FINAL REPORT

Fire Master Plan

Township of Wellesley Fire Department

June 2016

POMAX CONSULTING

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Executive Summary

Pomax Consulting is pleased to present a 10-year Fire Master Plan for the Township of Wellesley Fire Department. We would like to thank the Township of Wellesley and fire department staff, who freely gave of their time and expertise during the research and consultation phases of the project. Our discussions with Council, the public, and fire staff were conducted in a candid, professional, and respectful manner and demonstrated a high degree of commitment to the wellbeing and safety of the community.

Research and meetings with township staff confirmed that Wellesley Township will continue to be a primarily rural community with three low-density urban centres. Significant change in demographics, residential settlement, and industrial growth are not anticipated over the next 10 years.

Definition of a Fire Master Plan

A Fire Master Plan is a strategy to move from where a fire service is now to where it needs to be over the period of the plan, based on objective evaluation of numerous factors including incident type, municipal change, demographics, risk analysis, and mitigation. Part of that strategy is to create favourable conditions to make the move successful. The “plan” component is how the fire service and municipality will move from where they are now to the expected end point. The plan – that is, its execution and implementation – will need to be adjusted from time to time over the 10-year period. This is a duty for the fire service and municipality.

A Fire Master Plan is considered a strategic blueprint for the provision of local fire protection and rescue services that addresses legislative requirements and local needs and circumstances, while taking into account the community’s ability to fund and support the level of service determined by Council. A Fire Master Plan also makes significant findings and recommendations relating to fire risks and hazards, fire protection capabilities, public education, fire risk reductions and management, community preparedness and response, and funding and fiscal measures relating to fire protection.

A Fire Master Plan also helps formulate and communicate strategic direction and highlight opportunities for optimizing service delivery. Because members of the public, town council, the fire department, and and other township departments participate in the development of a Fire Master Plan, it also provides an objective basis to support decision making with respect to community fire protection and prevention service needs.

In order to determine the appropriate time to move to the next step of a strategy – for example, the point at which more fire inspectors may be necessary, or response or station capacity should be increased – a measurement method should be included in the plan. For Wellesley Township’s project, Pomax set a basis for a measurement methodology by first establishing the level of service currently required by Wellesley and associating that service level with general community and neighborhood indicators such as demographics, population change, and response times by type of incident.

Once ascertained, those parameters can be extrapolated on three- to five-year intervals as a means of establishing milestones for expected change. In this way, a strategy can be established, not only for bringing the steering committee or other teams together to examine the Master Plan's progress, but also to determine if anticipated response times, demographics, risk variables, and urbanization and intensification are unfolding as anticipated. The result is a review process to measure compliance with the Fire Master Plan, provide milestone triggers for change, and assist delivery of the plan.

Recommendation Summary

Recommendations within this report pertaining to the organization and operations of the fire department should be implemented within five years. Once township senior staff and Council review the recommendations and decide which to implement, the township should create a timetable for completion. And, subsequent to creating the implementation timetable, the impact of approved recommendations should be evaluated relative to the needs and circumstances of the community that may have changed since approval of the Fire Master Plan.

We have made recommendations, where appropriate, for each section of this report to address the objectives identified in the project RFP, and as brought forward during the consultation and research stages of the project.

Exhibit 2 in Section 5 provides a summary of our recommendations and an implementation schedule. The recommendation numbers, in that exhibit, coincide with the recommendation numbering in this section.

Governance

We recommend:

1. the establishment and enabling by-law be reviewed and revised to identify the types and levels of services to be delivered by the fire department.
2. the fire department organizational chart be revised to reflect the organizational model approved by Council on January 22, 2014.
3. terms of reference be developed for the fire services advisory committee to define its membership and roles and responsibilities.

Service Delivery

We have recommended in Section 4.1 Governance that the types and levels of services provided to the community by the fire department be reviewed and authorized by Council as a schedule attached to the establishment and enabling by-law.

Fire Prevention and Public Fire and Life Safety Education

We recommend:

1. the fire department work with other township departments to identify small manufacturing operations on farm properties and develop a coordinated inspection system utilizing all township resources, including paid on-call firefighters as appropriate.
2. the fire department establish a part-time fire inspector position to specifically address the need for inspection, code compliance, and fire safety education in small manufacturing operations.
3. the fire department enhance its fire-cause determination capabilities to assist with focused fire prevention and education initiatives.
4. the fire department create a part-time position of Public Educator.
5. the fire department conduct a study to determine the status of working smoke alarms and carbon monoxide detectors in the community.
6. the fire department continue the existing public education programs in the schools and explore opportunities to enhance fire and life-safety education in the parochial school system in the township

Emergency Response

We recommend:

1. the fire department conduct a two-year study of incidents by type of emergency and turn out and travel times by number of responders.

Training

We recommend:

1. the fire department develop a five-year training program/schedule.
2. the five-year training schedule take into consideration the types and levels of services delivered, as approved by Council, and address the training required to deliver those services at the operational level.
3. the five-year training schedule include mandated training requirements (such as first aid and CPR renewals) and department priorities based on frequency and hazard level of calls.
4. the training program include a regular review of the Ministry of Labour Fire Fighter Health and Safety Guidelines.
5. the five-year training program provide opportunities for multiple station training exercises, including task and incident command level simulations.
6. the fire department implement an officer training program that includes incident command, fire fighter health and safety, and appropriate training in departmental administrative procedures.
7. the fire department established a training program for future officers.
8. the fire department create a training officer position for each station.
9. each station schedules training night on a different day of the week so township firefighters can attend the same training sessions within a flexible schedule.

10. station officers receive the necessary training to utilize the department's records management system (FirePro) to enter and access training records.

Administration

We recommend:

1. the management team, consisting of the fire chief and the deputy fire chiefs, meet with the senior station captains to review positional job descriptions to ensure a clear understanding of the job roles and responsibilities by all parties.
2. the management team (chief and deputies) meetings are held regularly (once a month is recommended), to ensure an ongoing and open flow of communication through the department.
3. the township conducts a time/workload study of the administrative functions of the fire department to ensure the fire department administration is adequately and efficiently resourced.
4. the township undertakes the necessary hardware upgrades to make the most efficient and effective use of the FirePro system at the departmental and station level.
5. the fire department provide the training required to the station officers to utilize the FirePro system for recording emergency incidents.
6. the fire department undertake a thorough review of all policies and procedures and standard operating guidelines upon approval by Council of the types and levels of services to be provided to the community by the fire department.
7. the township undertakes a number of public information efforts to communicate the content of the Fire Master Plan to the community following adoption of the Fire Master Plan for the Township of Wellesley Fire Department.
8. the fire department present a report to Council annually indicating its compliance to Council-approved service delivery standards.

Finance

Suggestions and recommendations applicable to human resources and staff rapport are found throughout the report.

Facilities

We recommend:

1. the current station locations are maintained and a new station be constructed in St. Clements on the existing property.

Apparatus and Equipment

We recommend:

1. the St. Clements tanker without a fire pump and the tanker currently stationed at the Wellesley station with a fire pump be exchanged.
2. the Council consider a reduction in the number of rescue units required by the department.
3. the current fleet of pumpers is maintained and replaced as recommended in Section 4.11.

4. upon reaching the due date for replacement, fire apparatus are evaluated to consider the condition, currency of operational and safety features, reliability, and operational functionality of the vehicle.

Communications

We recommend:

1. the township continues the current rate of contribution to the radio replacement project in the 10-year capital budget and monitors the project for more specific cost estimates as the project proceeds.
2. the township should estimate the cost to replace the current inventory of radios based on the current replacement value and that the project be placed in year 3 or 4 of the 10-year capital budget.

Emergency Management Program

We recommend:

1. the township considers a model for emergency management, removing the role and responsibilities for emergency management from the fire department.

Section 1 Introduction

The Township of Wellesley contracted with Pomax Consulting Inc. to conduct a review of the Township of Wellesley Fire Department and prepare a 10 Year Fire Master Plan.

1.1 Project Objectives

The township requested that the project review consider the following:

- Governance — the applicable provincial Legislation and regulations, and municipal By-Laws relative to the fire department.
- Service Delivery — the level and range of services and programs delivered currently, and future requirements taking into account predicted growth and service delivery expectations.
- Fire Prevention — the Fire Prevention Program including fire inspections, investigations, and code enforcement.
- Public Fire Safety Education — the Public Education program, including demographics, website.
- Emergency Response — emergency response call volume and trends, including types of calls, numbers of calls, apparatus deployment, response staffing, firefighter deployment and safety.
- Firefighter Training — the Firefighter Training Program, including recruit training, firefighter training, and officer training.
- Administration — administration of the fire department, including organization, policies and procedures, administrative support, record keeping, information management, purchasing, inventory control, public and media relations, and customer service.
- Finance — the fire department budgeting, reserves, development charges, revenues and potential revenues.
- Human Resources — the fire department staffing, organizational structure, ratio of officers to firefighters, firefighter recruitment and retention, job descriptions, remuneration of full-time and paid on call staff, promotional policy, succession planning, and health and safety.
- Facilities — the number, location, condition, and configuration of existing fire stations and administration facilities. Fire station location analyses and identification of up to three options for site location.
- Apparatus and Equipment — the fire department fleet of vehicles, fire apparatus and major pieces of equipment including the types of vehicles, age, replacement cycles, utilization and suitability.
- Maintenance Program — the inspection and maintenance of fire department vehicles, fire apparatus, and equipment.
- Communications — the fire department communications systems, including dispatch, paging, telephone, and radio systems.
- Emergency Management Program — the Emergency Management Program as managed by the Fire Chief/CEMC.

1.2 Legislative Responsibilities

Municipalities in Ontario are required to fulfill certain legislated responsibilities primarily identified in the Fire Protection and Prevention Act, 1997 (FPPA) and the Occupational Health and Safety Act, R.S.O 1990

(OH&S Act). The FPPA identifies the responsibilities of a municipality with regard to providing a public fire protection system for the municipality and the OH&S Act provides requirements and guidance on a municipality's responsibilities regarding firefighter health and safety.

Section 9.1 (d) of the FPPA enables the Office of the Fire Marshal and Emergency Management to issue guidelines to municipalities respecting fire protection services and related matters. The Fire Marshal has issued Public Fire Safety Guidelines (PFSG) for many fire protection issues including the development of a Fire Master Plan. Generally, a Fire Master Plan for a municipality should be based on the three lines of defense and should be developed specific to the needs and circumstances of the municipality.

1.3 Three Lines of Defense

The three lines of defense for a municipal fire protection system are:

I. Public Education and Prevention:
Educating residents of the community on means for them to fulfill their responsibilities for their own fire safety is a proven method of reducing the incidence of fire. Only by educating residents can fires be prevented and can those affected by fires respond properly to save lives, reduce injury, and reduce the impact of fires.

II. Fire Safety Standards and Enforcement:
Ensuring buildings have the required fire protection systems, safety features, including fire safety plans, and that these systems are maintained, so that the severity of fires may be minimized.

III. Emergency Response:
Providing well-trained and equipped firefighters directed by capable officers to stop the spread of fires once they occur and to assist in protecting the lives and safety of residents. This is the failsafe for those times when fires occur despite prevention efforts.

1.4 Local Needs and Circumstances

It is a municipal responsibility to establish the level of fire protection that will be provided within the community following an assessment of needs and circumstances. The municipal fire protection system for the Township of Wellesley, as envisioned within a Fire Master Plan, should be designed with consideration to the local needs and circumstances of the citizens of the township.

The Office of the Fire Marshal and Emergency Management has issued Public Safety Fire Guideline (PFSG) 01-01-01 "Fire Protection Review Process" for municipalities to follow when preparing a Fire Master Plan. This public safety fire guideline refers to three other public safety fire guidelines to define local needs and circumstances – Fire Risk (PFSG 02-02-03), Capabilities of Existing Fire Protection Services (PFSG 02-04-01), and Economic Circumstances (PFSG 02-03-01)[1].

Public Fire Safety Guideline 02-02-03, Fire Risk, in general addresses such things as the municipality's geography and demographics; the history of emergency calls; comparison with like communities; building

[1] Public Fire Safety Guidelines are available on the Ontario Ministry of Community Safety and Correctional Services website http://www.mcscs.jus.gov.on.ca/english/FireMarshal/OFMLanding/OFM_main.html. We note that the PFSGs referenced are under review at the time of this report.

stock and occupancies; prevention and public education programs; and public and private protection systems.

Public Fire Safety Guideline 02-04-01, Capabilities of Existing Fire Protection Services, generally addresses such things as the fire department organizational model; services delivered by the fire department; emergency response and operations; training; vehicles; water supply; risk management planning, and financial planning and management.

Public Fire Safety Guideline 02-03-01, Economic Circumstances, in general, addresses such things as assessment values; tax rates; municipal debt; total fire protection costs; assets such as development charge accounts and reserve funds; and possible loss impacts for major employers.

The Fire Master Plan for the Wellesley Fire Department recommended within this report follows the general requirements of these public fire safety guidelines with consideration that they are currently under review.

1.5 Firefighter Health and Safety

Firefighter health and safety in the Province of Ontario is governed by the general provisions of the Occupational Health and Safety Act, R.S.O. 1910 (OHSA) with some exceptions related to the emergency response component of the service. Section 21 of the OHSA provides for the establishment of specific job sector advisory committees and the Ontario Fire Service Section 21 Advisory Committee is identified as the committee appointed to provide advice on firefighter health and safety matters to the Minister of Labour, and to issue Guidance Notes to the Ontario fire services on fire specific safety issues.

The Guidance Notes are provided to assist municipalities in their responsibility to "take every precaution reasonable in the circumstances for the protection of the worker" as required by the Act. The Guidance Notes are consolidated in a Section 21 Fire Service Health and Safety Manual available on various fire service websites including the Ontario Association of Fire Chiefs (OAFC), The Ontario Professional Firefighters' Association (OPFFA), and the Firefighters' Association of Ontario (FFAO).

The Guidance Notes issued by the Section 21 Committee provide advice on such matters as incident command; communications; vehicle maintenance; personal protective equipment; training requirements and documentation of training and procedures for conducting operations at the different types of services a fire department may provide to a community.

Although issued as Guidance Notes, the information is referred to by the Ministry of Labour as enforcement tools. Section 21 of the Occupational Health and Safety Act states:

The Ministry of Labour in collaboration with fire service stakeholders develops Guidance Notes. Guidance Notes outline recommended equipment and procedures to be used by workers in the fire service to prevent injury or illness and will comply with the intent and provisions as outlined in the OHSA. The Ministry of Labour refers to the guidelines, guidance notes, alerts, etc. for enforcement under the OHSA, and is

considered by the Ministry in determining if reasonable precautions for the protection of a worker are being taken under Clause 25.2(h) of the OHSA.

While developing the Fire Master Plan, we reviewed and considered the township's health and safety responsibilities as identified in the Section 21 Guidance Notes.

Section 2 Township of Wellesley Fire Department

2.1 Background

The Township of Wellesley Fire Department was formed in 1973 as a result of a provincial initiative to create amalgamated communities in a number of areas across the province. The Regional Municipality of Waterloo was established resulting in an upper-tier regional government made up of three cities and four townships each with its own local municipal government structure. The Township of Wellesley is one of the townships within the region. Subsequently, the fire departments in St. Clements, Wellesley and Linwood were amalgamated into the Township of Wellesley Fire Department. The township continued to be served by a fully paid on-call department until 2005 when a part-time fire chief was hired, and in 2009, the township hired its first full -time fire chief.

On January 22, 2014, the fire chief brought forward a report with recommendations to restructure the department. The report addressed the need to streamline the organization's administrative functions, to effectively deliver training programs, and to meet provincial health and safety requirements for firefighters. The report received the approval of Council.

The department, until the reorganization, operated with a fire chief in charge of the department and a district chief, assistant district chief, and a secretary treasurer in each of the three stations. The district chief was responsible for day-to day operations and emergency calls within each of the station call areas. The reorganization created a new structure with a full-time fire chief, two part-time deputy chiefs (a Deputy Chief of Operations and a Deputy Chief of Training), and a senior station captain. Job descriptions detailed each position's responsibilities. The positions of district chief, assistant district chief, and secretary treasurer were eliminated.

The restructured organizational model, approved by Council, caused some controversy within the department, and this controversy spilled over into the community. Council members have expressed a desire to address the issues by the community through this review, an objective determination of the facts, and the development of a 10-year Fire Master Plan for the community.

Section 3 Stakeholder Consultations

3.1 Consultation Schedule

Consultations were conducted with various stakeholders as follows:

- July 20, 2015 General meeting for all township firefighters at Wellesley Fire Station (Attendance 26) (Note: Fire Chief and one Deputy attended for the full meeting and Councilor Wagner attended for the first half of the meeting)
- August 10, 2015 General meeting for all township firefighters St. Clements Community Centre (Attendance 32) (Note: Fire Chief attended for the first half of the meeting)
- September 8, 2015 Individual interviews with Mayor and township councilors Township Council Chambers
- September 14, 2015 St. Clements Station meeting (Attendance 14) (Note: Chief and Deputies did not attend)
- September 14, 2015 Wellesley Station meeting (Attendance 15) (Note: Chief and Deputies did not attend)
- September 21, 2015 Linwood Station meeting (Attendance 14) (Note: Chief and Deputies did not attend)
- September 24, 2015 Public Meeting Township Council Chambers (Attendance 14) (Note: most attendees had previously served as firefighters and officers for Township of Wellesley Fire Department)
- October 8, 2015 Interview with Deputy Chief of Operations F. Karley
- October 8, 2015 Interview with Deputy Chief of Training S. Martin
- October 26, 2015 Review of a preliminary baseline report with the Project Steering Committee.

3.2 Consultation Summary

A summary of our stakeholder consultations is provided in Appendix A: Wellesley Fire Master Plan Consultations Summary for the purposes of reflecting a comprehensive consultation process. The input received serve the purposes of providing background information and identifying key areas of concern for the various stakeholders. The input presented reflects both individual and group opinions and in some instances, subjective opinions on the matters.

The consultation format allowed an open-ended discussion to ensure stakeholders had the opportunity to bring forth any issues, concerns, or questions regarding the fire protection system for the community. As part of the consultation process, the consultants solicited input specific to the subjects identified in Section 1 .

Section 4 Components of the Fire Master Plan

This section presents our findings and recommendations for inclusion in a Fire Master Plan for the Township of Wellesley Fire Department.

4.1 Governance

We have reviewed the applicable provincial Legislation and regulations and municipal By-Laws relative to the Fire Department, and have developed our recommendations for inclusion in the Fire Master Plan.

4.1.1 Governance Overview

The Township of Wellesley Fire Department is established and regulated through By-Law No. 5/2010. A review of the by-law indicates a number of revisions are required to update it for accuracy and to define types and levels of service to be provided by the Township of Wellesley Fire Department.

The fire chief is appointed through by-law and reports through the chief administrative officer. A council representative is appointed by the Mayor to an advisory committee for the fire department, but there are no terms of reference to define its purpose and responsibilities.

4.1.2 Governance Analysis

The establishment and enabling by-law for a municipal fire department should include:

- general functions and services to be provided
- the goals and objectives of the department
- general responsibilities of members
- method of appointment to the department
- method of regulating the conduct of members
- procedures for termination from the department
- authority to proceed beyond established response areas
- authority to effect necessary department operations

Our review of the governance model for the Township of Wellesley Fire Department identified the current establishment and enabling by-law, Township of Wellesley By-Law Number 5/2010, includes most of the essential components identified above. However, we also noted a number of additional areas that should be addressed, specifically, policy direction from Council on the types and levels of services to be delivered by the fire department, and revision of the organizational chart to reflect the new model as approved by Council on January 22, 2014. We recommend the establishment and enabling by-law be reviewed and revised to identify the types and services to be delivered by the fire department. These service types and levels then become corporate policy through ratification by Council. The current by-law speaks to the positions of District Chief and Assistant Chief whereas the new model consists of Senior Station Captains. **We note that authorization of these services by Council also commits Council to adequate funding to enable the fire department to deliver these services in an operationally effective and safe manner.**

An advisory committee for the fire department is established in the current By-law Number 5/2010. Section 1 (k) of the by-law defines the advisory committee as "a member from each station as the Fire Chief deems necessary and are there in an advisory capacity only." Section 12 of the by-law states the advisory committee is to assist the fire chief in the review of "policies, orders, rules and operating procedures" of the fire department. Our consultations with members of the department indicate there is confusion about the roles and responsibilities of the advisory committee and questions about its effectiveness. We recommend that terms of reference be developed for the advisory committee and that advisory committee members participate in the development of the terms of reference and in defining the roles and responsibilities of the board.

4.1.3 Recommendations for Governance

We recommend the By-law 5/2010 be reviewed and updated to:

1. include a schedule defining the types and levels of services the department is expected to provide to the community.
2. reflect the new organizational structure. The organizational chart in the existing by-law should be replaced with the new organizational chart approved with the January 22, 2014 restructuring report.
3. develop terms of reference for the fire services advisory committee, and to define membership and the rolls and responsibilities of the advisory committee.

4.2 Service Delivery

We have made recommendations for service delivery in various sections of this report. We have recommended the types of services and levels of service be reviewed by the fire department and that Council authorizes the types and levels of services to be provided to the community through a schedule attached to the Establishing and Enabling By-law for the fire department. We have provided a sample schedule (Appendix D) defining the types and levels of services that the fire department may be required to respond to in the township.

Facts:

- The township is forecasting limited industrial or residential growth for the next 10 years. As a result, the Fire Master Plan should focus on review of the current services provided by the fire department with a view to optimizing the types and levels of services within the financial capabilities of the township.
- Non-fire related calls make up the majority of emergency responses.
- There has been a rationalization within the tiered response protocols for emergency medical calls.
- The township has not adopted any policies specific to the types and levels of services to be delivered to the community by the Wellesley fire Department.

- The fire department offers a range of public education and prevention and code enforcement services, but there are resource limitations particularly related to time available to the paid on-call firefighters.
- The Township of Wellesley Fire Department has received the Fire Underwriters Survey Industrial/Commercial Certification for its Water Tanker Shuttle service.

4.2.1 Fire Prevention and Public Fire and Life Safety Education

The first and second lines of defense in a community fire protection system are public fire and life safety education, and fire prevention and code enforcement. The preparation of the Fire Master Plan includes a review of the fire prevention program including fire inspections, investigations, and code enforcement, and public education programs and delivery mechanisms.

4.2.2 Fire Prevention Overview

The current Fire Prevention Policy for Wellesley includes:

1. Emergency response statistics using the Standard Fire Incident Report
2. Fire investigations
3. Fire prevention inspection program – complaints, requests, mortgage and resale, other inspection types
4. Smoke alarm program
5. Distribution of public fire safety information and media releases
6. Public displays, fire hall tours etc.
7. Lectures, demonstrations, presentation to the public
8. Simplified risk assessment and other needs analysis processes containing a current community fire profile identifying current public education and prevention needs.

The current fire prevention policy of the Township of Wellesley states:

Fire prevention inspections are to be conducted for all complaints received by the fire department containing reports of potential fire code violations and/or potential fire hazards.

Additional fire prevention inspections may be conducted of occupancies and buildings as deemed necessary to address the needs and circumstances of the community or a targeted risk.

Appropriate action will be taken to ensure the elimination of serious fire hazards, immediate threats to life from fire and to enforce the Fire Code under the authority and in accordance with the provisions outlines in the Fire Protection and Prevention Act, 1997.

The fire chief provided the following information regarding fire prevention activities.

Complaints regarding contraventions of the Fire Code are investigated by the fire chief and inspection orders issued if required. Over the past 4 years, the department experienced approximately 4 complaints a year on average. There is one auto-wrecking yard that requires an inspection each year per Region of Waterloo bylaw. Request inspections for sale of property have been discontinued by the fire department as a recommendation of the regional insurance pool and a legal litigation in the City of Waterloo.

Fire safety plans are reviewed and approved by the fire chief at approximately 6 per year.

A smoke alarm program is conducted by the fire crews upon attendance at an emergency scene, and batteries and smoke alarms are available if required. The officer in charge who completes the incident reports logs the status of smoke alarms on the incident report. The Senior Station Captain conducts follow up, if required.

Fire-cause determination is conducted by the chief who is certified by OFM Core and Advance Fire-cause determination. No other member of the department is trained or experienced to conduct fire-cause investigations.

Wellesley Township has the largest small industry base of on-farm shops in the region. The majority of the fires occur in these shops with the exception of chimney fires.

The fire chief indicates fires in small farm shops should be considered within the master plan and suggests the workload involved to manage day-to -day fire department administrative tasks limits the opportunity to undertake proactive inspections in this area. He further submits undertaking inspections of on-farm shops would be a time consuming task and obtaining compliance would be difficult. If an inspection program is implemented, checking water reservoir levels should be part of the procedure.

Burn Permits are issued both by the fire chief and at the station level by senior station captains. The following statistics reflect the number of burn permits from 2010 to 2014.

2010 – 85
2011 – 74
2012 – 112
2013 – 130
2014 – 136

Table 1 indicates the history of structure fire calls by occupancy type, number of incidents, and dollar fire loss between January 1, 2010 and September 17, 2015.

Table 1 - Structure Fires January 1, 2010 to September 17, 2015

Occupancy Type	Number of Structure Fires	Dollar Loss
Group C Residential Detached Dwelling	**51**	**$582,900**
Group C Residential Attached Dwelling	**3**	**$3000**
Group A Assembly	**2**	**$100,500**
Farm Buildings Barns, Outbuildings	**14**	**$1,374,300**
Group F Industrial	**14**	**$941,600**
Group D Commercial	**1**	**$40,000**

Our interviews with firefighters indicated many of the structure fires involve small business manufacturing on farm properties. We interpret that to indicate that most of the Group F occupancy fires occur in these small manufacturing facilities given the limited large centralized manufacturing facilities in the township. This analysis confirms the input from the firefighters that this type of fire is a concern and should be proactively addressed.

Responsibility for fire inspections is included in the job description for the fire chief. We note the current policy for inspections is based on a complaint or request basis. The fire chief is currently handling those inspections. We are recommending the township move from this basic reactive fire prevention policy to a more proactive policy in order to address the significant fire risks associated with the large number of small business operations in the township. This will require additional resources.

We recommend the Township of Wellesley Fire Department establish a part-time fire inspection position to conduct inspections, ensure code compliance, and provide fire safety education in the over 300 small manufacturing operations throughout the township. This inspection position will work with other township departments to

- identify small manufacturing operations on farm properties,
- develop a coordinated inspection system,
- increases awareness of fire safety issues among small manufacturing operators, and
- provide important information to firefighters on potential hazards in case of emergency response.

An analysis of the cause of fires is presented in Table 2 below. Fire-cause information is based on the latest available data from the Office of the Fire Marshal and Emergency Management which is 2009 to 2013.

Table 2 - Structure Fire-causes 2009 to 2013

Cause	Number of Structure Fires	Fire loss	Fatalities and Injuries
Cooking	**4**	**$30,500**	**0**
Electrical equipment	**3**	**$76,000**	**0**
Processing	**2**	**$8,000**	**0**
Undetermined	**13**	**$2,758,000**	**0**

Due to the relatively large number of structure fires where the cause is undetermined, information to support public education and fire prevention action is limited, and specific recommendations cannot be made. In order to address this deficiency, we have recommended, in Section 4.2.5, that the Township of Wellesley create a part-time public education position to assist with an in-depth analysis of fire-cause and determination of strategies to reduce structure fires in the township. We also recommend that the Township of Wellesley Fire Department enhance its fire-cause determination expertise to assist with fire prevention efforts by documenting actual fire-causes within the community.

4.2.3 Public Fire and Life Safety Education

Public Education is considered to be the first line of defense in a community fire protection system. Members of an informed community recognize their personal responsibilities regarding fire and life safety in their homes, workplaces and community forums; thus, adding a public understanding and assistance to the overall community fire protection system. This is particularly important in rural areas where emergency response turnout and travel times may be extended.

4.2.4 Public Education and Life Safety Overview:

The Wellesley Fire Department public education program is the responsibility of the fire chief who is a Certified Public Fire and Life Safety Educator. The fire department reports the following public education initiatives:

1. A smoke alarm program is conducted by suppression crews.
2. Media advertisements are posted in local papers promoting fire safety, and emergency preparedness. This occurs approximately 3 times per year with a seasonal focus.
3. Station tours are conducted upon request and reportedly occur, on average, 8 times per year.
4. A full-day fire station open house is conducted during fire prevention week with demonstrations relating to fire extinguishers, safe home cooking, and fire safety planning. Public education materials are also distributed. The fire department reports that 300-500 residents attend including many from the Mennonite farming population.
5. Fire drills are conducted at the schools during fire prevention week and fire escape planning discussions are included.
6. On an annual basis the chief and deputies deliver
    a. A farm fire safety program
    b. A School Bus Safety program, and
    c. A seniors' fire safety program
7. A Fire Extinguisher Training Program is delivered by the chief twice a year
8. A junior fire setter program is available upon request. Kitchener Fire Department provides this program on a fee for service basis and delivers the Waterloo Region Arson Program for Children (WRAPC) to approximately 4 children per year.
9. The department partners with the Children's Safety Village in Cambridge. Public and Separate Schools from grades 2 -8 are invited to send children for fire safety programs.

10. Community groups and organizations may request fire safety related presentations, demonstrations and tours of the fire stations.
11. Fire safety education materials are distributed to address community fire safety issues and concerns based upon needs and circumstances.

Public education services face obstacles including:

1. Limited time for the paid on-call firefighters to develop and deliver programs and attend public education events.
2. Access to parochial schools in the township is limited.
3. Lack of code compliance and good fire safety practices in small farm shops are major fire risks, but paid on-call firefighters have limited time to visit these occupancies.
4. The fire department does not have adequate information to determine the status of working smoke alarms and carbon monoxide detectors in homes in the township, particularly in the rural areas of the township.

4.2.5 Fire Prevention and Public Education Effectiveness

We are recommending a number of changes to enhance the fire department's current fire prevention and public education efforts. Communities with focused and adequately resourced prevention and public education efforts experience reduced fire risks which translate into reduced fire losses in the community and increased fire and life safety for its citizens. This is particularly true in low density urban and rural areas that may experience longer emergency response times from a paid on-call fire department.

Numerous studies over many years have recognized the value of well-designed and effectively delivered prevention and education programs. A 1990 report on case studies of public fire safety education programs concluded that:

This collection of case studies not only shows that public education works, but demonstrates that it is probably more productive in terms of casualties and dollar loss saved per staff-year than any other aspect of fire protection. It is the height of foolhardiness to cut public fire education efforts if one is interested in the public's safety, and in the productivity of fire departments. Evidence in this report suggests that tripling the size of public education efforts, which can be accomplished by a minor shift in staff assignments in most departments, would produce enormous beneficial results. [2]

The same report includes the following "success factors" that the best public education programs have in common and are relevant to the development of programs for the Township of Wellesley Fire Department.

- They have champions who see the program through and lead its implementation.

[2] Proving Public Fire Education Works, TriData, P. Schaenman et al, 1990

- They carefully target a particular aspect of fire safety, or strike in force across a broad front, over and over, reaching a large percentage of the population.
- Market research in one form or another is used to tailor the programs to their intended audience.
- The programs reach a significant percentage of their target audience, with public educators often going door to door, or through the media to have broader impact.
- They often repeat messages over and over just as an ad campaign would.
- The good programs are adaptable, changing goals and materials as the fire problem changes.

Conclusive support for the *Proving Public Fire Education Works* report was provided by a study involving the Surrey, B.C. Fire Service, the University of Fraser Valley, B.C., and the John Jay College of Criminal Justice, NY. This report was published in The Journal of Safety Research and is available online.[3]

Essentially, the study involved public fire safety education efforts delivered by firefighters through a series of door to door visits to one group (cluster) of homes, and a randomized control cluster of homes that did not receive the visits by the firefighters.

The following main findings emerged from this study:

- Relative to cluster controls there was a 4.4 times greater reduction in the rate of fires for homes visited by the program (63.9% reduction in the annual rate of fires over the evaluation period in intervention areas), compared to 14.6% reduction in control areas.
- Increased activation of (smoke) alarms when fires occurred post-intervention with no increase for controls.
- Increased containment of fires to the object of origin post-intervention and no increase for controls.
- Trends indicative of reduced dollar damage for fires post-intervention with no trend for controls.

Our assessment of the Township of Wellesley Fire Department fire prevention and public education efforts concludes the most effective means to improve fire protection in the community is through enhanced inspection, code enforcement, and fire safety education initiatives. Access to comprehensive data regarding fire-cause in the community through enhanced fire-cause determination and a review of the level of compliance to the mandatory provision requiring working smoke alarms and carbon monoxide alarms in dwelling units will enable the efficient delivery of targeted inspection and public education efforts.

The need to address the history of fire incidents in small manufacturing facilities throughout the township requires a concerted effort over a number of years that involves inspection and fire safety education in these occupancies.

[3] Fire Prevention Education Delivered by On-duty Firefighters: Cluster Randomized Controlled Study, Journal of Safety Research, Clare, Garis, Plecas and Jennings, 2012

4.2.6 Recommendations for Fire Prevention and Public Education

In order to achieve enhanced fire

1. the fire department work with other township departments to identify small manufacturing operations on farm properties and develop a coordinated inspection system utilizing all township resources, including paid o- call firefighters as appropriate.
2. the Township of Wellesley Fire Department establish a part-time fire inspector position to specifically address the need for inspection, code compliance and fire safety education in small manufacturing operations.
3. the Township of Wellesley Fire Department enhances its fire-cause determination capabilities to assist with focused fire prevention and education initiatives.
4. the Township of Wellesley Fire Department create a part-time position of Public Educator.
5. the Township of Wellesley Fire Department conduct a study to determine the status of working smoke alarms and carbon monoxide detectors in the community.
6. the fire department continue the existing public education programs in the schools and explore opportunities to enhance fire and life safety education in the parochial school system in the township.

4.3 Emergency Response

Emergency response is the third line of defense in a community fire protection system. It includes emergency response call volume, types and trends, apparatus deployment, response staffing and firefighter deployment and safety.

4.3.1 Emergency Response Overview

The Wellesley Fire Department responds to an average of 229 emergency calls annually based on 2010 – 2014 data. On average, 134 of those incidents are medical calls whereas 95 are classified as structure fires, other fires, and other calls such as rescues.

For statistical purposes we categorized incidents as:

- Medical
- Structure Fires
- Other Fires
- Other

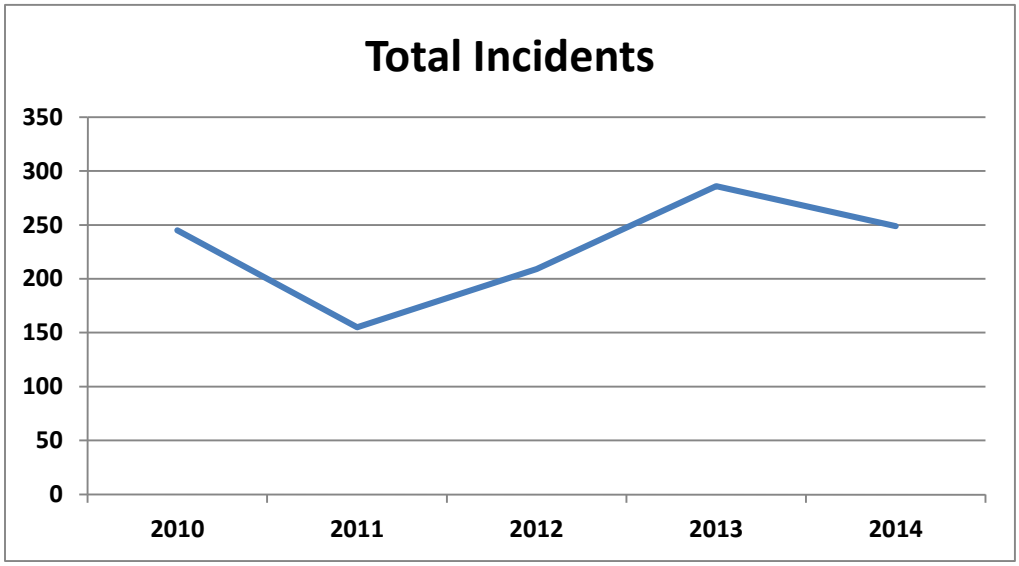
Total incidents from 2010 to 2014 are shown in Table 3 and Chart 1. Incidents for 2015 are not included because information is available only up to September 30th, 2015. Full year statistics were not available at the time of writing this report.

Medical calls represent the category to which Wellesley Fire responds most frequently. Except for 2011 (32%), the frequency of responses ranges from 55% (2012) to 67% (2010).

Table 3 - Total Incidents

	Total Incidents
2010	245
2011	155
2012	209
2013	286
2014	249

Chart 1 - Total Incidents



Incidents by category are shown in Table 4 and Chart 2, while incidents by category percentage are indicated in Table 5 and Chart 3.

Table 4 - Incidents by Category

	Medical	Structure Fires	Other Fires	Other	Total
2010	163	23	23	36	245
2011	50	28	18	59	155
2012	115	19	33	42	209
2013	181	24	24	57	286
2014	163	10	25	51	249

Chart 2 - Incidents by Category

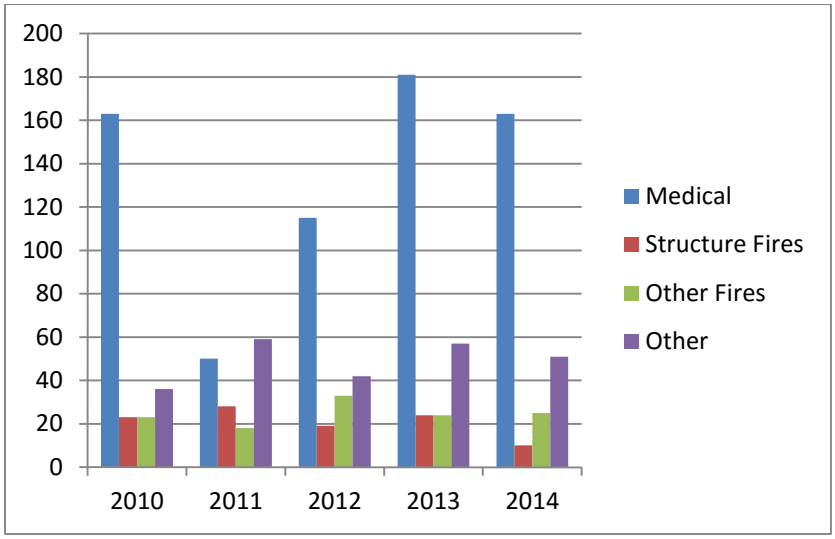
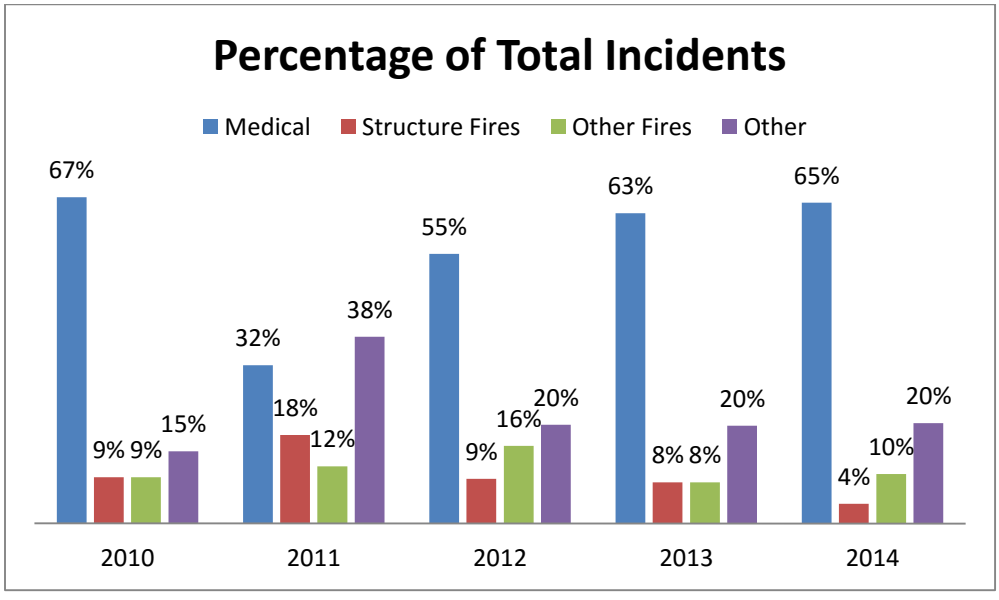


Table 5 - Incidents by Percentage

	Medical	Structure Fires	Other Fires	Other
2010	67%	9%	9%	15%
2011	32%	18%	12%	38%
2012	55%	9%	16%	20%
2013	63%	8%	8%	20%
2014	65%	4%	10%	20%

Chart 3 - Incidents by Percentage



A high level assessment of turnout times, travel time, and number of responding personnel was completed for 10 randomly selected fire calls from each station from 2011 to 2014. The results are shown in Table 6.

Table 6 - High Level Fire Response Assessment

Station	Average turnout time min/sec)	Range of turnout time	Average travel time (min/sec)	Range of travel time	Average number responders	Range of number responders
Linwood	4.17	2.04 - 5.18	5.33	1.07 – 11.29	10	6 - 16
St. Clements	4.31	1.45 – 5.50	5.29	1.07 – 8.53	12	7 - 19
Wellesley	4.02	1.45 – 6.48	5.14	0.29 -15.00	10	2 - 18

The information presented in Table 6 provides a very high level analysis of fire response capabilities. Table 7 below provides additional response data upon which to make recommendations for the Fire Master Plan. Table 7 presents five-year averages for response times in minutes and number of responders based on 2009 to 2013 data available from the Office of the Fire Marshal and Emergency Management.

Table 7 – Response Information 2009 – 2013 (All calls)

Year	2009	2010	2011	2012	2013
Total Number Calls	173	135	156	201	283
Average time dispatch to on scene	8.5	8.1	9.0	7.9	8.2
Average Number Initial Responders	5	8	4	2	4
Average Total Personnel on scene	9	11	11	6	5

We found calls increased in 2009 and again in 2013, while the average number of initial responding personnel and the total number of responders decreased in those years. The increase in call volume is predominately related to emergency medical calls. The fire department has initiated a medical call responder system, that attempts to control the number of firefighters who respond to medical calls; this has impacted the statistics regarding number of responding personnel.

The success of response to emergency incidents is dependent upon timely response by an adequate number of first response personnel followed by adequate numbers of secondary responders. We are not able to access response data specific enough to determine the adequacy of response time and sequence of numbers of responding personnel. We recommend the fire department conduct a two-year study of incidents by type of emergency, and turnout, travel, and arrival times by the number of responders.

A two-year study will assist the fire department and Council in determining compliance to service delivery standards that are appropriate to the needs and circumstances of the community. This information should also become part of an annual fire department report to Council.

4.4 Firefighter Training

We have reviewed the Firefighter Training Program, including recruit training, firefighter training, and officer training.

4.4.1 Training Overview

1. Considerable effort has been required recently to hire and train a large number of recruits. While some effort has been made to provide training at the officer level, additional officer training is required particularly as the department has recently promoted a number of personnel into officer positions.
2. Officers would like to have a greater level of training. This should be a priority for the department during the early stages of the 10-year Fire Master Plan. Given limited opportunities to attend provincially available officer training programs, it may be necessary to develop some local officer training programs focused on fundamental officer roles such as incident command and firefighter health and safety.
3. Paid on-call firefighters are finding it difficult to attend training sessions as currently scheduled.
4. Although it is a majority opinion of the members of the department that the training program has seen significant improvements since the organizational restructuring and assignment of the training program to the Deputy of Training position, there are still some concerns about consistency of training across the department and time available to conduct and attend training sessions.
5. Training records are not readily available to senior station captains who are responsible for training and ensuring their station members are current.

4.4.2 Proposed New Training Model

We are proposing a new training model for the Township of Wellesley Fire Department to address concerns noted in the interviews with firefighters and officers.

We propose that a five-year training schedule be developed. The schedule must include required updates for such things as first aid and CPR. The training program should consider the task level training needs of firefighters and the incident management training needs for officers. The five-year schedule should also identify training sessions that need to be delivered annually, once every two years, or perhaps just once in the five-year cycle depending on the level of service provided and the intricacies of the training required.

Because consistency of training has been raised as a concern, we propose that a training officer position be created for each station to monitor and deliver training in a consistent manner. The training officer positions would work together with the Deputy of Training to develop programs and teaching plans in order to provide consistency across the department. A job description should be developed for this position.

Firefighters and officers expressed concern about the need to attend training sessions on the specific nights for their station, causing scheduling conflicts with employment, personal, and family commitments. We recommend a flexible delivery model that allows firefighters to attend training sessions at any of the three stations. Each station will have a different, designated training night and the same training program would be delivered each week at each of the stations. For example, Wellesley station might hold sessions on Mondays, Linwood on Tuesdays and St. Clements on Wednesdays. A township firefighter could then attend any one of the weekly sessions and receive the same training.

Some firefighters highlighted the importance of training with firefighters from their home stations. To accommodate this concern, firefighters should be required to attend at least one training session a month at their assigned station.

It was also noted by firefighters from all three stations that the recent initiatives to have multiple stations train together provides for a more effective response during multiple station emergencies. We recommend this be continued and scheduled into the five-year training schedule.

Firefighter health and safety is always a critical component of any training program. We recommend that the training schedule include a regular review of the Ministry of Labour Section 21 Firefighter Health and Safety Guidelines.

Currently, the department training utilizes International Fire Service Training Association (IFSTA) manuals and a manual check off system. Training records are entered into the FirePro records management system by the administrative assistant. During consultations, the station officers expressed a desire to receive training and the authority to directly enter the training records into FirePro. We understand there are some concerns about the reliability of the township's computer hardware and network system. We also understand efforts are underway to improve the corporate information technology system.

In order to improve overall workflow efficiency and accessibility of training records at the station level, we recommend that station officers receive the necessary training and authority to use the FirePro system for inputting and accessing personnel training records.

4.4.3 Training Recommendations

We recommend:

1. The fire department develops a five-year training program/schedule.
2. The five-year training schedule should take into consideration the types and level of services delivered, as approved by council, and address the training required to deliver those services at the operational level.
3. The five-year training schedule should include mandated training requirements (such as first aid and CPR renewals), and the priorities for the department based on frequency and hazard level of calls.
4. The training program should include a regular review of the Ministry of Labour Fire Fighter Health and Safety Guidelines.
5. The five-year training program should provide opportunities for multiple station training exercises that include task and incident command level simulations.
6. The fire department implements an officer training program that includes incident command, fire fighter health and safety, and appropriate training in fire department administrative procedures.
7. The fire department establishes a training program for future officers.
8. The fire department creates a training officer position for each station.
9. Each station schedules training on a different night of the week so that township firefighters can attend the same training sessions within a flexible schedule.
10. Station officers should receive the necessary training to make use of the department's records management system (FirePro), to enter and access training records.

4.5 Administration

We have reviewed the administration of the Fire Department, including organization, policies and procedures, administrative support, record keeping, information management, purchasing, inventory control, public and media relations, and customer service.

4.5.1 Administration Overview

The administrative functions of the fire department are handled primarily by the fire chief with part-time assistance by an Administrative Assistant Fire/Recreation position. The Deputy Chief of Operations and the Deputy Chief of Training provide some assistance as part-time positions with some administrative responsibilities. Administrative responsibilities and functions of the Senior Station Captain positions are limited by access and knowledge of the administrative systems, particularly the FirePro records management system.

The following concerns or questions were conveyed during our consultations regarding administration of the department.

1. There are concerns that communication with the public about fire department costs and activities require additional efforts to ensure information regarding the department is accurate.
2. Does the new organizational model serve the department more effectively than the historical organizational model?
3. The records management program requires hardware upgrades in order to be used more effectively.
4. Communication channels through the department are not consistently used.
5. There are concerns about the efficacy of the Advisory Committee.
6. Standard Operating Guidelines (SOGs) are dated, and firefighters would like to provide input into the revision and development of SOGs.

4.5.2 Organization

The restructuring of the department in 2014 was reviewed in Section 2 of this report. Currently the department is structured to operate with a fire chief, two deputy chiefs and a senior station captain and four station captains in each of the stations. Job requirements and responsibilities are identified in job descriptions for all positions.

During consultations, concerns were expressed regarding the effectiveness of the new organizational model with two deputies and senior station captains versus the previous model that included positions of district chief and assistant district chief. It was apparent the department is still undergoing some change management issues regarding understanding and acceptance of the new model. In our opinion, the new organizational model is appropriate to the needs and circumstances of the Township of Wellesley Fire Department. It is a workable model, well-designed to provide effective command and administrative functionality for the department. However, some effort must be put into enhancing the flow of information through the department and ensuring there is a common understanding of roles and responsibilities by all personnel.

We have also identified the need for a training officer in each of the stations, a part-time fire prevention inspector and a part time public educator.

We recommend the management team of the fire chief and the deputy fire chiefs meet with the senior station captains to review job descriptions and ensure a clear understanding of roles and responsibilities by all parties. Efforts should be made to ensure that management team meetings are held regularly (once a month is recommended) to ensure an ongoing and open flow of communication through the department. Efforts should also be made to ensure the management team meetings are inclusive and effective in addressing concerns and issues that may arise.

During consultations regarding the new organizational structure, the issue of titles was raised. The title of District Chief was eliminated and a Senior Station Captain position was introduced in the new organizational model. Rank insignia on uniforms for the position of District Chief had been designated by three stripes. The position of Senior Station Captain is currently designated on uniforms by two stripes. This change in title and rank insignia was seen by some as a demotion of the position within the fire department organizational structure. While we appreciate the local dynamics of this matter, within the context of a Fire Master Plan, the germane issue is the clear definition and understanding of job roles and responsibilities. The traditional titles associated with similar fire service positions vary across the province and is a matter of local preference and determination. We have recommended in this report that the senior fire department officers review the various job descriptions for clarity. The township may wish to direct a review of job titles within this review process. However, we emphasize that the critical element in these reviews is a focus on definition and clarity of the roles and responsibilities.

4.5.3 Policies and Procedures

Policies and Procedures of a fire department essentially fall into three areas.

1. There are general corporate policies and procedures that direct the administrative operations of the department where appropriate.
2. Additionally, Council must establish the types and levels of services to be provided to the community by the fire department through an Establishing and Enabling By-law.
3. The fire chief is then enabled to develop policies and procedures for the department, including administrative and operational guidelines to deliver the approved services at the operational level. The operational policies and procedures are established and communicated to the fire department members through standard operating guidelines (SOGs).

We have recommended in Section 4.1 Governance the types and levels of services provided by the fire department be reviewed and then be approved according to the needs and circumstances of the township.

Concern was expressed, during consultations, with the knowledge and understanding of policies and procedures throughout the department. In particular, there is an interest in reviewing the standard operating procedures for currency and clarity.

We recommend, the fire department undertake a thorough review of all policies and procedures and standard operating guidelines following the approval by Council of the types and levels of services to be provided to the community by the fire department. This review should be conducted within an inclusive process that provides opportunity for input from department members. While recognizing the fire chief has the authority and responsibility for final approval of the policies and procedures, successful change management and acceptance of the new policies and procedures by the members of an organization depends upon the sense of contribution and final ownership of the policies and procedures of the organization. The educational value gained from participating in development of policies and procedures is a benefit of an inclusive process.

4.5.4 Administrative Support

The fire chief is assisted in the department's administrative responsibilities by a part-time Administrative Assistant Fire/Recreation position. A job description for this position indicates responsibilities in both the fire and recreation departments. This position provides administrative support to the fire chief, the deputy fire chiefs and the senior station captains. There is no indication in the job description regarding the percentage of time allocated to each department. The fire chief's understanding is that the original intent was to split this resource equally between the fire and recreation departments, but this has changed over time and administrative support hours available for fire department responsibilities is less than 50 percent. At the same time, the increase in number of calls and the changes to the organizational structure have added to the administrative support needs.

The fire chief has expressed a concern administrative report time is not adequate to the fire department needs and impacts the chief's ability to perform other fire department responsibilities such as inspections, policy review and development, and general oversight responsibilities for the department.

Though the confirmation of the specific administrative resource needs of the fire department through a time/workload study is beyond the scope of this project, we recommend the township conduct a time/workload study of the administrative functions of the fire department to ensure that adequate resources are allocated.

4.5.5 Record Keeping/Information Management

The Township of Wellesley Fire Department utilizes the FirePro records management system for incident reporting and training records.

Emergency incident forms are completed manually by the station officers, forwarded to the administrative assistant who then enters the data into the FirePro system for review by the fire chief, before forwarding to the Office of the Fire Marshal and Emergency Management. There are efficiency gains for the fire department administration if station officers are trained and authorized to enter the incident information directly into the FirePro system at the station level. Concerns have been expressed about the information technology hardware available at the stations; we understand this is under review along with internet access at the stations.

Consistent use of an electronic records management system, such as FirePro, will ensure efficient, consistent and accurate records management across the department and reduce duplication of effort. We recommend the township undertake the necessary hardware upgrades to make the most efficient and effective use of the FirePro system at the departmental and station level. We further recommend the fire department provides the training required to the station officers to utilize the FirePro system for the recording of emergency incidents.

We have previously made a similar recommendation regarding the use of the FirePro system for training records in Section 4.4.2.

4.5.6 Public and Media Relations

Though the public fire and life safety education programs and public and media relations programs are separate activities their functionality sometimes overlap. We have previously reviewed the fire department's public education activities and made recommendations in Section 4.2.4.

The fire department's efforts regarding public and media relations are limited in large part by available time and resources. This has led to some confusion within the community regarding the services the department provides to the community and speculation regarding costs of services and equipment. During consultations with council members, a number of the councilors remarked that during their last campaign for the municipal elections, they received comments and questions about the department that were based on misinformation and speculation within the community. Councilors suggested one of the primary reasons for developing a Fire Master Plan was to provide accurate information to the community regarding the structure and costs associated with the fire department operations.

We recommend that, following adoption of the Fire Master Plan for the Township of Wellesley Fire Department, the township undertake a number of public information efforts to communicate the content of the Fire Master Plan to the community, including among other things:

- An open house for presentation of the Fire Master Plan to the public
- Access to the Fire Master Plan on the fire department and township website
- Distribution of the content of the Fire Master Plan to local media
- Development of a social media program for public information and public education initiatives
- Presentation of the Fire Master Plan to the members of the fire department

4.5.7 Customer Service

Customer Service for the fire department is necessarily tied to the service delivery standards provided by the department to the community. We have previously recommended delivery service standards be developed by the fire department and approved by Council. Customer service delivered by the fire department is then measured against these service delivery standards. Upon approval of the service delivery standards, we recommend a monitoring process be implemented and that the fire chief report to Council annually regarding the department's compliance to those standards. Areas where the department is not able to achieve compliance to those standards should be noted with recommendations to close any gaps in service delivery.

Guidance for development of service delivery standards and reporting requirements can be found in The National Fire Protection Association standard, "Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations by Volunteer Fire Departments, 2014 Edition."

We recommend the Township of Wellesley Fire Department present a report to Council annually, indicating its compliance to Council approved service delivery standards.

4.6 Finance

Facts:

1. One of the primary concerns expressed during our consultations is the replacement of vehicles. Our preliminary review indicates the funding of reserves for equipment replacement is appropriate to the schedule for replacement indicated by the 10-year Capital Budget with regards to fire vehicles.

Please see Exhibit 2, Section 5 for financial estimates relating to recommendations.

4.7 Human Resources

We have reviewed the Fire Department staffing, organizational structure, ratio of officers to firefighters, firefighter recruitment and retention, job descriptions, remuneration of full-time and paid on-call staff, promotional policy, succession planning, and health and safety.

4.7.1 Human Resources Overview

1. The department underwent an organizational restructuring in 2014 to create the current model with a fire chief, two deputies, senior station captain, station captains and firefighters.
2. There is a general consensus the department is operating more consistently as one fire department under the new model. However, there continues to be questions within Council and the department as to whether the new model is appropriate for Wellesley.
3. We have completed an analysis of staffing for emergency response (Table 6 and Table 7, Section 4.3.1).
4. Job descriptions for the positions of fire chief, the two deputy chiefs' roles and senior station captains have been provided and reviewed.
5. There appears to be some disorder in the flow of communications up and down the chain of command within the fire department.

4.8 Fire Department Staffing

We have reviewed the staffing model and level for the fire department based on the 2014 restructuring and concur the organizational structure and number of managerial positions (fire chief and two deputies) is appropriate to the department. We have recommended a time/workload study of the administrative support position (Section 4.5.4) and recommended that the job descriptions be reviewed by the fire chief, deputy chiefs and senior station captains (Section 4.5.2) to ensure a clear understanding of job roles and responsibilities by all involved.

4.8.1 Ratio of Officers to Firefighters

Assessing the adequacy or suitability of the officer to firefighter ratio, for this review, has been primarily focused on ensuring there is adequate officer supervision and direction at emergency scenes. The organizational model for the fire department indicates there is a ratio of 5 station officers (one senior station captain and four station captains) to 18 firefighters in each station. We note these numbers may

vary slightly over time. Common fire fighter standards recommend a company of four personnel including one officer, or a ratio of one officer to every three firefighters.

Adequacy of response by a sufficient number of officers in a paid on-call fire department can be problematic. However, emergency responses are monitored by the fire chief and or the deputy fire chiefs who ensure adequate officer response by calling for additional staff or by responding themselves to provide supervision at emergency scenes. The department has also recently introduced an enhanced paging system called "Who's Responding" which provides immediate feedback on the personnel responding to an emergency call to ensure an officer is responding.

The division of responsibilities between the fire chief and two deputy fire chiefs provides a senior officer for emergency scene oversight and assumption of command by a senior manager when appropriate. The division of day-to-day work load and responsibilities between the three management positions (one full-time and two part-time positions) is defined and appropriate. However, there is a need for review and clarification of the roles and responsibilities for each position and have made that recommendation in Section 4.5.2 of this report.

4.8.2 Remuneration of Fire Department Staff

We have been asked to assess the remuneration for full-time and paid on-call fire department staff. We conducted a review of four nearby and similar paid on-call fire departments with a full-time fire chief and paid on-call staff. The available data received is presented in Table 8. For the purposes of confidentiality in a public document, the comparable municipalities are identified as A, B, C and D. The municipalities have been identified to the chief administrative officer and the fire chief.

Table 8 - Remuneration of Full time and Paid on call Fire Department Staff

Municipality	Fire Chief Salary Range	Deputy Chief	Senior Station Officers	Assistant Senior Station Officer	Captain	Paid on call Fire Fighter
A	$75,900 – $93,000	N/A Senior station officers in each of 3 stations	$8,000 annual honorarium plus 29.50 per hour call out	$4,000 annual honorarium plus $29.50 per hour call out	$1,400 honorarium plus $29.50 per hr. call out	$29.50 per hour call out
B	$82,593 – $101,400					
C Note FT Chief, FT Deputy, FT Assistant, and FT Fire Prevention Officer	Not provided	Not provided	$2,500 annual honorarium plus 22.60 per hour call out	$1,250 annual honorarium plus $22.60 per hour call out	$625 annual honorarium plus $22.60 per hour call out	$22.60 per hour call out
D	$75,425 – $93,638	$2,750 annual honorarium plus 25.84 per hour for 36 hours per month	N/A	N/A	$750 annual honorarium plus $23.77 per hour call out	$23.77 per hour call out
Wellesley	$77,728 – $95,430	$8160 annual honorarium plus 23.00 per hour call out	$4135 annual honorarium plus $23.00 per hour call out	N/A	$2036 annual honorarium plus $23.00 per hour call out	$1756 annual honorarium plus $23.00 per hour call out

Our review indicates the remuneration rates for management, officer and firefighter positions of the Township of Wellesley Fire Department are in line with positions in similar, local fire departments.

4.9 Facilities

4.9.1 Facility Location

Optimal facility location is comprised of several factors including: a) call volume and frequency; b) availability and location of paid on-call firefighters; and c) the geographic and address area that can be covered in the municipality. Appendix B presents several figures and address coverage that is provided by:

1. the existing fire stations;
2. decommissioning the St. Clements fire station; and
3. decommissioning the St. Clements fire station and relocating Wellesley station for better geographic coverage.

4.9.2 Incident Locations and Statistical Analysis

The five incident maps on the following pages identify the locations of emergency response calls from 2010 – 2014. The majority of calls are centred in or close to the major population centres of Linwood, Wellesley and St. Clements.

4.9.3 Firefighter Addresses

Three exhibit maps in Appendix B identify the residences of paid on-call firefighters serving the Linwood or St. Clements fire stations. The addresses are predominately located in the population centres of Linwood and St. Clements as are the majority of incidents.

During the consultations, questions were raised about the feasibility of changing to a fire protection model for the township from three fire stations to one or two stations. A change to two stations would require those stations to be located in a centralized area of the township at some distance from the population centres, the location and availability of the paid on-call firefighters, and the majority of emergency call locations. This would cause significant increases in turnout time and travel time to emergency scenes. The combination of increased turnout and travel time would result in a potential doubling of the current response times. Changing to a model with one fire station for the township would compound the impact on emergency response times and availability of paid on-call firefighters.

Specifically, we were asked to examine the feasibility of relocating the Linwood Station to the area of Moser Young Rd. (Township Rd 10) and Ament Line, while maintaining the current Wellesley Station location and closing the St. Clements Station. As the maps for incident locations and firefighter addresses indicate this would result in a 10-minute response to structure fires in Linwood (5 minutes to the new station location and 5 minutes back into town) and an estimate of 14 minutes to respond to a structure fire in St. Clements. The St. Clements response would require 5 minutes' travel time to the new station by the firefighters living in Linwood, donning their firefighting gear and boarding the fire truck followed by a travel time of 7 minutes to St. Clements.

Another consideration is the possibility of relocating the St. Clements fire station to a new property. The exhibit map titled 'Township of Wellesley St. Clements Station Firefighters' Addresses Relative to Current and Future Station Location' shows the location of the existing station and potential future station. Using the intersection of Lobsinger Line and Hergott as a starting point, we calculate there is approximately one kilometre additional travel distance between the existing station location and the potential alternative location. Since the majority of incidents to which the St. Clements firefighters respond are in St. Clements, relocation of the fire hall to the potential new location may require responders to travel an additional kilometre to the fire hall and a kilometre back to the incident.

4.9.4 Recommendation for Station Locations

We recommend the current station locations be maintained. This may necessitate reconstruction of the current St. Clements station or, depending on the future use of the station and site, major renovation and repair. The best option will not be known until an architectural functional assessment of future needs is undertaken.

As noted in the study of existing conditions and assessment for the St. Clements station, the station is in poor condition, and does not serve the purposes of the fire department and firefighters. The study also notes there are limitations to possible additions. We recommend a new or renovated station be designed to meet the current and future needs of the fire department and site requirements. Based upon the architectural review undertaken as part of this master plan process, we conclude extensive repairs may briefly extend the life of the station. However, the station does not meet the needs of the fire department in a number of areas identified in the assessment, and within the context of a 10-year Fire Master Plan, replacement is likely the most reasonable course of action.

An assessment of the response time contours for the various station locations contained in Appendix B, the history of emergency call locations (Section 4.9.2) and the location of paid on-call firefighter addresses (Section 4.9.3) leads to the conclusion the current configuration of stations is optimum to provide reasonable turnout times for the firefighters to travel to the stations and acceptable travel times to the majority of the emergency call locations.

We note that the water supply capability of the fire department is based on the existing fleet of pumpers and tankers in the current locations. A change to the number and location of fire stations would have to consider the impact on vehicle locations and vehicle complement of the fire department to meet the current water supply capability upon which the Fire Underwriters Survey Superior Water Shuttle certification is based.

4.9.5 Fire Stations Functional Assessment

We recommend the St. Clements fire station be replaced with a new or renovated building on the current location. Appendix C offers a fire station functional assessment.

The study of the existing conditions and functional assessment of the Linwood and Wellesley stations indicates they are in good condition and serving the purposes of the fire department and firefighters. As noted in the study of existing conditions and functional assessment for the St. Clements station, the station is in poor condition and does not serve the purposes of the fire department and firefighters. The study also notes there are limitations to possible additions.

Given the site limitations, Council may wish to consider a two-story building to provide extra training facilities and accommodations for the firefighters. There are examples of fire stations with larger training rooms on the second floor that can be utilized as a community room. Council may want to consider this possibility in the design of the new fire hall.

Design of a new fire station should consider health and safety recommendations and guidelines for fire stations. Guidance can be found in The Ontario Ministry of Labour Section 21 Fire Service Health and Safety Manual and various National Fire Protection Association standards for fire station design.

4.10 Apparatus and Equipment

We have reviewed the Township of Wellesley Fire Department fleet of vehicles, fire apparatus and major pieces of equipment including the types of vehicles, age, replacement cycles, utilization and suitability.

4.10.1 Apparatus and Equipment Overview

The Township of Wellesley Fire Department maintains a variety of vehicles required to respond to the types of incidents that the department is called upon to manage. Table 9 indicates the vehicle inventory for each station including the year and pumping capacity.

Table 9- Station Vehicle Inventory

Station	Type of Vehicle	Year of Manufacture	Pumping Capacity (GPM)
Linwood	Pumper	2015	1250
	Tanker/Pumper	2010	500
	Rescue Unit	2007	
St. Clements	Pumper	2007	1050
	Tanker/Pumper	2000	No fire pump
	Rescue Unit	2006	
Wellesley	Pumper	2001	1050
	Tanker/Pumper	2012	500
	Rescue Unit	2008	
	Aerial	1987	1250
	Command (Ford F150)	2010	

4.10.2 Pumping Capacity

The pumping capacity of the fire department is adequate to meet the needs to combat the fire volume the department can anticipate would be required for the structures and occupancies found within the township. We note additional resources are available through the Waterloo Regional Mutual Aid Agreement. We also note the Superior Tanker Shuttle Certification received by the fire department from the Fire Underwriters in 2013 is dependent on the capability of the department to shuttle and pump water at a consistent rate over a period of time.

4.10.3 Tankers

We recommend that the tanker without a fire pump and the tanker currently stationed at the Wellesley station with a fire pump be exchanged. This will give St. Clements a backup fire response capability. Wellesley will continue to have a backup initial fire response capability as the aerial stationed there has a 1250 GPM pump.

Each station has a tanker for rural water supply. The tankers stationed in Linwood and Wellesley have pumps with a 500 gallon per minute (GPM) pumping capacity. The St. Clements tanker does not have a fire pump. Although the tankers with fire pumps have a reduced water pumping capacity, they provide a first response pumping ability to a fire call in the event the primary response pump is unable to respond, for example, should there be a mechanical breakdown or the vehicle is out of service for maintenance. The St. Clements tanker does not have this capability and in the event that the St. Clements pumper is unable to respond, it will be necessary to dispatch a pumper from Wellesley or Linwood stations depending on availability.

4.10.4 Rescue Units

We recommend that Council consider a reduction in the number of rescue units required by the department. Each station is currently equipped with a Rescue Unit. The Rescue Units serve multiple purposes including carrying major rescue and vehicle extrication equipment, secondary response to emergency medical calls, transportation of firefighters and as rehabilitation facilities during inclement weather conditions. Council has requested opportunities for a reduction in the number of vehicles provided to the fire department be investigated during this review. We suggest one rescue unit could be eliminated and a pumper be equipped with vehicle extrication equipment. Response protocols would be designed to respond the appropriate vehicles. Maps on the previous pages display the history of the fire department rescue events, primarily vehicle collisions, with red circles (*Other Incidents*). This indicates there is a fairly equal distribution of these events. The fire department should report to Council regarding this recommendation and indicate which rescue can be eliminated and the reasons.

For Council's consideration, we suggest the new pumper currently scheduled for replacement in 2017 could be designed to function as a pumper/rescue unit with adequate seating to accommodate the requisite number of firefighters. The new pumper/rescue could be assigned to the St. Clements station and the existing St. Clements Rescue Unit removed from service. An additional consideration is our recommendation to build a new station on the current St. Clements site. There are some limitations on station design for the site and the reduction of one apparatus may assist in facilitating the design for the new station.

4.10.5 Pumpers

The fire department is equipped with 2015 pumper, a 2007 pumper and a 2001 pumper scheduled for replacement in 2017. The National Fire Protection Association standard for fire pumpers (NFPA 1901) recommends replacement of pumpers after 15 years of service.

Pumpers are used to transport firefighters and equipment to an emergency scene and to provide pumping operations as necessary depending on the operational needs for mitigation of that emergency. In rural applications, pumping functions may include application of water onto the fire scene, drafting of water from a water source, or relay pumping from pumper to pumper over a distance to provide water to the apparatus operating at the scene. The Township of Wellesley Fire Department is well served by its current fleet of pumpers.

4.10.6 Aerial 1

During our consultations, it became apparent that there is some controversy within the department and community regarding the cost and suitability of the used aerial purchased in 2009. There were some questions about whether the Township of Wellesley Fire Department needs an aerial device and the cost of replacement. The consensus of the firefighters interviewed is that the aerial provides a safe and effective means for reaching elevated areas for situations such as chimney and roof fires. It was noted the aerial is a tight fit for some rural lanes. It was also noted that the aerial provides additional pumping capacity if required.

Many paid on-call fire departments choose to maintain an elevated device as part of their equipment fleet where it can provide operational benefits during emergency incidents in the community. Generally, the departments purchase a used apparatus that still has serviceable life that will meet the demands of the service.

Since purchasing the aerial in 2011, the Township of Wellesley Fire Department has used the apparatus as an elevated device to provide access to upper levels of structures during various incidents for ventilation and fire extinguishment purposes. During fire incidents, it is often necessary to ventilate a structure at the highest possible location to allow toxic gases and smoke to vacate in order to establish a safe environment for fire crews to enter the structure. The aerial unit has also been used for water supply as a fire pump and as a pumper in a relay chain of pumpers that provide water to a fire incident over a distance from the water source to the incident location. The aerial can also be used as a water tower which means the ladder is elevated and water is applied from an elevated position onto or into a fire incident providing an advantage to extinguishing fire areas that are difficult to reach from an exterior ground level position.

Weakened roof structures can present operational hazards during fire incidents and an aerial device provides a safe platform from which to perform any necessary firefighting tasks such as ventilation, entry and water application access.

The fire department has noted the following incidents wherein the aerial provided significant operational benefits. The incident number identifies the year and number of the incident.

- Incident # 511-73 Aerial used as an elevated device during a silo rescue
- Incident # 511-78 Aerial used as a water tower to contain a fire in a 5000 square foot office, saving the attached shop and equipment

- Incident # 512-108B Aerial used as a water tower during a silo fire – the silo structure was saved
- Incident #512 -13B Aerial used at a silo fire – barn and silo structure saved
- Incident # 137 – Aerial used as a water tower and for rooftop ventilation at a shop fire – fire contained to approximately 50% of the shop and manufacturing equipment salvaged
- Incident # 515-36 Aerial used for fire attack water supply at a barn fire – barn saved
- Incident # 515-93 Aerial used as a water supply pump at a barn fire – barn saved
- Incident # 515-122 Aerial used for relay pumping to a shop fire
- Incident #515-138 Aerial was used to rescue a cat from a tree – really!
- Incident # 515-248 Aerial used as an elevated device to perform ventilation

Based on the evidence above, we concur the Township of Wellesley Fire Department benefits from ready access to an elevating device for multiple purposes. We also concur the current 30-year-old 1987 aerial should be scheduled for replacement in 2019.

The Fire Apparatus 10 Year Capital Forecast – Truck Replacement Projection shown in this report as Exhibit 1 anticipates replacement of this vehicle in 2019 at which point the vehicle will be 30 years old. There is $250,000 allocated in the capital budget forecast for this replacement. Our understanding is the fire department plans to purchase another used aerial available on the market at that time. The consensus of the firefighters interviewed is the aerial provides safer and effective operations during elevated situations as well as additional pumping capacity when required.

Depending on used equipment available in 2019, we anticipate that $250,000 will fund the purchase of an aerial between 10 and 15 years old.

4.11 Vehicle Replacement Cycle

Council has requested information and recommendations for the replacement cycle of emergency response vehicles for the fire department. Questions have been asked regarding the appropriate timing for replacement of fire department vehicles.

When considering the need to replace fire apparatus, we must review many factors. The National Fire Protection standard 1901, Standard for Automotive Fire Apparatus is the document most frequently referred to by the fire service and municipalities across North America for information on replacement and purchase of emergency response apparatus. Replacement considerations and timing are addressed in Appendix D of the 2016 edition of this standard. Underwriters Laboratories of Canada (ULC) may also apply.

We provide a summary of Appendix D of NFPA 1901, 2016 Edition below, for use when considering replacement of a vehicle. We note that Appendix D of the standard is not considered a mandatory requirement of the document, but is provided for informational and recommendation purposes.

To maximize fire fighter capabilities and minimize the risk of injury, it is important that fire apparatus be equipped with the latest safety features and operating capabilities.

Industry standards for fire apparatus are typically revised every five years, and there have been substantial changes to upgrade functional capabilities and safety features over the last 15 years. Included in those improvements are such things as:

- Roll over stability
- Seat belt design for fully dressed firefighters and seat belt use warning system
- Minimum acceleration and upper speed limitations
- Cab integrity
- Enhanced work and step lighting and safety design
- Reflective striping
- Ergonomic design for accessibility to equipment such as ladders and hose lines

The life cycle of a vehicle depends on many factors including:

- Vehicle mileage and engine hours
- Quality of the preventative maintenance program
- Quality of driver training
- Proper use of apparatus within design parameters
- Manufactured on a commercial or custom chassis
- Quality of manufacturer workmanship
- Quality of components used to build the vehicle
- Availability of replacement components

Factors to evaluate and consider for the replacement timing of a vehicle include:

- What is the true condition of the apparatus – has it been in a major accident or required major repairs?
- What advances have been made in design safety, technology and operational functionality since its manufacture?
- Does the vehicle still meet the needs of its service area or is it obsolete?
- Can the vehicle carry the equipment needed to do the expected job within its weight load capacity?
- What are the anticipated cost annually to keep the vehicle in service including downtime, maintenance cost, depreciation, reliability and safety of the users and the public?
- How available are replacement parts?
- How long can the department operate in the event of a major mechanical breakdown?
- What is the current trade in value of the vehicle and what is the expected depreciation rate?

NFPA 1901, Appendix D, 2016 Edition concludes,

A fire apparatus is an emergency vehicle that must be relied on to transport firefighters safely to and from an incident and to operate reliably and properly to support the mission of the fire department. A piece of apparatus that breaks down at any time during an emergency operation not only compromises the success of the operation but might jeopardize the safety of the firefighters relying on that apparatus to support their role in the operations.[4]

During our consultations, there were indications of misinformation in the public and from Council regarding the replacement schedule for fire vehicles. Particularly, concerns were raised about replacement of vehicles after 10 years of service. The information available in the Township of Wellesley "Fire Apparatus 10 Year Capital Forecast – Truck Replacement Projection" spreadsheet (Exhibit 1) indicates the following replacement timing for fire apparatus.

Pumpers – 15 years
Tankers – 18 years
Rescue Units – 17 years
Aerial 1 – 30 years

[4] National Fire Protection Association 1901, Standard for Automotive Fire Apparatus,2016 Edition, Appendix D

Exhibit 1 - 10-year Fire Truck Replacement Projection

STATION	VEHICLE	YEAR	Replacement Age	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Linwood	Freightliner FL80 P	2015	15											
Linwood	International Tank	2010	18											
Linwood	16' Rescue	2007	17										$210,000	
St. Clements	Freightliner Pumpe	2007	15								$500,000			
St. Clements	Freightliner Tanker	2000	18				$324,000							
St. Clements	GMC 5500 Rescue	2006	17									$210,000		
Wellesley	Freightliner FL80 p	2001	16			$470,000								
Wellesley	International Tank	2012	18											
Wellesley	GMC 5500 Rescue	2006	17									$210,000		
Wellesley	Aerial	1987	32					$250,000						
COMMAND	Ford F150	2010	8				$40,000							
Total expendature for year				$0	$0	$470,000	$364,000	$250,000	$0	$0	$500,000	$420,000	$210,000	$0
Reserve Contribution 2% Increase				*$175,000*	*$175,000*	*$180,000*	*$185,000*	*$190,000*	*$195,000*	*$200,000*	*$205,000*	*$210,000*	*$215,000*	*$220,000*
DC Funding								*$170,000*						
Equipment Reserve						*$45,000*								
Running balance				$250,657	$425,657	$180,657	$1,657	$111,657	$306,657	$506,657	$211,657	$1,657	$6,657	$226,657

We recommend, earlier in this section, a maintenance and replacement cycle for pumpers. Further, upon reaching the due date for replacement, fire apparatus should be evaluated to consider the condition, currency of operational and safety features, reliability and operational functionality of the vehicle. The evaluation should take into account the factors and considerations outlined above.

4.12 Maintenance Program

We have reviewed the inspection and maintenance program of Fire Department vehicles, fire apparatus, and equipment.

4.12.1 Maintenance of apparatus and equipment Overview

General maintenance items, such as MTO safety checks, general vehicle repairs and servicing is done by a local garage. Specialized testing, such as annual fire pump testing and aerial inspections are completed by a company specializing in fire equipment and apparatus.

Self-contained breathing apparatus tests are conducted annually by a company specializing in the maintenance, testing and repair of firefighter breathing apparatus. Testing, repairs and maintenance of apparatus and equipment is documented.

4.13 Communications

We have reviewed the Fire Department communications systems, including dispatch, paging, telephone, and radio systems.

4.13.1 Communications Overview

1. Alarms for the Township of Wellesley Fire Department are received and dispatched through a township owned paging system activated by the Kitchener Fire Department under contract for those services. Kitchener Fire Department provides full communications support during emergency operations as required.
2. The department has recently introduced a program called “Who’s Responding” which provides paging through smart phone technology and provides officers with up-to-date information on the number of firefighters responding to a call.
3. The Township of Wellesley Fire Department utilizes the radio system operated by the Regional Municipality of Waterloo for radio communications and paging of alarms. Local radio and paging equipment is operated and maintained by the township. The regional radio trunking system is being replaced and will require some capital costs for portable and vehicle radios. The project for replacement of the system is in the early planning stages and consultations with the stakeholders including the fire services in the region have begun. There is no estimate of costs at this early stage.
4. The RFP for the new radio system is scheduled to be issued in June, 2016 with completion of the project in 2018 at which time purchases for portable, mobile and station radios will be required.

4.13.2 Assessment of Communications

We recommend the township continues the current rate of contribution to the radio replacement program in the 10-year capital budget and monitors the project for more specific cost estimates as it proceeds.

Our consultations determined general satisfaction with the radio and paging system and with the support received from the Kitchener Fire Department Communications Centre during calls and for the provision of call statistics when requested.

The fire department should ensure any deficiencies in coverage and functionality of the regional radio system are identified and brought forward during planning and design of the new regional voice radio trunking system.

4.14 Emergency Management Program

We have been asked to review the Emergency Management Program for the township as managed by the fire chief/CEMC.

4.14.1 The Township of Wellesley Emergency Management Overview.

The Emergency Management Program for the township is authorized in By-Law 54/2004. The township received notification of continued compliance to the requirements of the Emergency Planning and Civil Protection Act and Ontario Regulation 380/04 in 2014. The fire chief is designated as the Community Emergency Management Coordinator (CEMC) for the township. The deputy chief of operations is designated as the alternate CEMC for the township.

Consultations on this project objective clarified that the intent is to review the appropriateness of having the fire chief function as the township CEMC.

4.14.2 Role of Fire Chief as Community Emergency Management Coordinator (CEMC)

We recommend the township consider a model for emergency management that removes the role and responsibilities for emergency management from the fire department.

As attention was focused on emergency planning and management over the last decade and requirements in the Emergency Planning Act and Civil Protection became regulated, municipalities were required to develop plans and designate officials to take on specific roles in the management of major emergencies including the requirement to designate a person in the role of CEMC. In most municipalities this function fell to the fire department and frequently the fire chief or a senior officer in the fire department was designated as the municipality's CEMC. As community emergency planning has evolved, and fire chiefs who also have been given the responsibilities of the CEMC role have gained experience in these dual roles, it has become apparent this does not, in practicality, provide optimum operational efficiency and

functionality during critical emergency incidents. This is of particular concern in departments where the fire chief is expected to act as a senior operational officer at emergency scenes as well as fill the CEMC role on the Community Control Group during major emergencies.

We understand that the Office of the Fire Marshal and Emergency Management (OFMEM) recommends that communities reconsider the appointment of senior members of the fire department to the role of CEMC and consider alternatives to fulfill the role of CEMC. The OFMEM has not issued a specific policy regarding this recommendation, but our understanding is that this concern has been presented at various seminars and conferences across the province.

We recommend that the township consider alternative opportunities to fulfill the CEMC role such as a part-time position or partnering with other communities to jointly manage this responsibility.

Section 5 Fire Master Plan Implementation

This timetable considers budgeting, availability of personnel, staff workloads and sequencing for a plan to implement the recommendations in the Fire Master Plan.

Exhibit 2 - Fire Master Plan Implementation Recommendations and Timetable

	Recommendation	Recommendation Reference	Initiate	Complete	Responsibility	Status	Financial/Resource Impact
	Council Approval of Fire Master Plan		2nd Q 2016	2nd Q 2016			
Governance	#1 and 2 review/revise By-law	Section 4.1.3	3rd Q 2016	4th Q 2016			Staff Time
	Advisory Committee terms of Reference		3rd Q 2016	4th Q 2016			Staff Time
Service Delivery		Section 4.2.5					
Fire Prevention/Public Education	#1 Inspections small manufacturing operations	Section 4.2.5	1st Q 2017	4th Q 2017			See recommendation #2
	#2 Establish a part time fire inspection position	Section 4.2.5	2nd Q 2017	2nd Q 2017			$24,000 annually
	#3 Enhance fire-cause determination capability	Section 4.2.5	4th Q 2016	1st Q 2017			See recommendation #2
	#4 Part time Public Education position		1st Q 2017	2nd Q 2017			$15,000 annually
	#3 Smoke and CO Alarm study		3rd Q 2017	2nd Q 2018			TBD
	#4 Enhance public education efforts in schools		1st Q 2018	4th Q 2018			See recommendation #4
Emergency Response	#1 Two-year study of time and responding personnel	Section 4.3	3rd Q 2016	4th Q 2018			Staff time May require some minor costs in dispatch contract

	Recommendation	Recommendation Reference	Initiate	Complete	Responsibility	Status	Financial/Resource Impact
Training	#1,2,3,4,5,9 five-year schedule	Section 4.4.3	3rd Q 2016	2nd Q 2017			Staff time
	#6 and 7 Officer training program		3rd Q 2017	2nd @ 2017			Staff time
	#8 Training Officer position at each station		4th Q 2016	4th @ 2016			$4,000 annually (4 x $1000 honorarium)
	#10 FirePro in stations		4th Q 2016	3rd Q 2017			Training and set up
Administration	#1 Review Job Descriptions	Section 4.5	4th Q 2016	2nd Q 2017			Staff time
	#2 Monthly Management Team meetings		3rd Q 2016	Ongoing			Staff time (Chief and Deputies)
	#3 Time/workload study Administrative support		1st Q 2017	3rd Q 2017			$5,000 to $25,000 depending on scope of study
	#4 Hardware upgrades for stations		2nd Q 2016	4th Q 2016			Part of township upgrade
	#5 Training station officers to use FirePro		4th Q 2016	3rd Q 2017			Staff time
	#6 Review/revise policies and SOGs		4th Q 2016	4th Q 2017			Staff time
	#7Communication of Fire Master Plan		3rd Q 2016	4th Q 2016			TBD
	#8 Annual Report to Council on Delivery Standards		1st Q 2018	Ongoing			Staff time
Finance		Section 4.6					
Facilities	#1 Maintain existing station locations	Section 4.9.4	N/A				
	#1 Replace/Renovate St. Clements station at current location	Section 4.9.4	1st Q 2017 Project entered into 10 Year Capital Budget				Dependent on renovation or rebuild. Cost per square metre estimated at $4,575

	Recommendation	Recommendation Reference	Initiate	Complete	Responsibility	Status	Financial/Resource Impact
			1st – 4th Q 2017 Design				
			1st Q 2018 Tender for Construction				
			1st to 4th Q 2019 Construction				
Apparatus and Equipment	#1 Tanker exchange	Section 4.10	3rd Q 2016	3rd Q			N/A
	#2 Review Rescue Units		4th Q 2016	2nd Q 2017			Savings of $200,000 replacement and maintenance/operational costs
	#3 and #4 Vehicle Replacement Cycle		Ongoing				N/A
Communications	#1 and 2 Capital Project to replace communications equipment	Section 4.13.2	1st Q 2017	2018 Completion with Regional Radio System Replacement			Ongoing contribution to Capital Project
Emergency Management Program	#1 Transfer CEMC role out of fire department	Section 4.14.2	1st Q 2017	3rd Q 2017			TBD (part time position – $25,000 annually)

Appendix A: Wellesley Fire Master Plan Consultations Summary

Consultations were conducted with various stakeholders as follows:

July 20, 2015 General meeting for all township firefighters at Wellesley Fire Station (Attendance 26) (Note: Fire Chief and one Deputy attended for the full meeting and Councilor Wagner attended for the first half of the meeting)

August 10, 2015 General meeting for all township firefighters St. Clements Community Centre (Attendance 32) (Note: Fire Chief attended for the first half of the meeting)

September 8, 2015 Individual interviews with Mayor and township councilors Township Council Chambers

September 14, 2015 St. Clements Station meeting (Attendance 14) (Note: Chief and Deputies did not attend)

September 14, 2015 Wellesley Station meeting (Attendance 15) (Note: Chief and Deputies did not attend)

September 21, 2015 Linwood Station meeting (Attendance 14) (Note: Chief and Deputies did not attend)

September 24, 2015 Public Meeting Township Council Chambers (Attendance 14) (Note: most attendees had previously served as firefighters and officers for Wellesley Fire Department)

October 8, 2015 Interview with Deputy Chief of Operations F. Karley

October 8, 2015 Interview with Deputy Chief of Training S. Martin

October 26, 2015 Review of a preliminary baseline report with the Project Steering Committee.

The following section provides an overview of the consultations undertaken for the development of the Fire Master Plan for the Wellesley Fire Department. Comments, concerns and questions are summarized under each of the project subjects and duplicate comments, concerns or questions have been condensed. We note the comments, concerns and questions have been generalized to ensure confidentiality where appropriate and reflect the understanding of the consultant(s) who conducted the interviews.

1. Governance — the applicable provincial Legislation and regulations, and municipal By-Laws relative to the Fire Department.

Council

What are the council's responsibilities for determining the level of service?
Firefighter safety is important

Firefighters

Council is too involved in fire department operational decisions – need to separate policy making vs. operations decisions

2. Service Delivery — the level and range of services and programs delivered currently, and future requirements taking into account predicted growth and service delivery expectations.

Council

Fire response to medical calls is important due to ambulance delays
Would like to see the call breakdowns – number of firefighters responding/needed at various types of calls
If 90% of calls are non-fire related, how many fire trucks do we need in the township?

Firefighters

EMS calls have been rationalized through the new dispatching protocols
There are ponds, streams and rivers in the township – do we need to expand water/ice rescue capabilities

3. Fire Prevention — the Fire Prevention Program including fire inspections, investigations, and code enforcement.

Firefighters

It is a time issue – how much time can paid on call firefighters contribute to public education and fire prevention in addition to training a, equipment maintenance, etc.
Most of our structure fire calls are for farm shops – we have the largest small industry base in the region
Perhaps more training on small industrial fires and explosive gases and chemicals used locally
Perhaps could get an inventory of small manufacturing sites (farm shops)
What is in the small shop is always part of initial size up
Lack of code compliance and good fire safety practices pose significant fire risks in small manufacturing shops – this would be a good prevention opportunity
Many rural small business fires – businesses change regularly and are not tracked by fire department – does building department track this?

4. Public Fire Safety Education — the Public Education program, including demographics, website.

Firefighters

It is a time issue – how much time can paid on call firefighters contribute to public education and fire prevention in addition to training a, equipment maintenance, etc.
We do public education on request

Concerns were expressed that messaging regarding the importance and requirements for working smoke alarms are not always effective in reaching residents in the rural areas of the community.
Get into the schools more often and influence the children and parents

5. Emergency Response — emergency response call volume and trends, including types of calls, numbers of calls, apparatus deployment, response staffing, firefighter deployment and safety.

Council

Does it make sense to put out a fire in a building that is going to be lost – is it cheaper to let it burn and avoid the demolition and excavations costs
At times there seems to be an excessive number of firefighters at minor accidents (i.e., 5 on scene for a car in the ditch)
Does the Fire Chief have to attend so many of the calls, even alarms ringing and minor MVCs?
Does the Fire Chief have to take command at emergencies as often as he does?
Firefighter safety is important to Council and the community
Appreciate being informed by the Chief through Blackberry about incidents

Firefighters

Turnout is affected by the fact that many of the paid on call firefighters are trades people and they can't always leave. Also not many businesses located near the fire stations so this affects turnout times and numbers.
Challenging to get adequate staffing to significant incidents
Need additional firefighters at large events
More working out of town so may need to change response protocols – i.e. 2 stations
Need to constantly monitor response turnout
Depth of response for multiple calls may be a problem
Need more freedom to call a second station
Working with Perth East to help with daytime staffing but need communication and joint training with them
We have better training and equipment and safer procedures than 13 years ago
Medical calls have doubled
Have an EMS platoon system from Sunday at 7:00 pm to Friday morning at 7:00 am but full paging Friday from 7:00 am to Sunday at 7:00 pm to ensure adequate turnout

Community expects someone in reasonable time even if just basic life support
Have been some significant saves – birth of twins
No set policy on how many personnel should be on a pumper for structure fire calls before it leaves the station – 3 is practical including an officer
Chief often responds to medical during weekdays because of low turnout numbers
Rehabilitation during hot/cold conditions needs to be addressed
When the Chief takes command at emergencies, this affects opportunities for officers to gain experience
Chief and Deputies sometimes take command because the officer on scene wants to "get into the middle of the action" and does not assume a proper incident command position or role
Need better identification for Acting Captains when they are acting vs. when they respond as firefighters

6. Firefighter Training —the Firefighter Training Program, including recruit training, firefighter training, and officer training.

Firefighters
More organized now than in the past
Joint training with the other stations is very beneficial when responding to actual emergencies – common training/procedures and know other firefighters working at the scene
There are sign off procedures for recruits to ensure they are trained adequately
The intensive training requirements may be turning people off from joining the department
Most staff at NFPA 472 Hazardous Materials awareness level
Chief says approximately 60 % are certified to Firefighter 1 – the members gave their time and enthusiasm to accomplish this
Ongoing training – good now with new organizational structure with Deputy Martin is in charge of training
Stations are working better together because of the type and joint training bringing stations together – should continue with this
Working better by bringing people into area to do training rather than sending our people out
Using NFPA Essentials and a sign off system
Suggestion to have a Training Officer in each station to deliver and monitor training
Communication on upcoming training is helping to encourage attendance
Hybrid vehicles – need training and updated manuals
Reevaluate number and scheduling of training nights per month – both for attendees and officers who have to conduct the training
Captains should meet with Deputy of Training so see plan
A master list of training records should be in each station so officers can review and determine gaps in training for their personnel
There should be a formalized review of training to determine if and where gaps may exist
Pump Operations – everyone should be trained and tested and also vehicle familiarization
Should be a Training officer for each station – the station captain can't always do it effectively along with all of the other workload

Currently using IFSTA manuals with hard copy check off – should be electronic – make better use of FirePro records management system
Station facilities aren't always the best for training – bays are taken up by equipment and vehicles so little room for training that requires additional space
More training because the is limited opportunity to get experience during a limited number of calls
Use Waterloo Regional Emergency Services Training Centre more for hands on training

Firefighter comments specific to officer training
Would like opportunity to do more – i.e., Incident Command, Accountability
Issue – need to have NFPA Firefighter 2 in order to get into Officer Program and only 4 of 12 officers have Firefighter 2
The Fire Master Plan should have a strategy for Officer Development – Health and Safety requirement to have a competent supervisor on scene
Need more training in size up, incident command
More scenario based training that integrates officer decision making with firefighter tasks and tactics
Limited calls so limited experience – have to make this up through realistic training exercises
Problem is taking the time off work or using weekends to get the training
Need more information on Health and Safety Guidelines – Ministry of Labour Section 21 Firefighter guidelines
Training should include mock calls where officers can be critiqued and mentored
Officers need training to deal with Human Resources issues – workplace diversification/respect
Training in Incident Command
Mentoring is the best way to develop officers and future officers
Training of officers in FirePro records management and incident reporting

7. Administration — administration of the Fire Department, including organization, policies and procedures, administrative support, record keeping, information management, purchasing, inventory control, public and media relations, and customer service.

Council
We need better communications with the public about what the department does, how the money is spent – based on facts not conjecture and misinformation
We need a communication plan for the Fire Master Plan

Firefighters
Can we streamline the incident reporting system and records management system?
Chief – we need to take a slow progression towards more advanced systems and procedures
Computers in stations need an IT fix before we can start with electronic incident reporting – currently using Bell Internet
Fire Master Plan should address need for reliable technology – need hardware improvements

Chief spends 15 – 20 hours per month reviewing incident reports and payroll
May be able to get into the regional network and this would help
Many Standard Operating Guidelines (SOGs) are 10 years old – need a revision process that includes firefighter and officer input
Currently no formal training/review of SOGs
Use a high risk/low frequency assessment to focus efforts on SOG revisions
SOGs need to be more specific and compact
Need more/better communication to all of the firefighters about what is happening in the department.
Ordering supplies for stations – how much can be spent at hardware stores and who is contact for central ordering
Create a committee for purchasing Personal Protective Equipment (PPE) – get input from users
Advisory Committee –

- What is its purpose?
- Is it effective?
- Station captain issues are not always heard
- Should be more collaborative

Information flow up and down the chain of command gets confused – i.e., station captains deal directly with chief and deputies are not kept in the loop when the issue falls within their scope of responsibilities

8. Finance — the Fire Department budgeting, reserves, development charges, revenues and potential revenues.

Council
There are fiscal realities given the townships limited tax base
Fire expenses seem to have gone up exponentially – wages, vehicle replacement
The department is well run but a lot of money is being spent on the fire department
Fire is second biggest expense in the township – three stations seems excessive
Why replace a fire truck every ten years at $250,000?
Should our trucks be replaced using the same cycle as full time departments?

Firefighters
Would like to know about the budget to understand priorities and offer input.
When we raise money through fundraising where does it go and how is it spent?

9. Human Resources — the Fire Department staffing, organizational structure, ratio of officers to firefighters, firefighter recruitment and retention, job descriptions, remuneration of full-time and paid on call staff, promotional policy, succession planning, and health and safety.

Council

There are ongoing human resource issues as a result of the recent restructuring of the department (2014)
Management of the restructuring could have been done better
While campaigning for the 2014 municipal elections, there were questions and misinformation in the public regarding fire department costs, a new fire hall, cost of vehicles, etc.
Need better communications between the department and Council – council members need more information for when the public asks questions about the department and costs
Communications between the chief and township senior managers has improved since chief came onto the Senior Management Team for the township
Would like to see a more unified approach between the three stations – sometimes it seems each station has its own agenda – need more of a "one team" philosophy
There is division on Council over the role of the fire chief and the direction the department is headed in – the Fire Master Plan should help with this
Is the new organizational structure of a chief and two deputies with senior station captains appropriate and better than the old structure?
What is the role of the full time fire chief and do we need a full time chief if the two deputies are handling many of the major responsibilities?
Need to review the job descriptions for chief and deputy positions
Need more communication with all three stations from department administration

Public Meeting

What was the basis for the restructuring – did the Fire Marshal recommend it?
Station officers had little input into the restructuring
Station chiefs had to reapply for senior station captain position although they had many years on the job
Advisory Committee used to be fire chief, station chiefs and two representatives from each station
Tension was created between chief and station chiefs during the restructuring and it is still there to some degree

Firefighters

We are moving forward but missing the experience of those who left – some were full time firefighters who brought those skills and knowledge to the department. They were also the ones who regularly turned out for calls.
There are still hard feelings about how the restructuring happened.
The organizational structure for the department should be revisited. In the old model, firefighters went to the station chief for issues and the station chief dealt with it or took it to the township chief. More confusing in the new model as to who is responsible for what and how do things get done

Things are working well under the new structure but people are still struggling to understand it
The ratio of officers to firefighters is good
Firefighters and officers in the stations do not have a clear idea of the roles and functions of the two deputies – there is confusion on who to go to about specific issues
Station officers tend to go to the deputy who is from their station – Deputy Karley in Linwood and Deputy Martin in Wellesley – St. Clements officers tend to go to Deputy Martin as they see him more often for training
Health and Safety – fit testing for self-contained breathing apparatus needs to be maintained
Chief and deputies should meet regularly to provide input into operational decisions and policies and procedures and to develop a consistent management approach
Retention of paid on call firefighters is a problem being experienced in many paid on call departments.

10. Facilities — the number, location, condition, and configuration of existing fire stations and administration facilities, fire station location analyses and identification of up to three options for site location.

Council
How many stations and associated equipment do we really need – 3, 2, 1?
St. Clements station – should it be relocated with a new station, renovate at current site or tear down and rebuild on current site?

Public Meeting
St. Clements station is in the right location
The St. Clements station has been ok for many years – why the need to replace it now?

Firefighters
Need to look at geographical response (Wellesley can cover some of Baden's area better)
Need to look at automatic aid or some kind of regional agreements
Consensus of those attending - the parcel of land near Heidelberg purchased for a new St. Clements station is not the best location. Most firefighters live closer to the current station and would have to go out of town to the station and then come back into their coverage area.
The current St. Clements station location is good but the station needs renovations or rebuilding – there are no female washrooms and too small.

11. Apparatus and Equipment — the Fire Department fleet of vehicles, fire apparatus and major pieces of equipment including the types of vehicles, age, replacement cycles, utilization and suitability.

Council

How many trucks do we need in the township?
How often is the aerial truck used and how much will it cost to replace it?
Why replace a fire truck every ten years at $250,000?
Should our trucks be replaced using the same cycle as full time departments?
I would like to have more information on the scheduling of fire apparatus scheduling.
Can we call on outside departments for specialty vehicles, i.e., aerials when needed?

Public Meeting

Is the aerial needed? What are the operating costs?
How much will it cost to replace the aerial?
Can we call on a neighbouring department when we need an aerial?

Firefighters

Need to have better public communications when purchasing new apparatus for the township
More public relations about equipment and its benefits
We have great equipment and apparatus
A breathing apparatus air fill station for Linwood station would be useful
We have reserves to replace pumps every 15 years but Council has the opinion it should be every 20 years – we need to replace equipment not only due to wear and tear but also to keep up with technology to make the job safer and more efficient
Master Plan should note equipment schedule to be replaced in 2016
Trucks need to be rationalizes through all 3 stations, i.e., St. Clements hasn't replaced a truck in a long while – they tend to replace trucks all together rather than staging replacements
Much better than it used to be
The Aerial unit was a good investment – should look at cost effective ways to replace it when the time comes – another used aerial?
How often has the aerial been used?
The aerial is difficult to get into some tight fire lanes
Works well for chimney fires if you can get it located properly
Should the deputies' personal vehicles have emergency warning lights for use when they arrive on scene and should have some kind of warning device?

12. Maintenance Program — the inspection and maintenance of Fire Department vehicles, fire apparatus, and equipment.

13. Communications — the Fire Department communications systems, including dispatch, paging, telephone, and radio systems.

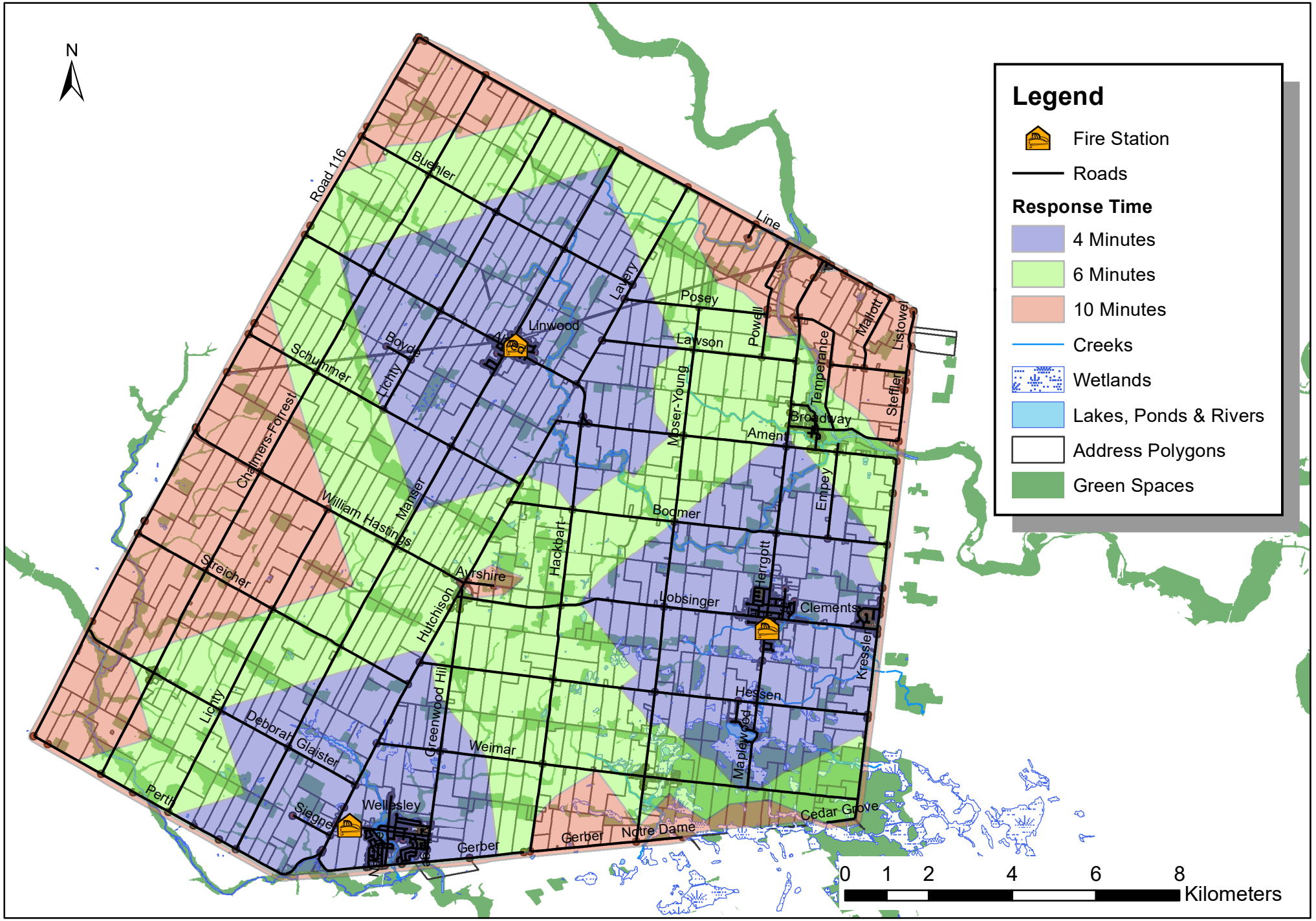
Firefighters

While interacting through Mutual Aid with Perth East radio communications can be a problem
There are plans for more/better coverage with Region's new radio trunking system
What is the fire service input into the new regional radio system?
Need to look at multiple repeaters
Have introduced "Who's Responding" for call outs – uses smart phone technology – firefighters need to make sure they use it to provide good assessment

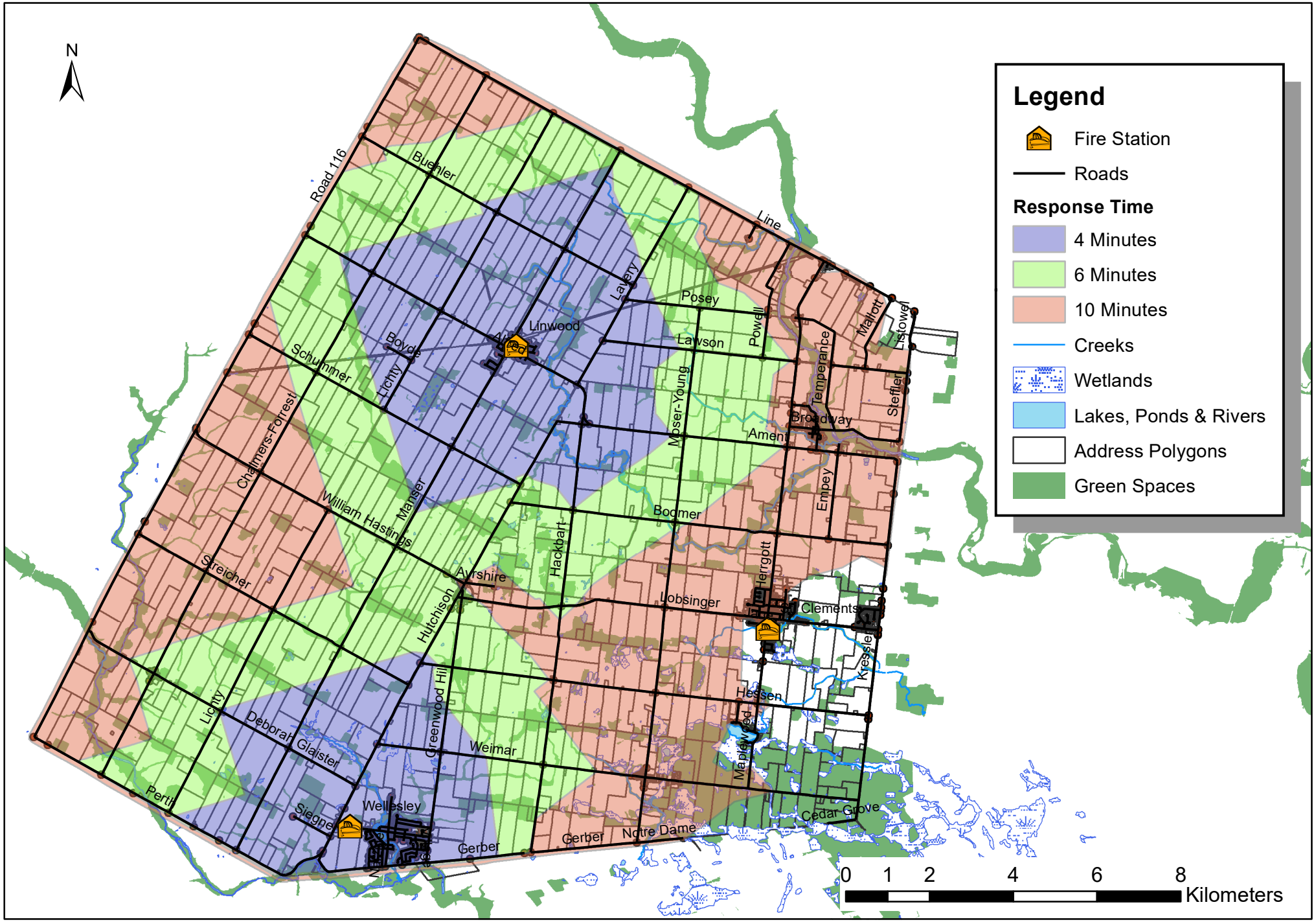
14. Emergency Management Program — the Emergency Management Program as managed by the fire chief/CEMC.

Appendix B: Fire Station Location Analysis

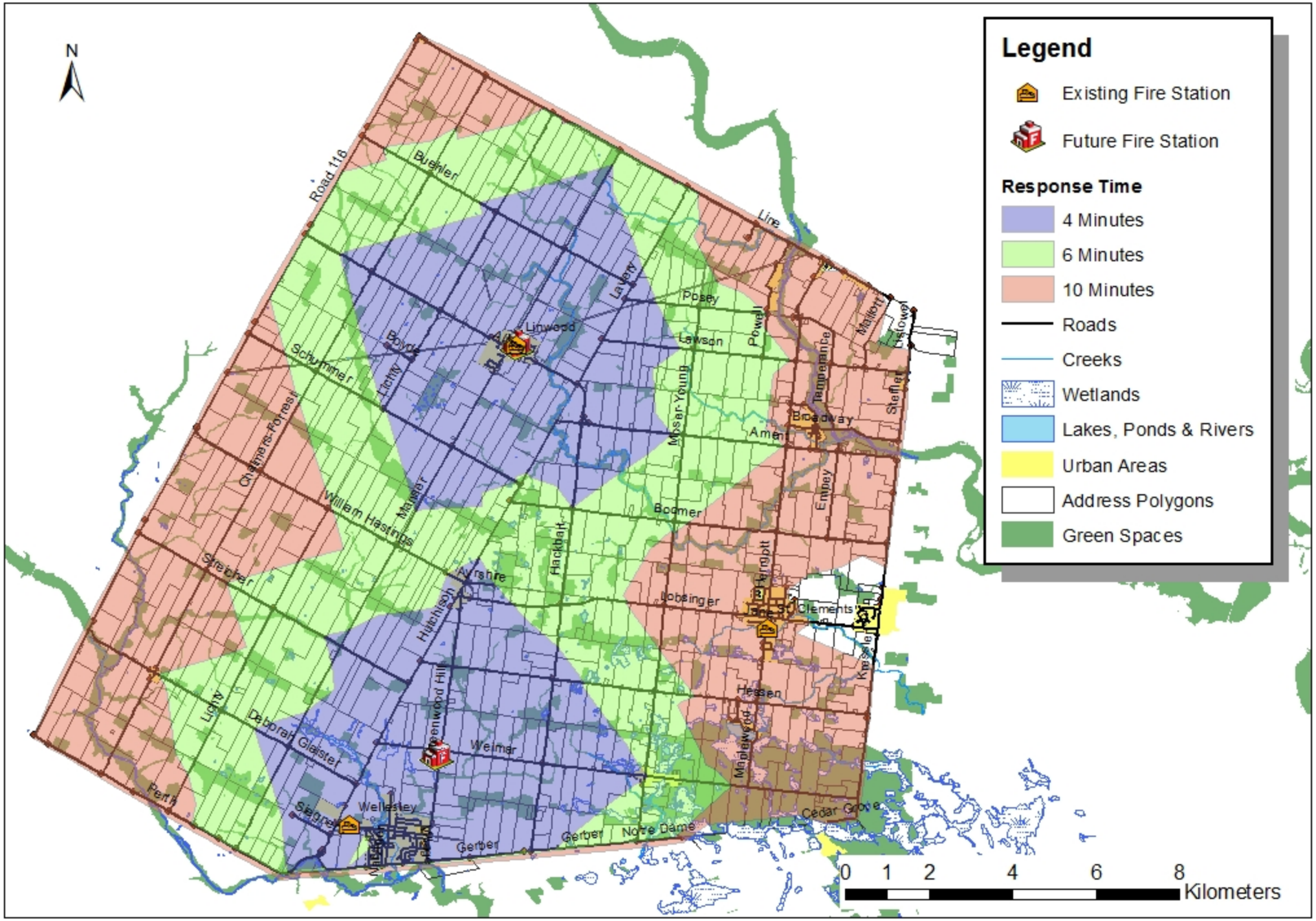
Township of Wellesley Fire Station Response Time Contours
Scenario: All Three Stations Intact



Township of Wellesley Fire Station Response Time Contours
Scenario: St. Clements Station Decommsissioned



Township of Wellesley Fire Station Response Time Contours
Scenario: Linwood Intact, Wellesley Moved & St. Clements Decommissioned



Appendix C: Fire Station Functional Assessment

Township of Wellesley - Fire Station Existing Conditions Study & Functional Assessment

Introduction

This report summarizes the findings of Fire Stations site visits in Linwood, Wellesley, and St. Clements, allocated in the Township of Wellesley, on June 9th 2015. The site visits were undertaken to document, at a high level, existing conditions and functional assessments of the buildings and sites. Information was obtained during building walkthroughs and discussions with occupants and users. This report is based solely on information observed during the site visits. No structural, environmental, system or assembly tests or assessments were performed.

In the report, elements have been assessed as per one of three qualitative ratings: Good, Fair, and Poor. Good indicates that elements show no visible signs of wear or deterioration. Fair indicates elements are in functioning condition, but show signs of wear and deterioration, and should be maintained. Poor indicates elements have deteriorated to a point that replacement should be considered before the building is compromised.

Overview of Findings

The three fire stations assessed are in varying conditions.

Wellesley Station, built in 2000, is in good condition. Minor upgrades and repairs are identified in the report, but are not urgent or necessary. The station well serves the department's functional needs, but it was identified there is a lack of deputy fire chief office space. There is ample space within the station, and on the site, for future growth and expansion.

Linwood Station, built in 1970 and renovated in 2011, is in fair to good condition. Upgrades and repairs have been identified in the report that should be considered to keep the station in good condition. The station serves the department's functional needs, but could be enhanced with dedicated storage space, dedicated maintenance space, and additional office space for the deputy fire chiefs. Future expansion and growth is possible, but would be at the expense of parking spaces.

St Clements Station, built in 1979, is in poor condition. Numerous required upgrades and repairs have been identified in the report. The station does not meet the current functional needs of the department, and the many functional upgrades required may not be viable within the existing building. The building's location on the site, and proximity to the property lines, makes future growth and expansion difficult. The property also borders a Grand Rapids Conservation Authority regulated floodplain area, potentially complicating or prohibiting future expansion.

Township of Wellesley - Fire Station Existing Conditions Study & Feasibility Analysis

Building Name: Linwood Station
Building Address: Linwood Fire Station
32 Adelaide Street
Linwood ON, N0B 2A0
Date of Site Visit: June 9th, 2015
Performed by: Paul Gorrie – Brook McIlroy

Overview: Linwood Station was built in 1970 and renovated in 2011.
2011 renovations include:

- adding a third vehicle bay to the west side of the building
- new pitched roof,
- new exterior metal cladding
- enlarged vehicle bay openings, doors and door operators
- New NG radiant heaters on vehicle bays
- New interior partitions for offices, kitchen, boardroom and office.

Linwood station is in good condition and suits the current and future needs of the Wellesley Township Fire Department. The washrooms, kitchen, dispatch office and training room are in good working order and suit the programmatic needs and occupant load. The functional program could be enhanced by adding a dedicated office for a deputy fire chief, at grade storage space and a dedicated maintenance closet. Vehicle bays are sufficient for existing equipment, however there is no space for new vehicles. Ongoing maintenance and upgrades will keep the station in good working order. Items that should be reviewed for maintenance and /or upgrade include:

- Septic system
- Spalling of concrete masonry units above grade
- Original electric panel

The building is suitably sited to accommodate future additions and renovations should expansion of the station ever be required.

Site

Parking	There is suitable parking on the site to accommodate the intended occupancy of 15. The asphalt was repaved in 2012 and is in good condition. There is good drainage of the parking lot away from the building. A few areas were identified where water was being drained back to the edge of the building, potentially contributing to spalling of the exterior masonry.	
Access	Access to the building is at grade, and the building does not have or require a ramp to access the main entrance.	
Lighting	Exterior lighting has been updated to LED fixtures with daylight operators.	

Other	Septic tank is believed to be original, but location was not apparent and could not be inspected.	

Exterior

Cladding	Metal cladding is new (2011) and in good shape. In a few areas there are gaps between the metal cladding and grade where the cement masonry units are exposed (no protective board or flashing), resulting in spalling of the masonry unit.	

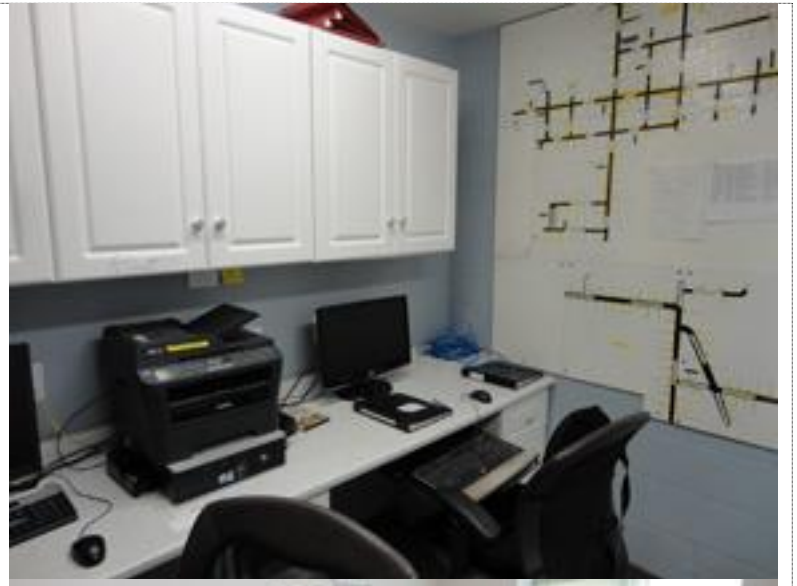
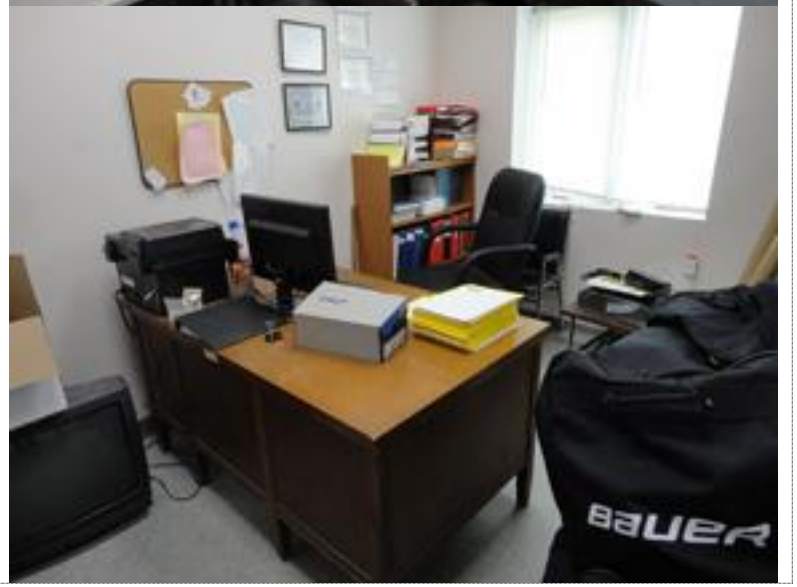
Windows	The sole window is vinyl, double glazed and is in fair condition.	
Roof	The roof was not inspected. The chief reports that the roof was replaced during the renovation in 2011. The chief also reports that during the winter months ice forms over the eves.	
Doors	New doors are insulated metal doors with thermopane glass. They are in good condition. The old doors are non-insulated metal doors with single pane glass. The old doors are in fair condition. Overhead doors are new and in good condition.	

Interior

Floors	Floors are in good condition. New epoxy coat (2011), in good condition.	
Exterior Walls	Good condition – some spalling on south concrete masonry unit in vehicle bays.	

Partition Walls	New partitions (2011), in good condition.	
Ceilings	New drop T-bar ceiling in office, bathrooms, meeting rooms (2011), in good condition. Pan metal deck ceiling in vehicle bays is in good condition.	

Doors	Doors are in good condition	
Trim	Trim is in fair condition. Vinyl baseboard is separating along exterior wall, possibly due to infilling of exterior doorway.	
Washrooms	2 washrooms. Both appear to be AODA compliant, in good condition. Adequate fixtures for occupancy.	
Plumbing Fixtures	New fixtures (2011), in good condition.	

Offices	Duty office and reports office are in good condition. Additional office for deputy chiefs would be beneficial. Current duty office also doubles as storage room, illustrating need for additional accessible storage space.	 

Meeting / Training Room	The meeting / training room is suitable for occupancy and training needs. A/V equipment is in good condition and suitable for the training that occurs at the station.	 

Electrical & Mechanical

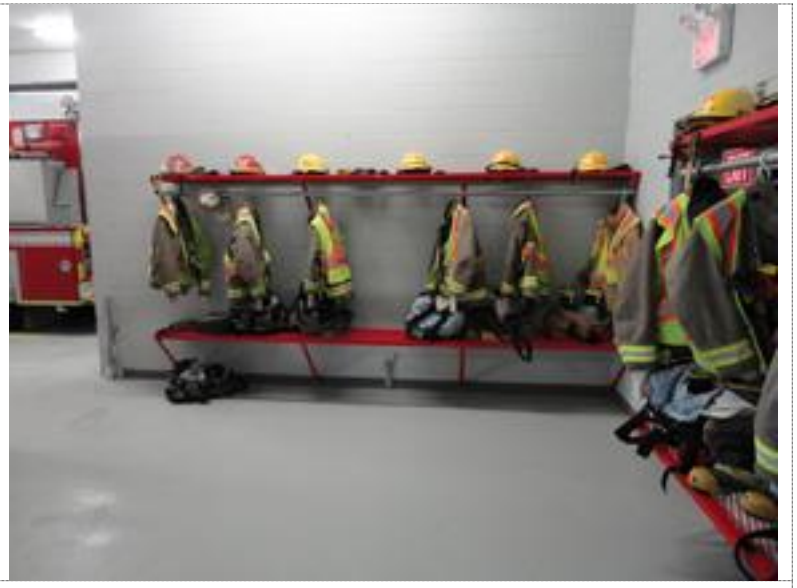
Electrical Service	200 amp service panel. Panel is in fair condition, but is old and could be updated. 60 amp subpanel installed in 2011, in good condition. Building power is backed up by diesel generators.	 

		
Lighting Fixtures	T5 ballast fixtures, in good condition. Exterior fixtures are LED with photo cell operators.	

		
Telephone	One phone line	
Network	Building is wired with cat6e cable	
Mechanical System	New gas radiant heaters in vehicle bays, in good condition. Direct vent gas furnace, 92% AFUE, in fair condition, for office, kitchen, board room and washrooms	

		
Water Heater	Direct vent 50 gallon gas hot water tank, in fair condition	
Natural Ventilation	None, other than doors and window.	

Other

Current Occupancy	15 occupants – can hold 23	
Future Occupancy	No projected changes	
Vehicle Occupancy	Adequate space for current vehicles. No space available for additional vehicles.	

		
Storage	Storage space is a mezzanine on top of the office – insufficient space and hard to reach via ladder. No hose drying rack.	

Maintenance	No dedicated maintenance room.	

Township of Wellesley - Fire Station Existing Conditions Study & Functional Analysis

Building Name: Wellesley
Building Address: Wellesley Fire Station, 1379 Queen's Bush Rd., Wellesley, N0B 2T0
Date of Site Visit: June 9th, 2015
Performed by: Paul Gorrie – Brook McIlroy

Overview: Wellesley Station was built in 2000. Wellesley station is in good condition. It suits the functional needs and programmatic requirements of the department:

- Vehicle bays are large and clear span, allowing for multiple configurations of vehicles to maximize space.
- Meeting / training room is large, with operable windows providing natural light and natural ventilation. Modern a/v facilities to accommodate training.
- Office space is sufficient with separate reporting and duty offices, with operable windows providing natural light and natural ventilation
- Kitchen provides sufficient amenities for occupancy.
- Separate male and female washroom facilities.
- Building is sited to allow for addition of vehicle bay, if required.

Functional and programmatic upgrades may include:

- Reduce size of mechanical room and reallocate as Deputy's office.
- Add additional Deputy's office
- Enclose mezzanine storage room.
- Convert female washroom into AODA washroom.
- Repair CO^2 sensors on mechanical ventilators in vehicle bays. Ventilators currently sit unused.

Wellesley station is currently at capacity for vehicles and apparatus. There is additional space available on site to add 3rd vehicle bay should future expansion be required.

Site

Parking	There is suitable parking on the site to accommodate the intended occupancy of 23. The asphalt is in good condition and appears to be graded properly.	
Access	Access to the building is at grade, and the building does not have or require a ramp to access the main entrance.	
Lighting	Exterior lighting are LED fixtures on daylight controllers, in good condition.	

Other	Cracking in sidewalk to north of building caused by rainwater leader releasing water onto sidewalk. Curb detached from sidewalk in same location.	 

Exterior

Cladding	Metal cladding is in good condition. Masonry cladding on south elevation is in good condition	
Windows	Metal operable windows are in good condition.	
Roof	The condition of the roof was not observed.	

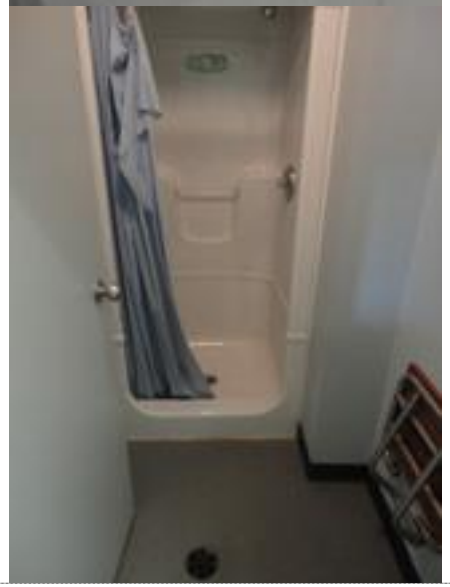
Doors	Man doors are in good condition. Overhead doors are in good condition.	 

Interior

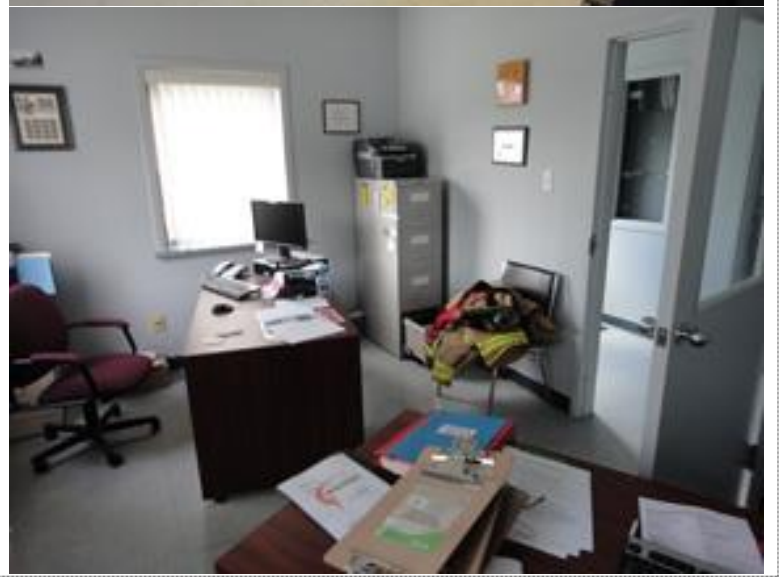
Floors	Concrete floors in vehicle bays are in good condition. Resilient vinyl floors in office, meeting / training rooms and washrooms are in good condition.	 

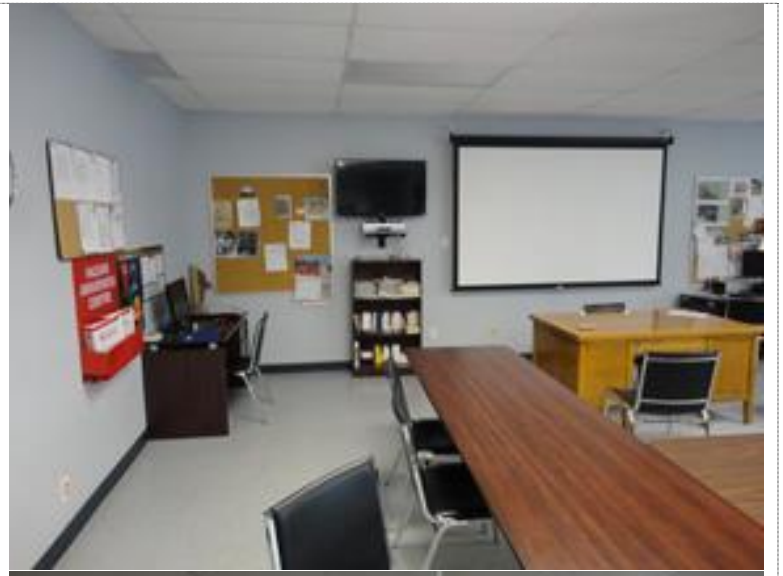
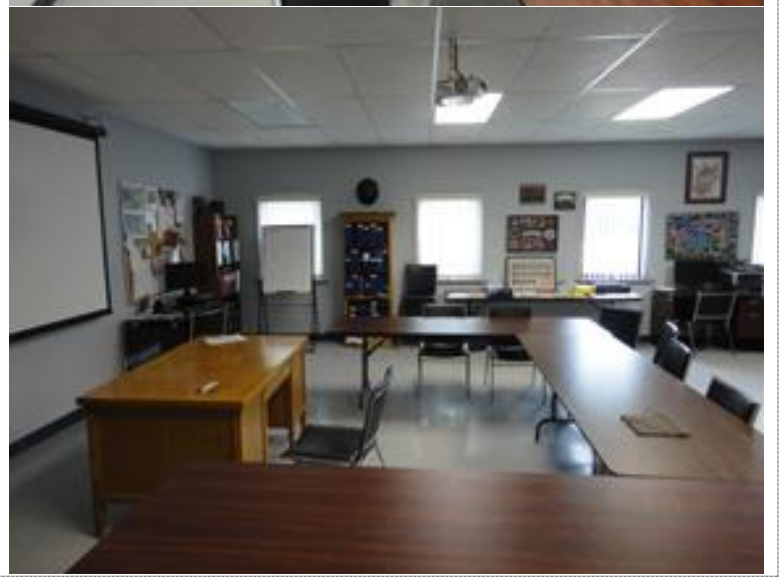
		
Exterior Walls	Gypsum on exterior walls is in good condition.	
Partition Walls	Gypsum on interior partitions is in good condition.	

Ceilings	T-Bar ceilings in offices, meeting room, washrooms and kitchen are in good condition.	 
Doors	Interior wood doors in fair condition.	
Trim	Vinyl base is in good condition.	

Washrooms	Both washrooms are in good condition. Neither are AODA accessible. The female washroom could be converted into an accessible washroom.		 

Plumbing Fixtures	Washroom fixtures are in good condition. Kitchen fixtures are in good condition.	

Offices	Separate report and duty offices. Offices are in good condition and suit the needs of the department. Additional office space for the deputy chief would be beneficial.	 

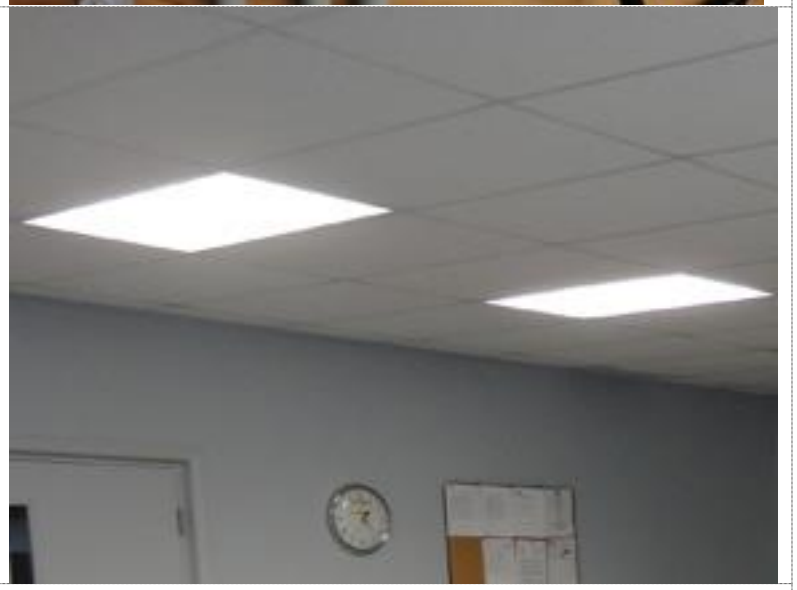
Meeting / Training Room	The meeting / training room is suitable for occupancy and training needs. A/V equipment is in good condition and suitable for the training that occurs at the station.	 

Storage	Storage space is a mezzanine on top of the office – insufficient space. Should be enclosed. Wellesley Station is the only station that has hose drying racks.		 

Maintenance	Sufficient maintenance space and uniform washing facilities under storage mezzanine, in good condition.	 

Electrical & Mechanical

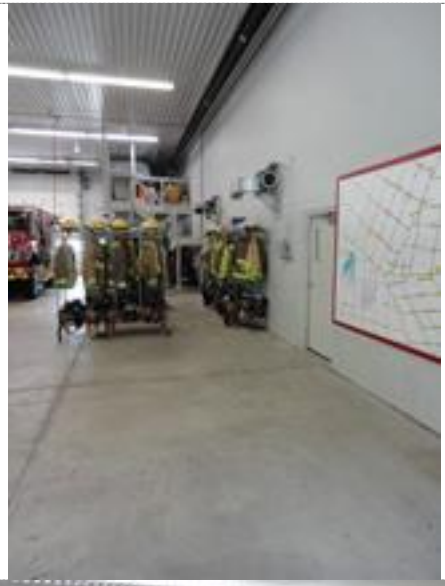
Electrical Service	200 amp service panel. Panel is in good condition, but is full.	
Lighting Fixtures	Interior T5 ballast fixtures, in good condition. Exterior fixtures are LED on daylight sensors.	
Telephone	One phone line.	

Network	Building is wired with cat 6e cable.	
Mechanical System	Direct vent gas furnace in good condition. Radiant gas heaters in vehicle bays in good condition.	
Water Heater	40 gallon direct vent electric hot water tank in good condition.	

Natural Ventilation	Exhaust fans in vehicle bays are connected to CO^2 sensors. The sensors are not working, and apparently have not worked properly since the building was constructed. Operable windows in the offices, meeting / training room, and kitchen allow for natural ventilation.	 

Other

Current Occupancy	23 occupants, (Jon to recommend # firefighters required)	

Future Occupancy	Space in the vehicle bays to accommodate more. Could increase to 30 people.	
Vehicle Occupancy	POMAX to comment. Sufficient space for existing vehicles and equipment. No space available for additional vehicles.	

Township of Wellesley - Fire Station Existing Conditions Study & Functional Assessment

Building Name: St Clements
Building Address: St Clements Fire Station 2671 Herrgott Rd, St Clements, ON N0B 2M0
Date of Site Visit: June 9th, 2015
Performed by: Paul Gorrie – Brook McIlroy

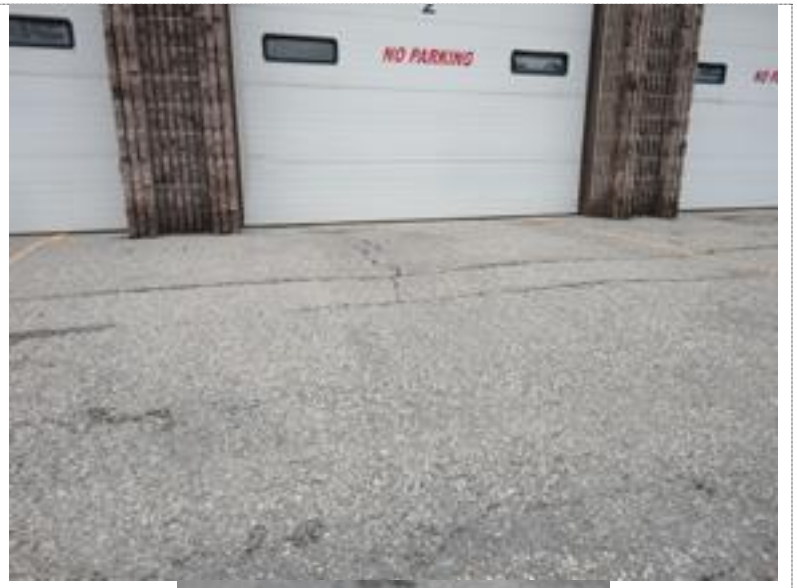
Overview: St Clements Station was built in 1979.

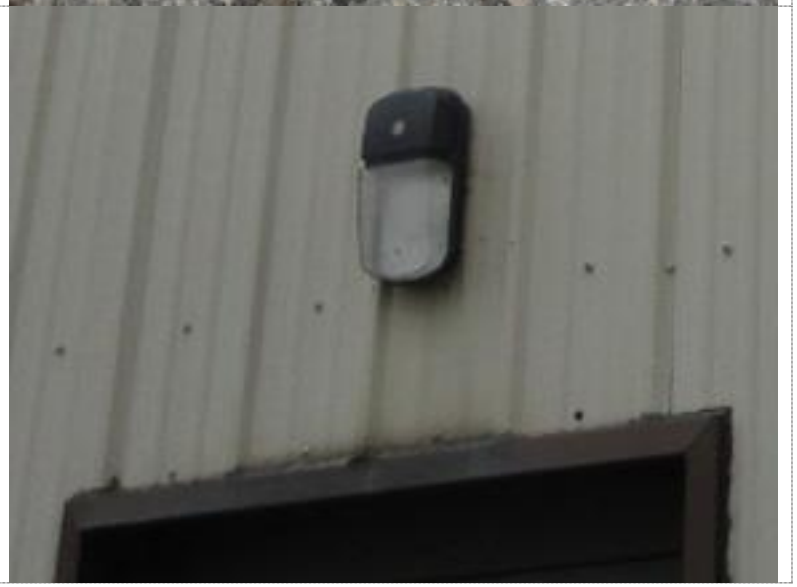
St Clements station is in poor condition and no longer suited to the programmatic and functional needs of the Wellesley Township Fire Department. The kitchen and meeting / training room are too small for the occupancy, lack windows, natural light and ventilation. The dispatch office is too small for the occupancy, lacks natural light and natural ventilation. The vehicle bays are too short to accommodate modern equipment, prohibiting equipment upgrades, and the orientation of the structure makes it difficult and costly to increase the length of the vehicle bays. The single washroom is not functioning, is not AODA compliant and is currently used as storage space. There is insufficient space for storage, maintenance and changing. The roof is in poor condition, shows pooling, at least one leak, and requires reroofing.

Mechanical upgrades to the furnace and vehicle bay radiant heaters, as well as recladding the south exterior wall with metal siding, have kept the building operational, but do little to help the functional and programmatic short comings.

Compounding the poor condition of the site is the siting of the building itself, located centrally on the site, and the location of the septic and cisterns, which would make additions to the building difficult, but not impossible.

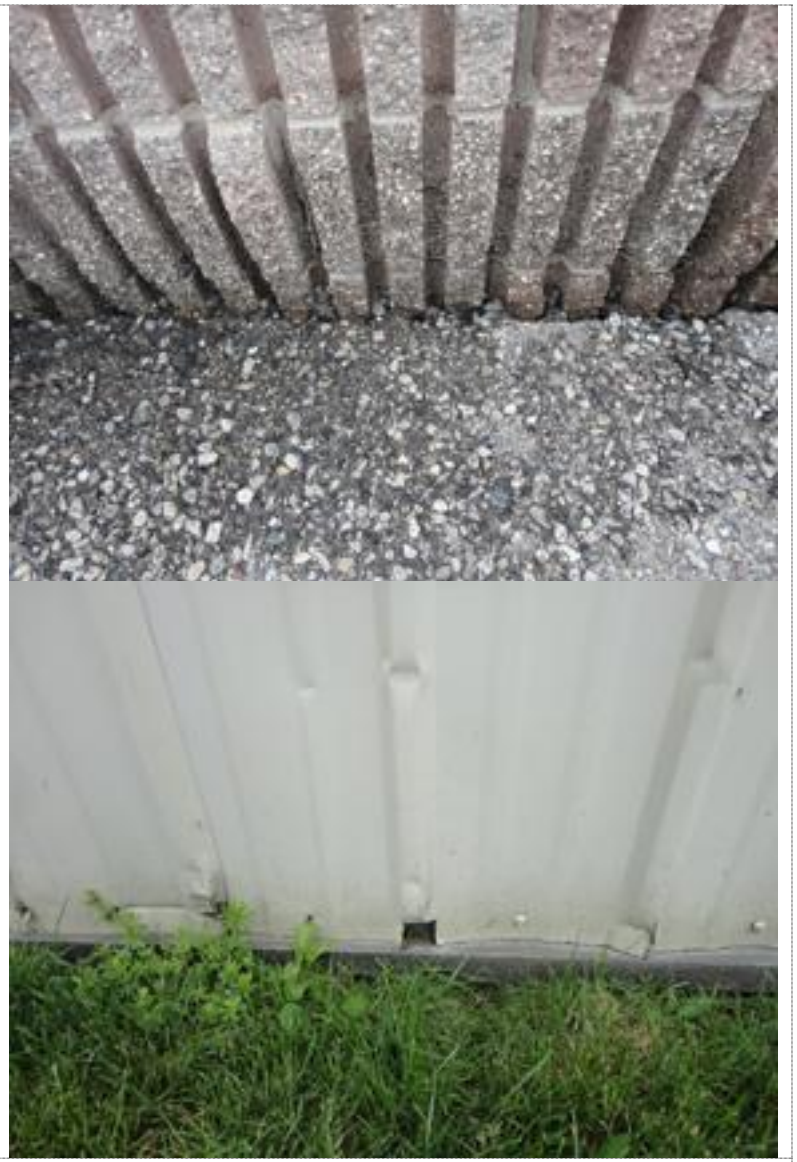
Site

Parking	There is suitable parking on the site to accommodate the occupancy of 15. The asphalt is in poor condition and in need of repaving, especially at the entrance to the vehicle bays.	 

Access	Access to the building is at grade, and the building does not have or require a ramp to access the main entrance.	
Lighting	Exterior lighting are original metal halide fixtures, no daylight controllers, in fair condition.	

Other	Septic system is believed to be original, could not be assessed for condition. If it is the original system it will likely be at the end of its life cycle and in need of upgrade.	

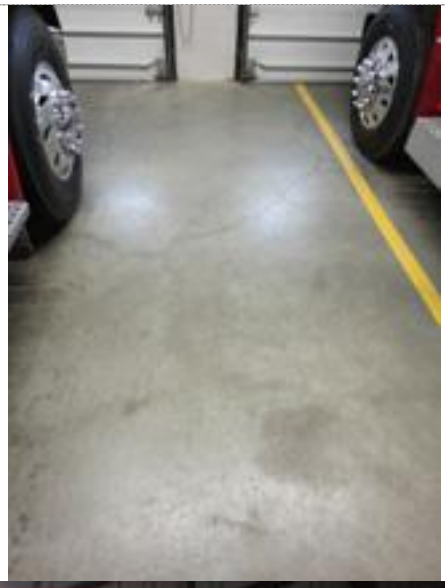
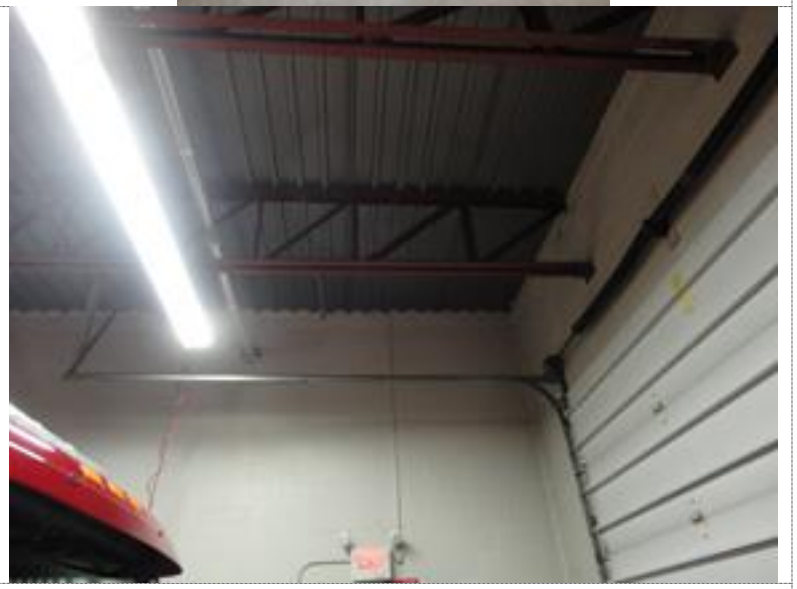
Exterior

Cladding	Original masonry cladding on west elevation is in fair condition. Metal cladding on north, east and west elevations is in poor condition.	
Windows	N/A	

Roof	The roof is in poor condition and needs to be replaced. There is water pooling in multiple areas, resulting in reported leaks (not observed during site visit). Rubber flashing is showing signs of cracking. The roof substrate appears soft when walked on.	 

Doors	Man doors are original hollow metal doors in fair condition. Vehicle bay overhead doors are original doors and lifters and are in fair condition.	

Interior

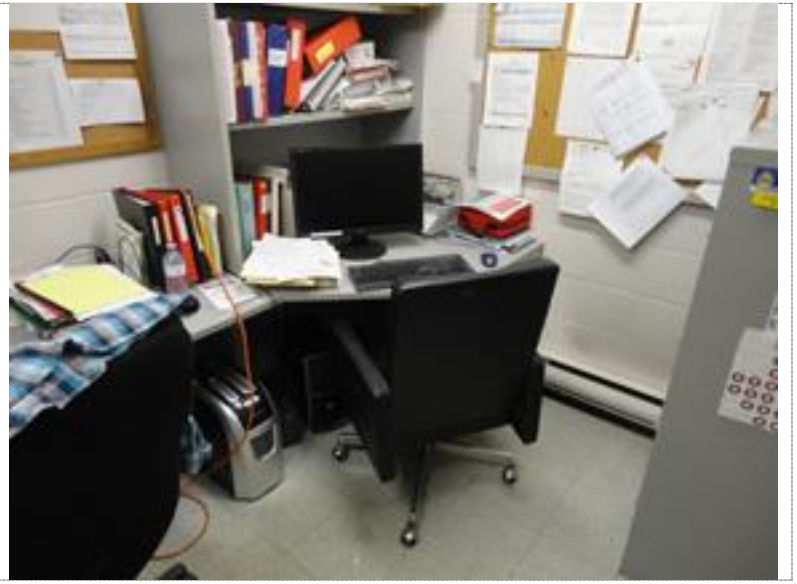
Floors	Concrete floors are in good condition, showing only cosmetic cracking. Chief reports that the floors drain well – best of all the stations.	
Exterior Walls	Exterior concrete masonry unit walls in good condition. No apparent moisture or cracking issues.	
Partition Walls	Interior concrete masonry unit walls are in good condition.	

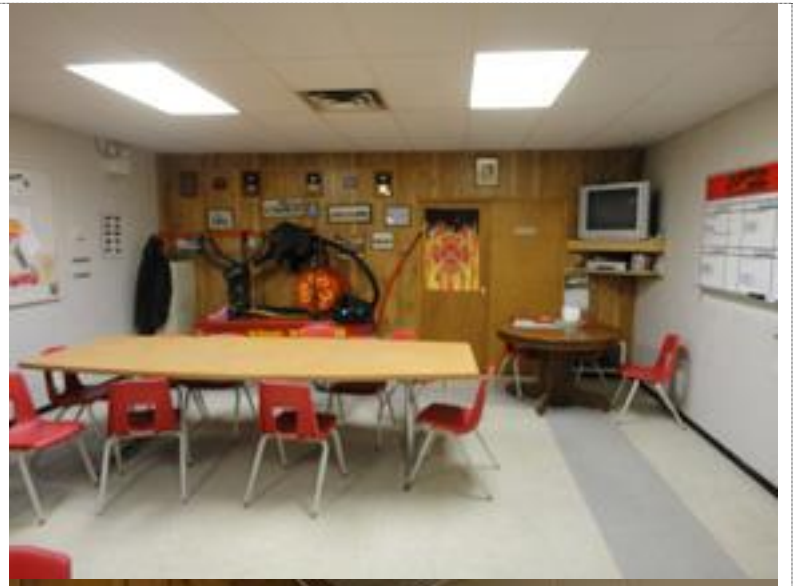
Ceilings	Vehicle bay metal ceilings in good condition. Kitchen / office / meeting room T-bar drop ceiling in fair condition. Storage room above T-bar ceiling lacks guard for safety. Insulation stuffed between metal pan ceiling and top of exterior block wall appears to be discolored – should be reviewed further by environmental.	 

		
Doors	Interior partition doors in good condition.	
Trim	N/A	

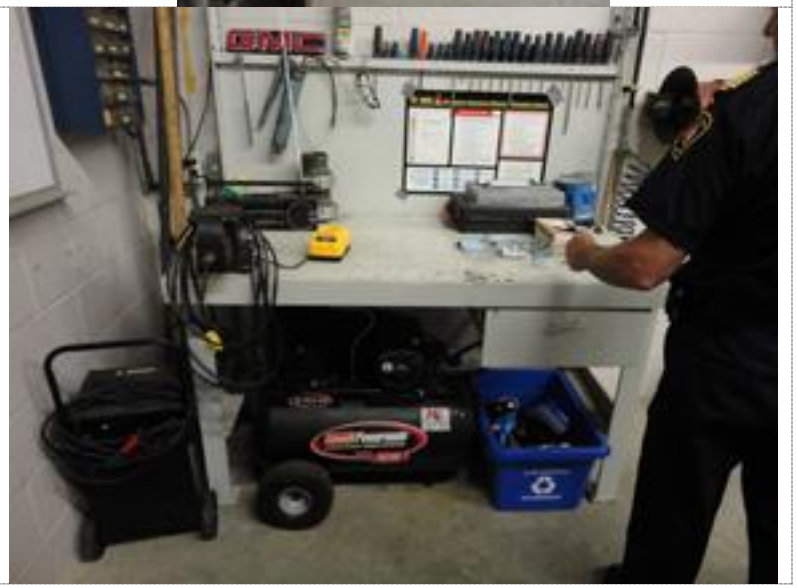
Washrooms	Single washroom in poor condition. Not AODA compliant. Old fixtures. Currently used as storage.		 

		
Plumbing Fixtures	Washroom fixtures in poor condition – shower not in working order. Kitchen fixtures in fair condition, in working order.	

Offices	Report office is at capacity, in fair. No duty office or deputy chief office. No radio room. Report office has no natural light or natural ventilation.	

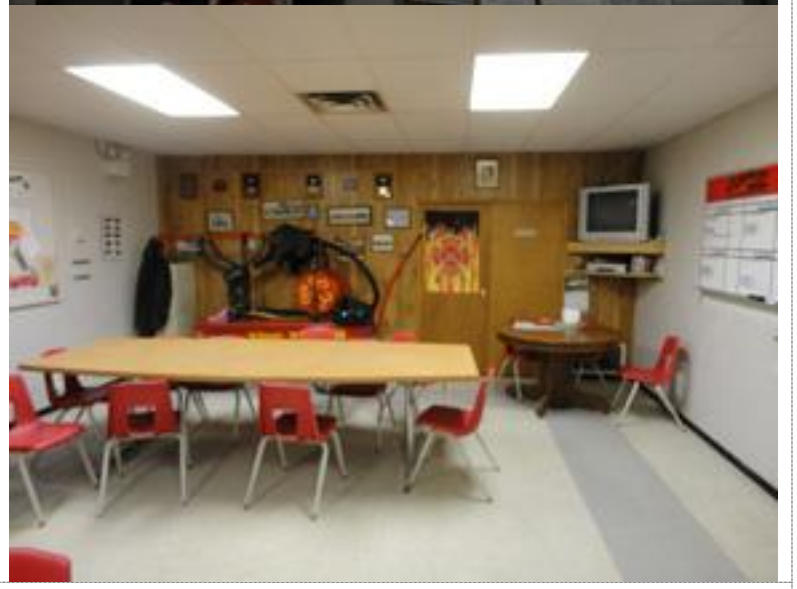
Meeting / Training Room	The kitchen and meeting / training room are too small for the occupancy, lack windows, natural light and ventilation. The A/V equipment for training is not suitable for training needs.	 

Storage	There is no dedicated storage room. Items are stored in a mezzanine above the washrooms. The mezzanine is accessed by ladder, and lacks a guard, which represents a safety hazard. Storage also occurs in unused areas such as the shower, washroom and old hose tower.	 

		
Maintenance	There is no dedicated maintenance room. A maintenance table is set up at the back of the vehicle bay. Maintenance supplies are also kept in the old hose tower room.	

Electrical & Mechanical

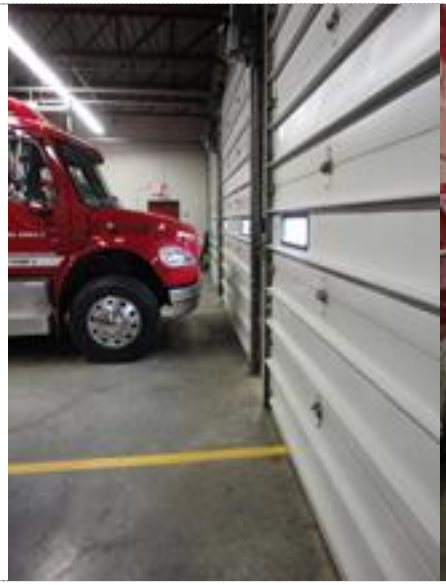
Electrical Service	200 amp service panel. Panel is in fair condition, but is old and could be updated.		

Lighting Fixtures	T5 ballast fixtures, in fair condition. Exterior fixtures are metal halide with no automated operators.	 
Telephone	One phone line	
Network	With exception of office, no network cable.	

Mechanical System	New gas radiant heaters in vehicle bays. Direct vent gas furnace, 92% AFUE for office, kitchen, board room and washrooms. In Fair Condition	 

Water Heater	10 gallon electric hot water tank – insufficient for occupancy.	
Natural Ventilation	No natural ventilation in office, kitchen, meeting room - only via man door. Switch operated ventilation fan in vehicle bays. Markup air comes from overhead doors and man door.	

Other

Current Occupancy	15 occupants – can hold 23	
Future Occupancy	No projected changes	
Vehicle Occupancy	Adequate space for current vehicles. No space available for additional vehicles.	 

Appendix D: Establishing and Enabling By-law Sample Schedule

The following services are provided by the Fire Department:

1. Vehicle Extrication: The Fire Department shall use manual and heavy hydraulic tools to perform rescues for vehicle, industrial and farm machinery extrication.
2. Confined Space Rescue: The Fire Department shall maintain the capability of responding to confined space incidents and performing confined space rescue in conformance with the (enter chosen reference standards)
3. Medical Aid Responses: The Fire Department shall provide advanced first aid and automatic external defibrillation.
4. High/Low Angle Rope Rescue: The Fire Department shall maintain the capability of responding to high/low angle rope rescue incidents limited to the use of descending rescue techniques for high angle rescue and rescues on flat land or mild, sloping surfaces.
5. Trench and Structural Collapse Incidents: The Fire Department shall maintain the capability to respond to Trench and Structural Collapse incidents at a level limited to securing the area surrounding the trench or structural collapse
6. Hazardous Materials Leaks and Spills: The Fire Department shall maintain the capability of responding to Hazardous Materials Leaks and Spills incidents at the "operations and technician level" in accordance with (enter chosen standard reference) The Fire Department will request additional assistance through the (County) Fire Coordinator in accordance with Provincial Protocols.
7. Ice and Water Rescue: The Fire Department shall maintain the capability to provide land based and vessel based water and ice rescue in accordance with (enter chosen standard reference)
8. Fire Prevention: Fire Prevention is mandated by the Act. The Fire Department, as a minimum, responds to complaints and requests for inspections. Generally, the Fire Department administers a proactive fire inspection program and other activities as regulated by the Act, as amended.
9. Public Education: The Fire Department shall meet the requirements of the Fire Protection and Prevention Act, as amended.
10. Fire Suppression: The Fire Department shall be capable of responding to and extinguishing fires at a level that meets the community needs and circumstances as determined by Council. The Fire Department shall perform these services at a level up to and including entry of buildings for the purposes of search and rescue and interior/exterior firefighting operations.
11. Fire Investigations: The Fire Department shall perform cause and origin fire investigations and work cooperatively with the local police services regarding any violation of the law. The Office of the Fire Marshal of Ontario shall be contacted to investigate fires which fall under its mandate as defined in the Act.
12. Training: The Fire Department shall provide training to members of the department on the use of equipment and procedures to perform the duties for which they may be called. The Training Division shall conduct research and ensure that the training required for the Members of the department is delivered.

13. Communications: The Fire Department shall operate an Emergency Fire Communications Centre which receives and dispatches emergency calls and disseminates critical response information to and from emergency scenes.
14. Public Assistance: The Fire Department shall provide public assistance to the community in accordance with the resources of the department and in accordance with the training of the Members, as authorized by the Fire Chief or designate.

Appendix E: Supplemental Questions from Township Council

Supplementary

Following the presentation of the Fire Master Plan draft report to Council by Pomax, Council submitted supplementary questions in three subject areas:

1. The fire department advisory committee
2. Advanced paging system
3. Delivery standards in comparable communities

The answers follow below.

1. Fire Department Advisory Committee

Council questions

a) Could the master plan make any recommendations of the composition of the Fire Advisory Committee? Should there be members of the public on the committee?

b) Could the master plan provide terms of reference for the council representative's role on the Fire Advisory Committee/Chair of the Property and Fire Committee of Council?

Pomax Response

The Township of Wellesley By-law No. 5/2010, section (k) states that the "advisory committee means members from each station as the Fire Chief deems necessary and are there in an advisory capacity only."

It appears that the original purpose of the advisory committee was to provide operational advice to the fire chief from the operations level of the fire department. It is not clear at what point the Chair of the Property and Fire Committee of Council was appointed by the Mayor to sit on the advisory committee, nor is it clear what purpose this appointment is to serve.
Council and the senior management of the township and fire department should decide on the purpose of the advisory committee and then create the terms of reference in that light, including the composition of the committee. Advisory committees can perform a number of functions and determining their purpose assists in defining who should be on a committee and what activities they should engage in, as well as defining the type of authority assigned to the committee and its members.

Council should determine if the purpose of the committee is to continue to provide operational advice to the fire chief as originally intended. If so, Council should reconsider the appropriateness of having a council member sit on the committee. Good practice in municipal settings delineates between policy and operational responsibilities and authority. Council has the authority and responsibility to make broader policy decisions such as setting types and levels of service and then operational policy making and responsibilities are assigned to the appropriate role, in this case the fire chief. Council should not directly participate in operational decision making and policy setting other than to ensure corporate policies are being adhered to at the operational level. Appointed council representatives should be vigilant to possible conflicts of interest and interference in personnel or confidential matters appropriately assigned as operational responsibilities.

Council may decide that the role of a council appointee is to provide a conduit for information flow between Council and the fire department, and, through participation on the advisory board, to impart some fire service "expertise" during council discussions and support fire department initiatives that come to Council through the advisory committee. In this case, the responsibilities and authority of the appointee should be clearly defined.

General terms of Reference for Advisory Committees
We provide the following template for creating the terms of reference for an advisory committee to Council, should Council decide that a fire services advisory committee benefits public fire safety in the township.

Terms of reference template

Name of group:
Title: Terms of reference [followed by date terms of reference written/revised]

Purpose: [role of the group, for example]

- What is the broad purpose/role of the committee?
- When was the group established and by whom?
- What are the aims/responsibilities of the group?

Membership: [for example]

- Who is membership of the group open to?
- Are there any restrictions on numbers?
- Are public members involved? What is the purpose of their membership?
- Should representatives from other organizations be included?
- How long is the period of membership and can it be extended?

Accountability: [for example]

- Are individual group members responsible for reporting back on activities of the group and if so to whom?

Review: [for example]

- How often will the group review the relevance and value of its work and the terms of reference?

Working methods: [ways of working, for example]

- What method/approach to working will be adopted?
- Will any sub groups be convened?

- What will the chosen working method involve in practical terms – for example, with reference to the following three points?

Meetings

- How many meetings will be held each year and where will they be held?
- Who will organize and chair the meetings?
- How will topics for the agenda be generated?
- How and when will meeting papers be circulated?
- What will the format of meetings be? For example, will they include small group discussions?
- Will non-members be invited to group meetings, and if so, under what circumstances?
- Who will provide secretariat for the group?

Sharing of information and resources (including confidential materials) [for example]

- How will group members share information and resources?
- How will confidential materials and copyright issues be identified and dealt with?

Definition of terms

- Provide definitions of any key terms.

2. Advanced Paging System

- Could the Master Plan discuss benefits that have been realized from the implementation of the advanced paging system?

The paging system, which uses smartphones rather than traditional pagers, has been introduced recently and was not fully adopted at the time of this report. Officers and firefighters are on a learning curve regarding accessing and reporting within the system. Due to the low incident volume within Wellesley Township Fire Department, a two-year assessment period will be required to acquire sufficient data to confidently assess the paging system's effectiveness. We encourage the township and fire department to allow the recommended two-year period to pass prior to making a decision regarding the effectiveness of the new system.

3. Service Delivery Standards in comparable communities

- Could the Master Plan outline any standards for service delivery and/or provide comparators for similar municipalities?

The Ontario Office of the Fire Marshal and Emergency Management has developed service standards, which are currently under review. NFPA 1720 provides delivery standards for volunteer fire departments. We recommend using NFPA 1720 as a template and extracting service standard components applicable

to the township. A review of service delivery standards of other municipalities would require access to their data and would be a considerable undertaking that is beyond the scope of the project deliverables.

The township's fire chief would have access to both NFPA 1720 and the Office of the Fire Marshal and Emergency Management service standards, which are available online starting at http://www.mcscs.jus.gov.on.ca/english/FireMarshal/Legislation/Legislation_main.html