

Report to Community and Protective Services Committee

To: Chair and Members
Community and Protective Services Committee

From: Lori Hamer, Fire Chief, Neighbourhood and Community-Wide Services

Subject: Fire Master Plan Action Plan

Date: June 21, 2022

Recommendation

That, on the recommendation of the Fire Chief and with concurrence from the Deputy City Manager, Neighbourhood and Community-Wide Services, the following actions be taken with respect to the Fire Master Plan Action Plan:

- a) the Fire Master Plan Action Plan attached as Appendix 'A', **BE RECEIVED**;
- b) the Civic Administration **BE DIRECTED** to take the necessary actions to update the existing Establishing and Regulating By-law and report back to a future meeting of the Community and Protective Services Committee; and,
- c) the Civic Administration **BE DIRECTED** to proceed with implementation of the Fire Master Plan Action Plan, it being noted that implementation will be subject to funding approval through future multi-year budget processes.

Executive Summary

This report presents the Fire Master Plan Action Plan, an evidence-based, community risk driven plan that guides the priorities and objectives of the London Fire Department (LFD) over the next 10 years. This report provides an overview of the development process, key components of the Fire Master Plan Action Plan, and next steps.

Linkage to the Corporate Strategic Plan

The Fire Master Plan Action Plan is aligned with the following strategic area of focus in the City of London Strategic Plan 2019 – 2023:

- Strengthening our Community, under the outcome Londoners have access to the services and supports that promote well-being, health, and safety in their neighbourhoods and across the city.

Analysis

1.0 Background Information

1.1 Previous Reports Related to this Matter

[Award of Consultancy Services for Comprehensive Risk Assessment and Fire Master Plan \(June 17, 2019\)](#)

[Fire Master Plan – Organization & Resource Deployment Analysis for the London Fire Services \(April 29, 2009\)](#)

[Establishing and Regulating By-Law F-1 \(September 25, 2006\)](#)

2.0 Discussion and Considerations

2.1 Background and Purpose

A Fire Master Plan supports fire departments to be responsive, proactive, and meet the growing needs of a community. The primary objective of a Fire Master Plan is to provide fire departments and their stakeholders with achievable and measurable actions that improve customer service and provide a foundation from which future policies and decisions are made.

The London Fire Department's Fire Master Plan Action Plan (attached as Appendix 'A'), provides overall vision, direction, and guidance to the London Fire Department in the delivery of fire and emergency services over a 10-year period (2022 – 2032). In some cases, the Fire Master Plan looks beyond the time frame to ensure that short-term actions can support long-term requirements.

Section 2(1) b of the *Fire Prevention and Protection Act, 1997* prescribes that a municipality should provide other such fire protection services as it deems necessary based on its needs and circumstances. It also informs the appropriate service levels, establishes a consistent way of assessing risks and service demands across the city, enhances planning for other initiatives (professional development, capital assets, administration, etc.), and facilitates a more informed decision-making process based on data.

In addition, the Fire Master Plan Action Plan takes into consideration policies and recommendations set out by other municipal documents such as Council's Strategic Plan, the London Plan, the People Plan, the 2021 Audit, the Corporate Asset Management Plan, and others.

2.2 Process to Develop the Fire Master Plan Action Plan

The development of the Fire Master Plan Action Plan occurred through a five-phase process. Through a Request for Proposal process, Civic Administration engaged Emergency Management & Training Inc. to support the first four phases of work. Civic Administration then prepared the Fire Master Plan Action Plan that is before Council for consideration today. Below is an overview of each phase of the development process and a brief description of the work undertaken:

Phase 1: Conduct a Community Risk Assessment

A Community Risk Assessment is a process used to identify the level of fire protection required within the boundaries of the City of London. It is a means of measuring the probability and consequence of an adverse effect to health, property, organization, environment, or community, as a result of an event, activity, or operation. The Community Risk Assessment process included:

- The identification of current and emerging factors such as economic and population growth, shifts in demographics, building stock profile, industry mix, fiscal challenges, environmental challenges, and provincial or federal legislative changes.
- An assessment of the overall operations of the LFD to identify service improvements and enhancements through fire hall locations, fleet configuration, and any other elements that would affect the delivery of fire protection services, as defined by the *Fire Protection and Prevention Act, 1997* and any applicable regulations.
- A review of documents, studies, and initiatives previously prepared and undertaken by the City to maintain the connection with previous community documents.

Phase 2: Complete a Community Risk Mitigation Strategy

The Community Risk Mitigation Strategy utilized the findings from the Community Risk Assessment to propose strategies to mitigate high and moderate risks as determined in consultation with the LFD.

Phase 3: Community Engagement Process

The Fire Master Plan is a community-informed plan. Londoners, LFD staff, and Councillors provided their opinion and ideas through online surveys. Meetings were held with senior Civic Administration, the Fire Chief, all division heads of the LFD, as well as the London Professional Fire Fighters Association to gather further insights and recommendations. The information collected was analyzed and serves as the basis from which the Fire Master Plan Action Plan was built.

Phase 4: Develop the Draft Fire Master Plan

To build on the Community Risk Assessment and Community Risk Mitigation Strategy, a documentation and equipment review was conducted to gather additional information. This included reviews of: the apparatus and equipment located at each station; related documentation, such as call volumes and types of calls; and vehicle and large equipment replacement schedules along with planned capital expenditures. A Fire Master Plan was then prepared that included risk considerations, a SWOT analysis, information related to operations and facilities, and a series of recommendations for consideration as part of the Fire Master Plan Action Plan development.

Phase 5: Prepare the Fire Master Plan Action Plan

Civic Administration undertook an analysis of the data from the first four phases of work, which resulted in the identification of 22 actions. The evidence that informed those actions and the actions themselves formed the foundation of the Fire Master Plan Action Plan.

2.3 Fire Master Plan Action Plan Highlights

The actions in the Fire Master Plan Action Plan reflect industry trends, community risks, and infrastructure requirements. All actions are based on industry standards, planning metrics, best practices, and input from the community engagement process. The key driver behind the actions in this document is the reduction of risk. There are 22 actions in total, which are grouped into five areas of focus.

- Public Fire Safety Education
- Fire Safety Standards and Enforcement
- Emergency Response
- Staff/Personnel Development
- Strategic Priorities

Public Fire Safety Education

Public fire safety education is the first line of defence in fire safety. It is the key to mitigating fire and life hazards before they start. Public education programs are designed for everyone, from young children to older adults, vulnerable populations, and equity-deserving populations. The overall objective of these programs is to educate the public about the dangers of fire, provide information to prevent fire, and provide tools to ensure safe evacuation in the instance that a fire occurs.

There are three key actions in this area of focus that support the risks identified through the Community Risk Assessment and community engagement process:

1. Engage fire suppression personnel in fire prevention and public education efforts whenever possible.

2. Equip Fire Officers with National Fire Protection Association certifications to manage the need for fire inspections and public education.
3. Develop new and enhance current partnerships with key stakeholders to advance public education efforts with a specific focus on vulnerable populations and equity-deserving groups.

Fire Safety Standards and Enforcement

Fire safety standards and enforcement is the second line of defense in fire safety and relates to the adherence of Ontario's *Fire Protection and Prevention Act, 1997*, the regulation under this Act being the Ontario Fire Code. When a building is built, it is done so in compliance with the Ontario Building Code. During this building phase there are fire safety measures that are required based on the type of building being built. Once a building is completed the Ontario Fire Code takes over from the Ontario Building Code to ensure these fire safety measures are maintained. At times, enforcement of regulatory requirements is necessary.

The LFD conducts fire safety inspections to ensure buildings are safe and comply with the Ontario Fire Code. These inspections are completed on complaint, request, by legislation, or are completed proactively. The LFD is also responsible for conducting fire investigations to ensure public safety.

There are two key actions in this area of focus that support the risks identified through the Community Risk Assessment and community engagement process:

1. Assess the time requirements of the current demands, as well as the desired inspection and education programs.
 - a. Provide an annual program outline at the start of the year with goals, expectations, resources available, and resources required.
 - b. Measure and report on completion and successes.
2. Complete a full work study and implementation plan, inclusive of financial impacts, to analyze the needs of the Fire Prevention Division to ensure span of control, quality assurance, and program planning.

Emergency Response

Emergency response is the third line of defence. It includes response to fires, medical emergencies, motor vehicle collisions, public hazard situations, water and ice rescue, hazardous materials incidents, and technical rescues such as high angle, elevator, and confined space. In emergency situations, time is critical and is influenced by a number of factors. To appropriately manage this, consideration must be given to the need for new stations, relocations of stations, as well as purchasing, maintenance, life-cycling, and planning for fire apparatus and equipment.

There are seven key actions in this area of focus that support the risks identified through the Community Risk Assessment and community engagement process:

1. Work with allied agencies on dispatch response time reduction opportunities.
2. Create a committee to review the response to remote fire alarm calls and certain types of motor vehicle collisions, fires, or other indicators where additional resources may be required, and monitor changes to the call matrix to ensure resource deployment and risk management are balanced. The Committee will make recommendations to Fire Administration.
3. Create a committee to review and make recommendations to Fire Administration on the deployment and station assignments of specialty and technical rescue teams.

4. Phase out the three quint apparatus and replace them with engines. Continue to monitor growth for the inclusion of additional aerial apparatus in the future due to the number of high-rise structures within the city.
5. Move to a 12+3-year replacement schedule for fire apparatus, with consideration being given to new fire apparatus being assigned to busier stations and then moved to less busy stations at a later time to allow for full use of warranty and manage excessive mileage on a single given vehicle.
6. Increase the reserve fleet with two additional engines to a total of one aerial, one tanker and six engines.
7. Continue to monitor the average response time metric for planning purposes as London continues to grow in size and population.

Staff/Personnel Development

People are essential to an efficient and effective London Fire Department and the implementation of the Fire Master Plan Action Plan. A healthy, safe respectful workplace that fosters self-development and involvement in decision-making is one that retains quality and high performing team members. Providing opportunities for team members to learn from each other, mentors, and leaders creates an environment that supports continuous learning and development. Training and learning initiatives are foundational to efficient and effective service.

There are four key actions in this area of focus that support the risks identified through the Community Risk Assessment and community engagement process:

1. Encourage a workplace culture that supports inclusion and belonging. Review recruitment practices with an equity tool, to promote increased representation from equity-deserving groups within the London Fire Department.
2. Continue to develop, implement, and measure a total wellness strategy to ensure mental and physical resilience and well-being of employees.
3. Identify strategies to engage and empower employees through relevant training, ongoing staff development through cross divisional opportunities, mentoring, collaboration with other City services, and participation in decision-making.
4. Develop and implement strategies providing for compliance with the new Ontario Regulation – *Firefighter Certification* and including the financial impacts and logistical requirements for the periods of July 1, 2022 to July 1, 2026 for general certifications and July 1, 2022 to July 1, 2028 for specialty rescue certifications.

Strategic Priorities

This area of focus refers to special projects that focus on policy and procedure development, system reviews and enhancements, revenue generation opportunities, and space utilization. The purpose of these projects is to enhance the efficiency and effectiveness of LFD's operations. This includes ensuring alignment with key government mandates and by-laws. Actions within this area also focus on strategic partnerships to enhance and expand service. Financial stability is also considered within the actions through revenue generation opportunities.

There are six key actions in this area of focus that support the risks identified through the Community Risk Assessment and community engagement process:

1. Review and update the Middlesex and Thames Centre aid agreements.
2. Continue to use the current training facility's resources and identify ongoing joint opportunities to enhance the use and possible revenue generation of the facility.

3. Continue to develop a business plan for the new training facility.
4. Explore a partnership with the London Police Service to implement the new Next Generation 9-1-1 telephone call answering system of which the Canadian Radio television and Telecommunications Commission has mandated that every Public Safety Answering Point (9-1-1 Centre) have in place by March 2025.
5. Conduct a full review of the 2006 Establishing & Regulating By-Law document and update it to ensure that Council's requirements for the current level of service are provided.
6. Examine the inventory control system(s), including purchasing and stores of supplies, to ensure an effective and efficient system for all divisions.

3.0 Financial Impact/Considerations

In many cases, the action items identified in the Fire Master Plan Action Plan can be accomplished within existing approved Fire operating and capital budgets. In other cases, additional resources may be required. To support future requests for financial resources, implementation plans will be developed to inform the requests. The implementation plans will consider logistics, operational needs, timing/phasing and financial impacts (including both capital and operating costs).

This work will be done in preparation for the development of Council's 2023-2027 Strategic Plan and the 2024-2027 Multi-Year Budget process. Any requests for additional resources will be incorporated in Council's Strategic Plan and will be supported by a comprehensive business case in the Multi-Year Budget process.

As many of the recommendations of the Fire Master Plan Action Plan are long-term in nature, they will also inform future strategic planning and multi-year budget processes.

4.0 Next Steps

The Fire Master Plan Action Plan has been designed to be a living document. Regular reviews and updates will be conducted to reflect rapidly changing information in an effort to continue to meet the current and future needs of the city and its residents. Many of the actions are already underway. Appendix 'A' includes a full list of the actions, their implementation status, and timeline over the duration of the Plan.

Based on Council's direction, Civic Administration will update the existing Establishing and Regulating By-law (last updated in 2006) and bring this By-Law to a future Community and Protective Services meeting. The Establishing and Regulating By-Law needs to be updated to reflect such things as new legislation and a more accurate accounting of the actual services that are being offered by the LFD.

In addition, on an annual basis, Civic Administration will bring forward a progress report, updating Council on the implementation of the Fire Master Plan Action Plan.

Conclusion

The Master Fire Plan Action Plan will guide the priorities and objectives of the LFD over the next 10 years in order to be responsive, proactive and continue to meet the growing needs of the community.

The London Fire Department priority has been, and will continue to be, positioning the LFD as a leader in fire service providing exceptional service to London residents while ensuring a workplace where people feel proud, safe, and engaged.

Submitted and Recommended by: **Lori Hamer, Fire Chief**

Concurred by: **Cheryl Smith, Deputy City Manager,
Neighbourhood and Community-Wide
Services**

Appendix A: Fire Master Plan Action Plan

2022 Fire Master Plan

Action Plan | May 2022

*Prepared by the City of London
and the London Fire Department*



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Section 1.0

Introduction

Within this section of the report, background information is provided to set the context for the Fire Master Plan Action Plan and how it was developed.



1.1 The London Fire Department

Committed to making London one of the safest communities in Canada, the London Fire Department is responsible for the delivery of fire protection services including responding to fires, medical emergencies, car accidents, hazardous materials incidents, and specialized rescues.

More specifically, the *Fire Protection and Prevention Act, 1997* defines fire protection services as:

- a. fire suppression, fire prevention, fire investigations, and fire safety education;
- b. mitigation and prevention of the risk created by the presence of unsafe levels of carbon monoxide and safety education related to the presence of those levels;
- c. rescue and emergency services;
- d. communication in respect of anything described in clauses (a) to (c);
- e. training of persons involved in providing anything described in clauses (a) to (d); and
- f. the delivery of any service described in clauses (a) to (e).

The London Fire Department consists of the following divisions: Fire Fighting Division including Specialty Teams; Fire Prevention Division including Public Fire and Life Safety Education Division; Apparatus Division; Training Division; Communications and Information Systems Division; Clerical/Administrative Division, Stores Division, and Fire Administration.

1.2 What Is a Fire Master Plan?

A Fire Master Plan is an evidence-based, community risk driven plan that guides the priorities and objectives of a fire department. A Fire Master Plan supports fire departments to be responsive, proactive, and meet the growing needs of a community.

The primary objective of a Fire Master Plan is to provide fire departments and their stakeholders with achievable and measurable actions that improve customer service and provide a foundation from which future policies and decisions are made.

1.3 London's Fire Master Plan Action Plan

The Fire Master Plan Action Plan provides overall vision, direction, and guidance to the London Fire Department in the delivery of fire and emergency services over a 10-year period, to the year 2032. In some cases, the Fire Master Plan Action Plan looks beyond the time frame to ensure that short-term actions can support long-term requirements.

The Fire Master Plan Action Plan satisfies section 2(1) b of the *Fire Prevention and Protection Act, 1997* that prescribes that a municipality should provide other such fire protection services as it deems necessary based on its needs and circumstances. It also informs the appropriate service levels, establishes a consistent way of assessing risks and service demands across the city, enhances planning for other initiatives (professional development, capital assets, administration, etc.), and facilitates a more informed decision-making process based on data.

1.4 Alignment with Other City of London Plans and Strategies

The Fire Master Plan Action Plan takes into consideration policies and recommendations set out by other municipal documents such as Council’s Strategic Plan, the London Plan, the People Plan, the 2021 Audit, the Corporate Asset Management Plan, and others.

1.5 How the Fire Master Plan Action Plan Was Created

The development of the Fire Master Plan Action Plan occurred through a five-phase process. The City of London engaged Emergency Management & Training Inc. to support the first four phases of work.



1. Conduct a Community Risk Assessment

A Community Risk Assessment is a legislated process under O.Reg 378/18 Community Risk Assessments, used to identify the level of fire protection required. It is a means of measuring the probability and consequence of an adverse effect to health, property, environment, or community, as a result of an event, activity, or operation. The Community Risk Assessment process included:

- The identification of current and emerging factors such as economic and population growth, shifts in demographics, building stock profile, industry mix, fiscal challenges, environmental challenges, and provincial or federal legislative changes.
- An assessment of the overall operations of the London Fire Department to identify service improvements and enhancements through fire hall locations, fleet configuration, and any other elements that would affect the delivery of fire protection services, as defined by the *Fire Protection and Prevention Act, 1997* and any applicable regulations.
- A review of documents, studies, and initiatives previously prepared and undertaken by the City to maintain the connection with previous community documents.

2. Complete a Community Risk Mitigation Strategy

The Community Risk Mitigation Strategy utilized the findings from the Community Risk Assessment to propose strategies to mitigate high and moderate risks as determined in consultation with the London Fire Department.

3. Engage the Community

The Fire Master Plan Action Plan is a community-informed plan. Londoners, London Fire Department staff, and Councillors provided their opinion and ideas through online surveys. Meetings with senior City staff, the Fire Chief, and all division heads of the London Fire Department, as well as the London Professional Fire Fighters Association provided an opportunity to gather further insights and recommendations. The information collected was analyzed and serves as the basis from which the Fire Master Plan Action Plan was built.

4. Develop the Draft Fire Master Plan

To build on the Community Risk Assessment and Community Risk Mitigation Strategy, a documentation and equipment review was conducted to gather additional information. This included reviews of: the apparatus and equipment located at each station; related documentation, such as call volumes and types of calls; and vehicle and large equipment replacement schedules along with planned capital expenditures.

A Fire Master Plan was then prepared that included risk considerations, a SWOT analysis, information related to operations and facilities, and a series of recommendations for consideration as part of the Fire Master Plan Action Plan development.

5. Prepare the Final Fire Master Plan Action Plan

An analysis of the data from the Community Risk Assessment, Community Risk Mitigation Strategy, documentation and equipment review, and community engagement process resulted in the identification of 22 actions. The evidence that informed those actions and the actions themselves form the foundation of the Fire Master Plan Action Plan.

Section 2.0

Plan Foundation

This section provides information on approaches, methods, and lenses that were considered in the development of the Fire Master Plan Action Plan.



2.1 Three Lines of Defence¹

The fire and emergency service industry, driven by mandates from the Office of the Fire Marshal and Emergency Management, has adopted a more proactive approach to fire safety by putting an emphasis on public fire safety education combined with the enforcement of fire safety standards and applicable codes. Where fire prevention measures cannot mitigate risk appropriately to meet the needs and circumstances of the community, emergency response is the failsafe. This approach is known as the three lines of defense which include: public fire safety education, fire safety standards and enforcement, and emergency response.

1. Public Fire Safety Education

Proactive public fire safety education is critical to community safety. The London Fire Department delivers a variety of public education programs. These programs are delivered by a Public Educator and Fire Inspectors who specialize in developing and delivering fire safety programs, as well as fire suppression crews who interact with the community regularly. The overall objective of these programs is to educate the public on the dangers of fire, provide information to prevent fire, and provide the tools to ensure safe evacuation in the instance that a fire occurs.

Since March 1, 2006, legislation requires the installation of smoke alarms on every storey of a dwelling in Ontario. Smoke alarm programs are also one of the required services to be provided by a fire department in Ontario as per the *Fire Protection and Prevention Act, 1997*. As a result, smoke alarm programs and compliance are a key component of public education and fire prevention activities provided by municipal fire departments. London Fire Department does have a smoke alarm program that is consistent with the expectations of the *Fire Protection and Prevention Act, 1997*.

The Province of Ontario enacted the Hawkins Gignac Act requiring carbon monoxide alarms in all residential occupancies in 2013. The Ontario Fire Code required carbon monoxide alarms to be installed as of April 2015. The London Fire Department conducts a carbon monoxide week, shares information through social media, and provides public education to inform residents about the requirement and importance of carbon monoxide alarms.

2. Fire Safety Standards and Enforcement

The London Fire Department has Fire Inspectors who conduct fire safety inspections to ensure buildings are safe and comply with the Ontario Fire Code at the time of inspection. These inspections are currently completed on complaint, request, or are completed proactively. It is the responsibility of a property owner to ensure they comply with appropriate regulations and statutes. Property owners who fail to ensure that their properties meet minimum standards of fire and life safety face potential charges under the *Provincial Offences Act* and are subject to penalties as outlined in the *Fire Protection and Prevention Act, 1997*.

The London Fire Department is legislatively responsible for conducting fire safety inspections, plans review, and fire investigations to ensure public safety. The frequency of inspections directly impacts the level of fire safety and code compliance of properties. Of particular concern are vulnerable occupancies (Group B - retirement homes and care and treatment facilities). All vulnerable occupancies within London are fully inspected annually, as per mandated Provincial legislation, and mock fire drills are conducted annually to ensure compliance.

3. Emergency Response

Emergency operations personnel respond to emergency and non-emergency calls. These include fires, medical emergencies, motor vehicle collisions, public hazard situations, water and ice rescues, hazardous materials incidents, and technical rescues such as high angle, elevator, and confined space.

2.2 Risk-Based Planning

Risk-based planning identifies the level of fire protection required within the boundaries of the city of London. It is a means of measuring the probability and consequence of an adverse effect to health, property, organization, environment, or community, as a result of an event, activity, or operation.

The following risk-based planning methods were used in the development of the Fire Master Plan Action Plan:

- 1. Risk Profile Analysis** – Nine risk profiles were factored into risk-based planning including: geographic, building stock, critical infrastructure, demographics, hazards, public safety response, community service, economic, and past loss/events.
- 2. Five Levels of Probability** – The five levels of probability as outlined in the Ontario Fire Marshal's Comprehensive Fire Safety Effective Model (Rare, Unlikely, Possible, Likely, and Almost Certain) were used to identify potential risks.
- 3. Event Consequences** – The consequences of an event, whether minor or major in intensity were considered. The use of professional judgement and reviews of past events were used to establish the quantification levels. Four components were considered: Life Safety, Property Loss, Economic Impact, and Environmental Impact.

2.3 People Planning

People are essential to an efficient and effective London Fire Department and the implementation of the Fire Master Plan Action Plan. Therefore, people were considered throughout the planning process in five key areas:

- 1. Attract:** The London Fire Department will continue to enhance diversity, equity, and inclusion efforts with a strong focus on implementing innovative recruitment tactics to better reflect the community served. Ongoing efforts have been relatively successful in attracting a diverse group, but further work is required to produce outcomes of greater diversity.
- 2. Retain** - A healthy, safe, respectful workplace that fosters self-development and involvement in decision making is one that retains quality and high performing personnel. The London Fire Department has identified the need to manage and lead in mental and physical health and wellbeing.
- 3. Education** - Ongoing education efforts help build resiliency. Understanding what will be faced and normal reactions will strengthen resolve in dealing with critical or cumulative events. Education also includes prevention, intervention, recovery, and return to work strategies to promote psychological health and safety.
- 4. Develop** - Providing opportunities for others to learn from leaders creates an environment that supports continuous learning and development. Cross divisional training and job mentoring serve to enhance service delivery, promote knowledge transfer, and improve operational effectiveness.
- 5. Growth** - All positions within the London Fire Department have prerequisite knowledge, skills, and abilities known as Job Performance Requirements. For individuals to advance in their career, they must continue to build skills and knowledge. Further, leadership training opportunities better align future leaders to their future roles and responsibilities.

Section 3.0

Population

In this section, demographic and population related data has been provided. This data helps to inform the delivery of current and future services of the London Fire Department.



3.1 Age

Fire Fatalities by Age Group (Ontario)

| Category | Age | % of Provincial Population ⁱⁱ | % of Fire Fatalities ⁱⁱⁱ |
|----------------|---------|--|-------------------------------------|
| Children/Youth | <=14 | 16% | 3% |
| Adults | 15 – 64 | 66% | 58% |
| Older Adults | >=65 | 18% | 39% |

Specific age groups are at a higher risk from fire related incidents. Older adults are considered to represent one of the highest fire risk groups across the province based on the proportion of fire fatalities. The table above demonstrates that while older adults represent 18% of the total population in Ontario, they represent 39% of fire fatalities.

In London, 16.6% of the population is age 65 and over, meaning they are at an increased risk of experiencing a fatality in a residential fire. Another 20.6% of the population is 50 to 64 years of age, representing a future risk.^{iv}

3.2 Language

Non-Official Languages Most Spoken at Home (London)^v

| Non-Official Languages | Total # of Households |
|------------------------|-----------------------|
| Arabic | 6,165 |
| Spanish | 5,300 |
| Mandarin | 4,270 |
| Polish | 2,550 |
| Portuguese | 2,300 |

English is the language spoken most often at home in 90.8% (n=429,235) of London households. In total, 8.7% of households (n=41,170) speak a non-official language at home most often.^{vi} Of those single, non-official languages spoken at home, the top five are shown in the table. The London Fire Department continuously looks for ways to share fire safety messages with residents whose first language or language of choice is not English.

3.3 Population Shifts

The population within a community can shift at various times during the day or week and throughout the year. Population shifts can be a result of a number of factors, including employment, tourism, and education, all of which can impact the demand for fire protection services.^{vii}

3.4 Planned Growth

Estimated Population Growth (London)

| Year | Estimated Population | # Increase | % Increase |
|------|----------------------|------------|------------|
| 2020 | 400,700 | | |
| 2025 | 420,760 | 20,060 | 5% |
| 2030 | 439,760 | 19,000 | 4.5% |
| 2035 | 458,380 | 18,620 | 4.2% |

The growth forecast for London indicates the population is expected to increase by more than 57,000 people over the next 15 years. In addition, commercial uses, offices, institutions, and industries will all continue to grow along with the number of people employed in the city.^{viii} The City is in the process of updating these forecasts based on 2021 census data. Updated forecasts will become available in late 2022 or early 2023. It is recommended that the Fire Master Plan Action Plan be updated once these forecasts become available.

An impact of residential growth is the development of high-rise multi-residential structures. These types of structures pose a unique challenge to service delivery. The distribution of fire apparatus throughout the city must be considered to ensure that elevated (aerial) trucks can respond quickly and efficiently to high-rise buildings.

Another impact of population growth is an increase in traffic and the related risk of motor vehicle collisions. In 2021, as an example, the London Fire Department responded to almost 1,205 motor vehicle collisions.

Residential growth brings commercial and industrial prospects with it. This increase impacts the service delivery of the London Fire Department, increasing the need for ongoing enhancement to service levels that fall in line with the population.

Section 4.0

Service Delivery

The information in this section outlines the scope and scale of fire service provided by the London Fire Department.



4.1 Current Service Delivery

Call Volume By Year

| Year | Total # of Calls |
|------|------------------|
| 2016 | 9,177 |
| 2017 | 9,594 |
| 2018 | 10,119 |
| 2019 | 10,709 |
| 2020 | 9,308 |
| 2021 | 11,165 |

Over the last six years, there has been a 22% increase in call volume. The total number of calls has increased each year, except for a decrease in 2020 due to factors related to the COVID-19 pandemic (e.g. fewer driving related incidents or recreation-related injuries due to stay-at-home orders). The London Fire Department has been able to effectively keep up with call volumes, however, there is concern that without expansion of resources, the London Fire Department will be challenged to meet this continued growth.

Emergency Versus Non-Emergency Calls

| Year | # of Emergency Calls | # of Non-Emergency Calls | Total |
|------|----------------------|--------------------------|--------|
| 2016 | 6,539 | 2,638 | 9,177 |
| 2017 | 7,190 | 2,404 | 9,594 |
| 2018 | 7,512 | 2,607 | 10,119 |
| 2019 | 8,261 | 2,448 | 10,709 |
| 2020 | 6,518 | 2,790 | 9,308 |
| 2021 | 9,103 | 2,062 | 11,165 |

An emergency response is any incident where there is an immediate threat to life, safety, or property. Examples of emergency responses include structure fires, carbon monoxide alarm with symptoms to individuals, medical assistance calls with EMS such as cardiac arrest, motor vehicle collisions, and water rescues. A non-emergency response is any incident that requires a response, but life, safety, or property is not immediately threatened. Examples of non-emergency responses include open air burn complaints, smoke alarms sounding with no signs of smoke or fire, and public assistance calls. Over the last six years, emergency calls have increased by 39% and non-emergency calls have decreased by 22%.

4.2 Call Type and Volume

Call Type

| Type of Call | Total # of Calls | % of Calls |
|---|------------------|------------|
| Over Pressure Rupture/Explosion (no fire) | 4 | 1% |
| Public Hazard | 478 | 4% |
| Burning (controlled) | 558 | 5% |
| CO Alarm Calls | 603 | 5% |
| Pre-Fire Conditions/No Fire | 811 | 7% |
| Other Response | 891 | 8% |
| Property Fires/Explosions | 937 | 8% |
| Rescue | 1,396 | 13% |
| Medical/Resuscitator Call | 2,577 | 23% |
| Fire Alarm Activations | 2,910 | 26% |

The main three types of calls for 2021 were:

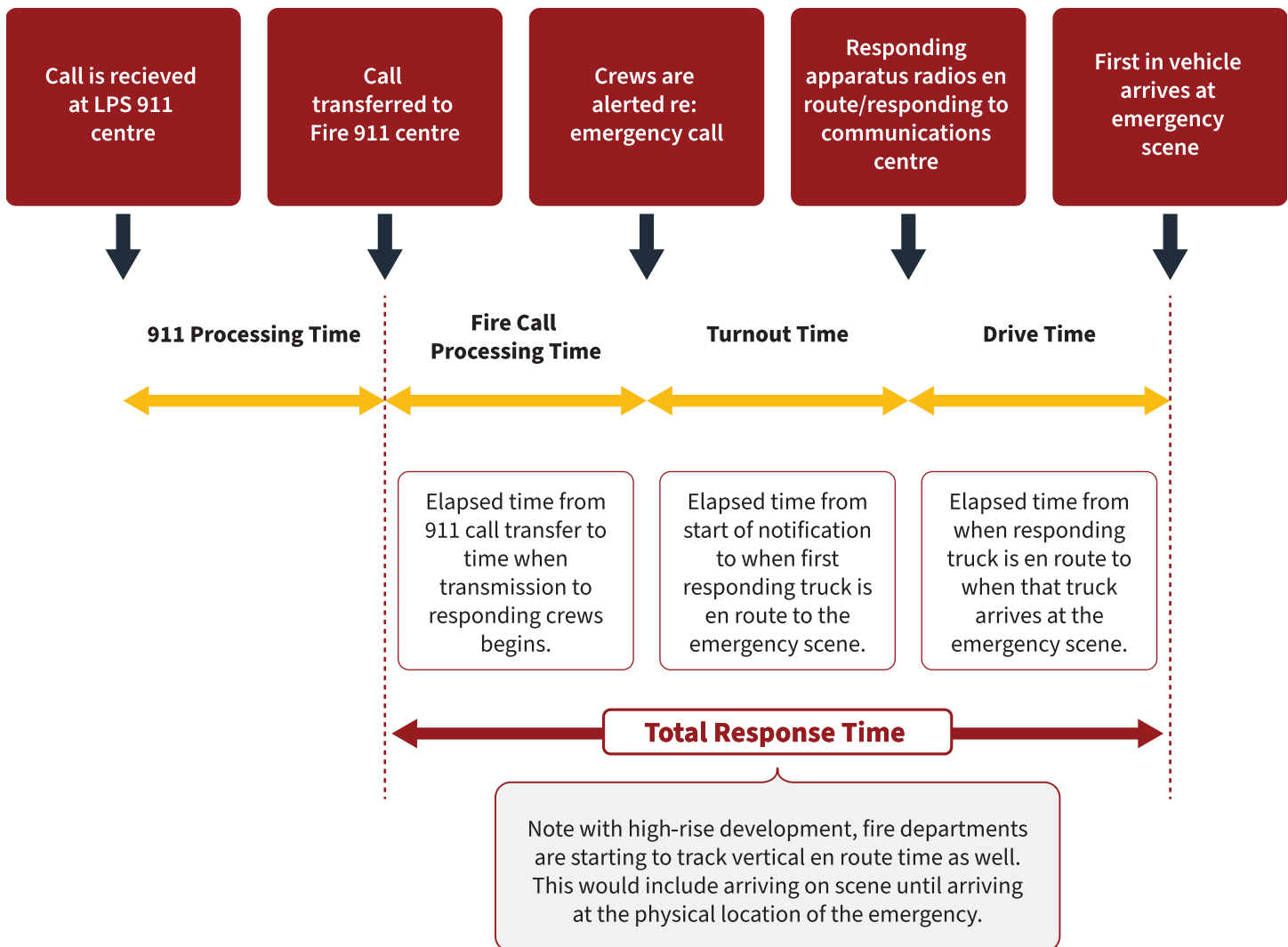
1. Fire Alarm Activations: 26%
2. Medical Calls: 23%
3. Rescues: 13%

The London Fire Department has an agreement in place with Middlesex-London Paramedic Service for full crews to respond to serious medical concerns such as:

1. Cardiac Arrest/Respiratory Arrest
2. Unconscious/Unresponsive
3. Motor Vehicle Collisions
4. Multi Casualty Incidents
5. Entrapment and Other Rescue Calls

4.3 Total Response Time Metric

Total Response Time Definition



The image above outlines the components of the total response time metric. Total response time starts when the call is received at the London Fire Department and ends when the first vehicle arrives at the emergency scene.

Total Response Time Metric

| Year | 90th Percentile Response Time (In Minutes) |
|------|--|
| 2016 | 6:05 |
| 2017 | 6:22 |
| 2018 | 6:23 |
| 2019 | 6:20 |
| 2020 | 6:12 |
| 2021 | 6:16 |

Overall, the average response time metric increased by 3% between 2016 and 2021. Between 2016 and 2018, response time increased each year, whereas from 2018 to 2020, response time decreased each year. In part, this has been attributed to the COVID-19 pandemic due to there being less traffic on city streets. The London Fire Department implements a number of strategies to mitigate traffic congestion, as this has an impact on the average response time metric. One example includes implementing GPS technology that takes into account traffic patterns and congestion.

4.4 Occupancy Classification

Occupancy means the use or intended use of a building, or part thereof, for the shelter or support of persons, animals, or property. Occupancy classifications in the Ontario Fire Code include:

- **Group A: Assembly Occupancy** – The occupancy or the use of a building, or part thereof, by a gathering of persons for civic, political, travel, religious, social, educational, recreational, or like purposes, or for the consumption of food or drink.
- **Group B: Care of Detention Occupancy** – Care of Detention was revoked in 2019 and separated into two classifications: Care Occupancy and Detention Occupancy. However, these two classifications are still reported together.
 - **Care Occupancy** – An occupancy in which special care is provided by a facility, directly through its staff or indirectly through another provider, to residents of the facility:
 - a. who require special care because of cognitive or physical limitations, and
 - b. who, as a result of those limitations, would be incapable of evacuating the occupancy, if necessary, without the assistance of another person.
 - **Detention Occupancy** – An occupancy in which persons are under restraint or are incapable of self-preservation because of security measures not under their control.
- **Group C: Residential Occupancy** – Any occupancy in which sleeping accommodation is provided to residents who are not harboured for the purpose of receiving special care or treatment and are not involuntarily detained.

- **Group D: Business and Personal Care Occupancy** – The occupancy or use of a building, or part thereof, for the transaction of business or the rendering or receiving of business or personal services.
- **Group E: Mercantile Occupancy** – The occupancy or use of a building, or part thereof, for the displaying or selling of retail goods, wares, or merchandise.
- **Group F: Industrial Occupancy** – The occupancy or use of a building, or part thereof, for assembling, fabricating, manufacturing, processing, repairing, or storing of goods and materials.

Proportion of Structure Fires By Major Occupancy

| Occupancy Classification | # of Fires | % of Structure Fires |
|--------------------------------|------------|----------------------|
| Group A – Assembly | 11 | 5% |
| Group B – Care of Detention | 7 | 3% |
| Group C – Residential | 179 | 76% |
| Group D – Business / Personal | 7 | 3% |
| Group E – Mercantile | 18 | 8% |
| Group F – Industrial | 9 | 4% |
| Other (not classified or farm) | 2 | 1% |
| Total | 233 | 100% |

Residential fires account for the majority of structure fires in London. In 2021, for example, Group C – Residential fires accounted for 76% of structure fires.

4.5 Fire Causes and Ignition Sources

Fire Causes

| Intentional | # of Fires | % of Fires |
|--|-------------------|-------------------|
| Vandalism | 2 | 1% |
| Suspected Arson | 35 | 15% |
| Unintentional | | |
| Misuse of Ignition Source | 17 | 7% |
| Mechanical/Electrical Failure | 25 | 11% |
| Design/Construction/Maintenance Deficiency | 5 | 2% |
| Undetermined | 59 | 25% |
| Other Undetermined | 15 | 6% |
| Children Playing | 1 | 1% |
| Other - Undetermined | | |
| Other | 74 | 32% |
| Total | 233 | 100% |

In 2021, 52% of fires were due to unintentional causes and 16% of fires were the result intentional causes. The remaining 32% of fires were undetermined as to their cause.

Ignition Source

| Reported Ignition Source | # of Fires | % of Fires |
|-----------------------------------|------------|-------------|
| Cooking Equipment | 47 | 20% |
| Undetermined | 107 | 46% |
| Open Flame/Tools/Smokers Articles | 29 | 13% |
| Miscellaneous | 10 | 4% |
| Electrical Distribution | 8 | 3% |
| Other Electrical/Mechanical | 9 | 4% |
| Heating Equipment, Chimney, etc. | 7 | 3% |
| Appliances | 7 | 3% |
| Exposure | 9 | 4% |
| Total | 233 | 100% |

In 2021, the ignition source was undetermined in 46% of structure fires. Where the ignition source was identified, cooking equipment (20%) and open flame (13%) were reported as the top two ignition sources.

4.6 Smoke Alarms and Fire Suppression Systems

Presence of Smoke Alarms

| Status | # of Fires | % of Fires |
|---|------------|-------------|
| No Smoke Alarm | 24 | 10% |
| Smoke Alarm Present and Operating | 93 | 40% |
| Unknown, Not Reported | 3 | 1% |
| Not Applicable: Non Residential Structure | 43 | 19% |
| Smoke Alarm Presence, Undetermined | 70 | 30% |
| Total | 233 | 100% |

In 2021, smoke alarms were present at 40% of structure fires responded to by the London Fire Department. In comparison, for 10% of structure fires, no smoke alarm was present and operating.

Fire Suppression Systems

| Status | # of Fires | % of Fires |
|--|------------|-------------|
| Full Sprinkler System Present | 20 | 9% |
| Partial Sprinkler System Present | 12 | 5% |
| No Sprinkler System Present | 144 | 62% |
| Undetermined | 54 | 23% |
| Not applicable – All Evacuated or No Persons Present | 3 | 1% |
| Total | 233 | 100% |

Sprinkler systems were present in 14% of structure fires in 2021, compared to 62% where sprinkler systems were not present.

4.7 Fire Related Injuries and Deaths

Fire Related Injuries and Deaths

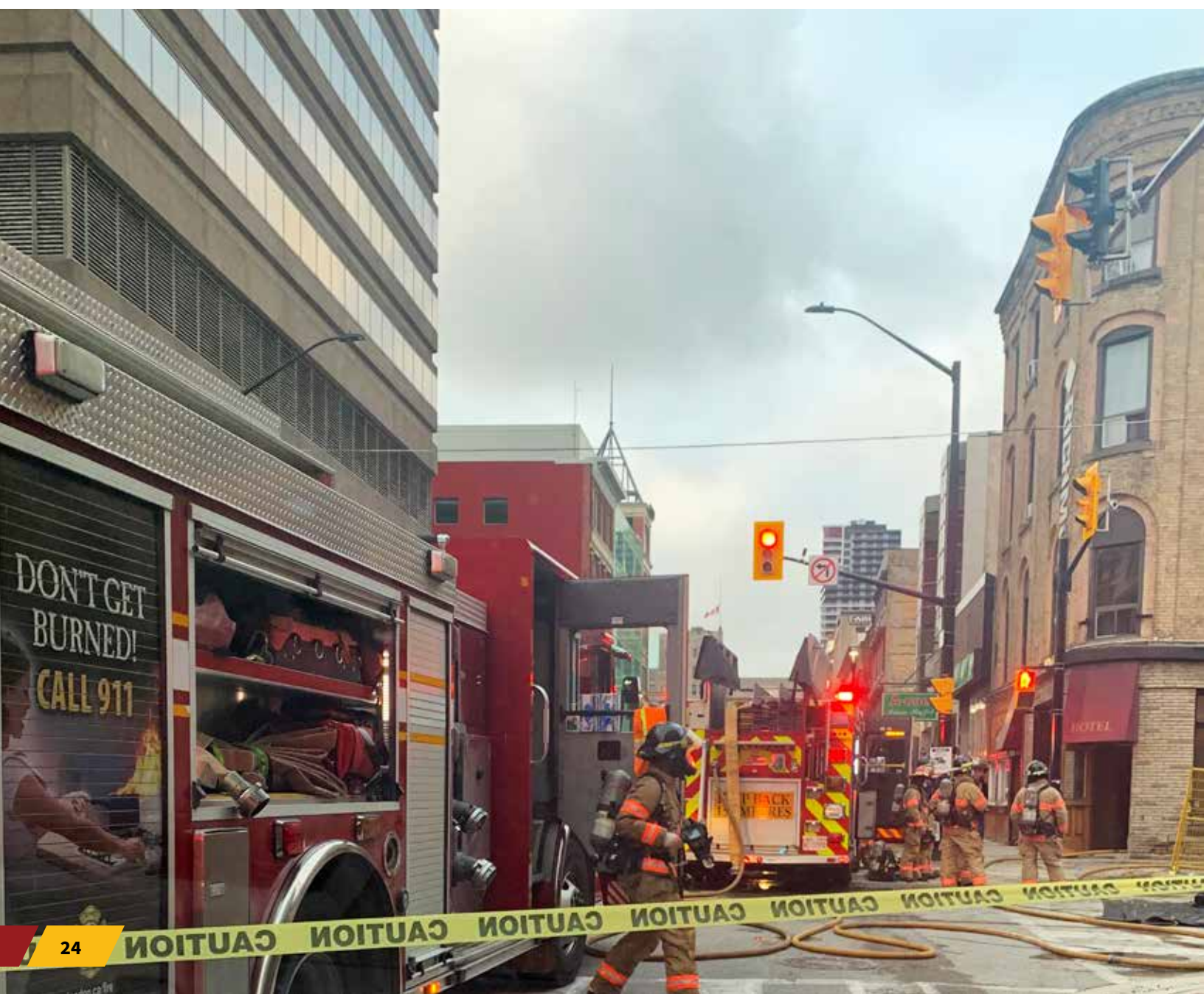
| Year | # of Fire Related Injuries | # of Fire Related Deaths |
|------|----------------------------|--------------------------|
| 2021 | 27 | 1 |
| 2020 | 38 | 2 |

In London, there were 27 fire injuries and 1 fire related death in 2021. In 2020, there were 38 fire related injuries and 2 fire related deaths.

Section 5.0

Capital Infrastructure

This section outlines information related to capital infrastructure, specifically facilities and vehicle fleet.



Total Number of Calls Per Station

| Station | Total # of Calls |
|------------|------------------|
| Station 1 | 2,192 |
| Station 2 | 1,208 |
| Station 3 | 706 |
| Station 4 | 1,000 |
| Station 5 | 569 |
| Station 6 | 904 |
| Station 7 | 833 |
| Station 8 | 606 |
| Station 9 | 1,150 |
| Station 10 | 640 |
| Station 11 | 343 |
| Station 12 | 311 |
| Station 13 | 344 |
| Station 14 | 359 |

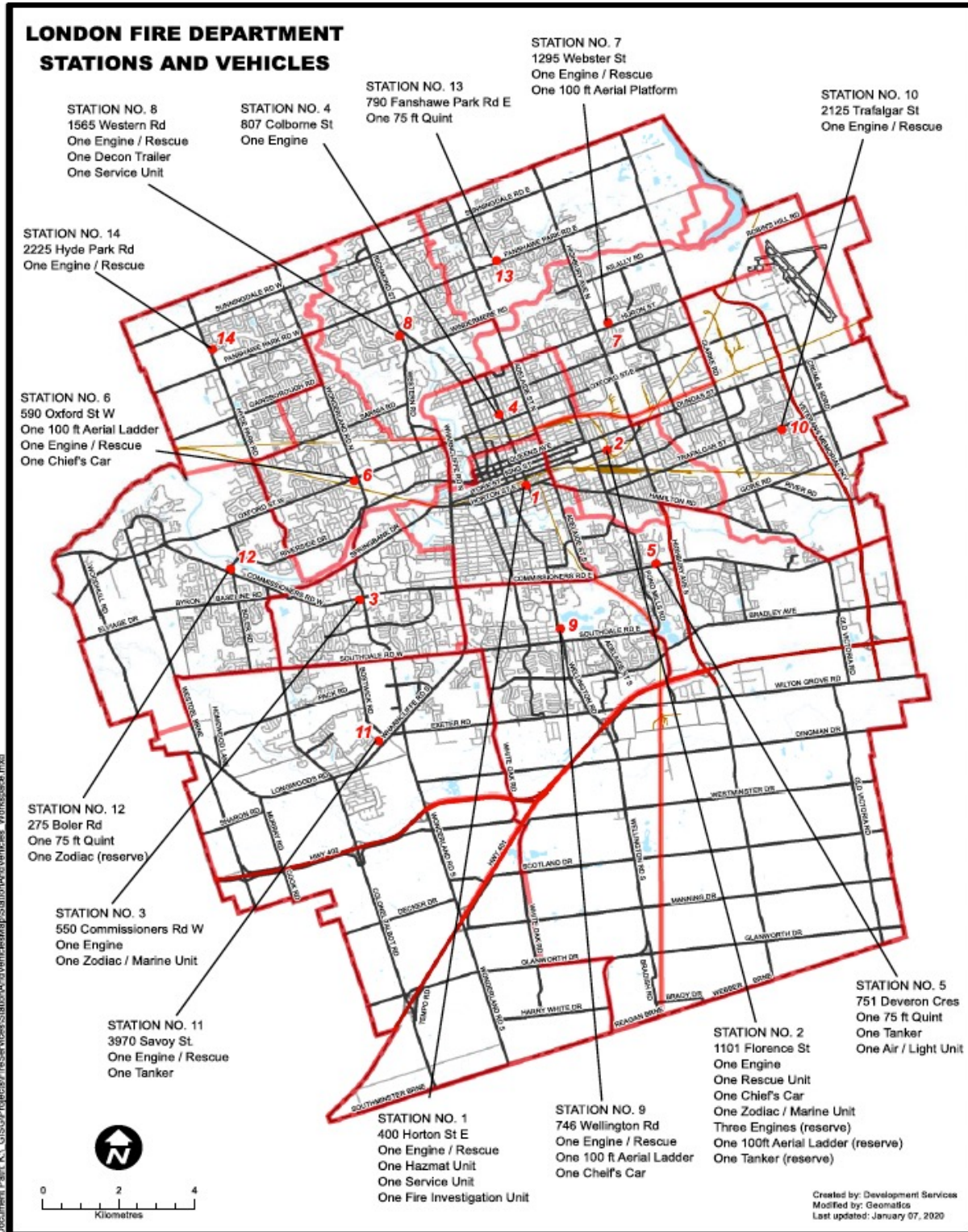
There is a wide variation in the number of calls to which the stations respond. In 2021, Station 1 responded to more than 2,100 primary calls compared to stations 11, 12, 13, and 14 that responded to fewer than 400 primary calls. The table indicates the calls where the station is the primary response vehicle, and does not include the number of calls where the station is responding to support calls in other station areas.

Training Facility

London Fire Department has a training facility located at 746 Wellington Road. When the training tower was originally built, the area was rural with little development. Now the training facility is amid a heavy residentially populated area. The current training facility is dated, under-sized, and too close to residential developments. The London Fire Department is developing a long-term strategy that includes the relocation and expansion of the training facility.

5.2 Fleet

Fire Station Location and Fleet Map



The map above outlines the fire station locations and the fleet available at each fire station.

Number of Calls for Service - Aerial Units

| 2017 | 2018 | 2019 | 2020 | 2021 |
|-------|-------|-------|-------|-------|
| 3,012 | 3,059 | 3,339 | 2,968 | 3,454 |

Between 2017 and 2021, the number of aerial responses increased by 15%. This is attributed to the increase in high-rise structures within the city of London. With the planned development over the next 10 years, a reassessment of aerial apparatus will be required to ensure there is a sufficient number of aerial apparatus available to meet the response demand.

The London Fire Department utilizes an apparatus known as a quint. These units were originally designed to be an alternative to aerial apparatus in locations that do not have many high-rise structures. They were also originally designed to be smaller than an aerial apparatus which made them more maneuverable within tighter confines of older city streets. Over the years, however, quints have grown to the point that they are very similar in size to that of an aerial apparatus, but with less reaching ability. Further, with their larger size and being used as a first response vehicle, the vehicles are not practical for continually responding in areas such as townhouse complexes and buildings with narrow driveway access.

Fire Apparatus - New and Replacement Schedules

The Insurance Board of Canada and the Fire Underwriters Survey support a regular replacement schedule for fire vehicles. This includes guidance on retirement criteria for fire apparatus, recommending that all front-run vehicles are replaced on a 15-year cycle for larger cities. In 2008, Council approved the current London Fire Department replacement cycle for engines, tankers, and aerials to be front line for 17 years and then moved into reserve for three more years. Currently, the industry recommends a 15-year replacement cycle.

Primary response vehicles at busy stations can accumulate high mileage and wear and tear in a short time that can shorten the apparatus life span. For example, while four stations respond to fewer than 400 primary calls per year, stations in the core respond to over 1,000 calls, with Station #1 responding to more than 2,100 primary calls annually. As the trucks accumulate mileage, engine hours, and pump use, the maintenance costs and downtime for repairs can increase dramatically in the later years of the apparatus' life. It can be more economical to replace the truck at an earlier age, when resale values are higher, and before the wear and tear starts to result in expensive repairs, potential failure at a scene, and long downtime.

Section 6.0

Actions

The actions in the Fire Master Plan Action Plan reflect industry trends, community risks, and infrastructure requirements. All actions are based on industry standards, best practices, and input from the community engagement process. The key driver behind the actions in this document is the reduction of risk.

There are 22 actions in total, which are grouped into five areas of focus.

1. Public Fire Safety Education
2. Fire Safety Standards and Enforcement
3. Emergency Response
4. Staff/Personnel Development
5. Strategic Priorities

Within each focus area, there is a data snapshot, identified risks, and actions. Each term is described below.

Data Snapshot: The data snapshot includes London Fire Department statistics and responses to the Fire Master Plan Community Survey, London Fire Department Staff Survey, and Council Survey. In the data snapshot, the term “satisfied” is inclusive of respondents who reported “very satisfied” and “satisfied” and “important” is inclusive of respondents who reported “extremely important”, “very important”, and “important”.

Identified Risks: Identified risks include risks identified through the Community Risk Assessment and community engagement process.

Actions: Actions are the initiatives or strategies to be implemented over the next 10 years as part of the Fire Master Plan Action Plan. Many of the actions are already underway. Others may require additional resources, the amount and timing of which will be determined through a detailed implementation plan and subsequent City of London strategic planning and multi-year budgeting processes.

6.1 Public Fire Safety Education

What Is Public Fire Safety Education?

Public fire safety education is the first line of defence in fire safety. It is the key to mitigating fire and life hazards before they start. Public education programs are designed for everyone, from young children to older adults, vulnerable populations, and equity-deserving populations. The overall objective of these programs is to educate the public about the dangers of fire, provide information to prevent fire, and provide tools to ensure safe evacuation in the instance that a fire occurs. Teaching people to be stewards of their own fire safety has proved to have a positive impact on the number and severity of fire-related injuries and deaths.

Data Snapshot

700+ public education activities are conducted annually.

530 fire safety posts were shared with the public via social media in 2021.

90% of respondents reported they were satisfied with the London Fire Department in relation to its level of community safety programs.

90% of respondents said how often the London Fire Department provides community training opportunities is important.

Identified Risks

- 10% of structure fires in 2021 did not have a working smoke alarm.
- Residential (Group C) structure fires in the city represented 76% of all fire calls in 2021.
- 12,000 children were provided fire safety education annually at the Children's Safety Village. With the closure of the Village, this leaves a gap in fire safety education for school aged children. With this identified gap, this will require more attention to this group and may create another gap with other vulnerable groups (e.g. older adults or equity-deserving populations).
- Older adults are one of the highest fire risk groups. In London, 16.6% of the population is age 65 and over, meaning they are at an increased risk of experiencing a fatality in a residential fire. Another 20.6% of the population is 50 to 64 years of age, representing a future risk.^{ix}

Public Fire Safety Education Actions

1. Engage fire suppression personnel in fire prevention and public education efforts whenever possible.

The reasoning for fire safety education is that if a person can be educated in the prevention of fire, a fire may not occur. As a result, education decreases the demand for service. The daily demand for public education is ongoing and is growing due to an increasing population. Fire suppression personnel interact with members of the community daily via emergency responses, medical calls, etc. Suppression crews gain access to single family homes and multi-residential buildings daily (where the vast majority of fires occur) and can identify fire safety issues (e.g. no working smoke alarms or carbon monoxide alarms). As a result, in between calls, suppression crews may be able to assist with providing education to many groups within the community where the Public Educator cannot due to workload and staffing demands.

2. Equip Fire Officers with National Fire Protection Association certifications to manage the need for fire inspections and public education.

Fire Officers will be educated in code compliance and will notice the fire safety issues prior to a fire occurring. These issues can then be rectified in the appropriate manner. As suppression crews gain access to single family homes and multi-residential buildings, Fire Officers can identify and appropriately address fire safety issues (e.g. blocked means of egress, fire alarm system issues). Not only can appropriate follow up be ordered, the Fire Officer and crew can educate those in the care and control of the building to ensure ongoing fire safety.

3. Develop new and enhance current partnerships with key stakeholders to advance public education efforts with a specific focus on vulnerable populations and equity-deserving groups.

Fire occurs on a regular basis and is non-discriminatory. Enhancing partnerships will ensure enterprise-wide and community-wide fire safety education. Reaching out to the City of London and community stakeholders will leverage access to various groups and increase the provision of fire safety education throughout the Corporation and community. Traditional fire safety messaging must adjust and adapt to changing demographics and an increasing population. Working in partnership with the Corporation and community groups will ensure a greater number of people are taught fire safety.

6.2 Fire Safety Standards and Enforcement

What is Fire Safety Standards and Enforcement?

Fire safety standards and enforcement relates to the adherence of Ontario's *Fire Protection and Prevention Act, 1997*, the regulation under this Act being the Ontario Fire Code. When a building is built, it is done so in compliance with the Ontario Building Code. During this building phase there are fire safety measures that are required based on the type of building being built. Once a building is completed, the Ontario Fire Code takes over from the Ontario Building Code to ensure these fire safety measures are maintained. At times, enforcement of regulatory requirements is necessary.

The London Fire Department conducts fire safety inspections to ensure buildings are safe and comply with the Ontario Fire Code. These inspections are completed on complaint, request, by legislation, or are completed proactively. To prevent fires from occurring, it is necessary to understand the causes of fires that do occur. This offers focused education and accountability, and can supply information for Ontario Fire Code changes and recall notices. As such, the London Fire Department is also responsible for conducting fire investigations to ensure public safety.

Data Snapshot

7,000+ safety inspections and inspection activities are conducted annually.

100+ fire investigations are conducted annually.

169 vulnerable occupancies (e.g. retirement homes) are fully inspected annually.

71% of respondents reported it was important the Fire Service visits their home to give safety advice, smoke/carbon monoxide alarm information, etc.

Identified Risks

- Every home in Ontario must have a working smoke alarm on every story and outside all sleep areas. Some residences in London may not meet Ontario Fire Code requirements. Property owners may be unaware of fire safety requirements and their responsibilities.
- The London Fire Department is legislatively mandated to conduct fire safety inspections to ensure public safety. For each inspection there may be more than one violation cited which may lead to fines or prosecution. Each inspection may also require follow-up on site, two to three times, prior to compliance being achieved.

- The demand for inspections continues to grow annually, putting pressure on resources:
 - Complaint-based fire safety inspections doubled from 817 in 2017 to 1,627 in 2021.
 - The London Fire Department is required by the municipality to conduct inspections as part of the rental licencing process. In 2020, there were 534 rental licence applications, and in 2021 there were 703 rental licence applications, representing a 32% increase.
 - Business owners must have a fire inspection to secure a business licence. In 2020, there were 34 business licence inspections completed. In 2021, the number of business licence inspections completed more than doubled to 71.

Fire Safety Standards and Enforcement Actions

1. Assess the time requirements of the current demands, as well as the desired inspection and education programs.

- **Provide an annual program outline at the start of the year with goals, expectations, resources available, and resources required.**
- **Measure and report on completion and successes.**

The demand for fire inspections continues to increase annually. In comparison to some other fire departments, the London Fire Department conducts complaint-based inspections, as well as proactive inspections to ensure compliance with the Ontario Fire Code. This action will support the work study (see Action #2 below) and inform the staffing ratio requirements for the Fire Prevention Division. Defining annual programming will provide strategic direction for fire safety inspections and target areas of risk, mitigating fire risks in the community.

2. Complete a full work study and implementation plan, inclusive of financial impacts, to analyze the needs of the Fire Prevention Division to ensure span of control, quality assurance, and program planning.

As London continues to grow, the number of buildings is expected to increase. More buildings mean more inspections and more fire safety issues which requires an appropriate staff complement to meet the needs and demands. The current span of control is 12 staff for every 1 supervisor. A work study will assist in exploring how the growing demands will affect the supervisor's ability to meet the needs of their team and their own role specific duties. Through this action, inspection processes will be streamlined and focus on risks that come from the work study. Further, the appropriate number of staff will be determined to meet the public education, inspection, and investigation demands of the community. Several retirements in the next five years are expected to put greater demand on existing staff while replacements are being trained.

6.3 Emergency Response

What Is Emergency Response?

Emergency response includes fires, medical emergencies, motor vehicle collisions, public hazard situations, water and ice rescues, hazardous materials incidents, and technical rescues such as high angle, elevator, and confined space. In emergency situations, time is critical and is influenced by a number of factors. To appropriately manage this, consideration must be given to the need for new stations, relocation of stations, as well as purchasing, maintenance, life-cycling, and planning for fire apparatus and equipment.

Data Snapshot

9,177 incidents occurred in 2016 and **11,165** incidents occurred in 2021, representing a **22% increase** in call volume.

\$13,000,000 in property loss from structure fires occurred over the last six years.

The main three types of calls in 2021 were:

- Fire alarm activations: **26%**
- Medical calls: **23%**
- Rescues: **13%**

98% of respondents reported it is important how quickly the Fire Service gets to them if they have an emergency.

233 structure fires occurred in 2021 in London.

97% of respondents reported it is important the London Fire Department purchases and maintains new and applicable equipment.

Identified Risks

- Increased density of residents within the city limits could result in an increased call volume overall. There has been an average increase of 750 units in higher buildings per year from 2009 to date. With an estimate of two people per unit, there are approximately 1,500 additional people per year moving into higher buildings. Over 10 years, that is a service increase of over 15,000 people in higher buildings.
- It is anticipated that response times will increase due to urban intensification, population growth, traffic density, and traffic calming measures. To ensure a sustainable level of service to the community, a comprehensive plan will be required in preparation for Council's future strategic planning and multi-year budget processes.

- In 2017, the three current aerial apparatus responded to 3,012 incidents compared to 3,454 responses in 2021, a 15% increase. With the increased call volume comes additional kilometers. This wear on these heavy vehicles creates premature mechanical issues.

Emergency Response Actions

1. Work with allied agencies on dispatch response time reduction opportunities.

London Fire Department has a response agreement with Middlesex-London Paramedic Services for serious, medical emergencies. Due to technology limitations, there may be delays in the calls being forwarded to the London Fire Department from the Ministry of Health's Central Ambulance Communications Centre. The London Fire Department will continue to advocate to the Ministry of Health to identify and implement potential solutions to reduce call handling and transfer times.

2. Create a committee to review the response to remote fire alarm calls and certain types of motor vehicle collisions, fires, or other indicators where additional resources may be required, and monitor changes to the call matrix to ensure resource deployment and risk management are balanced. The committee will make recommendations to Fire Administration.

The Response and Deployment Committee was struck in March of 2022. To date they have met twice as a committee and have had multiple sub-committee meetings. Their four goals are: determine boundaries for Station 15 and review and recommend changes to boundaries due to the additional station; determine placement of fourth aerial and review placement of other apparatus in the city for possible location changes; review placement of special team halls; and review and recommend changes to London Fire Department response rules.

3. Create a committee to review and make recommendations to Fire Administration on the deployment and station assignments of specialty and technical rescue teams.

As time can be a factor to a successful rescue, arriving to where help is required in a timely manner is essential. An engine from the closest fire station is always dispatched along with the specialty team that comes from various locations. The crew of the engine can begin operations to the level that the crew is trained and equipped. The specialized team then musters to the area via the vehicles they are assigned to that shift. Key stations are assigned specialty vehicles and equipment and, in general, trained individuals staff these stations. The Response and Deployment Committee will provide recommendations for special team hall placement, this specialized committee will look at deployment, Standard Operating Procedures, and overall response of the team. This committee will then provide further recommendations to Fire Administration.

4. Phase out the three quint apparatus and replace them with engines. Continue to monitor growth for the inclusion of additional aerial apparatus in the future due to the number of high-rise structures within the city.

With the increased size and cost of the quint apparatus the reasoning for their implementation is no longer viable. With an increase in aerial apparatus responses an additional aerial platform was included in the most recent Development Charges Background Study. With an additional aerial apparatus in the fleet, quint apparatus are not the best suited type of vehicle for primary response purposes and are no longer needed. Upon replacement of these quint apparatus regular engines should then be purchased. This adjustment in purchasing would result in significant cost savings (1/3 less). An implementation plan inclusive of financial impacts will be developed as part of this action.

5. Move to a 12+3-year replacement schedule for fire apparatus, with consideration being given to new fire apparatus being assigned to busier stations and then moved to less busy stations at a later time to allow for full use of warranty and manage excessive mileage on a single given vehicle.

In 2021, two engines (2007) required significant maintenance that cost in excess of \$80,000 each due to extensive frame corrosion and impending failure. A third engine (2007) was decommissioned, due to the same frame rail issues and other significant maintenance problems. The cost of fixing this third engine would have been more than the value of the vehicle. Civic Administration purchased two new replacement engines in August 2021 to manage interruptions to the level of service and to help mitigate the shortage of vehicles. There are 12 other large vehicles ranging in dates from 2007 to 2009. All of these vehicles are starting to show significant mechanical issues that need to be addressed. Some will be able to be fixed in a cost-effective way, whereas others will need to be exchanged for new vehicles. The London Fire Department will be issuing a Request for Proposal to purchase four vehicles during the remainder of this multi-year budget.

A movement to a 15-year overall replacement life cycle for apparatus will allow the front-line use for 12 years and the use in reserve for an additional 3 years. Newer apparatus may be assigned to busier stations and then moved to less busy stations. This would allow for full use of warranty and manage excessive mileage on a vehicle. This could also reduce maintenance costs. A comprehensive plan is required in preparation for the next Council Strategic Plan and Multi-Year Budget to ensure a sustainable level of service to the community.

6. Increase the reserve fleet with two additional engines to a total of one aerial, one tanker and six engines.

Currently there are four spare engines, one spare aerial, and one spare tanker. With the aging fleet, the requirement to move to a preventative maintenance program from a reactive maintenance program, and ongoing Training Division needs for vehicles, there is a need for two additional spare engines. An additional two spare engines will fill the gap, where one can be assigned to the Training Division, with the ability to be pulled back into frontline service when needed, and an additional engine in the spare fleet rotation. These additions will then allow all mechanics to work on preventative maintenance as these additional vehicles will be able to be assigned to frontline use for the duration of the maintenance of the regular vehicle.

7. Continue to monitor the average response time metric for planning purposes as London continues to grow in size and population.

As the city continues to expand and grow, the London Fire Department will continue to monitor the average response time metric. The average response time metric is one of the factors used for planning purposes when determining the strategic, future location and/or relocation of fire stations and fleet over the next ten years.

Further, the City of London is currently updating its growth forecast based on 2021 census data. These updated forecasts will help to inform the future growth of the London Fire Department including stations, staff, and fleet. The London Fire Department will conduct an in-depth station expansion and/or relocation review once this data is available. Additional actions, such as vehicle and fleet actions described earlier in this section, will also serve to mitigate the challenges of a growing city.

The London Fire Department will continue to work with City of London service areas (e.g. Transportation & Roadside Operations) to develop and implement strategies to minimize traffic and congestion wherever possible. In addition, the London Fire Department will engage external stakeholders to identify areas of concern and explore innovative strategies to mitigate these challenges as the city continues to grow in size and population.

6.4 Staff/Personnel Development

What Is Staff/Personnel Development?

A healthy, safe, respectful workplace that fosters self-development and involvement in decision-making is one that retains quality and high performing team members. Providing opportunities for team members to learn from each other, mentors, and leaders creates an environment that supports continuous learning and development. Training and learning initiatives are foundational to efficient and effective service. The City of London's People Plan has informed the actions in this focus area.

Data Snapshot

98% of respondents reported it was important to have continued, relevant training for London Fire Department personnel.

56% of London Fire Department staff who responded to the Fire Master Plan Internal Survey reported that additional training was required to improve service efficiency.

375+ London Fire Department firefighters respond to fire, rescue, technical rescue, and medical responses throughout the city (includes new team members for the implementation of Station 15 and the new aerial platform).

Identified Risks

- In 2008, there were 61 vehicles with the associated equipment that required regular servicing. In 2021, this number grew to 82 and will continue to grow over time. An additional mechanic was hired to ensure the London Fire Department can keep up with the increased demands.
- Industry standards, as noted in the 2021 Internal Audit, require one parts/stores person for every 5-8 mechanics on duty. It is estimated that mechanical staff spend a combined 12.8 hours per day on this function, rather than mechanical work. In 2022, an approved Assessment Growth Case provided the funding for a parts/stores person that would relieve mechanical staff from sourcing, acquiring, and delivering parts.
- Starting on July 1, 2022, through Ontario Regulation 343/22: Firefighter Certification in the *Fire Protection and Prevention Act, 1997* all fire services must complete mandatory certification to meet provincial standards. Certification must be completed by 2026 for fire protection services and 2028 for specialized services.

- The number of lost hours due to WSIB claims has increased by 161%, from 21.9 hours in 2015 to 57.2 hours in 2021. This includes increases due to WSIB presumptive legislation for firefighters which includes 17 cancers and Post-Traumatic Stress Disorder. As unplanned absences occur, including WSIB-approved illness and injury, the levels of frontline emergency service are impacted as on-duty staffing levels fall.
- Thirty percent of London Fire Department employees are 50 years of age or older and will be reaching retirement over the next few years. Retirements could result in skill and labour shortages without appropriate succession planning measures such as staff development, training, and mentoring.

Staff/Personnel Development Actions

1. Encourage a workplace culture that supports inclusion and belonging. Review recruitment practices with an equity tool, to promote increased representation from equity-deserving groups within the London Fire Department.

It is important that the London Fire Department more accurately reflect the community they serve. By implementing innovative and targeted recruitment tactics, the demographic profile of the workforce will be better aligned with the broader community. Addressing the systemic barriers to inclusion and ensuring a workplace culture which promotes a sense of belonging will enhance the experience of all employees. Applying an anti-racism and anti-oppression framework to policies, procedures, and service delivery will increase employee awareness and understanding of the harmful impact of systemic racism and oppression on equity-deserving groups within the workplace and the community they serve.

2. Continue to develop, implement, and measure a total wellness strategy to ensure mental and physical resilience and well-being of employees.

The London Fire Department seeks to lead in mental and physical health and well-being to ensure that the mental and physical health and well-being of all London Fire Department members are met. A Health and Wellness Committee has been established with representation from various sectors within the London Fire Department and other City staff. The core focus of this committee is to develop, implement, and measure wellness strategies within three pillars: education, prevention, and response.

3. Identify strategies to engage and empower employees through relevant training, ongoing staff development through cross divisional opportunities, mentoring, collaboration with other City services, and participation in decision-making.

A fire department is only capable of providing effective levels of protection to its community if it is properly trained and equipped to deliver these services. Firefighters must be prepared to apply a diverse and demanding set of skills to meet the needs of the modern fire service. The incorporation of a department-wide training calendar to identify the annual goals of the Training Division will be implemented and communicated to all personnel to indicate what training programs are required for services provided and to verify that training programs are meeting the related National Fire Prevention Association and other training program certifications.

4. Develop and implement strategies providing for compliance with the new Ontario Regulation – *Firefighter Certification* including the financial impacts and logistical requirements for the periods of July 1, 2022 to July 1, 2026 for general certifications and July 1, 2022 to July 1, 2028 for specialty rescue certifications.

The provision of training initiatives, including the new certification requirements, will require the London Fire Department to look at a gap analysis with respect to certification to determine the time required and training needs to achieve certification goals. As part of this, the London Fire Department will review staffing in each area to determine the safest and most cost-effective way to achieve certification requirements and outline a comprehensive plan including cost implications.

6.5 Strategic Priorities

What Are Strategic Priorities?

Strategic Priorities refers to special projects that focus on policy and procedure development, system reviews and enhancements, revenue generation opportunities, and space utilization. The purpose of these projects is to enhance the efficiency and effectiveness of the London Fire Department's operations. This includes ensuring alignment with key government mandates and by-laws. Actions within this area also focus on strategic partnerships to enhance and expand service. Financial stability is also considered within the actions through revenue generation opportunities. Some projects implemented through this area of focus are finite, in that there is a specific start and end date; they are not ongoing or operational in nature.

Data Snapshot

71% of respondents said it was important how much fire services costs them as a taxpayer.

Fire Master Plan Survey respondents recommended investigating revenue generation opportunities, specifically through a training centre.

Fire Master Plan Survey respondents suggested exploring unified response measures and partnerships to enhance service.

Identified Risks

- The London Plan and other City of London strategic plans envision growth through greater intensification within the city – inward and upward growth. While this type of growth is often advantageous because it leverages existing infrastructure, it can present challenges for delivering fire services. Depending on the location of these developments, this can result in the need for new or relocated fire stations, additional aerial vehicles to access high-rise structures, etc. These up-front costs are typically funded through a combination of Development Charges (recovered through Development Charges rates) and property tax supported funding. Additionally, the ongoing operating costs of these new capital requirements can add further pressure to the property tax supported municipal budget.
- As of the time of writing, inflationary pressures present a considerable challenge to the operating and capital costs of consumables due to supply chain challenges, and difficulty sourcing certain products present challenges for the fire operating budget. Similarly, elevated construction costs present additional challenges for constructing new fire stations.

- The need to consider and implement climate-friendly/green solutions within the London Fire Department's operations and future capital plans is likely to represent an additional cost relative to “like for like” replacements. However, in some cases, these environmentally friendly enhancements may result in future cost savings.
- When the training facility on Wellington Road South was originally built, the area was rural with little development. Now the training centre is amid an urban area and too close to residential development.
- The current training facility is also dated and under-sized. As the need for training has increased due to regulatory requirements, standards, and best practice, so has the need for increased classroom space, specialized props, and an updated fire tower design.
- With the closure of the Ontario Fire College facilities in Gravenhurst, there is a growing need for regional training facilities. This opens opportunity for the current and new training centre to be utilized as a potential for revenue generation in partnership with the Ontario Fire College and other fire services.
- Aid agreements with Middlesex and Thames Centre and the 2006 Establishing & Regulating By-Law document are outdated and require updates based on current standards and services.
- In June of 2017, the federal Canadian Radio-television and Telecommunications Commission created regulations regarding the next-generation communications for 9-1-1 centres. This transition will have a major impact on the networks, systems, and arrangements used to provide 9-1-1 services, and will be a complex and costly undertaking which must be completed by March 2025.

Strategic Priorities Actions

1. Review and update the Middlesex and Thames Centre aid agreements.

The *Fire Prevention and Protection Act, 1997* provides for two types of Fire Service Agreements between municipalities: Mutual Aid Agreements and Automatic Aid Agreements. A Mutual Aid Agreement is a provincial plan that is focused within the local area and provides for reciprocal provision of services for larger events that tax the local resources. There is currently no cost to the municipality that uses the Mutual Aid Agreement. The City of London is a partner in the Middlesex County Mutual Aid Agreement with the other fire departments in Middlesex County. An Automatic Aid Agreement allows for a municipal fire department to respond first for an emergency call within the municipal boundaries of the neighbour municipality and are generally in place due to distances travelled or specialized services that can be provided. Automatic Aid Agreements generally include a retainer and cost for service when required. The City of London has two Automatic Aid Agreements. These are with Central Elgin and Middlesex County, servicing Middlesex Centre and Thames Centre. These agreements are focused on the need for closer fire station responses to specific types of emergency events in the areas noted within the respective agreements.

The current agreements dated from 2002 through to 2018 are in need of updating to reflect changes within the city and in the partnering municipalities.

2. Continue to use the current training facility’s resources and identify ongoing joint opportunities to enhance the use and possible revenue generation of the facility.

Presently, the London Fire Department partners with other emergency service agencies, such as the London Police Service and the Ontario Provincial Police to utilize the Training Tower and the facilities at the old Station 11. The London Fire Department is in the initial stages of partnering with the Provincial Training Officers Group to host a Provincial Training Officers Workshop.

3. Continue to develop a business plan for the new training facility.

The need for a new training facility has been addressed and the capital expense has been forecasted within the Multi-Year Budget. An ongoing assessment of internal needs is underway along with the opportunity to partner with London Police Service. A business plan will be developed, with consideration being given to the space allocation needs of the Training Division; a potential joint training centre shared with London Police Service, which could allow other services such as transit, paramedic services, and public works the opportunities (e.g. driver training) for greater efficiency; the use of this facility for other divisions including the Apparatus Division, Communications Centre, and Administration; and options to utilize the training centre as a Regional Training Centre for the Office of the Fire Marshal and Emergency Management.

4. Explore a partnership with the London Police Service to implement the new Next Generation 9-1-1 telephone call answering system of which the Canadian Radio-television and Telecommunications Commission has mandated that every Public Safety Answering Point (9-1-1 Centre) have in place by March 2025.

The London Fire Department Communications Centre is a secondary Public Safety Answering Point, whereas the London Police Service is the primary Public Safety Answering Point – providing 9-1-1 services to the city of London. It has been mandated by the Canadian Radio-television and Telecommunications Commission that all Public Safety Answering Points transition from the current enhanced 9-1-1 service through wireline, wireless, and Voice Over Internet Protocol telephone services to Next Generation 9-1-1 which is Internet Protocol technology. With Next Generation 9-1-1, Canadians in need of emergency services will be able to send a text message or transmit photos, videos, and other types of data to 9-1-1 operators, in addition to making traditional voice 9-1-1 calls using wireline, wireless, or Voice Over Internet Protocol telephone services.

The Next Generation 9-1-1 digital system will also increase accuracy of pinpointing the exact location of 9-1-1 callers, as opposed to the current system which utilizes cell towers to approximate a geographical area that the individual is calling from, which can be hundreds of metres apart from each other.

5. Conduct a full review of the 2006 Establishing & Regulating By-Law document and update it to ensure that Council's requirements for the current level of service are provided.

The current Establishing & Regulating By-Law was updated in 2006, which makes this a 16-year-old document. While parts of the Establishing & Regulating By-Law document may still line up with the expectations of the *Fire Protection and Prevention Act, 1997*, a full review of the goals and expectations of the London Fire Department needs to be conducted. The present Establishing & Regulating By-Law needs to be updated to reflect such things as new legislation and a more accurate accounting of the actual services that are being offered by the London Fire Department. This By-Law should be detailed to provide direction to the Fire Chief and the Fire Department that regulates the service and provides for key performance indices to ensure ongoing assessments. These ongoing assessments provide information that outline the need for growth and development when necessary.

6. Examine the inventory control system(s), including purchasing and stores of supplies, to ensure an effective and efficient system for all divisions.

With the ongoing implementation of the Records Management System that is underway, the inventory control system will provide a means to account for all inventory and maintenance needs. In future budgeting and forecasting this system will be instrumental.

Section 7.0

The Implementation of the Fire Master Plan Action Plan

London Fire Department staff are dedicated to the community they serve. The City of London and the London Fire Department are committed to ensuring the safety of the community and all personnel of the London Fire Department. The London Fire Department is endeavoring to offer the most efficient and effective service possible, demonstrated through present staffing, equipment, and fire station locations.

The Fire Master Plan Action Plan has been designed to be a living document. Regular reviews and updates will be conducted to reflect rapidly changing information and service delivery to meet the current and future needs and circumstances of the city and its residents. Many of the actions are already underway. See Appendix A for a full list of the actions and their implementation status.

The London Fire Department will continually monitor, evaluate, and update each action as needed. This work will be done in preparation for the development of Council's 2023-2027 Strategic Plan and the 2024-2027 Multi-Year Budget process, as well as future strategic planning and multi-year budget processes. Implementation plans will be developed that consider logistics, operational needs, and financial impacts (including both capital and operating costs). On an annual basis, updates on the implementation of the Fire Master Plan Action Plan will be brought forward to Council by the London Fire Department.

Appendix A

Implementation Status and Timelines

The table below provides a comprehensive list of the actions contained in the Fire Master Plan Action Plan and notes their anticipated start date and end date. Anticipated start date refers to when the action will begin, while anticipated completion date defines when the action is expected to be finalized. The term “in progress” is used to define any actions that were started prior to 2022, and “ongoing” means that the action is expected to continue past the end date of this plan.

| Action | Anticipated Start Date | Anticipated Completion Date |
|---|------------------------|-----------------------------|
| Public Fire Safety Education | | |
| Engage fire suppression personnel in fire prevention and public education efforts whenever possible. | In Progress | Ongoing |
| Equip Fire Officers with National Fire Protection Association certifications to manage the need for fire inspections and public education. | Q1 2022 | Q3 2028 |
| Develop new and enhance current partnerships with key stakeholders to advance public education efforts with a specific focus on vulnerable populations and equity-deserving groups. | Q1 2022 | Ongoing |
| Fire Safety Standards and Enforcement | | |
| Assess the time requirements of the current demands, as well as the desired inspection and education programs. <ul style="list-style-type: none"> • Provide an annual program outline at the start of the year with goals, expectations, resources available, and resources required. • Measure and report on completion and successes. | Q4 2022 | Ongoing |
| Complete a full work study and implementation plan, inclusive of financial impacts, to analyze the needs of the Fire Prevention Division to ensure span of control, quality assurance, and program planning. | Q4 2022 | Q2 2023 |
| Emergency Response | | |
| Work with allied agencies on dispatch response time reduction opportunities. | In Progress | Ongoing |

| Action | Anticipated Start Date | Anticipated Completion Date |
|---|------------------------|-----------------------------|
| Create a committee to review the response to remote fire alarm calls and certain types of motor vehicle collisions, fires, or other indicators where additional resources may be required, and monitor changes to the call matrix to ensure resource deployment and risk management are balanced. The committee will make recommendations to Fire Administration. | In Progress | Q3 2023 |
| Create a committee to review and make recommendations to Fire Administration on the deployment and station assignments of specialty and technical rescue teams. | In Progress | Q3 2023 |
| Phase out the three quint apparatus and replace them with engines. Continue to monitor growth for the inclusion of additional aerial apparatus in the future due to the number of high-rise structures within the city. | Q1 2023 | Q4 2031 |
| Move to a 12+3-year replacement schedule for fire apparatus, with consideration being given to new fire apparatus being assigned to busier stations and then moved to less busy stations at a later time to allow for full use of warranty and manage excessive mileage on a single given vehicle. | Q1 2023 | Q4 2031 |
| Increase the reserve fleet with two additional engines to a total of one aerial, one tanker and six engines. | Q1 2023 | Q4 2031 |
| Continue to monitor the average response time metric for planning purposes as London continues to grow in size and population. | Q3 2023 | Q1 2025 |
| Staff/Personnel Development | | |
| Encourage a workplace culture that supports inclusion and belonging. Review recruitment practices with an equity tool, to promote increased representation from equity-deserving groups within the London Fire Department. | Q4 2022 | Ongoing |
| Continue to develop, implement, and measure a total wellness strategy to ensure mental and physical resilience and well-being of employees. | In Progress | Ongoing |

| Action | Anticipated Start Date | Anticipated Completion Date |
|---|------------------------|-----------------------------|
| Identify strategies to engage and empower employees through relevant training, ongoing staff development through cross divisional opportunities, mentoring, collaboration with other City services, and participation in decision-making. | In Progress | Ongoing |
| Develop and implement strategies providing for compliance with the new Ontario Regulation – <i>Firefighter Certification</i> including the financial impacts and logistical requirements for the periods of July 1, 2022 to July 1, 2026 for general certifications and July 1, 2022 to July 1, 2028 for specialty rescue certifications. | Q1 2022 | Q3 2028 |
| Strategic Priorities | | |
| Review and update the Middlesex and Thames Centre aid agreements. | Q1 2023 | Q4 2023 |
| Continue to use the current training facility’s resources and identify ongoing joint opportunities to enhance the use and possible revenue generation of the facility. | In progress | Ongoing |
| Continue to develop a business plan for the new training facility. | In progress | Q3 2024 |
| Explore a partnership with the London Police Service to implement the new Next Generation 9-1-1 telephone call answering system of which the Canadian Radio-television and Telecommunications Commission has mandated that every Public Safety Answering Point (9-1-1 Centre) have in place by March 2025. | Q1 2022 | Q2 2025 |
| Conduct a full review of the 2006 Establishing & Regulating By-Law document and update it to ensure that Council’s requirements for the current level of service are provided. | Q3 2022 | Q4 2022 |
| Examine the inventory control system(s), including purchasing and stores of supplies, to ensure an effective and efficient system for all divisions. | Q1 2022 | Q4 2023 |

Appendix B

Sources

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