



**SUBJECT: Fire Master Plan (2022)**

**TO: Environment, Infrastructure & Community Services Cttee.**

**FROM: Fire Department**

Report Number: BFD-03-22

Wards Affected: All

File Numbers: 705-01

Date to Committee: June 9, 2022

Date to Council: June 21, 2022

---

**Recommendation:**

Receive and file the Fire Master Plan (FMP) (2022) prepared by Dillon Consulting, and attached as Appendix A, to Burlington fire department report BFD-03-22; and

Direct the Fire Chief to utilize the 2022 FMP, as a reference document, to support “Fire Protection Service” delivery within the City of Burlington over the next 10 years (2022-2031); and

Direct the Chief Financial Officer to incorporate the financial investments recommended within the 2022 FMP, as part of the 2023 budget and multi-year simulation, based on prioritization of funding as part of the revised long-term community investment plan; and

Direct the Fire Chief to report back to council on the various recommendations provided within the Fire Master Plan through additional staff reports and/or the budget process, as required.

**PURPOSE:**

**Vision to Focus Alignment:**

Delete this line and the areas that do not apply.

- Increase economic prosperity and community responsive city growth
- Improve integrated city mobility
- Support sustainable infrastructure and a resilient environment
- Building more citizen engagement, community health and culture

- Deliver customer centric services with a focus on efficiency and technology transformation
- 

## **Executive Summary:**

The 2022 Fire Master Plan (FMP) is provided at the request of Council “develop a Fire Master Plan to support the growth and change within the city.” (Vision to Focus, 2019) The primary objective of the FMP is to present a comprehensive analysis of the City of Burlington Fire Protection Service community needs and circumstances.

The FMP is a complementary document to the recently approved Community Risk Assessment (CRA) (BFD-02-22) that outlines community fire risk priorities. These documents provide valuable data and information to allow staff and council to make informed decisions about the existing and long-term service delivery needs of the Burlington Fire Department (BFD).

Understanding that some of the recommendations require financial investment, the implementation schedule will be phased in subject to annual operating and capital budget constraints and prioritization with other corporate priorities allowing for future planning

---

## **Background and Discussion:**

The City of Burlington Strategic Plan (2015-2040) recognizes the shift from greenfield development to growing in place (intensification) and the need to be proactive with planned city growth. City of Burlington planned growth is included within the City’s Official Plan, and other related plans, to support these directions. The Vision to Focus (2018-2022) work plan prioritizes key strategic directions and details key goals and actions required to move identified priorities forward. The Vision to Focus takes into consideration a wide range of city “*programs and services delivered to the community and the commitment to deliver trusted, effective, and efficient services to everyone.*” A key action outlined under Focus Area 1 was to develop a Fire Master Plan to support community growth and change.

To undertake the key action to develop a Fire Master Plan (FMP), the City of Burlington Fire Department (BFD) issued a Request for Proposal (RFP-202-19) for consulting services to provide a comprehensive Community Risk Assessment (CRA) and Fire Master Plan (FMP). Through DA-35-19 (BFD-02-19), both the CRA and FMP was awarded to Dillon Consulting. The first part of this work was to complete the CRA, which was recently approved by Council (BFD-02-22). The CRA was used as a reference document to guide decisions and identify priority focus areas for the BFD.

The FMP sets out recommended strategic priorities and direction of the BFD over the next ten years (2023-2032), pending council approval.

### **Fire Protection and Prevention Act (FPPA)**

The Fire Protection and Prevention Act (FPPA), 1997, S.O. 1997, makes it the responsibility of Ontario municipalities to assess community fire risks and provide ‘*Fire Protection Services*’ to address local ‘*needs and circumstances.*’ Municipalities fund Fire Protection Services and, as a result, they are responsible for establishing programs and setting outcomes. They are also responsible for policy decisions regarding the delivery of these services and the evaluation of the effectiveness of their programs.

The Municipal responsibility for Fire Protection Services is outlined under Part II of the FPPA, which mandates the following:

2. (1) *every municipality shall,*
  - a) *Establish a program in the municipality which must include public education with respect to fire safety and certain components of fire prevention; and*
  - b) *Provide such other fire protection services as it determines may be necessary in accordance with its needs and circumstances.*

The FPPA definition for ‘Fire Protection Services’ is provided below.

- a) fire suppression, fire prevention 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).

While the FPPA doesn’t provide a definition for ‘needs and circumstance’, a general definition is provided below for reference.

- ‘*need*’ is the requirement, necessary duty and/or obligation,
- ‘*circumstance*’ is a condition, detail, part, or attribute, with respect to time, place, manner, agent, etc., that accompanies, determines, or modifies a fact or even; a modifying or influencing factor.

Under the FPPA, the accompanying Ontario Regulations (O. Reg.), further direct Fire Protection Service within the community:

- O. Reg. 213/07 – Fire Code
- O. Reg. 150/13 – Enhancements to the Fire Code (O. Reg. 213/07)
- O. Reg. 364/13 – Mandatory Inspection – Fire Drill in Vulnerable Occupancy
- O. Reg. 365/13 – Mandatory Assessments of Complaints & Requests for Approval
- O. Reg. 378/18 – Community Risk Assessments

### **Council Responsibility Under the FPPA**

The FPPA authorizes the council of a municipality to establish, maintain and operate a fire department for all, or any part of the municipality, and to pass by-laws regarding Fire Protection Service. Ontario municipal councils are obligated under the FPPA to provide Fire Protection Service, commensurate with its needs and circumstances, and provide fiscal resources for staffing, apparatus, and equipment to support the established level of service. The council approved level of Fire Protection Service is outlined within the Establishing and Regulating (E&R) Bylaw (90-2012), attached for reference as Appendix B. The existing E&R has not been updated since 2012 and is planned for a comprehensive review and update by Q4 2022. The CRA and FMP will be used to inform and update the E&R Bylaw. Any recommended revisions to the E&R Bylaw will be provided to council within a staff report for review, consideration and approval.

### **Office of the Fire Marshal Ontario**

The Office of the Fire Marshal (OFM) is part of the Public Safety Division of the Ministry of the Solicitor General and Correctional Services. Its primary function is to minimize the loss of life and property from fire by helping municipalities and fire departments improve their Fire Protection Service.

Under the FPPA, Part III Powers of Fire Marshal 9 (1). The Fire Marshal is assigned powers to monitor, review and advise municipalities respecting the provision of fire protection services and to make recommendations to municipal councils for improving the efficiency and effectiveness of those services.

The OFM complies with this requirement through the issuance of Public Fire Safety Guidelines (PFSG), Fire Marshal Directives, Technical Guidelines, Communique's, and other forms of communication, as required.

### **Responsibility of the Fire Chief**

Under the FPPA, Part III Responsibility to Council (3). A Fire Chief is the person who is ultimately responsible to the council of a municipality that appointed him or her for the delivery of the municipal Fire Protection Service.

The Fire Chief complies with this requirement by providing council with necessary information to make informed decisions on the provision of its municipal Fire Protection Service. The Community Risk Assessment (O. Reg. 378/18) supports the Fire Chief with this requirement to use its risk assessment to inform the provision of its Fire Protection Service to meet current community needs and circumstances.

### **National Fire Protection Association (NFPA) Standards**

In 2014, the Ontario Office of the Fire Marshal announced it was adopting standards provided by the National Fire Protection Association (NFPA). The NFPA delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach, and advocacy; are in line with industry best practice performance measures. Following the direction by the OFM, Ontario fire services have been transitioning to reference NFPA standards to guide Fire Protection Services. NFPA standards are recognized within the fire service as an industry best practice. Where applicable NFPA standards have been referenced within the 2022 FMP.

### **2020 City of Burlington Official Plan**

The Official Plan (OP) outlines planned community growth that will be within the urban area where forecast population and employment growth will be accommodated. The Primary Growth Areas for the city including the 3 Major Transit Station Areas (MTSAs) as well as the Downtown Junction are identified to accommodate significant growth and intensification.

The planned growth of population and employment are premised on the adequacy of infrastructure and public service facilities to support planned growth. This plan also outlines that it requires infrastructure, associated services, and public service facilities, to support the comprehensive implementation of the Plan.

Public service facilities listed in the OP includes fire service facilities. It is recognized that fire public service facilities should be planned for within a neighbourhood and city-wide scale to serve the current and future needs of residents and businesses. It is important that fire public service facilities are considered and planned for as part of future growth and development planning.

The planned growth should establish phased priorities to describe how investment in existing and new infrastructure and public service facilities will be made to support the vision for the Primary Growth Areas.

## **Strategy/process**

### **2022 Fire Master Plan Process**

Dillon Consulting was retained to develop a ten-year Fire Master Plan as part of the City's strategic planning process to ensure Fire Protection Services align with community growth and change. The recommendations presented within the Fire Master Plan (Appendix A) will be referenced to guide and establish strategic priorities supporting effective decision making, sustainability, efficiency, and effectiveness of Fire Protection Services to the community.

Each division currently within the Burlington Fire Department was reviewed, along with emergency response, fire station locations, staffing resourcing, procedures, programs, apparatus and related equipment, legislation, industry standards and best practices, fire marshal safety guidelines, and existing service agreements. The FMP process included an assessment of compliance with applicable legislation, review of related reports and plans, current operations, and knowledge of industry practices.

The FMP focused strategic efforts in consideration of the Three Lines of Defense (TLod). The TLod model is established on the premise that steps can be taken to reduce the probability of a fire occurring and the consequence to residents and businesses. The Three Lines of Defense model includes:

1. Public Education and Prevention
2. Fire Safety Standards and Enforcement
3. Emergency Response

Historically the fire service has focused efforts on fire suppression. This has changed in recent years with more emphasis being placed on the importance and value of preventing a fire. It is important from both an economic and public safety perspective.

### **Strategic Priorities and Implementation of Recommendations**

RFP-202-19 indicated that the FMP outcome must establish strategic priorities complete with actions. The FMP provides strategic priorities to provide staff and council to provide a framework for informative decision-making with respect the overall delivery of Fire Protection Services within the City. The proposed strategic priorities include:

- ✓ Prioritize strategies that support the sustainability of a 'composite fire department' and the delivery of Fire Protection Services to provide the most effective and efficient level of service resulting in the best value to the community.

- ✓ Optimize the first two lines of defense, including public education and prevention, fire safety standards and fire code enforcement as the foundation of providing a comprehensive fire protection program.
- ✓ Utilize Community Risk Assessments (CRA) (O. Reg. 378/18) analysis to inform decisions associated with the delivery of Fire Protection Service.
- ✓ Recommend future fire protection needs to meet the planned growth and intensification needs of the city.

The FMP was recognized as a future impact to the Preliminary Multi-Year Community Investment Plan, Interim report (CM-03-22). The FMP outlines 23 recommendations in total. It is recognized that over the next ten years during the FMP implementation strategy, there may be competing corporate priorities and fiscal constraints. While some recommendations will have an immediate priority and be incorporated into operating and capital budget based on prioritization of funding, others will form part of a refined long-term community investment plan. It is also understood that following a pandemic and economic uncertainty that staff must be responsible and focus recommendations on priority items. An ongoing review of all recommendations, community needs, and circumstances, evaluation, and prioritization will ensure recommendations are brought forward at the applicable time to support department, corporate and councils' objectives in perspective with other corporate priorities.

The FMP provides a recommended Implementation Plan (reference Chapter 12, page 285), which has been further refined by staff as follows:

**Timeline:**

1. Immediate – initiate within the next 18 months (2022 - 2023).
2. Short-term – Initiate within the next two to five years (2024 - 2027).
3. Long-Term – initiative within the next six to ten years or more (2028 – 2032).

**Process:**

- A. Ongoing – recommendations that will be coordinated by the department to align with current standards, procedures, and continuous improvement initiatives. The BFD will establish a process for ongoing review and evaluation.
- B. Internal Process – refers to recommendations that will be incorporated into the department work plan to align with corporate and council goals and objectives. As required, these recommendations will be integrated into the BFD service plan to provided annual updated information to staff, council and public.

C. Council Approval – refers to recommendations that will require further detailed review and information to be provided to council in a future staff report and/or as part of the annual budget process.

As previously mentioned, any fiscal needs will be submitted to council as part of the annual budget process for consideration. Staff will continue to progress FMP recommendations to council as part of a long-term implementation strategy, and the FMP will inform a future multi-year community investment plan, as other plans and strategies come to completion.

Table 1 below lists all recommendations provided in the 2022 FMP in the order listed within the FMP. Staff have included a column next to each recommendation outlining the proposed timing and process. These recommendations are provided throughout various sections of the 2022 FMP and summarized in Chapter 12 Implementation Plan (Appendix A, starting on page 285).

Recommendation	Timeline/ Process
The Fire Chief monitor the staffing needs of the department and report any recommended changes to council as part of strategies to enhance staffing to support the fire service and shall be monitored annually. (Section 5.3.6)	Immediate Ongoing
A workload analysis be conducted for all divisions of the BFD to understand the current and future workload required to meet the needs of the department’s service delivery and community risk reduction strategies effectiveness and efficiencies. (Section 5.3.6)	Immediate Internal
The Burlington Fire Department consider a review and update the existing Mission and Vision statements so that they are meaningful to fire personnel and represents the services provided to the community. That Fire Chief will report back to council for information and reference. (5.4)	Short-term Internal
Conduct a comprehensive volunteer firefighter review including recruitment and retention strategies, the volunteer promotional policy and other initiatives. (Sections 5.11, 7.12.3, 8.12.2.2, 8.12.3) <i>All findings and recommendations will be provided to Council within a staff report.</i>	Immediate Council
The existing career path guide be reviewed and updated using current best practices; to include all divisions within the BFD and the required skills, knowledge, and education; and with reference to NFPA standards, where applicable. (Section 5.3)	Short-term Ongoing
A by-law appointing the Deputy Fire Chiefs be brought forward to Council for approval. This will ensure that the applicable legislative	Immediate Council

Recommendation	Timeline/ Process
responsibilities of the Fire Chief are delegated when required. (Section 5.3.2, 5.3.3)	
The existing Establishing and Regulating By-law be reviewed and updated, including adding all the service areas provided by the BFD, for council approval. (Section 5.5.1)	Immediate Council
The existing Halton Region Tiered Response Agreement be reviewed with emergency agency partners and updated in consideration of pending C.A.C.C. protocol changes, advancements in technology, review of the Establishing and Regulating Bylaw and community needs. That the Fire Chief report back to council, as required. (Section 5.6.3)	Short-term Internal
A review of all existing partnering agreements be undertaken on a regularly scheduled basis cognizant of the C.R.A. and consistent with any changes to the Establishing and Regulating By-law. Fire Chief to report back to council, as required. (Section 5.6.5)	Short-term Internal
Develop a records management policy, supporting the City's Records Retention Schedule, outlining internal requirements and accountability for all department records. (Section 5.10)	Short-term Internal
Current inspection cycles approved by Council be reviewed based on a building/risk profile versus an occupancy/building type, and that the review include a comparison to NFPA 1730 as part of a risk reduction strategy. That the Fire Chief report back to council on any recommended enhancements to the existing council approved inspection cycles to support a Community Risk Reduction Plan (CRRP). (Section 6.1.1)	Short-term Council
Review existing policies and establish new policies specific to fire prevention mandatory inspection types and cycles, and to consider including reference to the Establishing and Regulating by-law in the Policy, as approved by council. (Section 6.4)	Immediate Internal
Develop a policy that references the appropriate professional standards and training, aligned with services levels as defined through the Establishing and Regulating By-law, and to use this to inform a Comprehensive Training Program. (Section 7.4)	Short-term Internal
Develop a comprehensive training program that identifies a five-year plan for achieving and maintaining the identified training, performance targets, and references an updated training policy, for all full-time and volunteer firefighter positions. (Section 7.4)	Short-term Internal
Further investigate the potential for participating in a regional training centre or the replacement/relocation of the existing facility, within the city's budget process, as required. (7.11)	Short-term Internal

Recommendation	Timeline/ Process
Establish fire suppression comparator performance benchmarks for the defined urban area based on NFPA 1710 and to use them to monitor and report to Council and the community. (Section 8.13.1)	Immediate Internal
Establish fire suppression performance targets for the defined rural area based on NFPA 1720 and to use them to monitor and report to Council and the community. (Section 8.6.3)	Immediate Internal
Identify and implement strategies to improve the department's dispatch time and turnout time. This may require a more in-depth review of each component step in the dispatch and turnout processes to assess where improvements may be possible. (Section 8.7.7)	Short-term Internal
Ensure the automatic aid agreement in place with the City of Hamilton, the Town of Milton and the Town of Oakville reflect the changes proposed in this Fire Master Plan and the response needs of the city. (Section 8.12.2.4)	Immediate Internal
<p>Establish a long-term hiring strategy in alignment with community and station growth, industry leading practices, Establishing and Regulating by-law service delivery, and performance targets. The Fire Chief to submit requests for increased resource needs as part of the City's annual budgeting established processes. (Section 8.11.1, 8.12.1)</p> <ul style="list-style-type: none"> <li>- Hiring eight firefighters to increase the existing total career suppression complement from 172 to 180 firefighters (support minimum staffing needs at Station 8) (Immediate Priority)</li> <li>- Hiring eight firefighters to increase the on-duty staffing on the Rescue vehicle in Station 1 from two to four firefighters (Short-term)</li> <li>- Hiring 20 firefighters in advance of opening the proposed new Station 9 in downtown Burlington (Long-term)</li> </ul>	Immediate Short-term Long-term  Council
Investigate increased fire protection in sub-districts currently classified as "unprotected" by the Fire Underwriters' Survey, including an expanded superior tanker shuttle accreditation and the use of updated automatic aid agreements. (Section 8.12.2.4)	Short-term Internal
Based on monitoring the actual timing of growth and with consideration to an updated Community Risk Assessment, develop and implement plans to respond to forecast growth. (Section 8.12.1)	Short-term Council
Review be completed of the Business Continuity and Emergency Planning Coordinator's role within the corporation to better assess alignment with and support for the city-wide emergency planning program. (Section 10.2.5)	Immediate Internal

Recommendation	Timeline/ Process
Continue to monitor and strive for continuous improvement in its alarm handling performance and compliance with the applicable NFPA 1221 call processing performance targets. (Section 11.6)	Long-term Internal
Work with the City’s Legal and Community Planning departments monitor, update, and implement the recommendations of this Fire Master Plan, as the municipal comprehensive review process and additional City planning projects unfold, whereby more detailed and refined information will become available in regard to growth areas, population projections, and built form. The Fire Chief will provide additional information and requests to support resource needs for growth following the City’s established processes. (Section 8.10)	Ongoing Internal

**Financial Matters:**

All operating and capital budget fiscal requirements will be provided to council as part of the City’s annual budget process. It is important to note, that the summary of costs represented in Table 2 below are shown in 2022 dollars, and are preliminary estimates at this time, are subject to change based on timing, inflation, and other economic and market influences currently being experienced in the capital and labour markets. As priorities come forward through the budget process costing will be refined, and in the case of capital requirements, operating budget impacts will also be further detailed.

Table 2: Estimated Operating and Capital Cost

Estimated \$ (Rounded)	Immediate (18 Months)	Short-term (2-5 Yrs)	Long-Term (6-10 Yrs)	Total 2023-2032
Est. Operating Investment	\$ 1,242,200	\$ 6,345,600	\$ 4,448,700	\$ 12,036,500
Est. Capital Investment	\$ 56,000	\$ 11,461,000	\$ 33,215,000	\$ 44,732,000
<b>Total Financial Impact</b>	<b>\$ 1,298,200</b>	<b>\$ 17,806,600</b>	<b>\$ 37,663,700</b>	<b>\$ 56,768,500</b>
Total staff increase (FTE)	8.0	41.0	28.0	77.0

The Estimated *Operating* Investment include human resource salary, benefits, and minor operating capital.

The Estimated *Capital* Investment include potential land purchase needs, fire station facility, apparatus, and specialized equipment. Eligible growth related capital costs will be included in the next development charges background study to ensure growth related costs can be recovered to the fullest extent possible.

### **Other Resource Impacts**

Recommendations contained within the 2022 FMP will have operational and capital budget implications. These budget matters will be brought forward by staff for councils' approval as part of the city's annual capital budget process and any long-term community initiatives will inform the future refined Multi-Year Community Investment Plan.

---

### **Climate Implications**

Burlington fire response times have a direct link and impact to the environment. Through effective and efficient response, and on scene tactical efforts, Burlington firefighters work quickly to extinguish a fire, mitigating potential environment impact due to an incident, such as toxins, chemicals, and carcinogens (e.g., asbestos) that are found or occur during/after a fire.

In addition, there are established agreements to support a timely response by third-party provided services to mitigate environmental impacts, where possible, such as a hazardous material calls that would require specialized response and cleanup efforts.

Furthermore, Burlington fire is continually researching, retrofitting and/or procuring available options to support climate actions to mitigate greenhouse gases (GHGs) and reduce energy consumption.

---

### **Engagement Matters:**

The FMP was developed in consultation with a project team, city subject matter experts across multiple city services, stakeholder, and public consultation. A significant amount of data was collected, research and comparison conducted against leading industry standards, legislation, and Office of the Fire Marshal guidelines. The FMP was also informed from past department fire protection service strategic planning efforts and community risk assessments.

Staff will conduct further engagement efforts with city staff and the public as the recommendations provided within the FMP are brought forward for councils' consideration.

---

**Conclusion:**

Staff are recommending that council receive and file the 2022 Fire Master Plan and direct city staff to provide additional detailed information in future staff reports and enhancements through the annual budget process.

---

Respectfully submitted,

Karen Roche

Fire Chief

905-333-0772 ext. 6205

Dawn Jarvis

Manager of Business Services  
and Strategic Planning

905-333-0772 ext. 6222

**Appendices:**

- A. 2022 Fire Master Plan (Final) prepared by Dillon Consulting
- B. 2012 Establishing and Regulating Bylaw (90-2012)

**Report Approval:**

All reports are reviewed and/or approved by Department Director, the Chief Financial Officer and the Executive Director of Legal Services & Corporation Counsel.