

Fire and Emergency Services  
Business Plan

City of Mississauga

2011-2014



**DRAFT**



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# Existing Core Services

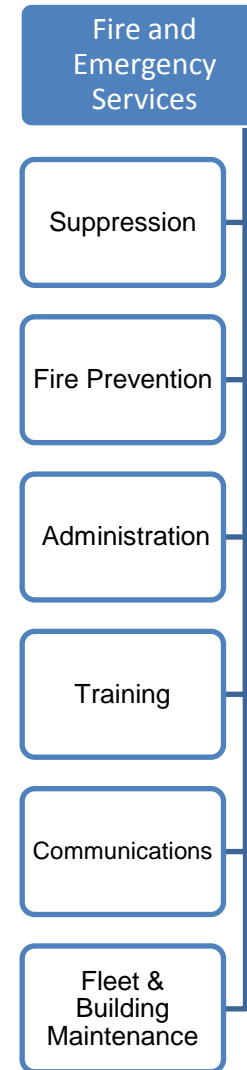
## 1.0 Vision and Mission

The continued success of the City relies on its ability to identify current and future needs of each of its communities and determine ways in which to effectively and efficiently address those needs. The primary component to achieving this success is the development of the City's long term strategic plan which outlines the vision for the City over the next 40 years.

In order to enhance the City wide vision, each service area in the city has developed a plan to ensure that both immediate and future needs are met. Fire and Emergency Services have developed a four year business plan that will be fundamental to managing the community's fire protection services. A key part of this plan was assessing the existing Service Delivery Model and identifying any areas where changes may be necessary in order to meet our strategic goals and continue to deliver a excellent service to the Community.

### Vision and Mission

The Mission of Mississauga Fire and Emergency Services (MFES) is to protect life, property and the environment in Mississauga from all perils through education, prevention, investigation, training, rescue, fire suppression, dangerous goods containment and life support services.



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## 2.0 Service Delivery Model

Traditional firefighting has evolved into a multi-faceted all risks emergency response service, providing the residents of Mississauga the appropriate level of service for fire, medical and rescue services. MFES is made up of six divisions that all work together. The successes are a result of the cooperation between all of the functional areas.

### Suppression

The Deputy Chief of Operations, Training and Fire Prevention is responsible for the Suppression Section. The suppression section operates 24 hours a day, 365 days a year. There are currently 616 full time staff operating on four shifts. Each shift is comprised of 154 persons, with one Platoon Chief, three District Chiefs, thirty Captains and one hundred and twenty firefighters.

### Prevention and Public Education

The Fire Prevention Section of Mississauga Fire and Emergency Services perform four very important functions for the City of Mississauga. These include; code compliance inspections, public education, plans examination and fire investigations. These functions are supported by a foundation predicated on ensuring initial building construction meets applicable code and proper fire safety design engineering.

### Administration

The administration section is responsible for the overall management of the department.

### Fleet and Building Maintenance

MFES currently maintains 30 front-line fire suppression vehicles, nine reserve vehicles, seven speciality vehicles, and some 34 cars and vans making up the balance of the MFES fleet. The building maintenance (facilities) section

provides regular repairs and maintenance to all fire department facilities, their associated equipment and systems. Like vehicles, these facilities must be maintained 24 hours per day, 365 days per year.

### Training

MFES Training Section is responsible for the continual development, organizing, delivery and recording of training programs specifically for the members of the operations section, as well as other members of the organization. On going training is a daily reality in this industry and one of the key factors to ensure service excellence and the ability to mitigate the impact of extreme hazards/risks to residents and staff.

### Communications (Dispatch)

Communications provides emergency call taking and resource dispatch for all emergencies and operates 24 hours per day, 365 days per year.

#### Key Documents that shape our Business Plan

- Strategic Plan
- City Business Plan
- Fire and Emergency Services Draft Master Plan
- Fire and Emergency Services Standard of Cover Report

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### 3.0 Past Achievements

MFES is proud of its achievements both in the community and abroad. The following are just a few of the highlights from 2009.

- A volunteer group of firefighters went to Honduras to train both the firefighters and the community in various life saving disciplines, and emergency preparedness principles;
- The auto extrication team took 5th place out of 30 teams in the World Auto Extrication Championships held in Germany;
- Responded to 527 cardiac events where 316 met the criteria for defibrillation protocol resulting in 23 people being successfully discharged from hospital; and
- A co-operative labour management Health and Wellness program was launched to promote a comprehensive and holistic approach to lifestyle.

MFES takes the City of Mississauga's motto of "Leading Today for Tomorrow" very seriously and strives to be a leader in fire services. Over the years MFES has reviewed operations in many municipalities across the country to better understand best practices and develop new and innovative programs. Some of these are:

- The Home Safe Home inspection program. This program has on duty suppression crews visit homes within the community to provide fire safety information and ensure smoke alarms are functional;
- Provision and installation of smoke alarms for residents;
- Hosting an Incident Command training symposium that welcomed participants from all across Canada; and

- Training program for MFES officers on latest Incident Command processes in order to be able to provide training to other municipalities.



MFES staff in High Angle Rescue Exercise



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#### 4.0 Opportunities and Challenges

In early 2010 a detailed analysis was conducted to assist in identifying the opportunities and challenges that Mississauga Fire and Emergency Services will face over the next few years. MFES has also completed a draft Master Plan to lay the planning framework for the next 20 years. The following opportunities and challenges are derived from both these exercises.

##### Opportunities:

- New emergency response performance model that reports total response time (dispatch, turnout and travel time) allowing for measurable improvements in all portions of the response process;
- Automatic Vehicle Location (AVL) will identify the closest available vehicle to respond to an emergency leading to reduced response times;
- Mobile Data Units (laptops) in front line vehicles to improve both routing and overall response capabilities while allowing for more accurate “in-field” reporting;
- Garry W. Morden Centre will provide better cross training possibilities with other emergency service providers and reduce the City’s exposure to driving related incidents with the addition of a 1.2 km driver training circuit;
- Establishing working relationships with the Department of National Defence, Peel Police and EMS which lead to improved emergency management programs through inter-agency co-operation of local responders and better training opportunities;
- New Building Code legislation which makes sprinklers mandatory in high rise residential occupancies over three stories enhancing life safety of residents and fire fighters and reducing fire loss;

- Health and Wellness program will reduce lost time from illness, injury and job related disease; and
- If the Region of Peel adopts a response time standard that includes the ability of the Fire Department to “Stop the Clock” for specific medical emergencies. This will help to limit the duplication of services and reduce the cost of medical service across the Region.



MFES Staff on-site emergency response service

## Challenges

- Limited capacity to collect and use existing data to its potential;
- Difficulty being able to reflect the cultural diversity and demographic profile of the community through the recruitment process;
- Demographics and language barriers lead to difficulty in communicating fire safety messages;
- Difficulty developing performance measures in some non-emergency areas;
- Limited capacity to respond beyond basic core services outside of MFES mandate;
- Population has increased by 100,000 people since 2001 and is expected to increase further and as a result the number of emergency incidents has increased and traffic congestion is negatively impacting response times;
- Number of high rise developments negatively impacts response times;
- Revenues are decreasing, equipment costs are rising and development charges are in a deficit;
- Labour costs continue to escalate at a higher rate than inflation; and
- Proximity and response requirements to the airport with regard to terrorism has been identified in the Hazardous Identification Risk Assessment.



Air France Crash – August 2, 2005

*“When a man becomes a fireman his greatest act of bravery has been accomplished. What he does after that is all in the line of work.”*

*Edward F. Crocker*

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## 5.0 Current Service Levels

The establishment of standards and guidelines that affect the staffing response to structural fire calls has been a topic of much debate in the fire protection industry for some time. Since there are no legislative requirements pertaining to performance measures or any specific standards that fire departments are obligated to meet, municipalities are tasked with setting the service level that meets the needs of their municipality. This has resulted in a wide range of service levels across Canada and North America.

In Ontario the provision of fire protection services is modelled on the three lines of defence which are:

- Public Education and Prevention;
- Fire Safety Standards and Code Enforcement; and
- Emergency Response.

No one measure on its own provides the level of fire protection necessary to reduce the loss of life from fire. The fire service had historically put more emphasis on suppression, but the emphasis today is on the need to prevent fires and educate the public on fire safety. Fire prevention and public education use a proactive approach in reducing the probability of fires occurring and helping to limit the loss of life and property in the fires that do occur. Fire suppression is the fail safe.

Available fire department data was used to establish a council endorsed standard in 1999. The expected performance identified in 1999 was reflective of the expectations of the day for the fire service to respond the necessary resources to address a single family dwelling fire. This standard established travel time targets as follows:

First responding vehicle arriving on scene within four minutes of travel time, 75 percent of the time; MFES Actual : 62 percent;

- Second responding vehicle arriving on scene within six minutes of travel time, 90 percent of the time; MFES Actual: 79 percent; and
- Third responding vehicle arriving on scene within eight minutes of travel time, 90 percent of the time. MFES Actual: 90 percent.

Fire and Emergency Services responded to a total of 26,966 incidents in 2009. While fire suppression is generally considered to be the primary function of the fire service, only about 1 percent of responses in Mississauga are structure fires. Approximately 45 percent of the responses are medical. Services provided to the community include:

### **Fire Suppression**

MFES responds to a broad range of structure fires including single family detached and semi- detached homes, multi-unit residential, institutional occupancies as well as commercial and industrial buildings and complexes. MFES provides shore based firefighting for boat fires at marinas and assists the GTAA (Greater Toronto Airports Authority) with aircraft incidents on their property and are responsible for any offsite aircraft incidents.

### **Rescue**

MFES provides rescue response for automobile extrication, industrial accidents, and home accidents.

### **Medical**

Calls to 911 are evaluated by dispatchers at the ambulance service and, if warranted MFES responds in support of Peel Regional Paramedic Services.

### **Hazardous Materials**

Specialized MFES staff are trained to analyse and mitigate responses to chemical, biological, radiological, nuclear and explosive (CBRNE) incidents.



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### **Technical Rescue Programs**

Specialized MFES staff are trained to provide rescue for ice and fast water incidents high and low angle rope rescue, trench and confined space rescue.

### **Utility Emergencies**

MFES provides response to natural gas incidents including gas leaks and gas line breaks, electrical incidents including wires down, electrocutions and transformer fires.

### **Public Assist**

MFES responds to a variety of public assistance calls from flooding, to elevator emergencies.

### **Disaster Response**

MFES provides response to natural disasters as well as other large scale community disasters such as pandemics, blackouts etc.

### **Fire Alarms**

Response personnel investigate the cause of alarm activations to ensure that the occupants and properties do not have an emergency, and are being effectively protected by the existing alarm system.

### **Other Community Programs**

MFES uses their 616 suppression personnel proactively in providing fire safety and security to the residents of Mississauga. These programs are delivered by on duty fire fighters and are an effective and cost effective way to deliver fire safety programs while still meeting our suppression requirements. The table below highlights some of the activities.

In Company Inspections - on duty suppression crews conduct fire safety inspections of mercantile, commercial and

industrial occupancies within their respective response areas.

Tactical Surveys - on Duty Suppression crews conduct tactical surveys in order to familiarize themselves with higher risk occupancies.

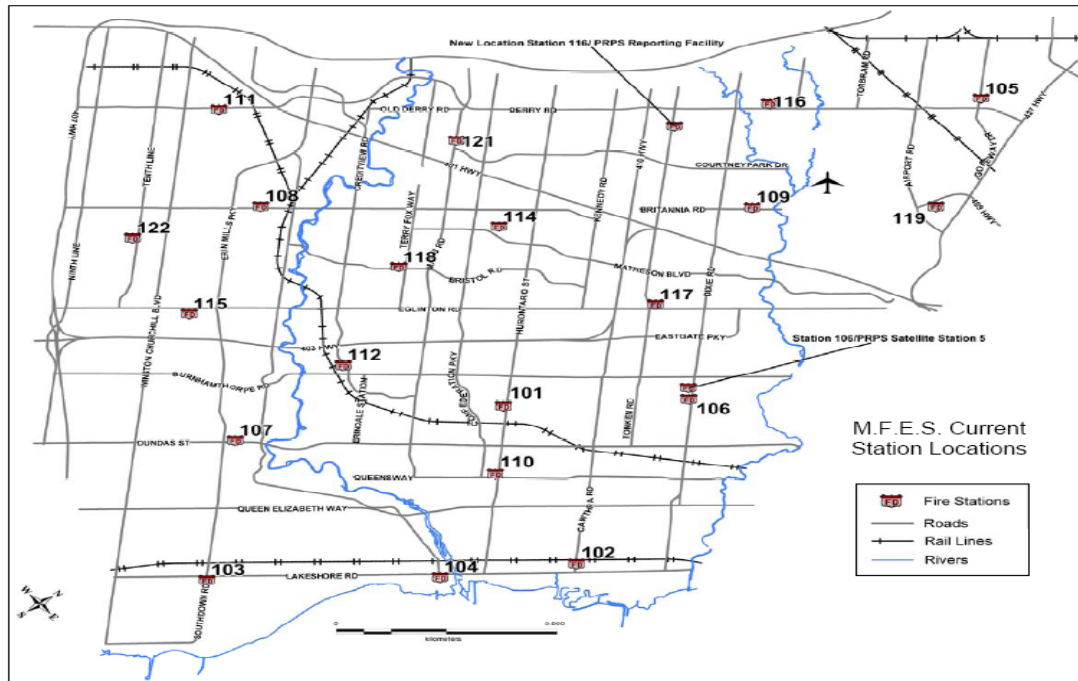
<b>Programs - 2009</b>	
In Company Inspections	11,876
In Company Re-inspections	741
Tactical Surveys	3907
Home Safe Home Visits	16,126
Truck Visits	351
Station Visits	122

## 5.1 Maintaining Infrastructure

In order to deliver the needed service, MFES has strategically placed 20 fire stations throughout the City of Mississauga. These facilities are staffed 24 hours per day, 7 days a week with thirty staffed front line vehicles consisting of 16 pumpers, 8 aerials and 6 squads. To support these and other types of emergency responses, MFES also has 7 unstaffed specialty vehicles used for technical rescue, hazardous material and trench rescue response. The replacement value of these vehicles is estimated at \$35,000,000.



Fire Station 116/Paramedic Reporting Station



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## 6.0 Looking Ahead: Goals for the next 4 years

MFES is committed to the following goals:

- That MFES meet service level objectives using a new performance model that measures total response time based on industry best practices;
- That MFES completes the categorization of all properties within the City of Mississauga according to the associated risk;
- That the MFES response plan matches resources with risk category (ie high risk properties require more resources than lower risk); and
- That enhanced public education program delivery is targeted to match identified risks in the community such as older adults, children, and residents requiring special needs.

### Operational Objectives of Service (Based on Industry Best Practice)

#### Suppression:

- **Dispatch Time** (from time call received to when the station is alerted). MFES will consistently meet the alarm processing target time of 60 seconds, 95 percent of the time;
- **Turnout Time** (from time alerted until truck leaves the station). Firefighters will receive and acknowledge the alarm, dress in full personal protective equipment and be ready to respond in 80 seconds, 90 percent of the time;
- **First Response** (Distribution). An initial team of four firefighters will arrive within six minutes 20 seconds total response time, 90 percent of the time; and
- **Depth of Response** (Concentration). A minimum total complement of 20 firefighters will arrive to a fire involving

a typical single family dwelling in 10 minutes 20 seconds total response time, 90 percent of the time.

**Emergency Medical Response:** An initial crew will arrive within 6 minutes total response time, 90 percent of the time.

#### Prevention and Public Education:

- That MFES, through Fire Prevention and Suppression crew activities use available data to, identify and classify building stock of special, high, moderate, and low risk occupancies, based on industry best standards;
- To meet both new and existing legislative requirements related to Building Code, Fire Code, by-laws, and zoning regulations while continuing to reduce the backlog of outstanding, issued building permit and violation notices that require follow up inspections;
- To expand the existing fire safety webpage to better address our multicultural make-up, where fire safety and emergency planning information will be posted, translated into the 11 predominant languages as identified by the last census;
- To identify and capture all residential accessory dwelling unit occupancies to be targeted for fire safety audits and regulatory compliance inspections;
- Complete the certification and provincial qualification process of all Prevention staff as Certified, Fire Prevention Officers, Fire & Life Safety Educators, and Qualified Building Officials; and
- Expand the Risk Watch Program for children in all elementary and middle schools across the city.

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### Training:

- Continue to develop officer training programs and identify new opportunities for officer development and succession planning;
- Innovative use of research and development based on industry best practices to drive front line operational efficiencies;
- Review, test and evaluate all practices and policies for compliance against industry best practices and legislative requirements;
- Leverage the use of the Garry W. Morden Centre to deliver high level training programs to MFES staff, industry stakeholders and optimize the return on investment;
- Develop, deliver and assess training programs that meet the needs identified in the Hazard Identification Risk Assessment (HIRA) study; and
- Effectively maintain all specialized rescue and medical response programs to industry standards.



Hazardous Materials Training Exercise

*“Courage is not the absence of fear, but rather the judgement that something else is more important than fear.”*

*Ambrose Redmoon*

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## 7.0 Engaging Customers

Based on the Pollara Citizen Value measurement survey completed in 2009, MFES was rated as the highest in overall satisfaction of any service in the City of Mississauga at 8.5. The City Average was 7.5. Residents have also indicated that the Fire Service is the most valued service offered by the City.

### Station Visits

This public education program is provided to various groups in Mississauga, ranging from elementary classes, boy scouts and pre-school groups. It allows the group to tour the fire station and learn about fire safety and the various public safety programs available to residents.

### Vehicle Visits

Many community events such as school fairs and parades request a fire department vehicle to provide public education as part of the event. Elementary schools request truck visits in order to assist with the risk watch program and the firefighter in the community program.

### Post Fire Community Blitz

This is a public education program that is directed to neighbourhoods that have had a fire in their immediate vicinity. Fire crews will distribute public education materials and answer questions from neighbouring residents.



United Way Truck Pull



## Proposed Changes

This part of the Business Plan deals with proposed changes to the 2011-2014 Business Plan & Budget. To assist the reader, the table below summarizes the drivers of these changes including, both operating and capital. Individual tables with a brief description of the change follow.

### Drivers of Operating Costs

Description (\$ 000's)	2011	2012	2013	2014
Prior Year Budget	81,582	84,863	89,064	94,387
<b>Base Changes &amp; Impact of Capital Projects</b>				
Base Changes	3,132	3,320	3,325	1,905
Impact of New Capital Projects	0	260	97	0
<b>Continuous Improvements</b>				
Efficiencies	0	0	0	0
Budget Reductions	0	0	0	0
<b>Total Changes to Base and Continuous Improvement</b>	<b>3,132</b>	<b>3,580</b>	<b>3,422</b>	<b>1,905</b>
<b>Total Cost to Deliver Our Existing Services</b>	<b>84,714</b>	<b>88,443</b>	<b>92,485</b>	<b>96,292</b>
<b>Proposed Changes</b>				
Growth Driven Initiatives	137	525	1,902	115
New Service Level/New Initiatives - Funded from Tax or Reserves	12	96	0	0
New Revenues	0	0	0	0
<b>Total - Proposed Changes</b>	<b>149</b>	<b>621</b>	<b>1,902</b>	<b>115</b>
<b>Total Budget</b>	<b>84,863</b>	<b>89,064</b>	<b>94,387</b>	<b>96,407</b>

Note: Numbers may not balance due to rounding

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## 8.0 Base Changes

In order to develop a city wide vision, each department has identified key priorities to ensure that both immediate and future service needs are met. MFES is developing a fire master plan which will be instrumental in identifying, prioritizing and managing organizational needs and the community's fire protection services outlook for the next twenty years.

Growth forecasts suggest that 41,500 people of the projected 83,400 additional Mississauga residents over the next 20 years will reside in the downtown core and in the Hurontario and Dundas corridors.

In an effort to mitigate some of the impacts of intensification on the fire service, recommendations for this business planning cycle promote: construction of a new fire station in the Hurontario and Eglinton area as well as targeted public outreach and the enhancement of training programs for suppression staff to address changes in building stock and associated intensification challenges.

One of the challenges for MFES in the future will be the growth and intensification in specific areas of the City. To meet these challenges, a proposal has been made for the construction of a new fire station to help address this issue and maintain the level of service provided as the population continues to increase.



Highrise Development along City Roadway

The following table illustrates highlights of this service area's base budget. This includes costs to maintain existing service levels including the annualized impact of previous Council decisions. Costs identified here are related to labour and benefit increases for existing staff, increases of an inflationary nature as well as service demand changes (e.g. declining program enrolments). This table does not represent a reconciliation of all budget changes, just highlights.

### Highlights of Base Budget Changes

Description (\$ 000's)	FTE	2011	2012	2013	2014	Total Net Costs
Labour	0.0	3,411	3,262	3,277	1,946	11,897
Labour gapping	0.0	(750)	0	0	0	(750)
False Alarm Revenue Decline	0.0	185	0	0	0	185
Fire Mechanical - Fleet Vehicle Maintenance Increase	0.0	100	0	0	0	100
Lease increase for Fire Station 119	0.0	79	0	0	(79)	0
Fire Building & Lease Maintenance Cost Increases	0.0	60	0	0	0	60
IT Allocations	0.0	45	4	0	0	49
Departmental Support Services Allocation	0.0	20	37	35	25	117
Utility initiative from Corporate Services	0.0	(18)	17	12	13	24
<b>Total Base Budget Highlights</b>	<b>0.0</b>	<b>3,132</b>	<b>3,320</b>	<b>3,325</b>	<b>1,905</b>	<b>11,681</b>

Note: Numbers may not balance due to rounding

The following table illustrates new operating expenditures which will be incurred annually going forward as the result of a completed capital project. Where a Budget Request (BR) number is noted, more information regarding this can be found in Volume 2 of the documentation.

#### Operating Impacts from Capital Projects

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Garry W. Morden Centre	61a	1.0	0	260	97	0	357	Other	
<b>Total Operating Budget Impact</b>		<b>1.0</b>	<b>0</b>	<b>260</b>	<b>97</b>	<b>0</b>	<b>357</b>		

Note: Numbers may not balance due to rounding

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## 9.0 Continuous Improvement

MFES has recommended changing the reporting of response data from travel time to *total response time*. Total response time is call processing time plus preparation (turnout) time plus travel time, which is sometimes referred to as “ring to arrive”. As highlighted above, the objective will be to maintain a response time of six minutes and 20 seconds 90 percent of the time for the first arriving truck.

While many of the improvements continually made by MFES are suppression or “firefighting” based, the non- suppression solutions are equally as important in mitigating community risk. MFES will look at options to expand and improve the public education programs, continually review new Building Code legislation and review alternatives to the current inspection cycles particularly for higher risk occupancies.

Partnerships play a vital role in how emergency service is delivered. MFES continues to work with Peel Paramedic Services and have worked to establish Fire and Ambulance co- located facilities at three locations in the City. Feasibility studies are ongoing to determine the viability of other locations.



Garry W. Morden Centre Construction

As highlighted in Section 4 of this document, the Garry W. Morden Centre will be a training facility that will provide the capacity for enhanced training for 616 suppression staff in order to meet future challenges. It will also provide a better opportunity for cross training with other emergency service providers.



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## 10.0 Proposed Changes

As highlighted in Section 6 one of the long term operational objectives for MFES is to achieve a total response time of six minutes, 20 seconds 90 percent of the time for the first responding fire truck.

Recognizing that effective fire fighting is not just about the first responding vehicle, it is important to identify objectives for concentration (depth of response). MFES is recommending that twenty firefighters arrive on scene within 10 minutes 20 seconds to all house fires to support simultaneous rescue and suppression capabilities.

There are critical tasks that must be conducted by firefighters at structure fires. Critical tasking for fire suppression outlines the requirements by task as well as the number of personnel and response vehicles require to complete those tasks. For example, to accomplish the critical tasks required in a fire involving a typical single family dwelling, 20 firefighters are needed for such things as: search and rescue; ventilation; and fire control.

To achieve these objectives, a number of measures are being taken and will need to continue to be introduced over this business cycle.

Population growth, intensification, increasing call volumes, increasing construction of high rise buildings and changes in building stock contribute to the ongoing need for additional resources. These include additional fire stations to help to achieve operational objectives.

A responsible growth strategy will permit impact assessments of any additional station as they are implemented to understand the influence of these stations on total response time and depth of response impact on adjacent response areas. After the impact of these new

stations has been fully assessed, MFES will consider additional facilities where a need is demonstrated.

Also impacted by population growth is the ability of prevention staff to maintain current service levels while at the same time responding to new regulatory mandated services. There are several new legislative changes that have recently come into affect, and others that are expected to occur over the next four years, that will further challenge the capabilities of the division.

MFES Training Division has one Chief Training Officer and a staff of six full time training officers to meet the training needs of a total department compliment of 704. Ministry of Labour and other regulatory agencies expect safety standards to be met and the current training division has limited capacity to meet the increasing research, program design, delivery and evaluation components for more than 50 core programs.

The primary function of the administration section of the fire department is to ensure, through careful planning and analysis, that the services delivered meet the needs of a growing community. As highlighted in this business plan, there are many opportunities that will be explored over the next four years. MFES has committed to the consistent collection, evaluation and analysis of data in order to be able to report on key performance measures on a regular basis. (see performance measure in Section 15).

The following table includes operating costs which are required to ensure that service levels are maintained to service a larger community.

### Growth Driven Service Costs

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Garry W. Morden Centre	61	2.0	83	0	0	0	83	Other	
Data Analyst	144	1.0	54	54	0	0	108	Continuous improvement	
New Fire Training Officers (3 FTE)	96	3.0	0	115	115	115	345	Continuous improvement	
Fire Prevention Legislation Resourcing	73	2.0	0	99	99	0	198	Continuous improvement	
Building Maintenance Mechanic	65	1.0	0	97	0	0	97	Maintaining a state of good repair for our infrastructure	
Deputy Chief Position	163	1.0	0	92	91	0	183	Continuing to be an Employer of Choice	
Stores/Equipment Clerk	116	1.0	0	37	37	0	74	Continuing to be an Employer of Choice	
Emergency Management	164	1.0	0	31	120	0	151	Continuous improvement	

### Growth Driven Service Costs

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Station 120- Hurontario and Eglinton area	74	20.0	0	0	1,440	0	1,440	Identifying any new initiatives that align with the Strategic Plan	Connect
Station 123 - Burnhamthorpe and Winston Churchill area -Post 2014	109	0.0	0	0	0	0	0	Identifying any new initiatives that align with the Strategic Plan	Connect
Station 124- Dundas and Cawthra area Post 2014	110	0.0	0	0	0	0	0	Identifying any new initiatives that align with the Strategic Plan	Connect
District Chief Positions Post 2014	158	0.0	0	0	0	0	0	Continuous improvement	
<b>Total Operating Budget Impact</b>		<b>32.0</b>	<b>137</b>	<b>525</b>	<b>1,902</b>	<b>115</b>	<b>2,679</b>		

Note: Numbers may not balance due to rounding

This table captures all costs for new or enhanced levels of service.

**Increased Service Levels/New Initiatives - Funded from Tax**

Description (\$ 000's)	BR #	FTE	2011	2012	2013	2014	Total Net Costs	Area of Focus	Strategic Pillar
Electronic Vehicle Inspection Reporting System	286	0.0	12	0	0	0	12	Continuous improvement	
Disability Management Coordinator	191	1.0	0	96	0	0	96	Continuous improvement	
<b>Total Operating Budget Impact</b>		<b>1.0</b>	<b>12</b>	<b>96</b>	<b>0</b>	<b>0</b>	<b>108</b>		

Note: Numbers may not balance due to rounding

The table below lists newly identified capital projects in 2011-2014.

**2011 - 2014 Net Capital Detail Changes**

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Station 120- Hurontario and Eglinton Area	74	1,500	700	2,700			4,900	Identifying any new initiatives that align with the Strategic Plan	Connect
Relocation of Station 119	100	1,200	700	2,000			3,900	Identifying any new initiatives that align with the Strategic Plan	Connect
Laptops in Fire Trucks	169	400				440	840	Continuous improvement	
VCOM Radio System - Upgrade	190	200	275	1,000	725	800	3,000	Maintaining a state of good repair for our infrastructure	
VCOM Radio System - funding forecasted previous budget submission				(2,978)			(2,978)		
Electronic Vehicle Inspection Reporting System	286	50					50	Continuous improvement	
Reachlift-front end loader - Garry Morden Centre	202		100				100	Maintaining a state of good repair for our infrastructure	
Vehicle for New Deputy Chief Position	163		68				68	Continuing to be an Employer of Choice	



## 2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Emergency Management	164		45				45	Continuous improvement	
Hazmat Mass Decon Shelter	201		40				40	Other	
Additional Prevention Vehicle	48		40				40	Continuing to be an Employer of Choice	
Fire 911 Voice Logger Replacement	180		34				34	Maintaining a state of good repair for our infrastructure	
Fire Rehabilitation Container	204		25				25	Continuing to be an Employer of Choice	
Station 123 - Burnhamthorpe and Winston Churchill Area	109			1,000	1,700	1,700	4,400	Identifying any new initiatives that align with the Strategic Plan	Connect
Station 124 - Dundas and Cawthra Area	110			1,000	1,700	1,700	4,400	Identifying any new initiatives that align with the Strategic Plan	Connect
Station 101 Rehabilitation	598			500	700		1,200	Maintaining a state of good repair for our infrastructure	
Station 107 Rehabilitation	86				500	2,500	3,000	Identifying any new initiatives that align with the Strategic Plan	Connect

## 2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Upgrade to Back up Fire Communications Centre	206				171		171	Maintaining a state of good repair for our infrastructure	
Station 104 Relocation	32a					4,200	4,200	Maintaining a state of good repair for our infrastructure	
Station 115 Rehabilitation	59					910	910	Maintaining a state of good repair for our infrastructure	
Station 109 Rehabilitation	56					860	860	Maintaining a state of good repair for our infrastructure	
Station 102 Rehabilitation	46					800	800	Maintaining a state of good repair for our infrastructure	
Station 114 Rehabilitation	58					680	680	Maintaining a state of good repair for our infrastructure	
Station 112 Rehabilitation	57					640	640	Maintaining a state of good repair for our infrastructure	
Station 108 Rehabilitation	55					430	430	Maintaining a state of good repair for our infrastructure	
Vehicle for New District Chief Position	158					70	70	Continuous improvement	
New projects 2019-2020						5,198	5,198		

2011 - 2014 Net Capital Detail Changes

Program Expenditures (\$ 000's)	BR #	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)	Area of Focus	Strategic Pillar
Fire Vehicle changes		172	(1,015)	343	(1,500)	991	(1,009)		
Equipment Replacement		0	(800)	800	0		0		
Safety clothing Replacement		(151)	(157)	(163)	(169)	(96)	(736)		
Other Equipment Replacement		(38)	38				0		
<b>Total Net Expenditures</b>		<b>3,333</b>	<b>94</b>	<b>6,202</b>	<b>3,827</b>	<b>21,823</b>	<b>35,278</b>		

Note: Numbers may not balance due to rounding.

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## Required Resources

### 11.0 Human Resources

#### Suppression (Operations)

As part of the Master Fire Plan, MFES has identified the tasks which are critical to meet the needs of every emergency situation. To accommodate these tasks as well as future requirements it is recommended that MFES hire 20 additional suppression staff in this four year plan. This translates into one fire crew per shift.

#### Fire Prevention and Public Education

Today's fire service views fire prevention, public education and fire suppression as equally important facets of the fire service. Fire prevention and public education use a proactive approach to reducing the probability of fires occurring, and endeavour to limit loss of life and property damage in the event that fires do occur.

Public education activities include the development and implementation of educational programs directed at a wide variety of groups within the community. These groups which include older adults, school aged children, special interest and social groups, as well as industry within the city receive education programs geared to life safety, injury prevention, and fire safe learning behaviours.

#### 2009 Fire Prevention Inspection Activities

Building Code Inspections	4,651
Fire Code Inspections	1,584
Complaint Inspections	869
Request Inspections	501
Follow Up Inspections	1,887
Paid Inspections	200
Mandatory Inspections	118

#### Mechanical

MFES has a significant fleet of apparatus to delivery fire protection services, and these apparatus are required to be maintained at the highest levels so as to be available for immediate use at all times. A fleet replacement schedule is currently in place that provides for the timely replacement of apparatus, ensuring a high level of operational functionality. As part of the fleet replacement program, a co-ordinated approach to setting vehicle specifications ensures vehicles purchased will have consistent specifications which reduces maintenance costs as well as provides front-line users with the knowledge to more effectively operate the vehicle. Maintenance requirements for fire apparatus is complex, highly technical and can affect the ability of the fire department to perform their duties.

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## Building Maintenance

Staff review building plans and assist with project management during construction of new facilities as well as renovations and alterations to existing facilities.

MFES has significant infrastructure in place to support fire department operations which includes: twenty fire stations, the training facility and other administrative buildings. Currently, under construction are the new Garry W. Morden training facility, the relocation of stations 106 and 116 and renovations/additions to station 105.

## Stores

This group ensures that all fire department personnel have the appropriate personal protective clothing and equipment required by the Occupational Health and Safety Act. This includes turn-out gear, station wear, respiratory protection equipment, tools, supplies and specialized equipment necessary for technical rescue and Hazardous Material response.

## Training

The current training facility is located adjacent to Fire Station 109. The facility comprises a two storey office and classroom building, a five storey high rise and smoke tower, a single storey fire house complete with basement and an outdoor fire ground area utilized for vehicle extrication training and simulated hazardous materials evolutions. The complex is utilized to simulate smoke, fire and heat conditions to train firefighters. It periodically hosts training and seminars for other fire/rescue related agencies. The requirement for a new training facility was substantiated as staffing increased and program requirements expanded. The new Garry W. Morden Centre dedicated to Fire and Life Safety to be located on 9<sup>th</sup> line North of Derry Rd, is scheduled for completion in early 2012. This facility is a joint venture

between the City of Mississauga, the Region of Peel and the Federal Government.

## Administration

The section includes the Fire Chief, two deputies, three division chiefs as well as other support staff who ensure that all functions of Fire and Emergency Services are delivered in a superior and cost effective manner and attempt to anticipate, initiate and manage change effectively. In order to ensure that these objectives are continuously being met, trend analysis, strategic planning and data analysis play a significant role.

## Human Resources Requirement

Description	Total FTE
2010 Restated Complement	704.0
2011 Budget Requirement	707.0
2012 Budget Requirement	714.0
2013 Forecast	737.0
2014 Forecast	738.0



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### Human Resources Requirement Distribution

Program	2010	2011	2012	2013	2014
Suppression	616.0	618.0	619.0	641.0	642.0
Building Maintenance	2.0	2.0	3.0	3.0	3.0
Vehicle Maintenance	10.0	10.0	11.0	11.0	11.0
Prevention	38.0	38.0	40.0	40.0	40.0
Divisional Support Services	38.0	39.0	41.0	42.0	42.0
<b>Total Service Distribution</b>	<b>704.0</b>	<b>707.0</b>	<b>714.0</b>	<b>737.0</b>	<b>738.0</b>

*“As Mayor, I have always been proud of our dedicated firefighters. You are all a great source of pride to the Corporation and when I hear stories about the projects like the one you are undertaking in Honduras it really warms my heart.”*

*An extract from a letter of the Mayor  
– April 26, 2010*

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## 12.0 Technology

MFES has worked with Transportation and Works to install traffic signal pre-emption devices in over 600 intersections across the City and when combined with Automated Vehicle Locators which are in the testing phase and Mobile Data Units, will assist with improving response times.

Most of the technology initiatives are being implemented to improve our response to the community however in order to ensure these initiatives continue to be effective, new technologies will be reviewed to monitor performance measures. MFES will be assessing the value of specialized software that will be able to assist in the measuring and monitoring processes.

The following is the Technology Implementation plan for the 2011-2014 business planning cycle:

- MFES will be introducing Automated Vehicle Locators (AVL) that will automatically dispatch the closest available truck to an emergency whether it is in or out of station. This is anticipated to be completed by mid 2010;
- Update the current VCOM trunked radio system to a fully supported, modern radio platform suitable for emergency radio services. Cost will be proportionate to the number of radios each user has on the system. Expected completion – 2013;
- Implementation of new Station alerting system by the end of 2011 to meet NFPA Standards and enhance turnout time; and
- Implementation of Mobile Data Units (laptops) in all front line vehicles to assist with routing and provide site specific hazard and tactical information by end of 2011.

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### 13.0 Facilities

There are currently 20 Fire stations positioned strategically throughout the City.

Fire Prevention operates out of the 2<sup>nd</sup> Floor of City Hall and the Joint Communications Centre (Dispatch) operates at the Police Headquarters Building at 7750 Hurontario St in Brampton as it is a shared facility with Caledon and Brampton Fire and Emergency Services.

As part of a staged approach to supplement the existing services over the next 4 years, additional fire stations are being considered to address service gaps beginning in 2011. As well, the following projects are currently underway and are expected to be completed within this business cycle:

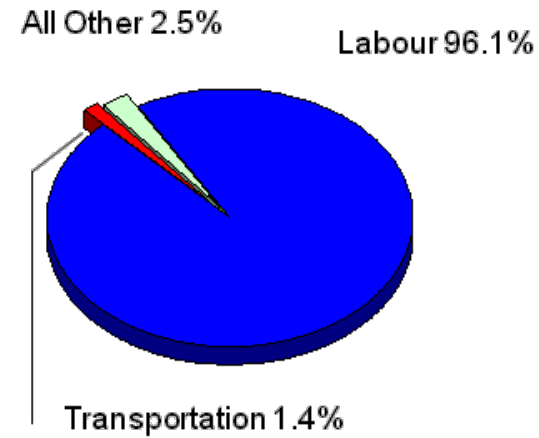
- The Garry W. Morden Centre began construction in Spring of 2010 with occupancy expected in the spring of 2011;
- Station 106 will be relocating and will co-locate with the Region of Peel Paramedic Services (Satellite Station) in late 2011;
- Station 116 will be relocating to 6825 Tomken Rd and will also co-locate with the Region of Peel Paramedic Services (Reporting Station) in mid 2011; and
- Station 119, which is currently a leased facility, will begin the relocation process in 2011.



Station 121 – Meadowvale Village

## 14.0 Budget

Labour is 96 percent of the operating budget. Almost 94 percent of the MFES staff compliment are directly in contact with, and provide a direct service to the public on a daily basis.



### Comparator Municipality Statistics

	Mississauga	A	B	C	D
Population/ Station	36,161	28,900	30,442	20,887	31,298
Population/ Front Line Vehicle	24,104	16,055	14,398	10,091	20,062
Population/ Fire Staff	1027	705	785	895	766
Population/ Suppression Staff	1186	782	862	1030	866
Suppression Cost/Capita	\$91.04	\$123.88	\$119.91	\$120.48	\$147.86

Source: Annual Comparator Survey, Calgary, 2009

Cities A,B, C and D in the above chart represent four of the top urban centres in Canada that are most comparable to the City of Mississauga with regards to fire services.

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#### 4 Year Budget and Forecast

<b>(\$ 000's)</b>	<b>2010 Budget</b>	<b>2011 Budget</b>	<b>2012 Budget</b>	<b>2013 Forecast</b>	<b>2014 Forecast</b>
Labour Costs	79,343	82,092	86,058	91,275	93,336
Other Operating Expenses	3,203	3,484	3,779	3,851	3,784
Total Costs	82,546	85,577	89,837	95,125	97,120
Total Revenues	(1,749)	(1,564)	(1,664)	(1,664)	(1,664)
<b>Net Cost</b>	<b>80,797</b>	<b>84,013</b>	<b>88,173</b>	<b>93,462</b>	<b>95,456</b>
<b>Allocations</b>	<b>785</b>	<b>850</b>	<b>890</b>	<b>926</b>	<b>951</b>
<b>Net of Allocations</b>	<b>81,582</b>	<b>84,863</b>	<b>89,064</b>	<b>94,387</b>	<b>96,407</b>

Note: Numbers may not balance due to rounding.

### 2011 - 2014 Net Operating Budget by Program

Program Expenditures (\$ 000's)	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast
Suppression	71,985	75,083	79,472	81,159
Building Maintenance	1,038	1,145	1,156	1,083
Vehicle Maintenance	2,967	3,052	3,137	3,165
Prevention	4,296	4,562	4,828	4,928
Divisional Support Services	4,577	5,222	5,795	6,072
<b>Net Budget Impact</b>	<b>84,863</b>	<b>89,064</b>	<b>94,387</b>	<b>96,407</b>

Note: Numbers may not balance due to rounding.

### 2011 Net Budget by Program

Program Expenditures (\$ 000's)	2009 Actual	2010 Budget	2011 Base Budget	Base Change %	2011 Program Changes	2011 Request	2011 Change	2011 Change (%)
Suppression	64,970	68,907	71,902	4.3	83	71,985	3,078	4.5
Building Maintenance	873	907	1,038	14.4	0	1,038	131	14.4
Vehicle Maintenance	2,815	2,797	2,955	5.6	12	2,967	170	6.1
Prevention	3,723	4,145	4,296	3.6	0	4,296	151	3.6
Divisional Support Services	5,485	4,825	4,523	(6.3)	54	4,577	(249)	(5.2)
<b>Net Budget Impact</b>	<b>77,866</b>	<b>81,582</b>	<b>84,714</b>	<b>3.8%</b>	<b>149</b>	<b>84,863</b>	<b>3,281</b>	<b>4.0%</b>

Note: Numbers may not balance due to rounding.

2011 - 2020 Total Net Capital Program

Program Expenditures (\$ 000's)	2011 Budget	2012 Budget	2013 Forecast	2014 Forecast	Post 2014 Forecast	Total (\$)
Stations & Auxiliary Buildings	12,774	1,438	6,500	4,642	13,112	38,466
Vehicle & Equipment	2,878	2,879	4,273	2,988	25,073	38,091
<b>Total Net Expenditures</b>	<b>15,652</b>	<b>4,317</b>	<b>10,773</b>	<b>7,630</b>	<b>38,185</b>	<b>76,557</b>

Note: Numbers may not balance due to rounding.

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# Performance Measures

## 15.0 Balanced Scorecard

A Balanced Scorecard identifies and measures four key areas of an organization's performances; Financial; Customers; Employees; and Business Processes.

By focusing attention on all four areas an organization can retain a balanced approach as it moves towards its goals.

### About the Measures for Fire and Emergency Services

#### *Financial Measures*

**Total Operating Cost Per Capita** is a measure that indicates how efficiently we are using our resources and is a particularly useful measure when comparing with other similar municipalities to gauge effectiveness. At the beginning of section 14 of this document, a comparison of the total cost for suppression services between four comparable cities was illustrated. The numbers in the chart on page 36 of this document are based on total operating cost which includes labour as well as all other operating expenditures. Currently MFES cost per capita is well below most other comparable municipalities.

#### *Customer Measures*

The number one priority of MFES is to ensure the safety of our residents. A key part of achieving this is to provide fire safety education and information to the public and excellent skills development to staff.

#### **Number of Home Safe Home Inspections Annually**

carried out by MFES was the first in the GTAA to develop this program where on duty fire crews have the opportunity to visit homes in their response area and provide valuable fire safety information. MFES benchmark is to complete 10

percent of all residential occupancies annually. As of year-end 2009, MFES was completing approximately 8.7 percent.

**Number of Defibrillator Saves Annually** is a result of quick response and well trained suppression staff, MFES has continued to have great success in saving lives through the application of defibrillation. The goal is to continue to improve on that success through continued training and reach the benchmark of 10 percent of all applications. As of year end 2009, MFES reached 7 percent.

#### *Employees/Innovation and Learning Measures*

MFES supports the City of Mississauga's goal to continue to be an Employer of Choice and to that end have developed performance measures that will be monitored on a continual basis in order to ensure our staff have both the training they need to advance their careers as well as to ensure the ongoing safety of our residents.

#### **Average number of training hours/firefighter annually**

MFES is extremely proud of our safety record. The safety of our firefighters and our residents is a priority. In order to continue to be able to provide excellent service to the community and be an employer of choice MFES continually strives to increase the number of training hours available to each member of the suppression staff. As of year-end 2009, MFES was approximately 50 hours per firefighter below this benchmark.

#### **Percentage of Prevention Staff having Fire Prevention**

**Officer Certification** is a Provincial accreditation through the Ontario Fire Marshal's Office that demonstrates expected core competencies of Fire Prevention Officers relative to the Fire Protection and Prevention Act and Ontario Fire Code. The MFES benchmark for this is 100 percent. As of year-end 2009, MFES has 53 percent of all prevention staff with this certification.



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**Percentage of Prevention Staff having Fire & Life Safety Educator Certification** is a Provincial accreditation through the Ontario Fire Marshal's Office that demonstrates expected core competencies related to Public Fire and Life Safety education. The MFES benchmark is 100 percent. As of year-end 2009, MFES has 35 percent of all prevention staff with this certification.

*Internal Business Measures*

Current industry best practices, standards and related expectations commonly identify a minimum response time reporting level at the 90th percentile. Essentially the 90th percentile response time is the time where 90 percent of all incident responses are at or below this time. MFES has reviewed data for the past two years, looked at current abilities and industry best practices and attempted to predict the trends over this business cycle. In doing this, service benchmarks have been established with consideration being given to operational, resourcing and external changes and conditions that may have an affect on trends over the four year period.

**First Unit Travel Time for Moderate Risk Occupancies (90<sup>th</sup> Percentile)** captures how long it takes from the time the truck leaves the station until it arrives on the scene of a moderate risk occupancy. An example of moderate risk occupancy would be a single family residential dwelling or other occupancy where life risk in the event of a serious fire is considerable. The benchmark for this measure is four minutes based on industry guidelines and best practices. As of year-end 2009, MFES was just over two minutes short of reaching the benchmark.

**First Unit Travel Time for High Risk Occupancies (90<sup>th</sup> Percentile)** captures how long it takes from the time the truck leaves the station until it arrives on the scene of a high risk occupancy. An example of a high risk occupancy would be a hospital or nursing home or other occupancy where life risk in the event of a serious fire is extremely high. The benchmark for this measure is four minutes based on industry guidelines and best practices. As of year-end 2009, MFES was just over thirteen seconds short of reaching the benchmark.

**First Unit Total Response Time for Moderate Risk Occupancies (90<sup>th</sup> Percentile)** captures total response time which is call processing time (dispatch) + crew preparation time + plus vehicle travel time. These numbers are based on what the total response time is to a moderate risk occupancy. The benchmark for this measure is six minutes and twenty seconds based on industry guidelines and best practices. As of year-end 2009 MFES was slightly under two minutes short of reaching the benchmark.

**First Unit Total Response Time for High Risk Occupancies (90<sup>th</sup> Percentile)** captures total response time which is call processing time (dispatch) + crew preparation time + plus vehicle travel time. These numbers are based on what the total response time is to a high risk occupancy. The benchmark for this measure is six minutes and twenty seconds based on Industry Guidelines and best practices. As of year-end 2009, MFES was achieving this benchmark.

<b>Measures for Fire &amp; Emergency Services</b>	<b>2008 (Actual)</b>	<b>2009 (Actual)</b>	<b>2010 (Planned)</b>	<b>2011 (Planned)</b>	<b>2012 (Planned)</b>	<b>2013 (Planned)</b>	<b>2014 (Planned)</b>
<b>Financial Measures</b>							
Total Operating Cost per Capita	\$102	\$107	\$113	\$117	\$123	\$128	\$123
<b>Customer Measures</b>							
Number of Home Safe Home Inspections Annually	14,551	16,126	16,500	16,500	17,160	17,820	18,480
Number of Defibrillator Saves Annually	19	23	25	25	28	30	32
<b>Employees/Innovation &amp; Learning Measures</b>							
Average number of training hours/firefighter annually	130	150	150	150	160	165	170
% of Staff having Fire Prevention Officer Certification	53%	53%	60%	63%	66%	69%	73%
% of Staff having Fire & Life Safety Certification	35%	35%	40%	43	46%	49%	53%
<b>Internal Business Measures</b>							
First Unit Travel Time for Moderate Risk Occupancies (90 <sup>th</sup> Percentile) (Minutes)	5:45	6:02	6:05	6:08	6:08	6:02	5:55
First Unit Travel Time for High Risk Occupancies (90 <sup>th</sup> Percentile) (Minutes)	4:21	4:13	4:20	4:27	4:27	4:20	4:13
First Unit Total Response Time for Moderate Risk Occupancies (90 <sup>th</sup> Percentile) (Minutes)	7:54	8:05	8:15	8:25	8:25	8:05	7:54
First Unit Total Response Time for High Risk Occupancies (90 <sup>th</sup> Percentile) (Minutes)	6:19	6:12	6:15	6:18	6:18	6:18	6:18