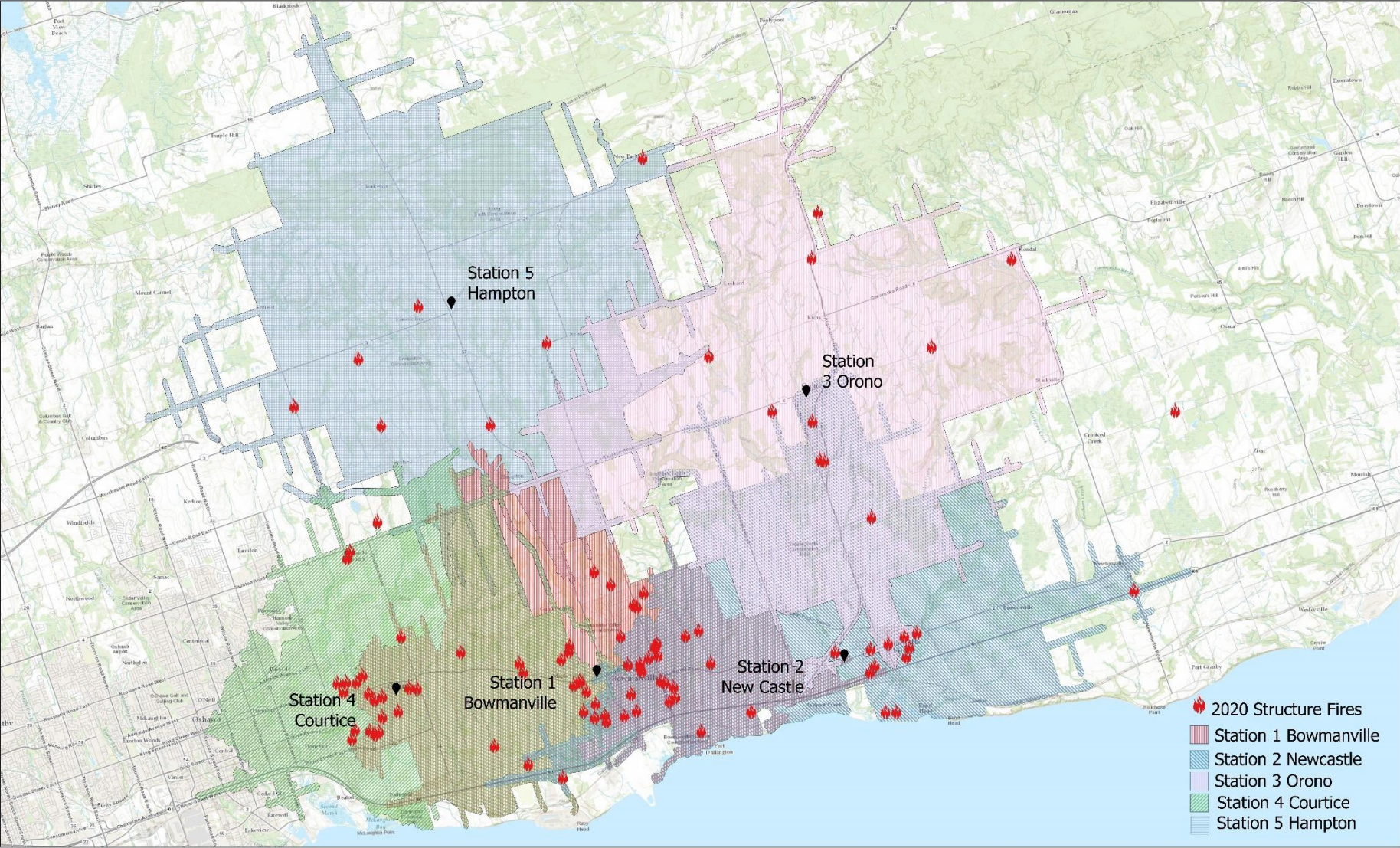
Station 4 : Number of structural fires by year



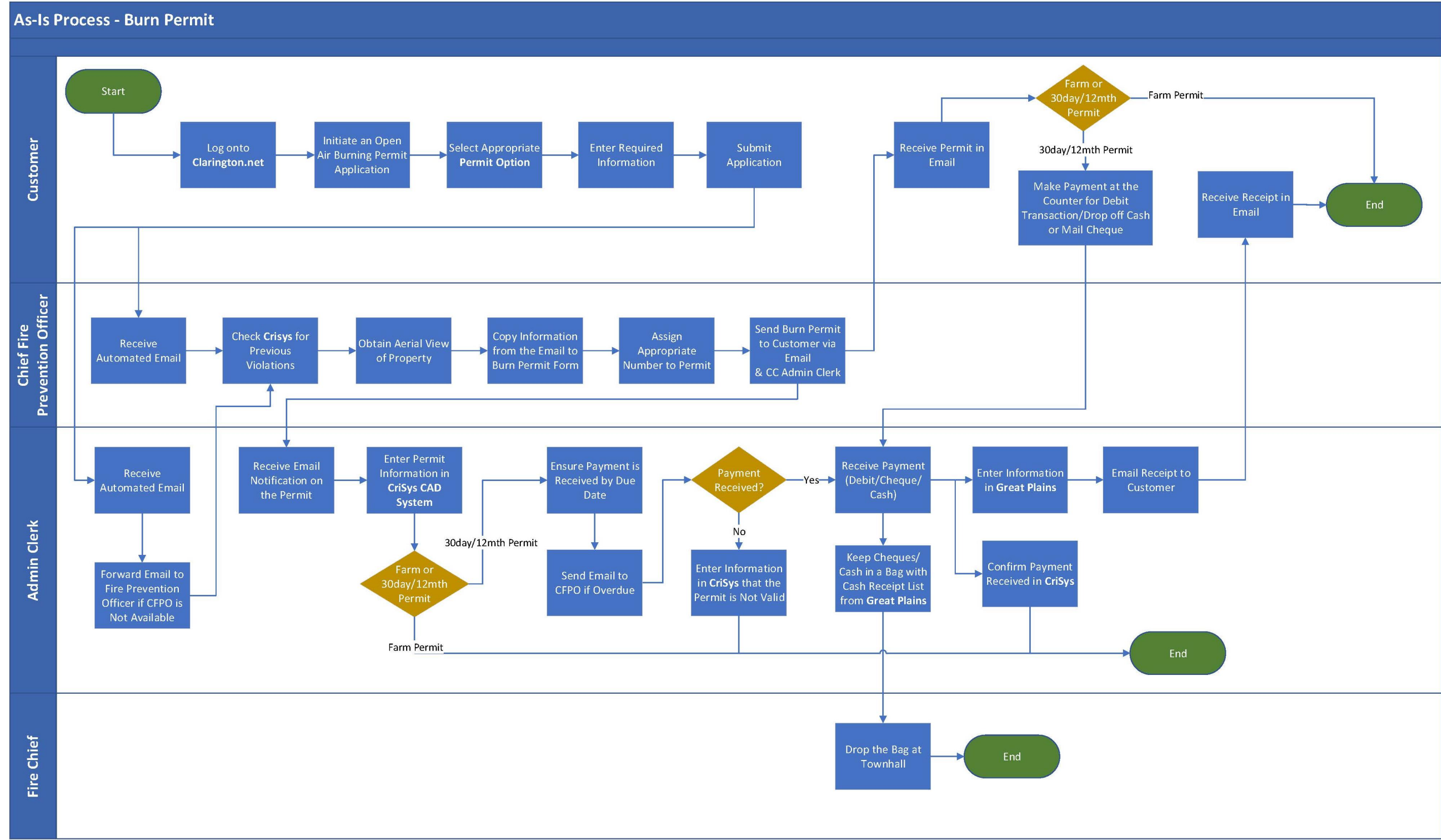
4 minute travel time for stations in Clarington, Ontario showing 2020 fires

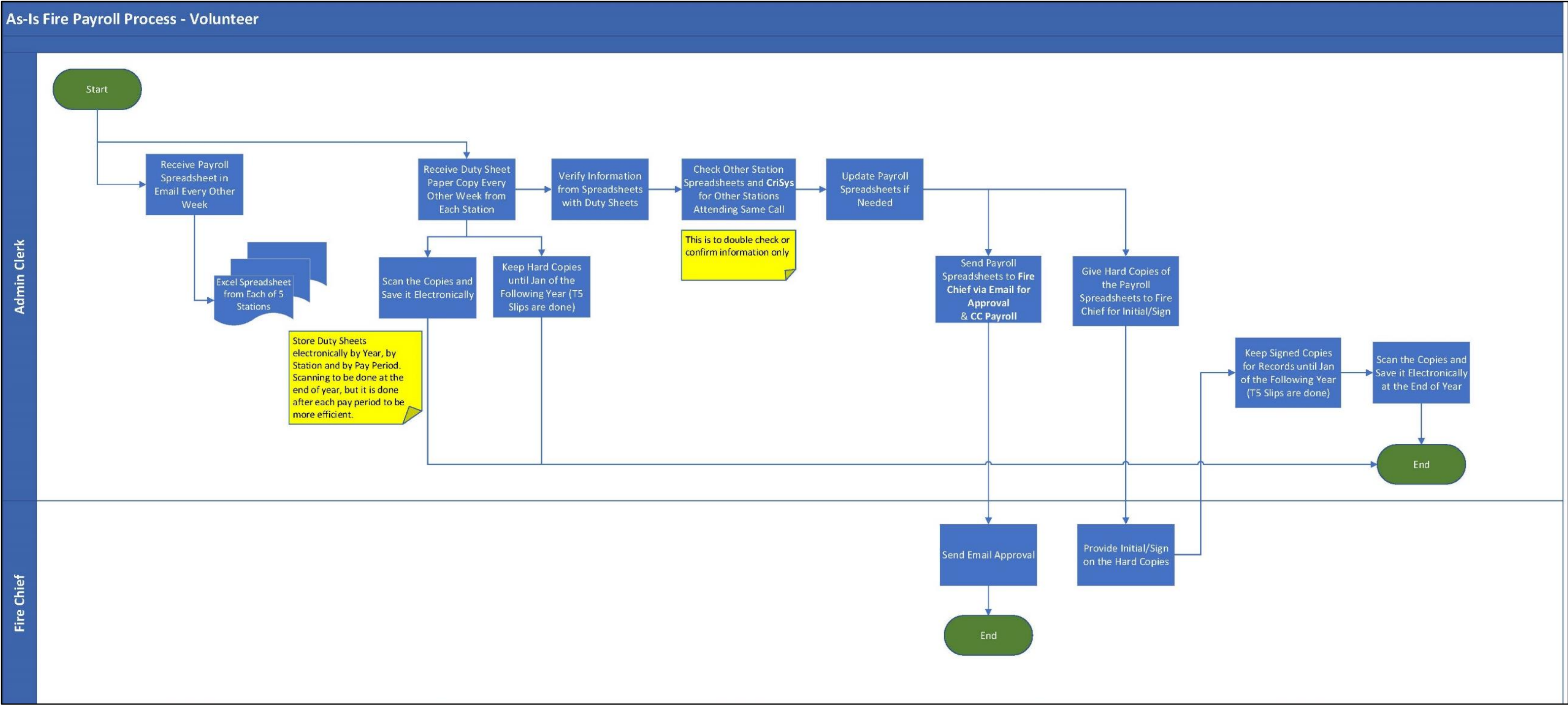


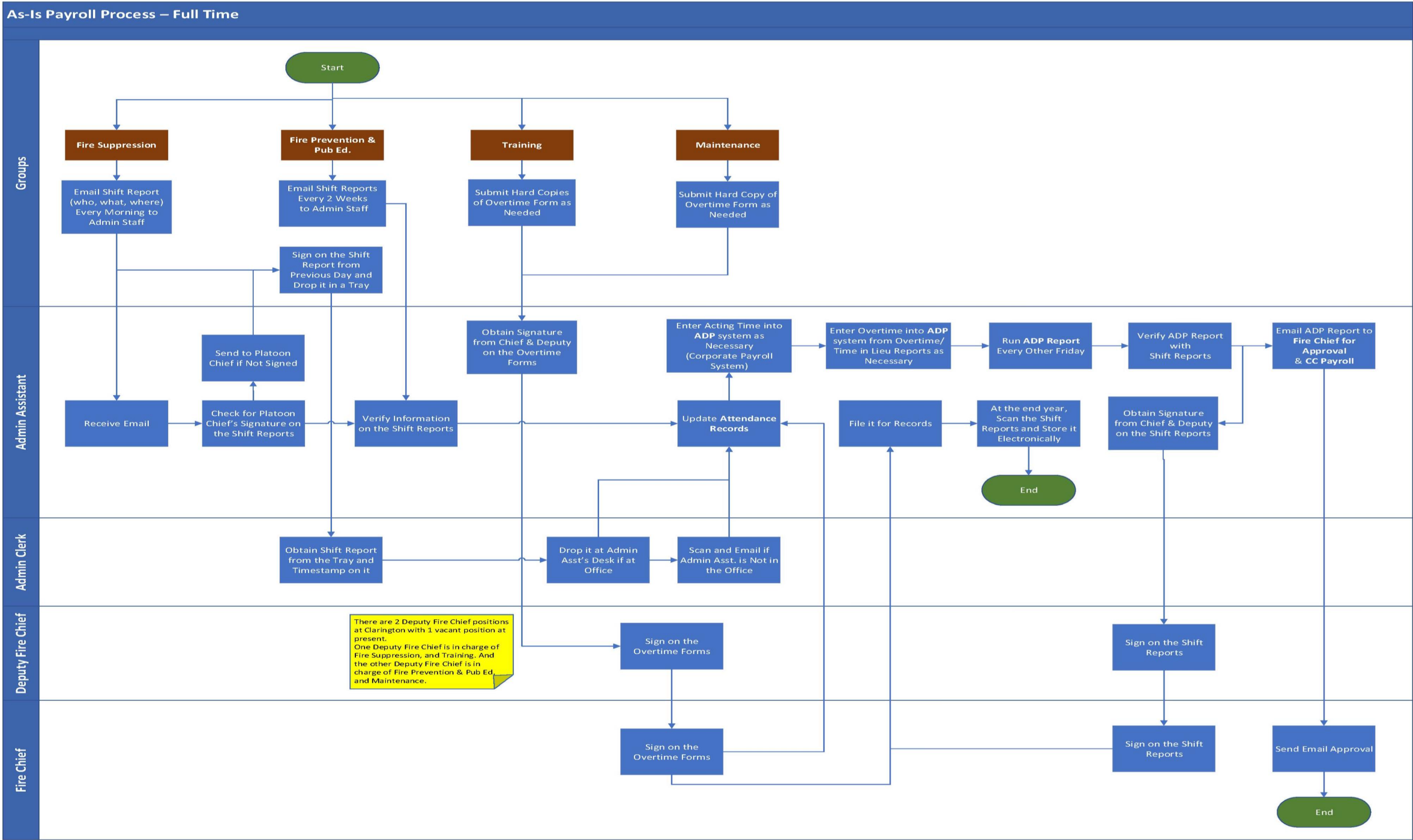
8 minute travel time for stations in Clarington, Ontario showing 2020 structure fires



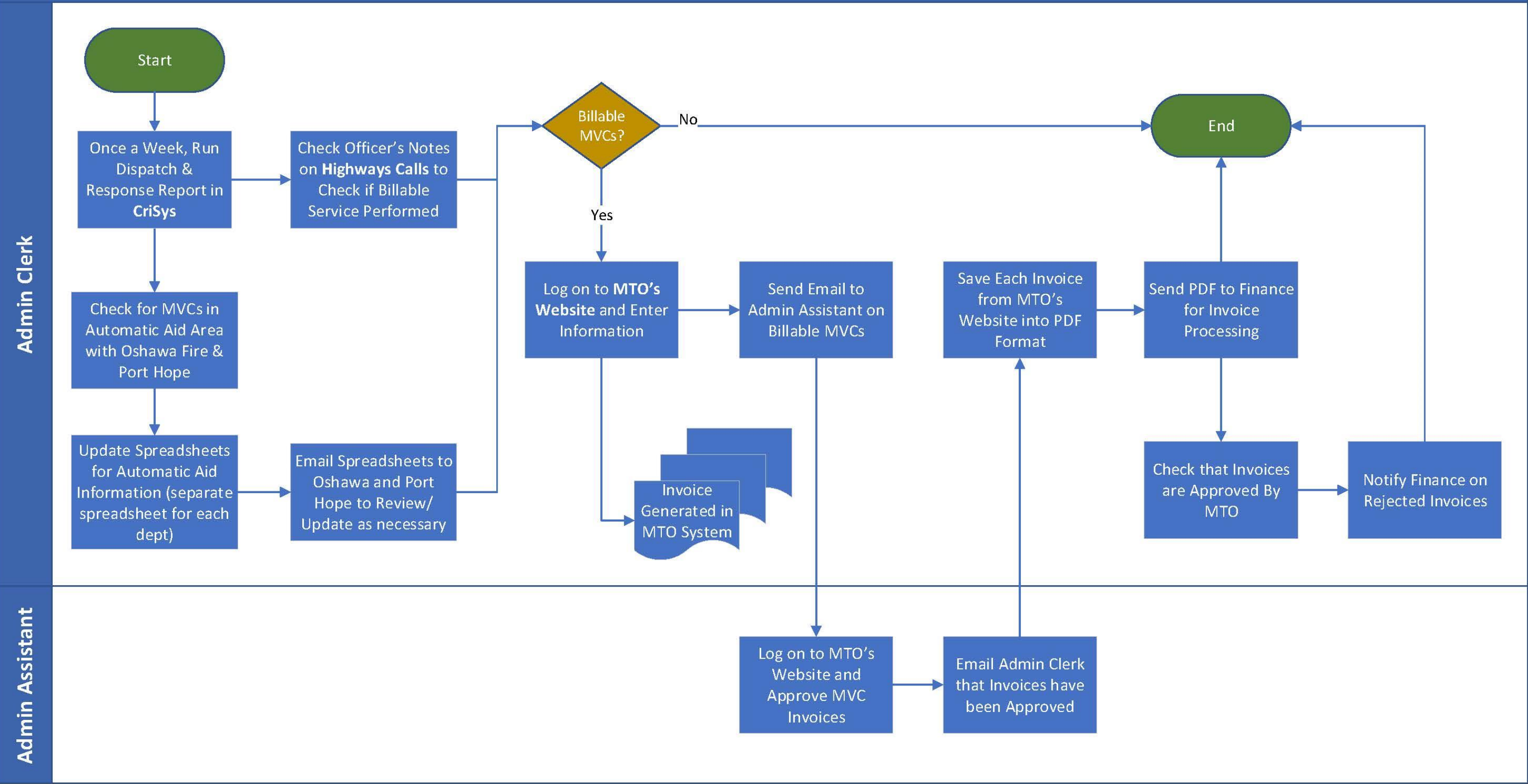
Appendix B: Administrative Services Process Maps

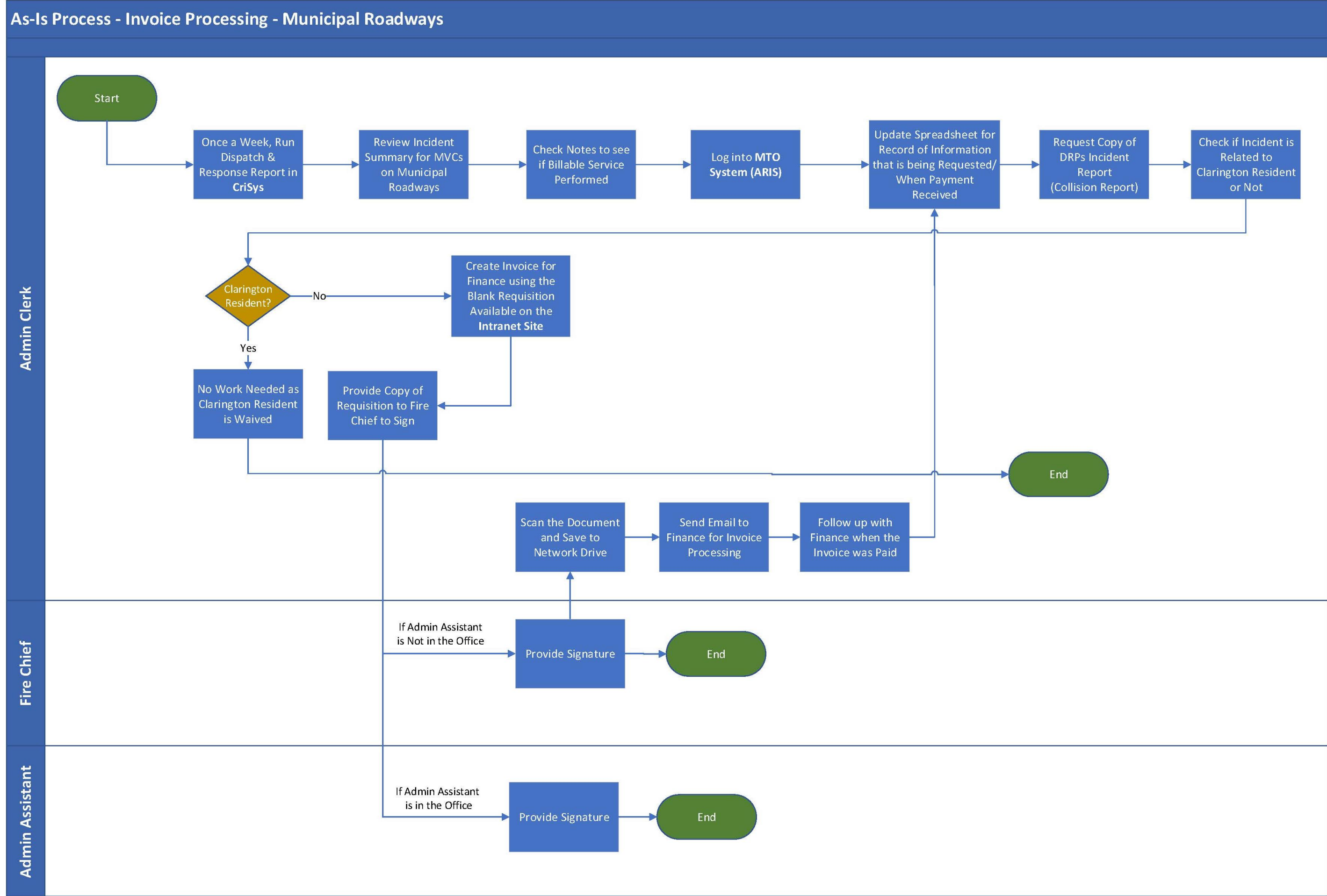


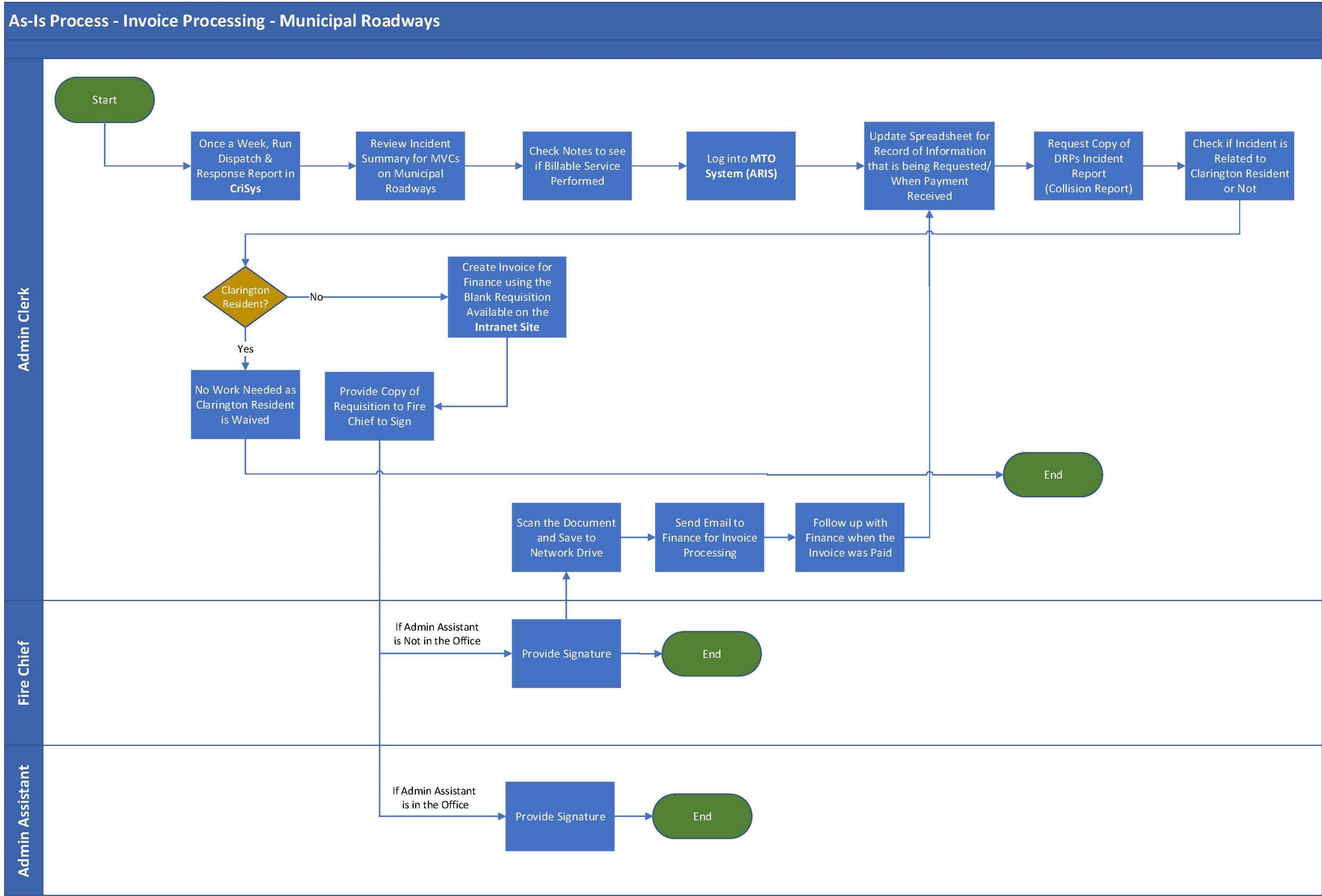




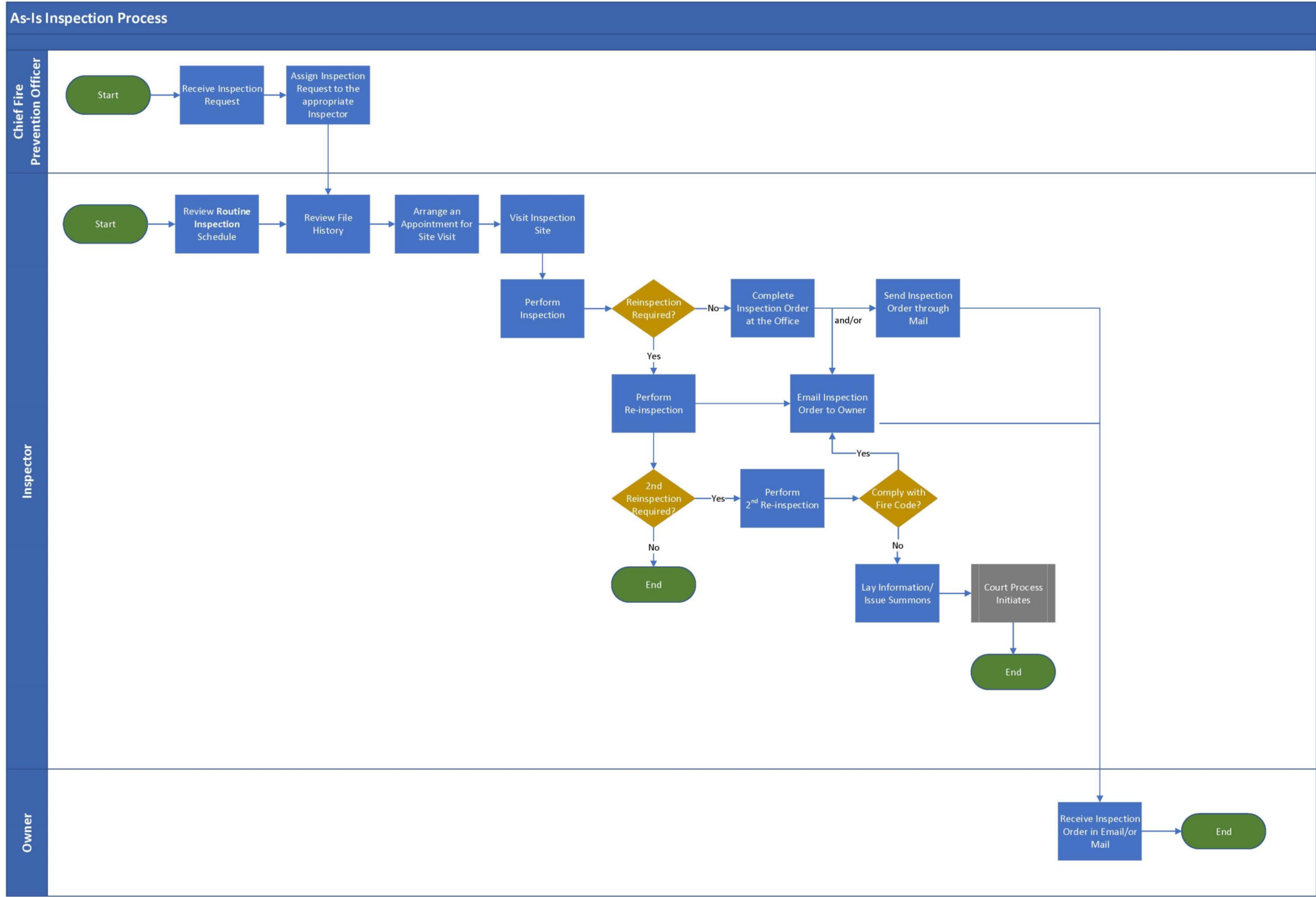
As-Is Process – Invoice Processing - Multiple Vehicle Collisions (MVCs) on Provincial Highways

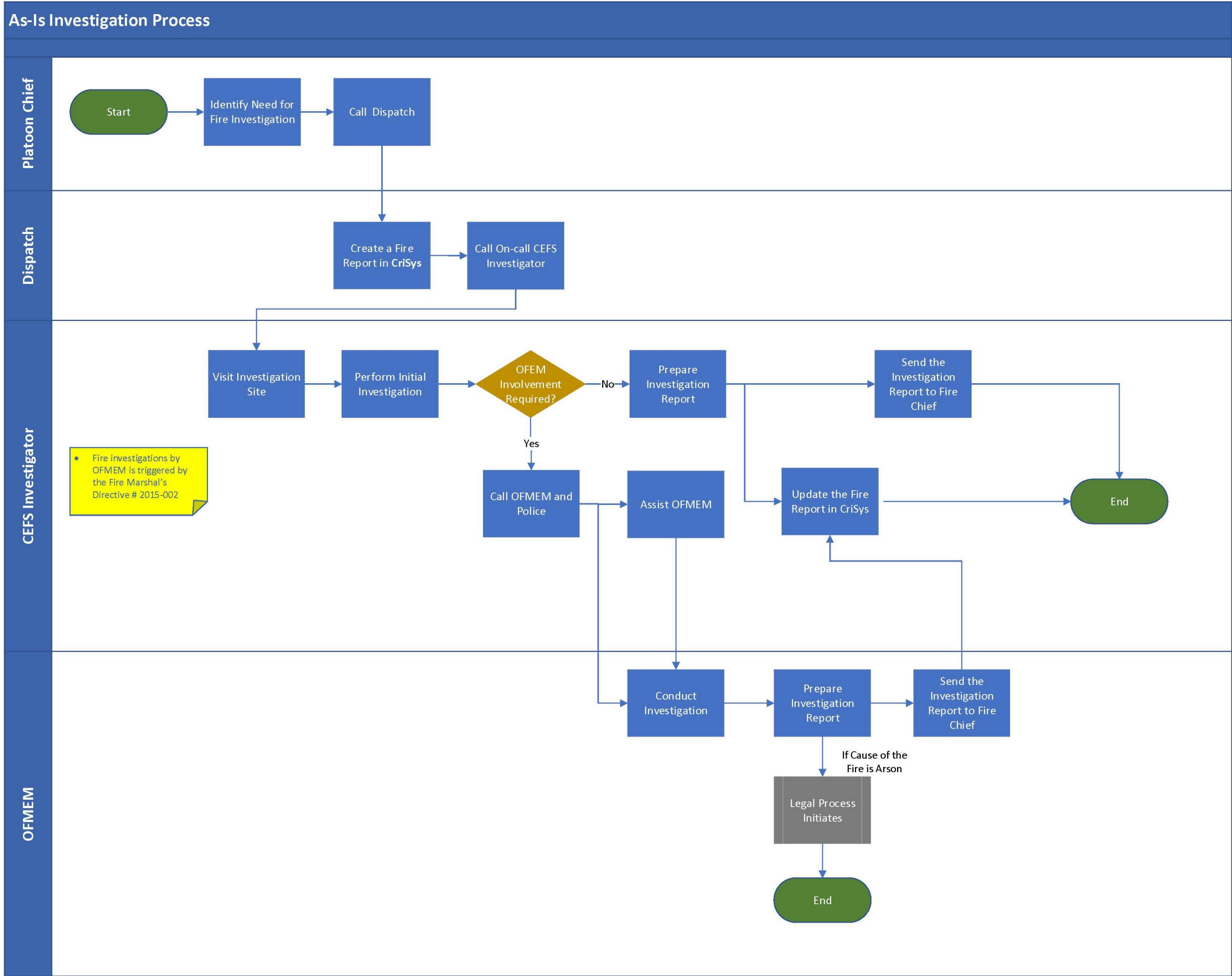






Appendix C: Prevention Division Process Maps



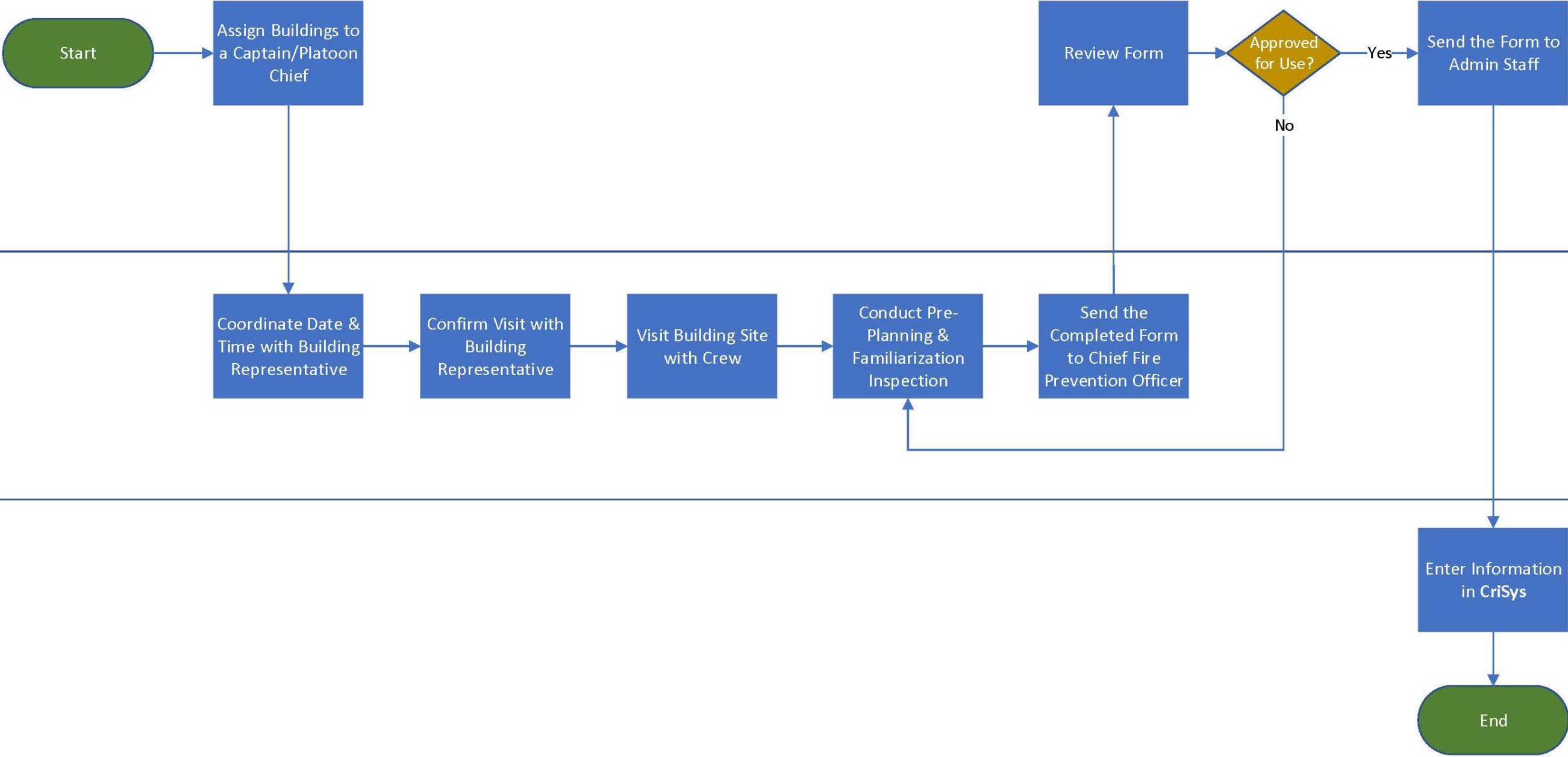


As-Is Pre-Planning Process

Chief Fire Prevention
Officer

Captain/Platoon Chief

Admin Staff



Appendix D: Establishing and Regulating By-Law

The Corporation of the Municipality of Clarington

By-Law 2017-033

Being a By-law Governing the Emergency and Fire Services, and the Provision of Mutual Aid and Automatic Response, and to Repeal By-law 2010-077.

Whereas the *Fire Protection and Prevention Act 1997*, S.O. 1997, c. 4, as amended, (FPPA) requires every municipality to establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention and to provide such other Fire Protection Services as it determines may be necessary in accordance with its needs and circumstances;

Whereas the FPPA permits a municipality, in discharging these responsibilities, to establish a Fire Department;

Whereas the FPPA permits a Council of a municipality to establish, maintain and operate a Fire Department for all or any part of the municipality; and

Whereas the FPPA requires a Fire Department to provide fire suppression services and permits the Fire Department to provide Prevention and other Fire Protection Services in the municipality.

Whereas the Council of the Municipality of Clarington deems it necessary to update the provisions in the existing By-law 2010-077;

Now Therefore the Council of the Corporation of the Municipality of Clarington enacts as follows:

Part 1
Definitions

- 1.1 In this by-law, unless the context otherwise requires,
- a) “approved” means approved by Council;
 - b) “Automatic Aid” means a municipality agrees where possible to the provision of an initial or supplemental response to fires, rescues, and emergencies that may occur in a part of another municipality where a fire department in the municipality is capable of responding more quickly than any fire department situated in the other municipality with services invoiced as or if appropriate;
 - c) “CAO” means the Chief Administrative Officer appointed by Council to act as Chief Administrative Officer for the Corporation;
 - d) “CEFS” means Clarington Emergency and Fire Services;

- e) "Chief" means the person appointed by the Council or designate to act as Fire Chief for the Corporation and is ultimately responsible to Council as defined in the FPPA;
- f) "confined space" means a fully or partially enclosed space in accordance with Health and Safety regulations;
- g) "Corporation" means The Corporation of the Municipality of Clarington;
- h) "Council" means the Council of the Corporation;
- i) "Deputy Fire Chief(s)" means the person(s) with that title who may act on behalf of the Fire Chief in the case of any absence of the Fire Chief or a vacancy in the office of the Fire Chief. (If the title changes the responsibility will reside with the person taking on the duties);
- j) "Division" means a Division of the Fire Department;
- k) "emergency" defined to include an unforeseen event that involves imminent danger to the life, health and safety of any person and includes medical assistance or non-fire emergency such as a storm, flood or another Act of God;
- l) "Emergency Response Plan" means an emergency plan formulated under the prevailing *Emergency Management and Civil Protection Act* or any other related Act which specifies procedures to be taken for the safety or evacuation of persons in an emergency area, provide for obtaining and distributing materials, equipment and supplies during an emergency and provide for such other matters as are considered necessary or advisable for the implementation of the emergency plan during an emergency;
- m) "Fire Department" means the Municipality of Clarington Emergency & Fire Services;
- n) "firefighter" means a fire chief and any other person employed in, or appointed to, a fire department and assigned to undertake fire protection services, and includes a volunteer firefighter;
- o) "FPPA" means the *Fire Protection and Prevention Act, 1997*, S.O. 1997, c 4, as may be amended from time to time, or any successor legislation, and any regulation made thereunder;
- p) "Fire Protection Services" includes fire suppression, fire prevention, fire safety education, communications, training of persons involved in the provision of Fire Protection Services, rescue and emergency services and the delivery of all those services;
- q) "Hazardous Materials Awareness Level" means the responder shall be that person who responds to hazardous material incidents for the purpose of recognizing the presence of the hazardous material, calling for trained personnel, and securing the area;

- r) "Hazardous Materials Operations Level" means the responder shall be that person who responds to hazardous material incidents for the purpose of protecting nearby persons, the environment, or property from the effects of the release. Operations level responders use personal protective equipment, perform product control, and perform victim rescue;
- s) "high angle" means an environment in which the load is predominately supported by a rope rescue system;
- t) "HUSAR" means Heavy Urban Search and Rescue;
- u) "Member" means any person employed in or appointed to the Fire Department and assigned to undertake Fire Protection Services;
- v) "Mutual Aid" means where the Council has made an agreement or plan with another municipality or Region, or at the discretion of the Chief as provided for herein, for the provision of any personnel, service, equipment or material during an emergency;
- w) "Rope Rescue Level 1" means the responder shall be that person who responds to rope rescue incidents and completes an assignment while being lowered from a rope rescue system in a high-angle environment, given a rope rescue system, life safety harnesses, so that risks to the victims and rescuers are minimized;
- x) "tiered response" means the process of dispatching police, fire and ambulance to what is determined to be a life threatening situation. Tiered response endeavors to send the closest appropriate emergency response agency, based on time, to render assistance at the scene of an emergency incident until the primary response agency can arrive; and
- y) "volunteer firefighter" means a firefighter who provides fire protection services either voluntarily or for a nominal consideration, honorarium, training or activity allowance.

- z) "Water and Ice Rescue Level II" means the responder shall be that person who responds to situations with water rescue personal protective equipment, vessels, swim/rescue aids as required, so that the specified objective is reached, all performance parameters are achieved, movement is controlled, hazards are assessed, distress signals are communicated, and rapid intervention for the rescuer has been staged for deployment.

Part 2 Establishment

- 2.1 The Fire Department was established by By-law #84-68 and 94-172 which was repealed in By-law # 2007-134 for the purpose of updating references to reflect current terminology and practice. Despite repeal of past By-laws, the Fire Department will continue with services and organization as has been and as may be amended and approved by Council from time to time.
- 2.2 The Fire Department is continued under this By-law to provide Fire Protection Services and any other service as approved by Council for the Corporation and shall be known as the Clarington Emergency & Fire Services. (Department name may be amended by Council from time to time).

Part 3 Core Services

- 3.1 For the purposes of this By-law core services provided by the Fire Department will be as per Appendix "A" forming part of this By-law.
- 3.2 Nothing in this By-law will restrict the Fire Department to providing only core services or limit the provisions of Fire Protection services, as set out/covered under appointing by-law, as approved by Council.

Part 4 Property/Apparatus Use

- 4.1 No person shall supply any apparatus, equipment, or other property of the Fire Department for any personal or private use.
- 4.2 No person shall willfully damage or render ineffective or inoperative any apparatus, equipment or other property belonging to or used by the Fire Department.

Part 5
Fire Suppression

- 5.1 The Fire Department may suppress any fire or suspected other hazardous condition by extinguishing it or by other reasonable action and, for this purpose, may enter private property, if necessary or deemed necessary to do so.
- 5.2 The Fire Department may pull down or demolish any building or structure, with the assistance of the municipal or other equipment and services available; when considered necessary to prevent the spread of fire, or other hazardous situation.

Part 6
Mutual and Automatic Aid Response Outside the Limits of the Municipality
(Automatic and Mutual Aid Agreements)

A) Aid to the Municipality of Clarington (requested by the Municipality)

- 6.1 The Fire Department may request other municipalities to provide mutual aid and other qualified persons to assist in,
- a) extinguishing fires;
 - b) pulling down or demolishing any structure;
 - c) crowd and traffic control;
 - d) suppression of fires or other hazardous conditions in other reasonable ways; or
 - e) determining the origin, cause or circumstances of any fire or explosion, if it is deemed necessary to retain a private contractor, rent/lease heavy equipment or specialized equipment, specialized services, and associated persons then those costs may be billed to the property owner and collected by the Municipality by means as determined in this by-law.

B) By the Municipality of Clarington to others (response outside the limits)

- 6.2 The Fire Department shall respond where possible, to a call with respect to a fire or emergency outside the territorial limits of the Corporation with respect to a fire or emergency including non-fire emergencies under the following conditions:
- a) In the opinion of the Fire Chief or designate of the Fire Department, conditions threaten property outside the territorial limits of the Corporation that is owned or occupied by the Corporation;
 - b) In a municipality with which an approved automatic aid or mutual aid agreement has been entered into to provide Fire Protection Service or other emergency assistance, including Oshawa and Port Hope prevailing By-laws as established;

- c) At the discretion of the Fire Chief, to a municipality participating in any regional or Municipal mutual aid plan established by a Fire Co-ordinator appointed by the Fire Marshal or any similar reciprocal plan or program, or as determined necessary by the Fire Chief;
- d) As directed by the Province under *Emergency Management Act* and *Civil Protection Act* or any other prevailing government directive, or legislation as determined appropriate by the Fire Chief;
- e) Coverage/ability when asked to respond and when requesting response from Municipalities with no formal program or plan is at the discretion of the Fire Chief, or designate;
- f) The Fire Department is not required to respond to requests by private companies; non government; or incorrect assigned calls;
- g) On property beyond the territorial limits of the Corporation where the Fire Chief or designate determines immediate action is necessary to preserve life or property and the appropriate fire department is notified to respond and assume command or establish alternative measures, acceptable to the Fire Chief or designate, provided it does not compromise our own Municipal level of service or commitments with the right to withdraw at any time to service home Municipality's needs; and
- h) Any other existing response agreements will continue to operate on Automatic and Mutual Aid response. Agreements may be amended and approved by Council from time to time.

Part 7

Mutual Aid or Automatic Aid or Other Related Expenses

- 7.1 If as a result of Fire and Emergency Services (i) response to an emergency including a motor vehicle incident, (ii) under a Mutual or Automatic Aid agreement or (iii) carrying out any of its duties or functions the Fire Chief or Deputy Fire Chief determines that it is necessary to incur additional expenses, retain a private contractor, rent special equipment not normally carried on a fire apparatus or use more materials than are carried on a fire apparatus in order to suppress or extinguish a fire, preserve property, prevent a fire from spreading, control and eliminate an emergency, carry out or prevent damage to equipment owned by the Corporation or otherwise carry out the duties and functions of Fire and Emergency Services, the owner of the property requiring or causing the need for any additional service shall be charged, if appropriate, the costs to provide the additional service including all applicable taxes. Property shall mean personal and real property.
- 7.2 Cost recovery under Automatic and Mutual Aid response agreement will be as per the Province's direction unless otherwise specified. To the extent reasonably possible materials/supplies will be replaced or cost recovered excluding cost of manpower and excluding something out of the ordinary unless

determined appropriate to recover. The cost recovery provision should be incorporated into Automatic and Mutual Aid agreements, where possible.

Part 8

Interference

- 8.1 No person shall impede or interfere with or hinder the Fire Department in the performance of its duties.
- 8.2 No person present at a fire shall refuse to leave the immediate vicinity when required to do so by the Fire Department.
- 8.3 During a fire and for the time after it has been extinguished that is required to remove the apparatus and equipment of the Fire Department and render the location and vicinity safe from fire, no person, either on foot or with a vehicle of any kind, shall enter or remain upon or within;
 - a) the portion of any street or lane upon which the site of the fire abuts or upon any street or lane for a distance of fifteen (15) metres on each side of the property damaged by fire; or
 - b) any additional street or lane or part of a street or lane or any additional limits in the vicinity of the fire as may be prescribed by the Fire Chief or the next ranking officer present at the fire.
- 8.4 The provisions of section 8.3 shall not apply to a resident of any street or lane or within any prescribed additional limit or any person so authorized to enter or remain by an officer of the Fire Department or by a police officer.
- 8.5 No person shall prevent, obstruct or interfere in any manner whatsoever with the communication of a fire alarm to the Fire Department or with the Fire Department responding to a fire alarm that has been activated.

**Part 9
Offences**

- 9.1 Every person who contravenes any provisions of this By-law is guilty of an offence and on conviction is liable to the penalty established by the *Provincial Offences Act*, or any other prevailing by-law or legislation, as may be amended or replaced from time to time, inclusive of costs.

**Part 10
Conflict**

- 10.1 Where this By-law may conflict with any other By-law of the Corporation, this By-law shall supersede and prevail over that By-law to the extent of the conflict.

**Part 11
Severability**

- 11.1 If any section or part of this By-law is found to be illegal or beyond the power of the Corporation, such section or part of item shall be deemed to be severable and all other sections or parts of this By-law shall be deemed to be separate and independent therefrom and to be enacted as such.

**Part 12
Enforcement and Enactment**


Effective Date of By-law

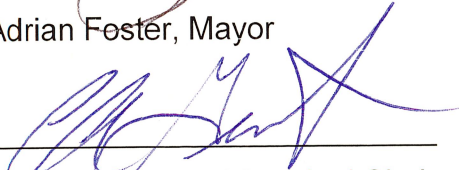
- 12.1 This By-law comes into effect the day it is passed by Council.

Repeal of Existing By-law

- 12.2 By-law 2010-077 and 2001-172 is hereby repealed.

Passed this 1st day of May, 2017



Adrian Foster, Mayor


Anne Greentree, Municipal Clerk

Appendix "A"
Core Services

1. Fire Suppression And Emergency Response

- 1.1 Fire suppression services shall be delivered in both an offensive and defensive mode and shall include search and rescue operations, forcible entry, ventilation, protecting exposures, salvage and overhaul as appropriate.
- 1.2 Emergency pre-hospital care responses and medical acts such as defibrillation, standard first aid, CPR, EPIPEN Assistance and the Emergency Medical Responder Program shall be maintained to Base Hospital protocols as agreed.
- 1.3 Special rescue services shall include performing extrication using hand tools, air bags and heavy hydraulic tools as required. Full time firefighters will be trained in level 1 Basic Rope Rescue Techniques as determined by the Fire Chief. Water/ice rescue services shall be provided by those firefighters who are competently trained to perform the requested level of service as determined by the Fire Chief (up to level II if so trained).
- 1.4 Highly technical and specialized rescue services such as Trench Rescue, HUSAR and Structural Collapse shall not be provided by Clarington Emergency & Fire Services. Awareness training in these areas may be provided where possible.
- 1.5 Defensive hazardous material emergency response shall be conducted to the operations level by the fulltime firefighters and awareness level by the volunteer firefighters. In addition to operations level response, the capability for rescue and emergency decontamination shall be maintained where resources permit.
- 1.6 The NFPA 1001 Standard for Firefighter Professional Standards, International Association of Fire Chiefs/National Fire Protection Association "Fundamentals of Fire Fighter Skills" and other related industry training standards and reference materials may be used as reference guides for CEFS training as approved by the Fire Chief. All training will comply with the Occupational Health and Safety Act and any other applicable provincial legislation.
- 1.7 Confined Space services shall be provided by those firefighters who are competently trained to perform the requested level of service as determined by the Fire Chief (up to Operational Level if so trained).

2. Fire Prevention

- 2.1 Inspections arising from complaint, request, retrofit, or self initiated and fire investigations shall be provided in accordance with the FPPA and policies of the fire prevention division.
- 2.2 New construction inspections and plan reviews of buildings under construction in matters respective of fire protection systems within buildings shall be conducted in accordance with the applicable By-law and operating procedures.
- 2.3 The N.F.P.A. Standard for Fire Prevention Officers shall be used as a reference guide for fire prevention training.

3. Fire Safety Education

- 3.1 Distribution of fire and life safety information and public education programs shall be administered in accordance with the FPPA and policies of the departments Fire Prevention & Public Safety Division.
- 3.2 A residential Smoke Alarm awareness program shall be ongoing.
- 3.3 The department shall maintain at least one public fire and life safety educator certified to the Ontario Fire Service Standard.

4. Emergency Dispatching and Communications

- 4.1 The N.F.P.A. Public Safety Telecommunications Standard shall be used as a reference guide for emergency dispatching and communications and shall provide the following minimum services;
- 4.2 Provide emergency call taking and dispatching of emergency vehicles.
- 4.3 May provide after hour's emergency and non-emergency call taking for Operations, By-law Services, and other agencies as required.