INTRODUCTION

During the fall of 2012, The leaders of the three volunteer fire companies who serve the Town of Boston, New York (the Boston, Patchin and North Boston Fire Companies) located in Erie County, New York contracted with Michael P. Dallessandro to conduct an independent review of the general day-to-day operations and management of the three individual volunteer fire companies and the general level of fire protection they provide to the Town of Boston. This review is a critical "first step" in a pro-active process of seeking feedback, conducting a self-assessment, evaluating each fire company's current situation, recognizing the positives, identifying issues that may require attention, identifying alternatives and, if necessary making changes to bring about possible improvements in service to the community.

This report is not a comprehensive, detailed analysis or "audit" of the existing fire and emergency services in the community or for that matter a "multi-year" in-depth study. The report is only intended to provide a general snap shot or "where are we at" overview of the fire companies and make independent recommendations on topics such as management practices/structure, buildings and facilities, fleet/apparatus, public/government relations and other general topics. Throughout the process this review was guided by some general basic questions that the consultant used to generate discussions and that were used to identify data that was requested for review. These questions are as follows:

1) Are we as a Town and fire service organizations, in our current form, meeting the needs and expectations of the community and our volunteer fire department members?
2) Do our levels of service model applicable "best practices and recommended standards for similar organizations and communities in our state?
3) Are emergency services provided by our organizations, provided to the community at an appropriate cost?
4) Are the individual fire company organizations well managed?
5) Is there adequate planning for the future?
6) Are there any changes that should be considered to improve the fire companies or the current structure of fire service organizations serving the Town of Boston?

Along with the questions listed above that were used as a guide for the review, three additional guide criteria were used as well to help direct the consultant's external "look" at the participating fire service organizations and they are as follows:

MISSION

All emergency services organizations regardless of size and only restrained by budget or manpower should strive to provide the highest possible level of service to the public.

VALUES

All emergency services organizations should insure they strive to model the following values:

1) People are our most valuable resource.
2) As an organization we are committed to being responsive to emerging needs of the community.
3) Fire protection is our critical mission.
4) We will seek opportunities to provide shared services and develop partnerships, which will strengthen our ability to deliver services to our citizens.
5) Excellence in the delivery of customer service is the standard of our performance.

VISION

All emergency services organizations should be properly funded, staffed and equipped organizations of highly motivated and trained people providing a full range of emergency services, public fire protection and fire safety education. Our organizations should be seen as a premier fire department in the delivery of fire suppression, rescue, prevention, training, EMS (if provided) and dispatch/communications (if provided).

How Fire Protection Is Provided in a Municipality

Cities are required to provide fire protection. It is typically provided through a municipal fire department which may have paid and/or volunteer firefighters. According to the Firemen's Association of the State of New York (FASNY), 42 cities have all or mostly paid fire departments, while 17 are all or mostly volunteer departments. Paid firefighters are commonly known as "career" firefighters. According to a 2003 FASNY report, the median wage, benefits and overtime payment for a full-time firefighter statewide (excluding NYC) was $57,278. Examples range from $49,764 in the North Country to $101,702 on Long Island. Villages must also provide fire protection. A village may (a) have its own fire department, (b) contract with the fire department of another municipality, (c) contract with a fire district, or (d) form a joint fire district with a town and other villages. Where villages have fire departments, they may also have career, volunteer, or a mix of both types of firefighters. While the reported numbers of combination fire departments vary, most seem to be located in Monroe and Westchester Counties. In Monroe County, which has 10 combination departments, nearly one third of those departments' members are career firefighters. State law does not allow towns to provide their residents with fire protection as a municipal function. Instead, fire protection is provided either by a fire district or through creation of a fire protection district. There are about 1,850 fire suppression or prevention organizations and over 114,000 firefighters in the state, including over 96,000 volunteer firefighters. The fire district system was established in 1932, by the State Legislature as a means of insuring adequate fire protection throughout the state. Some 800 fire districts were established, primarily around the existing volunteer companies, which

were originally established to protect rural villages with horse drawn apparatus.

The Number of Volunteer Firefighters is declining

The number of volunteer firefighters has declined by 15,000 in the past 20 years. There is also a decline in availability of volunteer firefighters, particularly in the area of emergency medical services. More and more fire districts are employing paid drivers or station masters to respond to calls during the day. While there is uncertainty about the numbers of departments with both career and volunteer firefighters, the Office of Fire Prevention and Control has a list of 40 combined fire departments, including the Fredonia Fire Department with 6 career and 130 volunteer firefighters, and the Ridge Road Fire Department in Monroe County with 50 career and 4 volunteer firefighters. To address the decline in volunteers, the Legislature has enacted various incentive programs, such as property tax credits and the firefighter length of service award program (LOSAP) – essentially a pension-like program for volunteers. These incentive programs are offered at local option. Local LOSAPs must be audited annually by an independent certified public accountant, with the results reported to the State Comptroller. The state now offers a $200 income tax credit for active volunteer firefighters and ambulance corps members.

Fire Districts by Definition

A fire district is a separate unit of local government that is established for the purpose of providing fire protection and response to emergencies. A fire district need not have its own firefighters or equipment; it can contract with

a neighboring municipality or district. Fire districts are not necessarily coterminous with towns. They may span several towns or portions of towns, and a town may contain parts of multiple fire districts. In addition, the governing boards of one or more towns and one or more villages may form a joint fire district. If a joint district is formed, the municipal governing boards must adopt a local law dissolving any existing fire, fire alarm or fire protection districts contained within the joint fire district. A fire district is created, extended, or dissolved by a town board. However, such changes must be at the request of a majority of the fire district commissioners or land-owning resident taxpayers of the district, and is subject to permissive referendum. Details on how such changes may occur are in the Department of State's publication on fire protection consolidation. A fire district is overseen by an elected board of commissioners composed of five members serving five year terms. (The fire commissioners in joint fire districts may be elected or appointed.) The Office of the State Comptroller (OSC) reports that there are 867 fire districts, an increase of 20 districts in the past 20 years. The commissioners appoint the members of the fire companies within the fire district, and may provide for the removal of those members for cause. They also organize, operate, maintain and equip fire companies.

Elections of Fire Commissioners

The residents of a fire district who are registered to vote may cast their ballot for commissioners in a fire district election which is held the second Tuesday of December (with limited exception). Unfortunately, often in some areas few people other than those who take interest in government and/or fire protection or friends and families of firefighters cast votes in fire district

elections. In the spring of 2007, an informal survey of the participation in 2006 fire district elections was done by the Lundine commission. They sampled 20 town clerks in 17 counties whose jurisdictions included 62 fire districts and found that over 25% of those fire districts failed to file election results with the clerks. Of those reporting, it was found that most had fewer than 100 people voting, and in 18 out of 44 districts fewer than 50 people cast votes. While participation in fire district elections was minimal, there were some anomalies in the voting totals for some rural towns. For example, in the Town of Greenfield (Saratoga County), 414 people cast ballots in the election for fire commissioners. However, this election followed the defeat a few months earlier of a proposition to purchase two ladder trucks (590 votes cast) and a candidate was challenging the incumbent who had been championing the purchase of the fire trucks. Four of the districts in which the most votes were cast were in the Town of Huntington, population 195,289. The number of people voting in all of the Huntington fire districts was 2573 out of a total electorate of 125,692, or two percent of the electorate.

Fire Protection Districts by Definition

Although the term "fire protection district" is similar to "fire district," they represent very different ways of managing fire protection. While a fire district is a separate unit of government, run by elected commissioners; a fire protection district is a geographic service area within a town, established for the purpose of fire protection. Towns contract for fire protection services within these districts at the expense of the property owners in that district. The contract may be with a city or village fire department, a fire district, or

an independent fire company. A town board can create a fire protection district, consolidate adjoining fire protection districts, alter the boundaries of a fire protection district, or dissolve a fire protection district on its own motion or by petition. There are 951 fire protection districts in the state, down from 1,015 in 1988. Contracts between a town and a fire protection district vary in detail; some simply name a price for protection. The trend is for town boards to convert fire protection districts to fire districts, placing the decisions regarding fire protection in the hands of independently elected fire commissioners.

Independent Fire Company by Definition

An independent fire company is a special not-for-profit corporation formed to provide fire protection to a fire district, fire protection district or village under contract. The contract is with the governing body – a board of fire commissioners, town board, or village board of trustees. There are 800 independent fire corporations.

Funding Fire Protection

In cities and villages, general municipal tax levies support fire protection. In areas of the town served by fire protection districts, the town levies property tax. A fire district has the power both to incur indebtedness and to require the levy of taxes. Fire district taxes are assessed against the taxable properties within the district and levied and collected at the same time and in the same manner as town taxes. Towns collect fire district taxes and distribute them to fire districts. These funds may be used to purchase buildings, equipment, and insurance, as well as pay for firefighter training.

They may also pay for annual inspection dinners and refreshments served after meetings and emergencies. Fire districts get over 90% of their revenue from property taxes. Total revenues raised by fire districts have increased 61% from 1995 to 2005, with an average annual increase of 4.9 percent, as reported in the Financial Report on Fire Districts. In addition to funds raised through taxes, there are two other main sources of funding. The first is funds that are donated to a fire department, such as through coin drops or other charitable fund-raising activities or paid in exchange for facility rentals or special services. The second source is a tax on certain fire insurance policies written by out-of-state insurance companies. Foreign insurance companies contribute two percent of the fire premiums written on property located in the state to be distributed to the fire departments and fire districts statewide. Fire insurance money - $43 million in 2007 - must be used for the benefit of the fire department and its fire companies, as determined by the members. For example, fire insurance funds may be used to purchase dress uniforms, turn out gear, and office equipment; and to pay for installation banquets and holiday parties. However, those funds may not be used to fund a length of service award program, and members may not be compelled to use these monies to defray ordinary operating expenses of the fire department. (A portion of the tax is also used for the support and maintenance of the firemen's home at Hudson, New York.) Other sources of funding include federal assistance, state grants, county subsidies, and tax-exempt bonds.

The Cost of Fire Protection in New York State

Statewide, in 2006 $1.5 billion was spent on fire protection among counties (4% of total), cities (39%), towns (11%), villages (9%) and fire districts (37%). With such a large share of expenditures attributable to a relatively little-known unit of local government, the following examines fire districts in more detail; Fire districts, as autonomous units of government, report their expenditures directly to the Office of the State Comptroller. OSC reported that in 2006 fire districts spent $601.1 million for current operations, equipment and capital outlay, and debt service. Expenses for current operations were responsible for 64% of all spending in fire districts, with equipment and capital outlay (28%) and debt service (8%) making up the balance. This distribution of expenditures has been consistent over the past decade, and reflects the capital-intensive nature of fire protection and emergency medical services when largely provided through volunteer labor.

Town Board Authority over a Fire District Budget

Fire district budgets are determined by boards of commissioners, and inserted, unchanged, into town budgets. Fire districts prepare a proposed budget and discuss it at a public hearing on the third Tuesday in October. Notice requirements include publishing notice of the hearing in the newspaper and posting notice on the town sign board and district website, if one exists. The budget is submitted to the town on or before November 20 each year.

Fire District Spending Limits

Under State law fire districts are subject to a spending limit. The spending limit is $2,000 for the first $1 million of assessed valuation within the district, and $1,000 for each additional $1 million of assessed valuation. Some expenditures excluded from the cap, such as premiums required to cover firefighters injured in the line of duty; salaries of paid firefighters who supplement volunteer forces; service award program contributions; and most forms of debt service. The State Comptroller's office is not aware of any districts at or near their limit.

Community Concerns over the Cost and Provision of Fire Protection

The provision of fire service has been evolving for some time, and concerns about the way it has historically been provided have been ongoing. In 1984 the National Fire Protection Association reported in the Fire Almanac that the fire service and the fire protection community in America have no choice but to find more cost effective approaches to delivering fire safety to the public. In the next twenty years, the fire service will be considering new, as well as time-proven steps to achieve these cost effective goals. There will be increased consolidation of fire departments and similar functions within municipalities. Functional consolidation will be much more widespread and will include central purchasing, central dispatching and alarm service, and the pooling of training, fire prevention and emergency medical services (EMS). . . Better utilization of manpower, increased productivity, a cost conscious citizenry, and management hardened fire chiefs will be the watchwords of the next decade.

Checks and Balances for Fire Districts

An independent accountant must be hired to conduct an annual audit of revenues and expenditures if the fire district, or volunteer fire company, has revenues of more than $200,000. Fire companies with annual revenues of less than $200,000 are not required to, but may obtain, an independent audit of revenues and expenditures. A model RFP for the hiring of an auditor is available on the OSC website. The State Comptroller also periodically audits fire districts. Recent audits can be found on the Comptroller's website.
Fire districts must also submit annual financial reports to the Office of the State Comptroller. However, financial information relating to fire protection districts are included in town financial reports, as fire protection districts are administrative units of a town.

Funding for Fire District Building Projects or Large Equipment

According to the Office of Fire Prevention and Control, there are 2824 fire stations, 5563 fire engines, 1712 tankers, 915 aerial devices, and 2360 miscellaneous vehicles in the fire service in New York State. In addition, there are 1046 ambulances. To pay for buildings or expensive equipment, fire districts may either save up the money over time or borrow the money. To save for anticipated expenses, fire commissioners can pass a resolution creating a reserve fund to finance capital projects. The decision to spend the money is published in a legal notice, and is subject to mandatory referendum. The district may establish a "specific" fund for the construction, reconstruction or acquisition of a specific capital improvement or the acquisition of specific equipment; or a "type" fund for the construction, reconstruction or acquisition of a general type of capital improvement or the

acquisition of a type of equipment. Fire districts may borrow money by issuing bonds to finance capital projects. In addition, the Office of Fire Prevention and Control administers the emergency services loan program which allows fire districts and any municipality operating fire or emergency medical services to borrow money at low interest. The loan board gives preference to applications which demonstrate the greatest need, joint applications, and applications addressing compliance with federal and state laws. The expenditure authority in SFY 06-07 was $7,346,600. Sixty percent of the loans were made to fire departments with annual budgets of less than $100,000; and the law requires that at least 50% of loans be made to fire and ambulance departments staffed exclusively by volunteers whose annual budgets do not exceed $100,000.

Public Input on Capital Purchases by Fire Districts?

The resolution by a board of fire district commissioners which establishes a capital reserve fund is subject to mandatory voter referendum. In addition, expenditures for general items from a "type" fund are subject to permissive referendum. To issue debt fire districts must attain approval for their capital investments from district voters through a "special election." A recent change in the law intended to improve voter turnout now requires that all special elections, such as those to approve bonds, be held on a Tuesday that is not a public holiday. An example of bond vote turnout is 68 voters who approved a $3.2 million firehouse in Greece. Much of the area covered by the new firehouse is within 1½ miles of other firehouses. Newsday reported that when Coram Fire Department held a bond vote in 2000 to finance the biggest, most expensive firehouse on Long Island only 242 people voted. At

less than 2% of registered voters, at least 138 of those votes were cast by department members or their relatives. The referendum passed, and the firehouse was built at the cost of $7.7 million. Property tax revenues collected by the Coram Fire District were the eighth highest amount in the state in 2005 at just over $5.4 million.

Media & Public Attention to Spending by Volunteer Fire Departments

In 2005 Newsday did a series of investigative articles raising questions about the effectiveness and efficiency of the volunteer fire service on Long Island. The articles indicated that Long Island fire forces have accumulated large amounts of equipment and built a large number of fire houses relative to the population they serve. According to Newsday, Long Island has more fire apparatus than New York City and the city and county of Los Angeles combined, which protect almost three times as much land and six times as many people while answering more than 12 times as many calls for help. Moreover, despite this investment, emergency response times are often slow, indicating that investments are not well targeted. This is not just a downstate phenomenon. The Rochester Democrat and Chronicle reported in 2007 that Irondequoit has a pumper truck for every 4,256 residents while Rochester has one for every 12,417 residents. Some spending on trucks has been driven by a 1987 national safety standard that recommends through strong wording that almost mandates that firefighters ride in enclosed cabs.

Fire District Commissioner Training

In 2006, State law began requiring that all fire district commissioners complete financial training within 270 days of taking office each time they are elected, re-elected, appointed or re-appointed. The training must cover legal, fiduciary, financial, procurement and ethical responsibilities, and such other topics as may be prescribed by the State Comptroller. One issue being addressed by the training is conflicts of interest. Some volunteer firefighters may find themselves in a position to gain financially from their role in the fire service, such as when they serve as brokers for the purchase of fire equipment, or provide other supplies or services to the fire department.

There is a new requirement that every fire company either under the control of a municipality or fire district, or under contract with a municipality or fire district to provide fire protection or other emergency service, adopt a code of ethics providing guidance and standards of conduct reasonably expected of the officers, employees, and volunteer members. Included in the code of ethics must be standards relating to disclosure of interest in legislation before the local governing body, holding of investments in conflict with official duties, future employment and other standards of conduct.

Another new training topic is travel at taxpayer expense. The legislature modified travel rules such that conference travel by fire district volunteer firefighters must be for official business, using a "cost-effective and reasonable method of travel" and may be charged only with the prior approval of the board of fire commissioners. Local travel must be authorized by the chief of the department, and mileage allowances for the use of personal vehicles in the performance of official duties may not exceed the federal reimbursement rate.

It is this consultant's hope that the aforementioned information regarding types and structure of the various fire protection entities in our state and detailed managerial guidelines for fire districts provides a general insight to fire protection in our state for readers of this narrative report who are civilians, elected officials or for that matter firefighters or officers who are either new to the fire service or experienced veterans who had never before seen this information broken down and presented in this format.

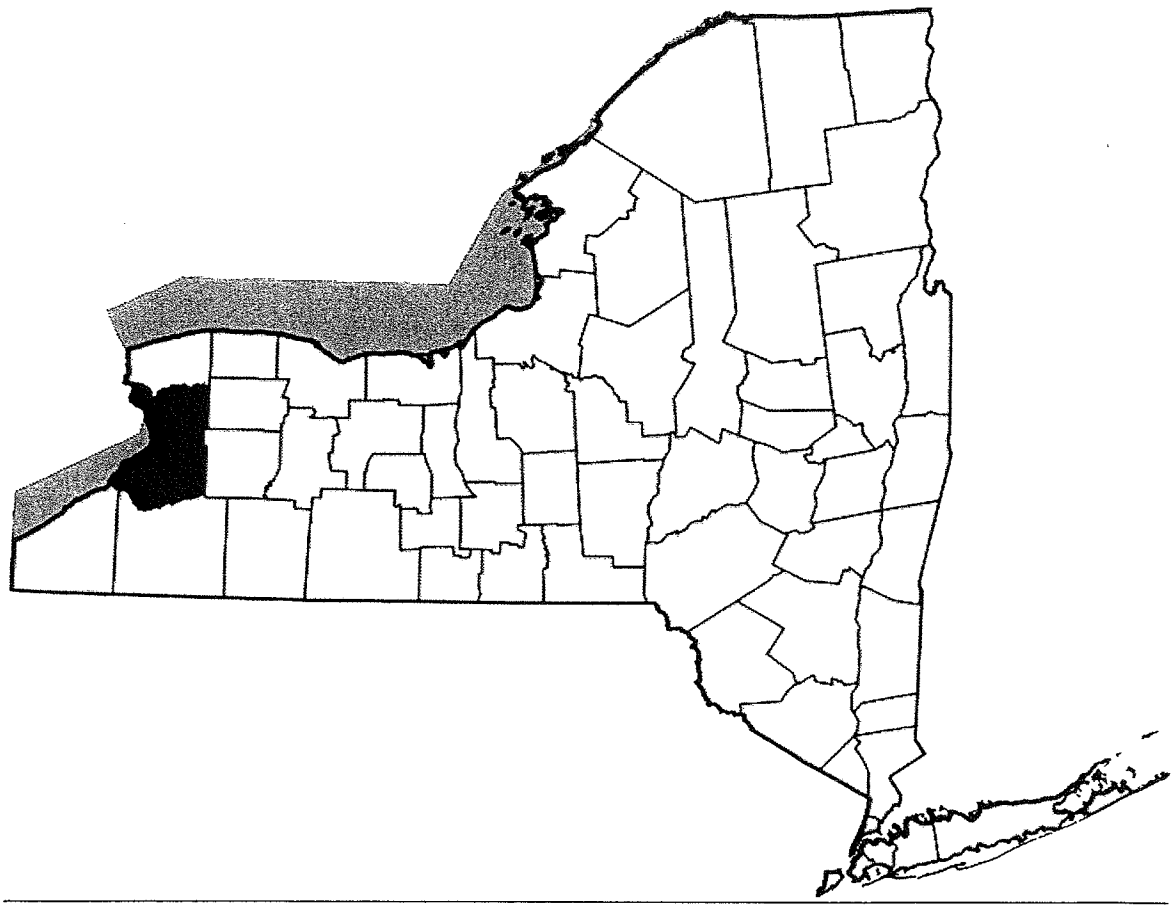
Community & Fire Risk

While this review did not include a detailed fire risk analysis, a general review of the community (first due area) served by the fire departments did take place. The Boston, North Boston & Patchin Fire Companies and Volunteer Firefighters provide fire suppression, rescue services primarily for the Town of Boston. Boston is a town in Erie County, New York, United States. The population was 8,023 at the 2010 census. The town is named after Boston, Massachusetts. The Town of Boston is an interior town of the county and one of the county's "Southtowns." Boston is southeast of Buffalo. The Iroquois, under various names, lived here until the European immigrants became predominant.

In 1804, brothers Charles and Oliver Johnson and their families became the area's first settlers. The first Christian church was the Free Will Baptist Church, founded circa 1811. On April 5, 1817 the town of Boston was formed from a portion of the Town of Eden. The first post office opened in

1832 on the north side of town. In 1843, the town suffered an epidemic (28 of the 43 residents were affected, 10 of them died) believed to be typhoid fever, possibly from a local well. This town has much history that can be found on the headstones in the cemetery across from the Boston Town Hall. There are many old gravestones that show some of the first settlers in the town and the infamous "Love" murder.

Erie County, NY:



When counties were established in New York State in 1683 present-day Erie County was Indian territory and was not part of New York. Significant European settlement began in 1800 after the Holland Land Company extinguished Indian claims to the land, acquired the title to eight western-most counties of Western New York, surveyed their holdings, established towns, and began selling lots. At this time, all of Western New York was part of Ontario County. In 1802, Genesee County was created out of Ontario County. In 1808, Niagara County was created out of Genesee County. In 1821, Erie County was created out of Niagara County, encompassing all of the land between Tonawanda Creek and Cattaraugus Creek. The first towns

formed in present-day Erie County were the Town of Clarence and the Town of Willink. Clarence comprised the northern portion of Erie county, and Willink the southern part. Clarence still exists as a town, but Willink was quickly subdivided completely into other towns. When Erie County was established in 1821, it consisted of the towns of Amherst, Aurora, Boston, Clarence, Collins, Concord, Eden, Evans, Hamburg, Holland, Sardinia, and Wales. The county has a number of properties on the National Register of Historic Places listings in Erie County, New York. Erie County is in the western portion of New York State, bordering on the lake of the same name. It is the most populous county in New York State outside of the New York City metropolitan area. The county also lies on the international border between the United States and Canada, bordering the Province of Ontario. According to the U.S. Census Bureau, the county has a total area of 1,227 square miles (3,177.9 km2), of which 1,044 square miles (2,703.9 km2) is land and 183 square miles (474.0 km2) (14.89%) is water. The northern border of the county is Tonawanda Creek. Part of the southern border is Cattaraugus Creek. Other major streams include Buffalo Creek (Buffalo River), Cayuga Creek, Cazenovia Creek, Scajaquada Creek, Eighteen Mile Creek and Ellicott Creek. The county's northern half, including Buffalo and its suburbs, is relatively flat and rises gently up from the lake. The southern half, known as the Southtowns, is much hillier and is the northwestern most foothills of the Appalachian Mountains.

The highest elevation in the county is a hill in the Town of Sardinia that tops out at around 1,940 feet (591 m) above sea level. The lowest ground is about 560 feet (171 m), on Grand Island at the Niagara River. The Onondaga Escarpment runs through the northern part of Erie County. As of the census

of 2010, there were 919,040 people residing in the county. The population density was 910 people per square mile (351/km²). There were 415,868 housing units at an average density of 398 per square mile (154/km²). The racial makeup of the county was 82.18% White, 13.00% Black or African American, 0.61% Native American, 1.46% Asian, 0.02% Pacific Islander, 1.42% from other races, and 1.31% from two or more races. 3.27% of the population were Hispanic or Latino of any race. 19.6% were of German, 17.2% Polish, 14.9% Italian, 11.7% Irish and 5.0% English ancestry according to Census 2000. 91.1% spoke English, 3.0% Spanish and 1.6% Polish as their first language. There were 380,873 households out of which 29.60% had children under the age of 18 living with them, 46.50% were married couples living together, 13.70% had a female householder with no husband present, and 36.10% were non-families. 30.50% of all households were made up of individuals and 12.50% had someone living alone who was 65 years of age or older. The average household size was 2.41 and the average family size was 3.04. In the county the population was spread out with 24.30% under the age of 18, 8.70% from 18 to 24, 28.40% from 25 to 44, 22.70% from 45 to 64, and 15.90% who were 65 years of age or older. The median age was 38 years. For every 100 females there were 91.60 males. For every 100 females age 18 and over, there were 87.80 males.

The median income for a household in the county was $38,567, and the median income for a family was $49,490. Males had a median income of $38,703 versus $26,510 for females. The per capita income for the county was $20,357. About 9.20% of families and 12.20% of the population were

below the poverty line, including 17.30% of those under age 18 and 7.80% of those age 65 or over.

Boston, NY:

As of the census of 2010, there were 8,023 people, 2,997 households, and 2,244 families residing in the town. The population density was 220.4 people per square mile (85.1/km²). There were 3,122 housing units at an average density of 87.1 per square mile (33.6/km²). The racial makeup of the town was 98.91% White, 0.14% African American, 0.14% Native American, 0.20% Asian, 0.01% Pacific Islander, 0.10% from other races, and 0.49% from two or more races. Hispanic or Latino of any race were 0.72% of the population. There were 2,997 households out of which 33.3% had children under the age of 18 living with them, 64.6% were married couples living together, 7.0% had a female householder with no husband present, and 25.1% were non-families. 20.6% of all households were made up of individuals and 8.8% had someone living alone who was 65 years of age or older. The average household size was 2.63 and the average family size was 3.06. In the town the population was spread out with 25.2% under the age of 18, 6.3% from 18 to 24, 28.7% from 25 to 44, 27.1% from 45 to 64, and 12.7% who were 65 years of age or older. The median age was 40 years. For every 100 females there were 100.8 males. For every 100 females age 18 and over, there were 98.2 males.

The median income for a household in the town was $48,315, and the median income for a family was $57,714. Males had a median income of $42,101 versus $27,798 for females. The per capita income for the town was $21,303. About 3.6% of families and 5.9% of the population were below the

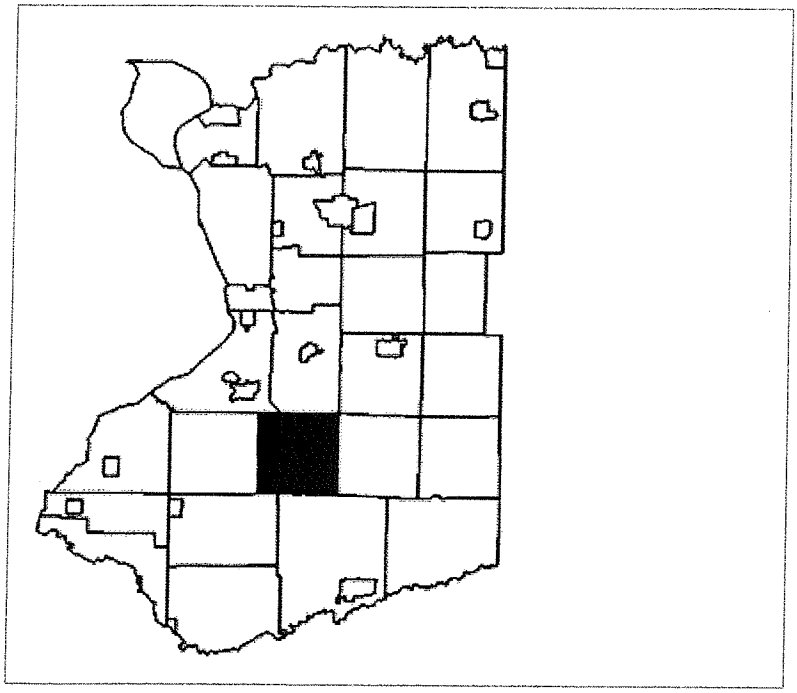
poverty line, including 8.0% of those under age 18 and 4.5% of those age 65 or over.

*See the following chart for technical Boston data.

Boston

Town

Country	United States
State	New York
County	Erie County
Elevation	925 ft (281.9 m)
Coordinates	42°37′44″N 78°44′15″W42.62889°N 78.7375°W
Area	35.8 sq mi (92.7 km^2)
- land	35.8 sq mi (93 km^2)
- water	0.0 sq mi (0 km^2), 0%
Population	8,023 (*2010*)
Incorporated	1817
Town Supervisor	Martin Ballowe (R) Town Council[show]
Timezone	EST (UTC-5)
- summer (DST)	EDT (UTC-4)
ZIP code	14025
Area code	716



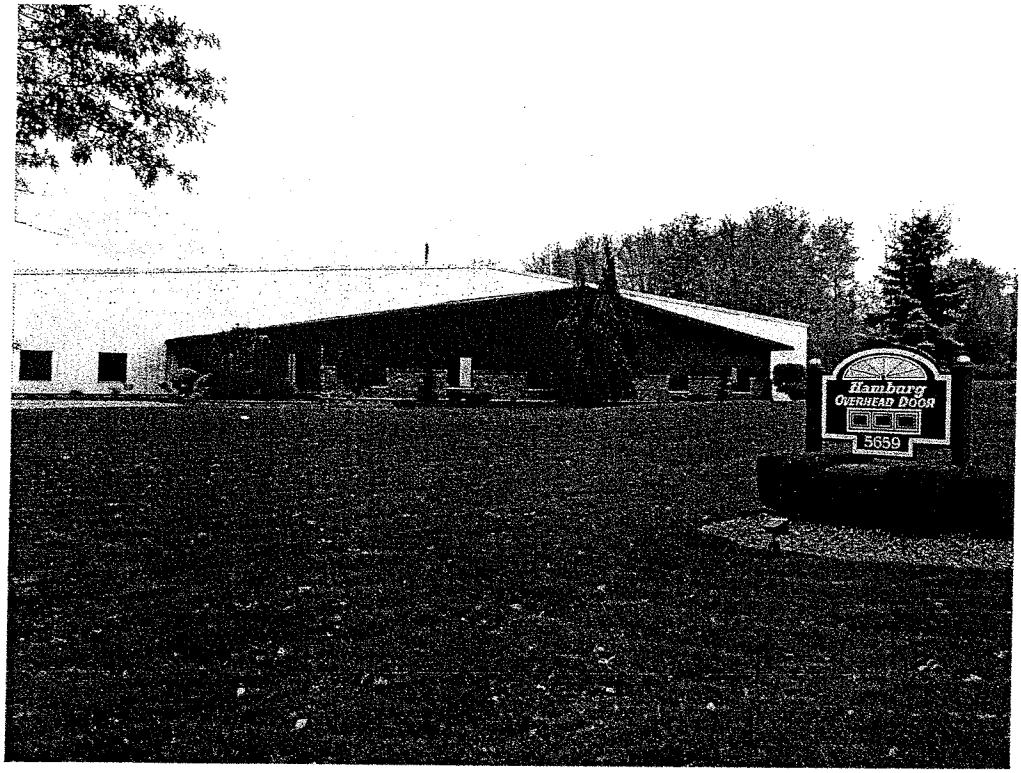
Fire Protection District

As referenced previously in this narrative fire and rescue services for the Town of Boston are provided via a fire protection district with three contracted fire company organizations; Boston Fire Company, North Boston Fire Company and Patchin Fire Company. Emergency Medical Services also known as E.M.S. is provided to the town by a separate volunteer organization, the Boston Emergency Squad. In the recent past, Patchin Fire Company has added E.M.S. responses in their first due area to improve public safety. However there are differing opinions on the success of or need for this additional service with comments ranging from Patchin firefighters simply being "in the way" at E.M.S. calls or providing the service to boost call numbers and public exposure vs. making actual "saves" of critical patients prior to the arrival of Boston E.M.S.; The volunteer fire services are provided by members of the various departments who operate from five separate stations (Boston 2, Patchin 2 & North Boston 1). The departments provide protection to residents, businesses and an educational organization located in the community. The department/associations are also responsible for protecting some properties and/or facilities of community concern some of which are listed in the following chart:

PROPERTIES OF COMMUNITY CONCERN
Auto Dealership
Public School Educational Facility
Agricultural Facilities
Town owned Local Government Facilities & Infrastructure
Revenue Generating Facilities such as Tops, Tim Hortons, Etc

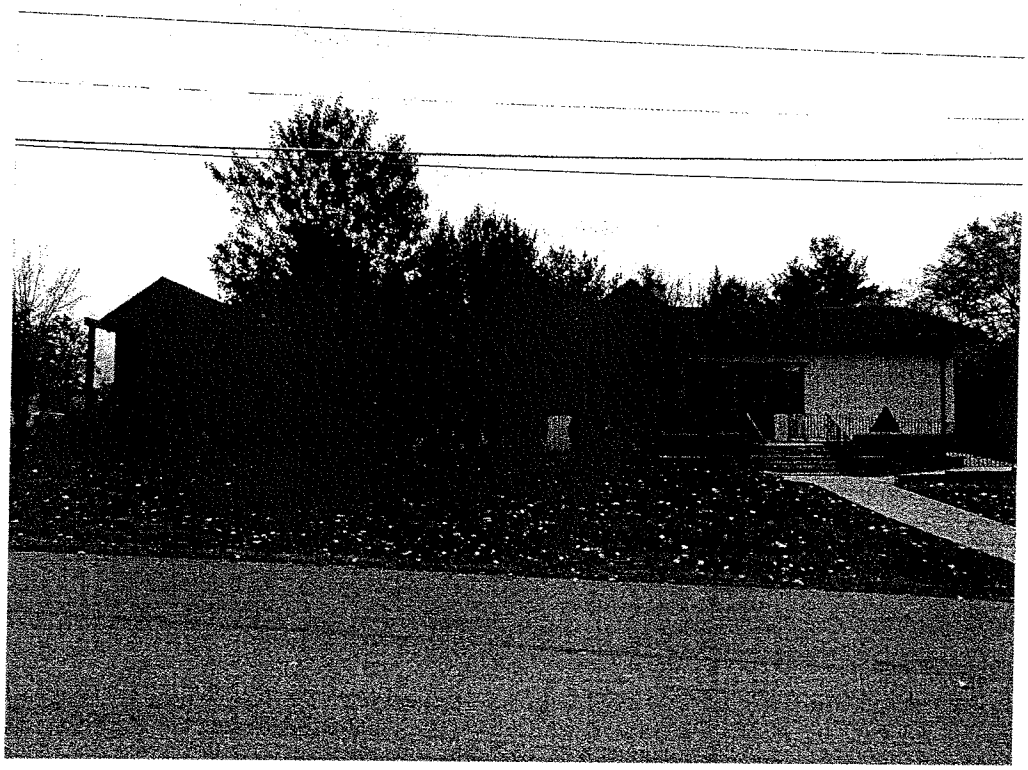
The following series of photos are an example of the various properties in the first due response/protection area of the three Fire Protection Districts:

Retail & Small Business Centers

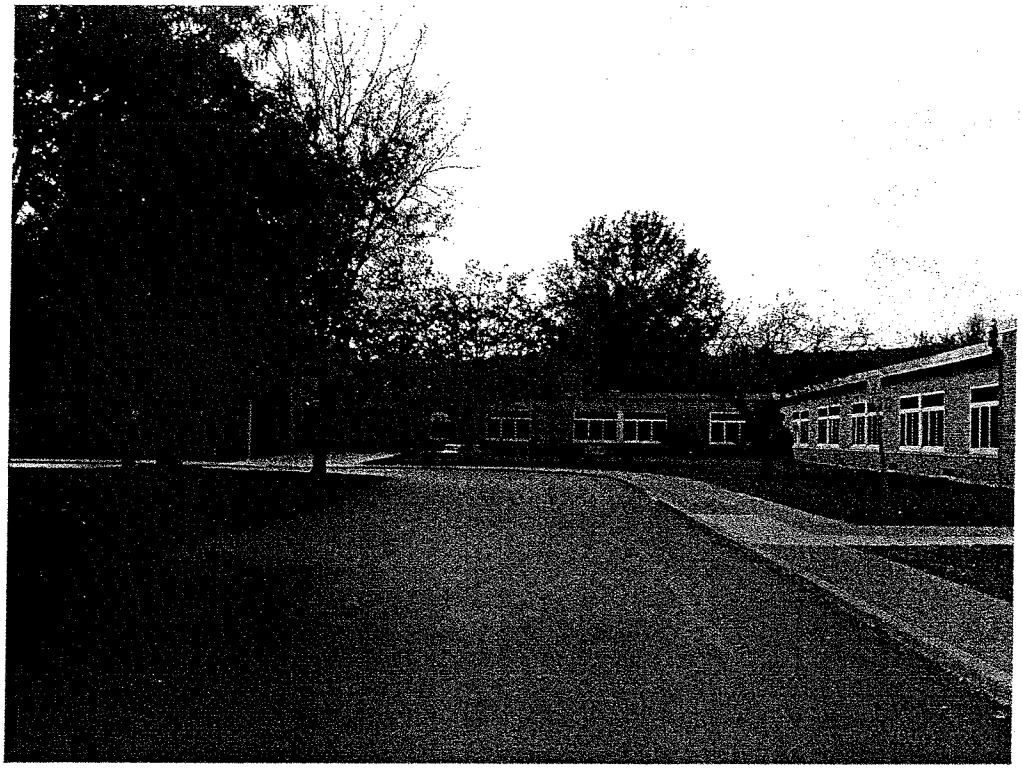


Various Business/Commercial Structures

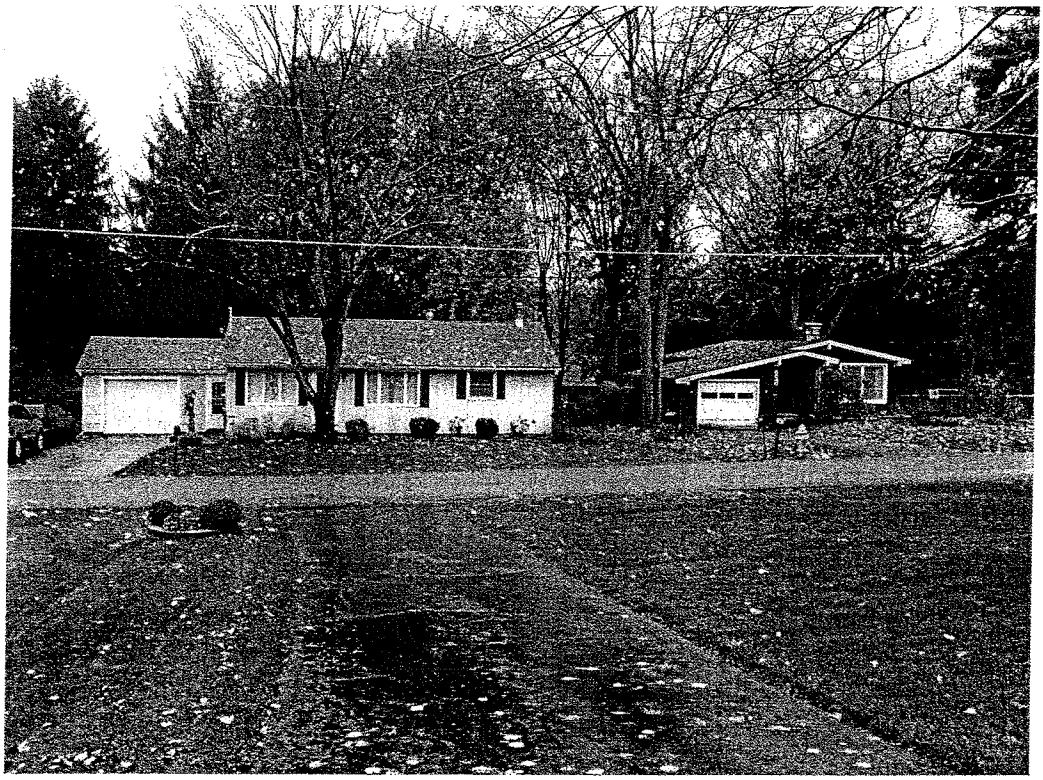
Public Assembly



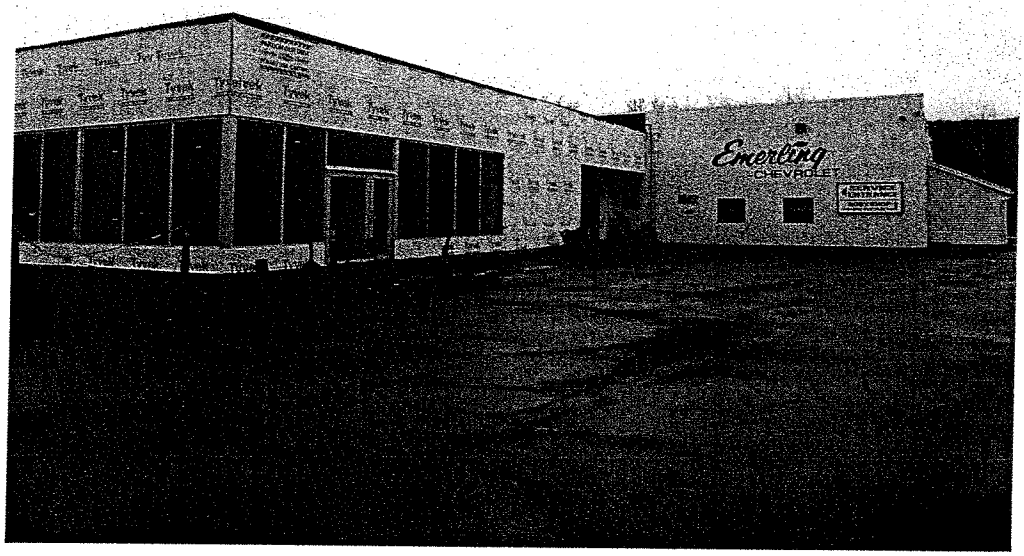
Houses of Worship Type Structures



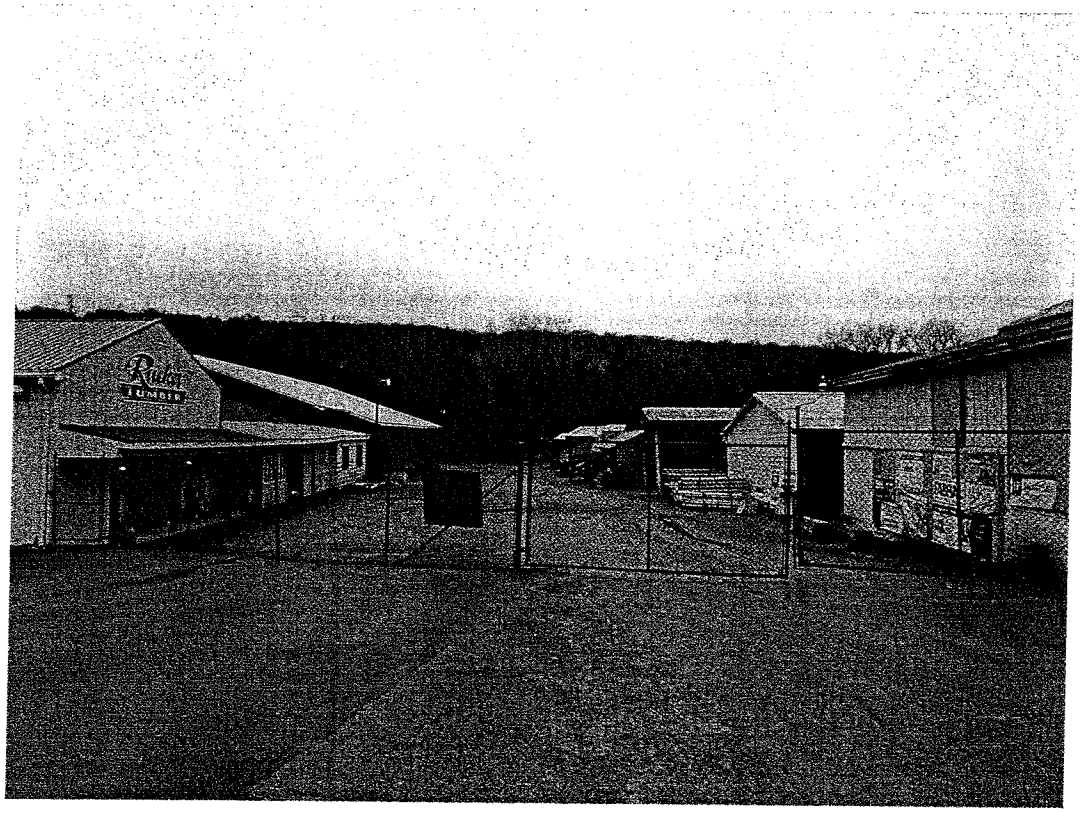
Educational Facilities



Traditional Housing Stock

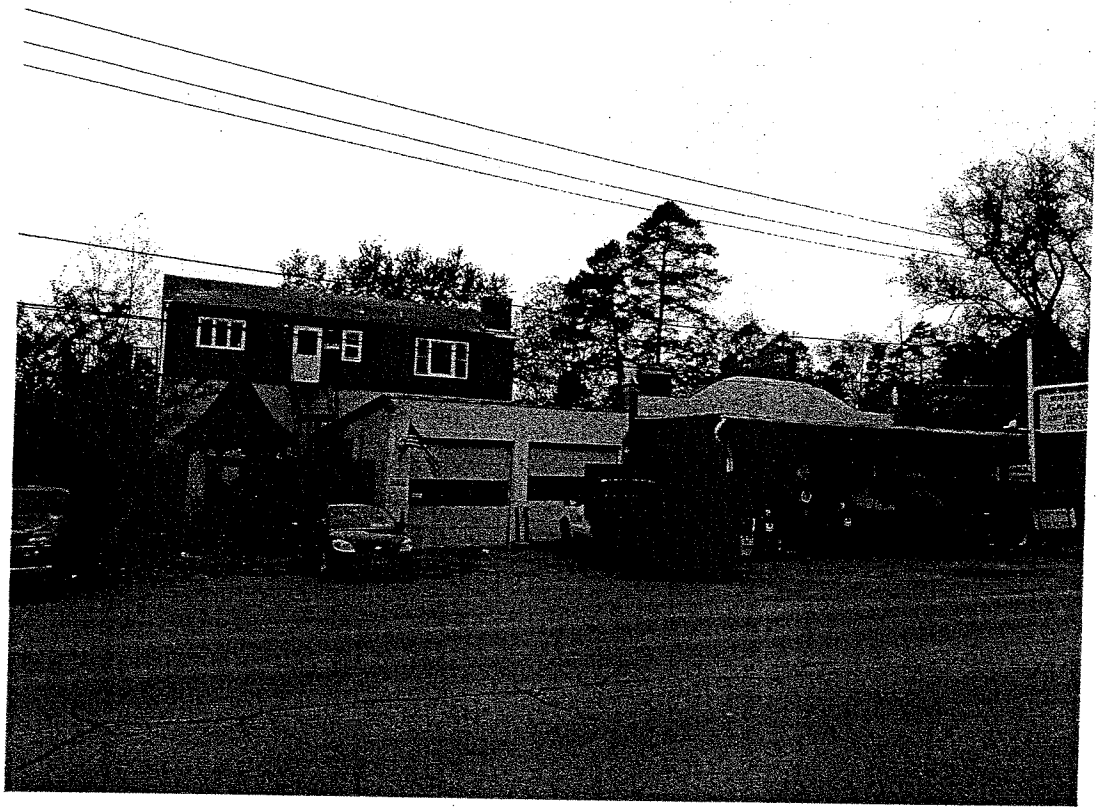


Auto Dealership



Lumberyard

Businesses That Present Firefighting Challenges



Various Facilities That May Pose Haz-Mat or Access Concerns

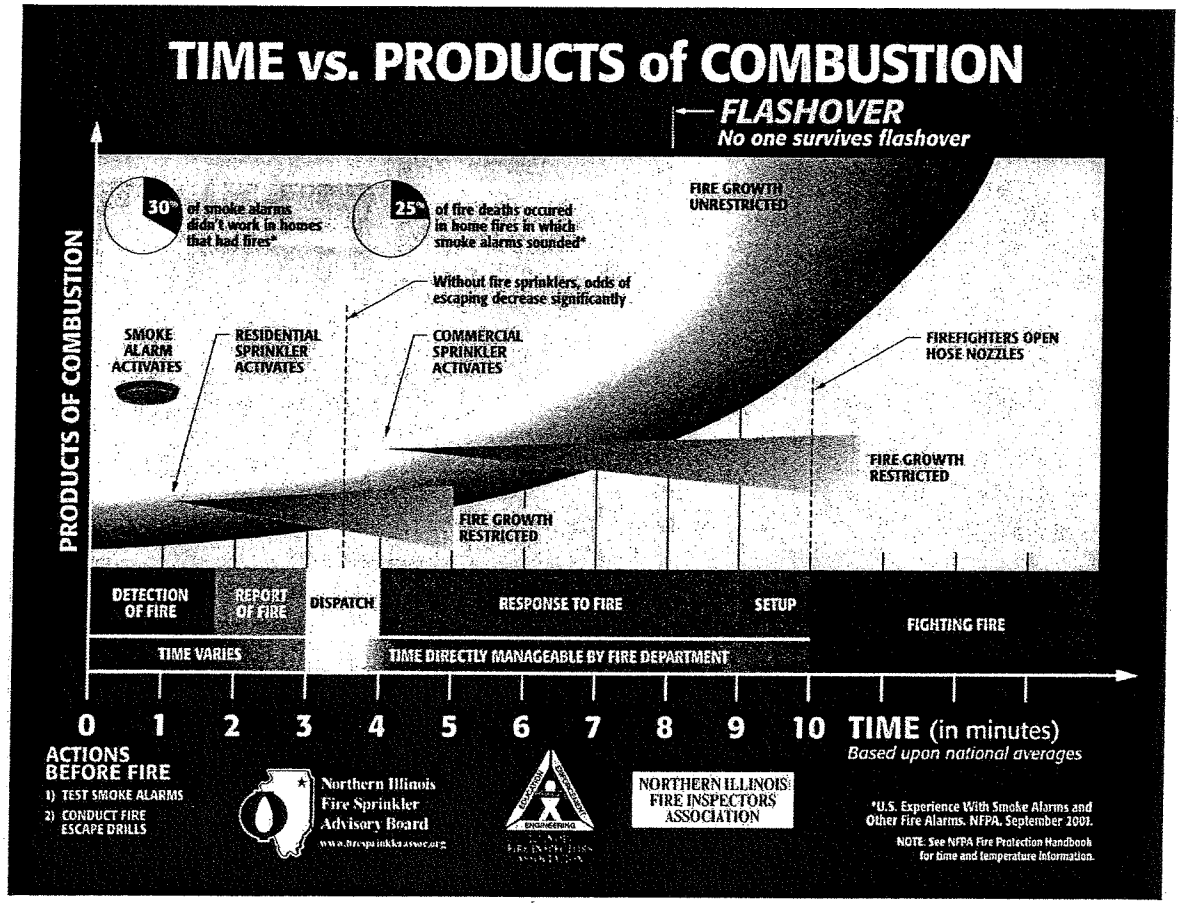
Multiple Dwellings or Apartments

During my years as both a firefighter and a consultant I have learned that there are three limiting factors in the ability of any community to meet required fire suppression activities and water flow to properly protect life and property and have a positive outcome of fire related incidents.

1) The number and size of fire department pumper apparatus
2) The firefighters available to provide the attack force
3) The available fire water flow from the community water system

Properly staffed, trained and equipped fire companies must arrive, deploy and attack fires within a specific time if successful fire ground strategies and tactical objectives are to be met. The same holds true for rescue operations,

major medical emergencies and other situations that require varying levels of resources. Every minute the fire keeps burning the more damage results and the likelihood of any victims surviving decreases. The following graphic on this page shows the timeline of a fire inside a structure as it develops from the ignition stage and progresses through the growth stage. When the fire reaches the flashover stage all combustible materials in the space are heated to their ignition temperatures and simultaneously ignite in a violent and sometimes explosive event. Flashover is deadly to both firefighters and any victims that may yet still be inside the building.

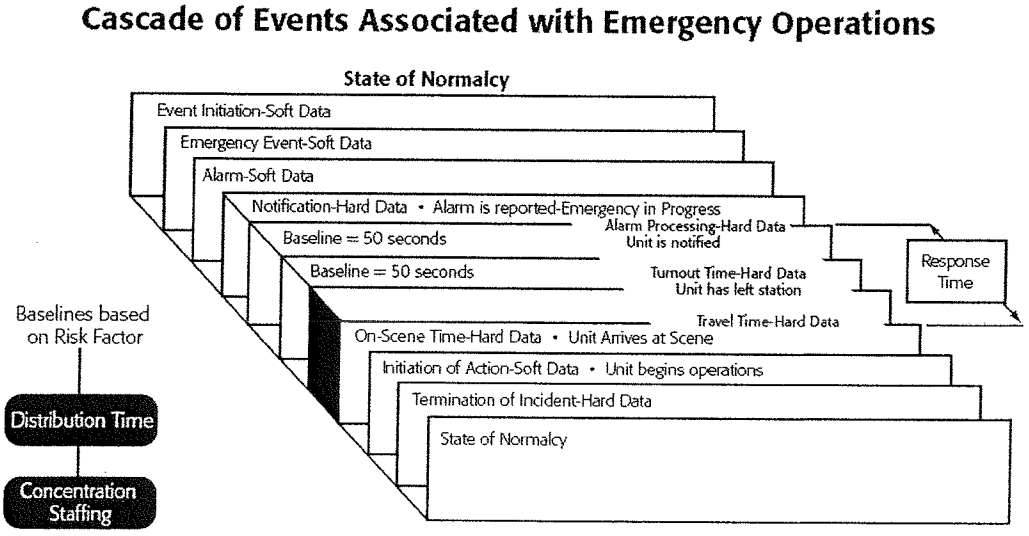


Event Cascade

For all emergency incidents there are factors that affect successful outcomes: Station location; number of available and responding units; and the response of the required staffing to mitigate the emergency incident. The success of each factor is based upon the reaction to and timing of each of the following cascade of events.

1. Event initiation
2. Emergency event
3. Alarm
4. Notification
5. Alarm processing/unit is notified
6. Turnout time/unit leaves station
7. Travel time
8. On-scene time/unit arrives
9. Initiation of action
10. Termination of incident

Figure 1 Cascade of events



As can be seen in the chart on the previous page, there are several uncontrollable factors in responding to emergency incidents. These factors provide soft data that is not measurable.

- There is no measurement of the time from when an incident actually starts to when it is discovered.
    - This fact holds true even when there are automatic detection devices and automatic extinguishing systems.
- There is no way to accurately determine the time between discovery of the event and notification of the emergency communications system, although that time seems to multiply in the minds of the average person discovering and reporting an emergency incident.

Call processing times, dispatch, turnout time and response time and arrival times can all be readily measured.

The prevention and suppression of fires is the primary mission as well as the underlying reason for the existence of the Boston, North Boston & Patchin Fire Companies. Aggressive firefighting actions are needed to minimize fire damage, rescue any trapped occupants, contain fire to the area or building of origin and must begin prior to flashover occurring to be effective. After flashover has occurred, the fire becomes more difficult to control and extinguish the damage more severe, and the likelihood of any victims surviving drastically decreases. The conditions that firefighters are required to work in are also significantly more difficult and dangerous after flashover has occurred.

To make an aggressive interior attack for reported structure fires in their respective coverage areas under each protection district's current separate and individual operating structure, the three fire companies should each send the following firefighters needed to complete the following tasks in order to make a safe interior fire attack:

Recommended First Due Response	
Command	1 Firefighter
Attack Hose Line	2 Firefighters
Pump Operator	1 Firefighter
Water Supply	1 Firefighter
Search and/or Ventilation Team	2-4 Firefighters
Rapid Intervention Team	3 Firefighters
Safety Officer	1 Firefighter
Back up Hose Line	2 Firefighters
Aerial Operator (Mutual Aide if Needed)	1 Firefighter
Total	**14/16 Firefighters**

The above chart is a recommended first due response based on generally accepted standards for safe fire department operations and every effort should be made to model that recommendation within the constraints of available manpower.

For the primary response area covered by the three fire companies the NFPA 1720 standard applies the following:

NFPA 1720 Response Goals			
Demand Zone	**Demographics**	**Staff/Resp Time**	**Achievement %**
Special Risks	AHJ Determines	AHJ Determines	90
Urban	>1000 People/Mile	15/9 Minutes	90
Suburban	500-1000 People/Mile	10/10 Minutes	80
Rural	<500 People/Mile	6/14 Minutes	80
Remote	Travel distance >/= 8 Miles	4 Responders	90
*Remote: Upon assembling the necessary resources at the emergency scene, the fire department should be able to safely commence an initial attack within two minutes			

Based on the population density for the Town of Boston area the "Rural" standard in NFPA 1720 is being applied in this review. This standard as referenced in the chart above requires 6 firefighters (two in two out/Officer/Driver-Pump Operator) to arrive in 14 minutes. Today's modern standards of response guidelines and benchmarks are also defined by the Center for Public Safety Excellence and the Commission on Fire

Accreditation International, encourages multiple levels of service within the following categories, combined with appropriate deployment of equipment and personnel. As agencies analyze their response times, those times should include call processing, turnout time, and travel time.

Rural: Population of less than 10,000 people and/or any area with a population density of less than 1,000 people per square mile. (Much of the Town of Boston coverage area is in this category)

Bench mark:

First unit 10 minutes,

Second unit 14 minutes,

Balance of 1st alarm assignment 14 minutes

Performance 90%

Base line – 70%

First unit 13 minutes

Second unit 18 minutes/20 seconds,

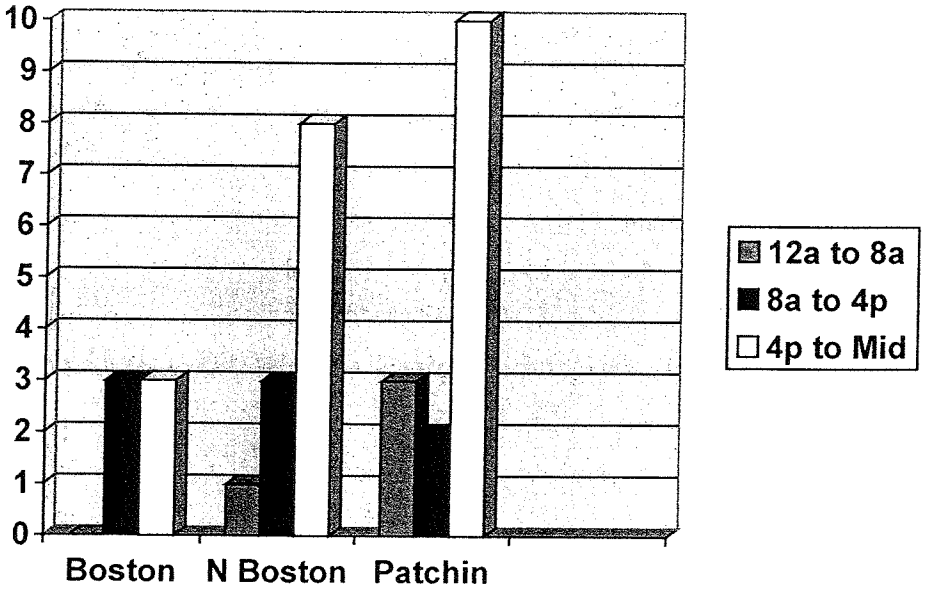
Balance of 1st alarm assignment 18 minutes/20 seconds

Performance 90%

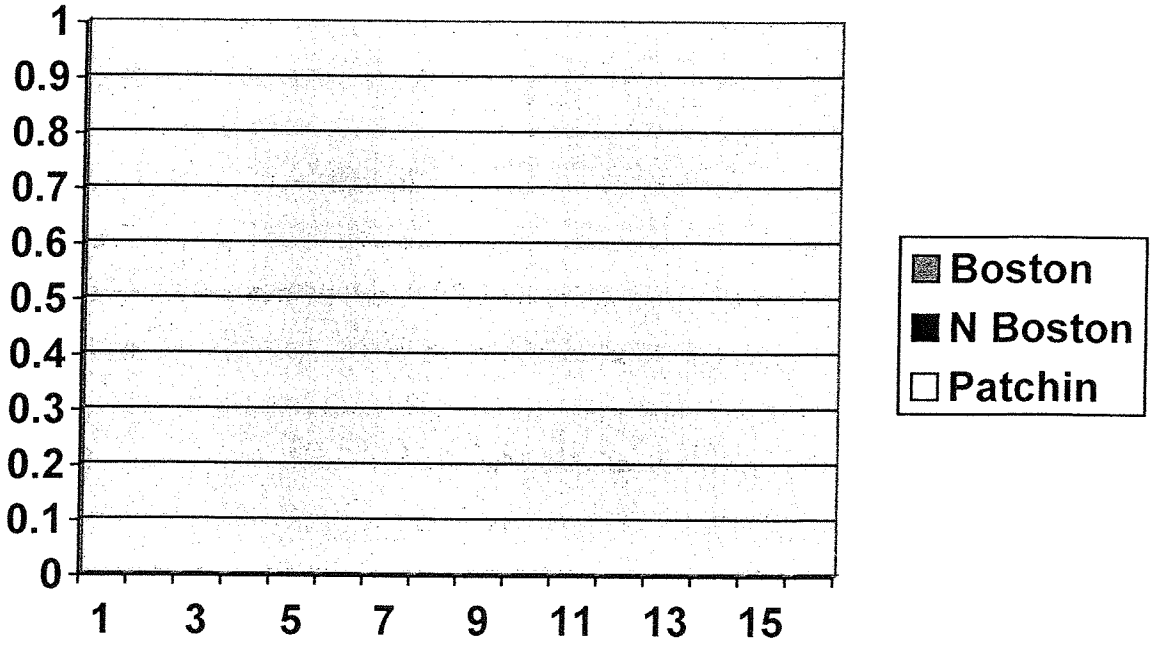
The criteria above show the range of performance within the Rural category from the target benchmark to a lesser base line of 70% of the benchmark. These performance indicators are based upon emergency, priority 1 responses.

For the purposes of this general review I requested and reviewed call response data provided by each Fire Company for the period 2/1/2012 to 4/30/2012. My goal was to provide a general sense of response times and available manpower during a random "snap shot" so that the Officers of the three Fire Departments can use this data to get a general feel for the response trends of their members, have this added information available as they review and plan for future recruitment needs, also be able to use this data as a part of a larger goal to uncover any possible motivational concerns regarding members participation and review response needs during certain time periods during the day or night. For the purposes of this review only calls where complete data was available were used so as to not "skew" the report. This is critical due to situations where calls were cancelled or initial apparatus or officers were called off could provide an inaccurate picture of the actual full start to finish response. Along that same theme, responses where additional information received during the response would be used to alter the response such as slowing units down while enroute were not used either as that can paint an inaccurate picture as well. Lastly, mutual aide responses were not used either as the travel time to stations or addresses outside of the district can often make responses appear abnormally long when only analyzing numbers. The following charts contain the various information "snap shot" breakdowns:

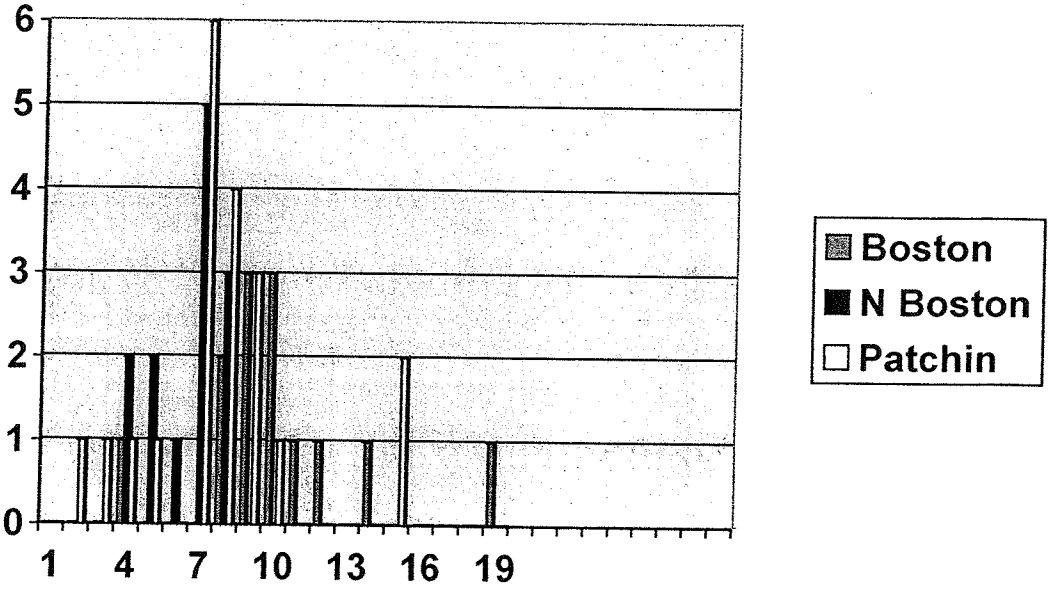
RESPONSES BY TIME OF DAY



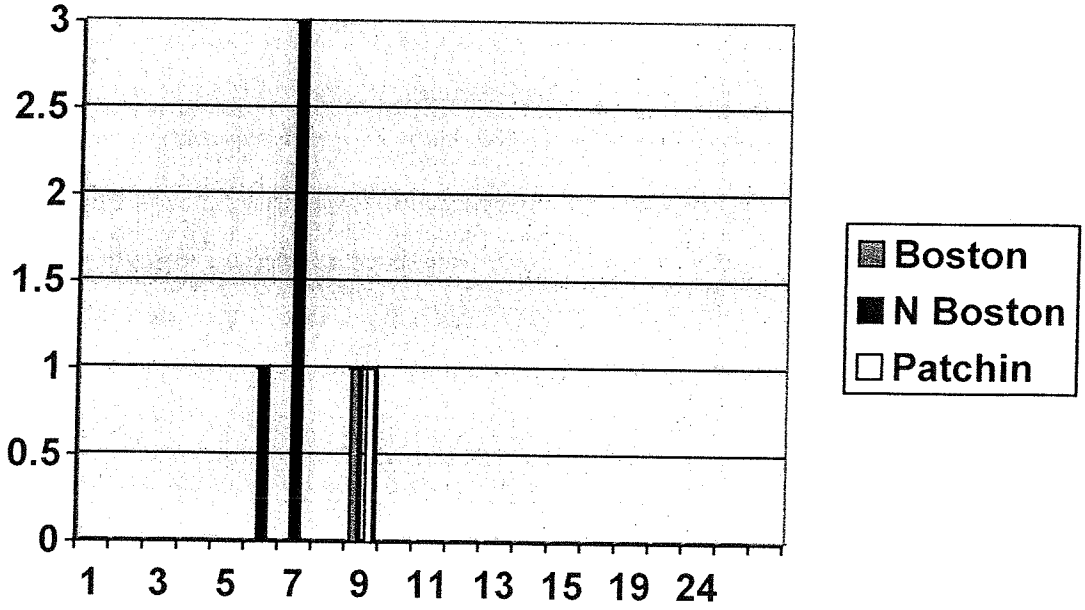
RESPONSE TIMES – FIRE



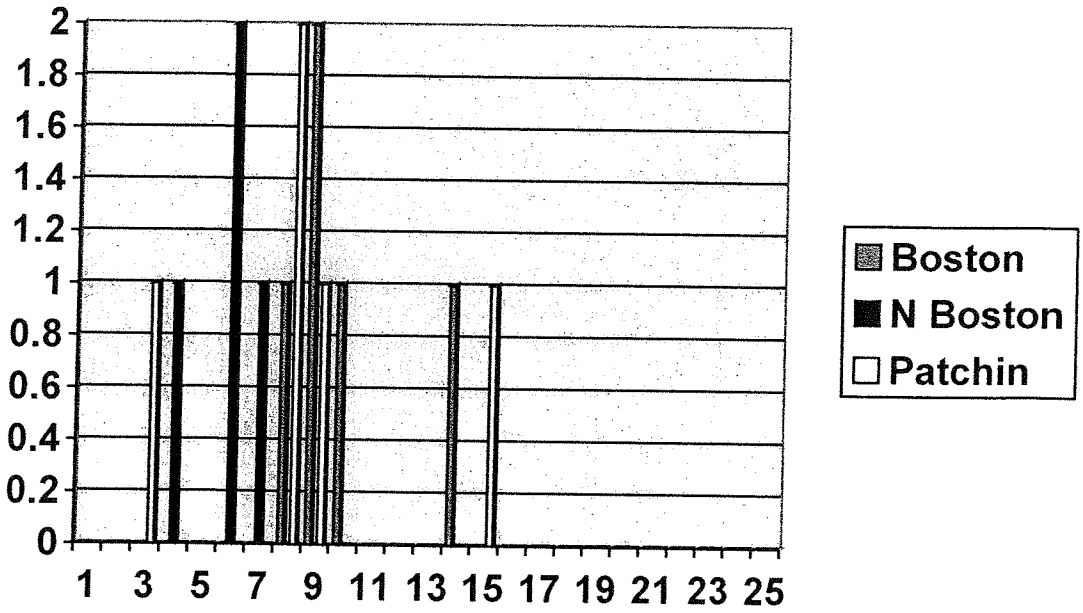
MANPOWER – ALL CALLS DURING SAMPLE



MANPOWER – MVA



MANPOWER – SERVICE CALL



Trends that were noted above are as follows:

1) Town of Boston calls for service during the sample period followed national patterns where the majority of calls occur between 8:00am to 4:00pm and 4:00pm and Midnight with a slight lean towards the 4-12 period where demand is highest.

2) During the sample period there were no actual structure fires in any of the fire company first due areas nor were there any incidents that at the time of dispatching sounded like working structure fires therefore we were unable to clearly draw data for those specific incidents. However during the evaluation of all responses in all categories including mutual aide, times and manpower seemed to indicate the organizations could muster manpower and response times within nationally accepted standards for similar departments (6

firefighters in 14 minutes or less for rural fire departments per NFPA 1720) for working structure fires.

3) Evaluation of call sign in sheets and reports generated for the consultant by the three fire companies show total responding personnel for the majority of incidents reviewed during the test period were appropriate for MVAs/service calls and would meet the "rural" response goal based on Boston's population density per square mile for turning out 6 or greater responders. *This report did not break down responders/personnel into interior qualified and not interior qualified for this general reporting.

4) During this review this consultant did a line by line review of dispatch information of all of the calls answered during the study sample period. While the calls may have been labeled fire, EMS support, MVA, rescue or other headings the dispatch log information showed many of these calls ultimately fell into a category that for this review was designated as "service calls". The ability to designate these calls as "service calls' uses the extraordinary powers of "Monday Morning Quarterbacking" meaning at the time of the call the caller or the dispatcher may have felt they warranted an emergency response or a response by the fire department but in the "light of day" said calls may have been a matter that could have been handled by the police, plumber, electrician, building superintendent/maintenance worker, counselor, DPW or other person or agency other than the fire department. The point of this commentary is to prompt a conversation internally at the fire department level that can be continued with dispatchers, the town and other Boston area emergency response and non emergency response agencies to make every effort to develop a plan that reduces the drain on emergency services and volunteer service providers. Also dialogue may

need to be held to study the impact of these service type responses on total call numbers and said impact on required response percentages or "stats" for volunteers in a way that reduces burn out. While some would argue that a call is a call for the sake of conversation and to look ahead, we must at least acknowledge the fact that despite the fact that sometimes the rural volunteer fire service may not turn out fully interior qualified firefighters for every response many of the actual incidents can be handled by volunteers with years of experience handling the "service" related calls of their fellow neighbors and community members.

Boston, North Boston and Patchin Fire Company's Level of Compliance with NFPA 1720

As a part of this review I provided each department's Chief with a copy of the NFPA 1720 questionnaire. This survey was intended to help your Officers take a look at each organization's level of compliance with professional standards that were designed to guide organizations and operations within the American Fire Service as we know it. In my opinion, although firefighters and some politicians will quickly point out that these are only recommendations, the standards published by the National Fire Protection Association (NFPA) are the nations "best practices" guidelines that all fire departments and officers/firefighters should strive to follow and model. All volunteer or predominantly volunteer fire departments should work within their organizations to become compliant with or model NFPA standard 1720, which deals with the organization and deployment issues

within volunteer fire departments. Fire departments who reach a point where they are in total compliance with the 1720 standard are making considerable progress towards meeting the NFPA 1500 standard on occupational safety and health and the NFPA 1561 standard on emergency services incident management if they have not also met those standards in entirety as well. This basic review does not explore compliance with either of the aforementioned 1500 or 1561 standards. In order for the Officers to get a feel for a department's level of compliance and to introduce them to this standard and to provide a goal for compliance whenever possible, I have developed a simple questionnaire that is voluntarily completed by the Chief(s). During this particular review the survey questions are listed below. Each Chief was asked to complete a survey which reflects their professional opinion, interpretation and perspective of the wording of the questionnaire and the application of NFPA 1720 in their organization. It is my hope that this exercise has allowed each department to conduct their own self assessment of their level of NFPA 1720 compliance and that they will use the information going forward to strengthen their organizations. I have NOT noted each of the three chief's individual responses in this document however I have marked in red "common areas" that individual fire departments should pay extra attention to insure their operations are efficient and most importantly safe for their members and the community at large. (Note individual Chief's response documents are included for review in the binder under each FDs tab)

Fire Suppression Organization:

1) Are fire suppression operations organized in such a way as to ensure the fire department's fire suppression capability includes sufficient personnel, equipment, and other resources to efficiently, effectively and safely deploy fire suppression resources?

*Consultant's Comment: Officers acknowledge sufficient resources in equipment and tools but also acknowledge the one main weakness of the volunteer fire service is that we often rely on "chance" that the right number of people show up with appropriate skills and/or the need for mutual aide to insure we have sufficient manpower. Active, ongoing recruitment of volunteers is the new "norm" going forward for Fire Companys in the Town of Boston and many around our state and country.

2) Are there written organizational, operational and deployment procedures as specified in written administrative regulations, standard operating procedures and departmental orders?

3) Does the fire department participate in a process that develops a community risk management plan with respect to the risks associated with the storage, use and transportation of hazardous materials?

*Consultant's comment: Each fire department should stay in communication with the various community representatives such as building department/code enforcement officers, fire marshal's office and even representatives of the state police and state D.O.T. to regularly evaluate the fire department's knowledge of and exposure to hazardous materials that exist within the community or that may travel through the community. A review of hazardous material reporting forms should also be conducted annually.

4) Are the specific roles of the fire department and other responding agencies defined by the community risk management plan for hazardous materials and other special operations?

5) Do the fire department procedures clearly state the succession of command responsibility?

6) Are the personnel who respond to fires and other emergencies organized into company units or response teams with appropriate apparatus and equipment?

It is this consultant's opinion that based on the response patterns of a volunteer fire department the crew serving as the "first due" company with defined "first due" tasks and additional crews arriving on other apparatus, despite arriving at the station and boarding apparatus randomly, can fulfill the spirit and goal of this standard with appropriate guidance and on scene company style organization by the individual serving as the "officers" on each of the additional arriving apparatus.

7) Has the fire department identified minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively?

*Consultants comment: The fire companies should make every effort to regularly evaluate staffing. Also, due to different availability of manpower based on different times of the day and the added time needed to assemble mutual aide crews coupled with the travel time needed for assistance from the "neighbors" to arrive, additional aide should be considered for incidents that meet

a criteria predetermined by your department to reduce the time spent waiting for sufficient manpower to conduct safe and effective operations.

8) Does the fire department maintain a standard report containing specified information for each response?

9) Do these reports include the location and nature of the fire or emergency and describe the operations performed?

10) Does this report identify the members responding to the incident?

11) Are there standard response assignments and procedures, including mutual aide response and mutual aide agreements, predetermined by the location and nature of the reported incident that regulate the dispatch of companies, response groups and command officers to fires and other emergency incidents?

12) Have the number and type of units assigned to respond to a reported incident been determined by either risk analysis and/or pre-fire planning?

Fire Suppression Operations

13) Do your procedures assign one individual as the incident commander?

14) Do your procedures require assumption and identification of command to be communicated to all units responding to or involved at the incident scene?

15) Do your procedures require that the incident commander shall be responsible for the overall coordination and direction of all activities for the duration of the incident?

16) Do your procedures require the incident commander to ensure that a personnel accountability system is immediately utilized to rapidly account for all personnel at the incident scene?

17) Do your procedures require the company officer/crew leader be aware of the identity, location and activity of each member assigned to the company at all times?

18) Do your procedures require each member of the company to be aware of the identity of the company officer/crew leader?

19) Do your procedures require the orders addressed to individual members, particularly verbal orders and orders at incident scenes to be transmitted through company officers?

Initial Attack:

20) Upon assembling the necessary resources at the emergency scene, does your fire department have the capability to safely initiate an initial attack within 2 minutes 90% of the time?

*Consultant's Comment: Chiefs in response to this question acknowledged the unpredictability of arriving manpower to impact this goal however the wording of this question clearly states "upon assembling the necessary resources" (meaning once rigs and personnel are on scene) can initial attack be made within 2 minutes and it is my belief that Boston area fire departments may actually be able to do this.

21) Initial attack operations shall be organized to ensure at least four members shall be assembled before initiating interior fire suppression operations at a working structure fire?

*Consultant's comment: There is significant risk for injury and death to firefighters who attempt to "make the grab" flying solo or while working in less than 2 in 2 out operational models and there is significant exposure to liability to responding officers who are in charge of a scene should something go bad when firefighters are working in less than ideal manpower situations so every effort should be made to place manpower on scene at working structure fires very early in the incident including achieving this goal by using automatic mutual aide.

22) Do your procedures require that while they are operating in the hazardous area, two individuals shall work as a team?

23) Do your procedures require that outside the hazardous area, two individuals shall be present for assistance or rescue of the team operating in the hazardous area?

24) Do your procedures require that the assignments of any individuals not be permitted if abandoning their critical task(s) to perform rescue clearly jeopardizes the safety and health of any firefighters operating at the incident?

25) Do your procedures require the initial attack operations be organized to ensure that if, upon arrival at the emergency scene, initial attack personnel find an imminent life threatening situation where immediate action could prevent loss of life or serious injury, such action shall be permitted with fewer than four personnel when conducted in accordance with NFPA 1500, standard for fire department occupational safety and health program?

26) Does your fire department have the capability for sustained operations including fire suppression; engagement in search and rescue, forcible entry, ventilation and preservation of property; accountability for personnel; a dedicated rapid intervention team; and provision of support activities for those situations that are beyond the capability of the initial attack?

Chiefs commented that the departments are dependent on volunteer response and mutual aide companies.
*Consultant comment: If the Fire Departments are not able to recruit additional active, interior qualified volunteer manpower over the next 24 to 36 months capable of meeting the goal and spirit of the above sustained operations section (at all times of the day or night) the organizations should begin to have additional dialogue or coordinate the further study of a long range merger of the three organizations that would then have greater financial resources to eventually add part-time career staff and increased volunteer ranks through multiple volunteer "companies" covered under a larger town-wide fire district or department umbrella.

Intercommunity Organization:

27) Are your mutual aide, automatic aide, and fire protection agreements in writing?

28) Do said agreements address such issues as liability for injuries and deaths, disability retirements, cost of service, authorization to respond, staffing and equipment including the resources to be made available and the designation of the incident commander?

29) Do your procedures require the training of personnel for all fire departments in those procedures that govern your mutual aide, automatic aide and fire protection agreement?

30) Are these plans comprehensive and do they produce an effective fire force and ensure uniform operations?

31) Are those companies who respond to mutual aide incidents equipped with communications equipment that allows personnel to communicate with the incident commander and division officers, group officers or sector officers?

Emergency Medical Services:

32) Does your department respond to and/or provide E.M.S.?

33) If YES, are your emergency medical services (EMS) operations organized in such a way as to insure that your fire department's emergency medical capability includes personnel, equipment and resources to deploy the initial arriving company and additional alarm assignments?

34) Do your procedures include established automatic mutual aide or mutual aide agreements?

35) The fire department shall clearly document its role, responsibilities, functions and objectives for the delivery of EMS?

36) Are you meeting your response requirements in a timely fashion?

37) Do you have any no-response EMS situations where neighboring agencies have to be toned out to cover the call?

Quality Management for EMS:

38) Does your FD have a quality management program?

39) Are you reviewing all first responder and BLS medical care provided by the department?

40) If YES to question #39, are you documenting this review process?

Special Operations Response:

41) Have you established any special operations components within your fire department?

42) Have you organized your special operations in such as manner as to ensure that the fire department's special operations capability includes sufficient personnel, operational procedures, equipment and apparatus and resources to efficiently, effectively and safely deploy the initial arriving company and additional alarm assignments providing services?

43) Have you established automatic mutual aide or mutual aide agreements to assist you in complying with your operational requirements of your special operations services?

44) Have you adopted a special operations response plan and SOPs that specify the role and responsibilities of the fire departments and the authorized functions of members responding to hazardous materials emergency incidents?

45) Have all fire department members who are expected to respond to emergency incidents beyond the first responder operations level for hazardous materials response been trained to the applicable requirements of NFPA 472, Standard for Professional Competence of Responders to Haz Mat incidents?

46) Does your fire department have the capacity to implement a RIT during all special operations incidents that would subject firefighters to immediate danger of injury or in the event of equipment failure or other sudden events?

47) Have you determined where you will obtain assistance if a higher level of emergency response is needed beyond the capability of the fire department special operations?

48) Do your procedures consider the availability of outside resources that deploy these capabilities and the procedures for initiating their response?

49) Do your procedures limit the operations of your personnel to performing only those specific special operations functions for which they have been trained and properly equipped?

Fire Department Systems:

50) Does your department have a firefighter occupational safety and health program that forms the basic structure for protecting the health and safety of firefighters, regardless of the scale of the department or the emergency?

51) Does your fire department have an incident management system that meets the requirements of law?

52) Does this system comply with the NFPA 1561 standard on emergency services incident management system to form the basic structure of all emergency operations of the fire department regardless of the scale of the departments or the emergency as specified by law?

53) Do you utilize the incident management system to manage incidents of different types including structure fires, wild land fires, haz-mat, EMS and other types of emergencies that could be handled by the department?

54) Does your fire department have a training program and policy that ensures that personnel are trained and competency is maintained effectively, efficiently and safely execute all responsibilities consistent with the departments organization and deployment

*Consultant's comment: Fire Departments should make sure they develop a drill schedule and/or training calendar that is posted and available to members. Officers should keep tabs on members training status every few months and reach out to members who may be in danger of not making the department's required training goals for members. Creative training schedules may need to be developed to address volunteer members schedules due to family and job commitments and the demand on a volunteer's time by sources outside the VFD.

55) Does your department have a reliable communications system to facilitate prompt delivery of public fire suppression, EMS and special operations?

56) Does the communications system including its facilities equipment staffing and operating procedures comply with NFPA 1221 standard for the installation, maintenance and use of emergency services communications systems?

57) Does your department have SOPs for radio communications that provide for the use of standard protocols and terminology at all types of incidents?

58) Does your department have a system of standard terminology to transmit information, including strategic modes of operations, situation reports, and emergency notifications of imminent hazards?

Pre-Planning:

59) Does your department have operational procedures, policies and requirements that allow it to conduct pre incident planning?

60) Does your department pay particular attention to target hazard occupancies?

*Consultants Comment: Regular tours and preplanning sessions for commercial facilities in your response areas should be a priority for each department serving the Town of Boston. This will also insure responding members and officers have an up to date understanding of the facilities that can improve operations and reduce the danger to firefighters due to lack of knowledge of the layout and hazards of commercial facilities.

Regarding pre-planning and target hazard occupancies listed above there needs to be a relationship between the types of occupancies to be protected and the amount of apparatus and staffing resources that are required for each different occupancy style. The NFPA has already done this for us. I have taken the following information from the NFPA Fire Protection Handbook 20th edition and it should be considered as you pre-plan your district, train your members and mutual aide companies, develop automatic aide plans and agreements and consider future apparatus purchases:

High Hazard Occupancies (schools, hospitals, nursing homes, explosive plants, refineries, high rise buildings and other high life hazard or large fire potential occupancies)

At Least:

Four pumpers

Two ladder trucks (or combination apparatus with equivalent capabilities)

Two chief officers and other specialized apparatus as may be needed to cope with the combustible involved.

No fewer than 24 firefighters. One or more safety officers and a RIT for a total of 29 personnel.

Medium Hazard Occupancies (apartments, offices, mercantile and industrial occupancies not normally requiring extensive rescue or firefighting forces)

At Least:

Three pumpers

One ladder truck or equivalent listed above

One chief officer and specialized apparatus as needed listed above

Not fewer than 16 firefighters – One or more safety officers and RIT for a total of 21 personnel.

Low Hazard Occupancies (one, two or three family dwellings and scattered small businesses and industrial occupancies)

At Least:

Two pumpers

One ladder truck or equivalent listed above

One chief officer and other specialized units as referenced above

Not fewer than 12 firefighters – One or more safety officers and RIT or a total of 17 personnel.

Rural Operations (scattered dwellings, small businesses and farm buildings).

At Least:

One pumper with large water tank (min 500 gal)

One mobile water supply apparatus (1000 gal or larger)

Such specialized equipment as may be needed to perform effective initial interior firefighting operations.

One chief officer

Not fewer than 12 firefighters and one or more safety officers and a RIT for a total of 17 personnel.

Additional alarms:

At least the equivalent of that required for rural operations for second alarms; equipment as may be needed according to the type of emergency and capability of the fire department. This may involve the immediate use of mutual aide companies until local forces can be supplemented with additional off duty personnel. In some communities, single units are "special called" when needed without always resorting to a multiple alarm. Additional units may be needed to fill at least some empty stations.

*Consultant note: During my visit(s) to the Town of Boston I found that the majority of the properties and facilities in their coverage area were of the Rural hazard occupancy class (scattered dwellings, small businesses and farm buildings) with only a very small portion of what could be termed in other categories ranging from low to high hazard category properties (i.e the public school in the North Boston area, Town Hall, etc). Based on the charts for those said categories and the apparatus currently operated by the various Fire Company units, I believe they are able to properly meet first due needs based on equipment. However due to potential "time of day" issues regarding personnel and equipment in Boston and at mutual aide departments (and in the majority of all volunteer units) I do have concerns about being able to consistently bring out the maximum 29 first due firefighters and equipment needed to safely and effectively operate at a fire in a high hazard occupancy such as a working fire incident or other major disaster at the school facility or other significant incident as defined in the previous charts. Based on the above information officers should not delay the activation of mutual aide until they arrive on location and do a complete "size up" as this may result in too much time elapsing for a mutual aide

response to be effective in life saving activities or controlling an advancing fire in a high hazard occupancy before it becomes a total property loss and a basic extinguishment of the remains of the "former" structure.

1720 Compliance summary

This survey was intended to be an educational exercise. Reading the responses and in speaking with the Chiefs and officers one can clearly see there is a great deal of "interpretation" regarding compliance with NFPA 1720. YES was the response to many of the questions above from officers in all three departments. Please note the consultant's comments and consider them in the coming months. While there are some members in every organization that continue to "buck" organization, standards and requirements or members who prefer the "good ole days" leaders must remember that an organized, well trained, responsive fire department should be the minimum standard provided to your community. Also it should be noted that pre-planning is a critical function of any fire department. Pre-plans should be a goal for each fire department's leadership. While this may appear to be a project that is very large for any one individual to wrap their hands around, a pre-plan committee should be formed and a listing of facilities that require pre-plans be developed. Then a manageable calendar or time table should be established based on a schedule that allows the committee to develop a number of pre-plans every three months or so until the task is ultimately completed. *The Fire Departments serving the Town of Boston should adopt NFPA 1720 standard as an operational model and goal for all officers to push the organizations towards for full compliance. A copy of the standard has been included in the report binder.

Fire Department Key Assignments and Strategies for Success

The means of achieving success in the fire service are no different than in most areas of human organizational behavior. First, what is an organization? An organization is a group of people working together to achieve a common set of goals. In order for any form of success, an organization must have a number of components in its organizational tool box:

1) Structure

2) Processes

3) A behavioral system for its members.

A basic definition of structure states that it is a pattern of ways which members, sometimes too numerous to always have face to face contact and engaged in a wide range of tasks relate to one another in a conscious, systematic manner for the accomplishment of mutually acceptable goals. The following helps to make up structure for an organization:

1) Job definitions – What the member is supposed to do.

2) Departmentalization – The grouping of like tasks/functions.

3) Span of Control – How many people report to an officer?

4) Delegation – Moving authority as close to the source of the decisions as possible.

A fire department is a top down organization. Orders and directives are issued at the top and travel downward through an established chain of command. In order to have a better idea of how to operate, members of the fire department need to know where the decisions are made and who will

make them. Members need to know whether there is a centralized or decentralized type of an organization. Here are some clues:

1) Do individuals have a great deal of input into decisions?

2) Are individuals allowed to perform many tasks or are they limited in what they are allowed to do on behalf of the organization.

3) Are the tasks laid out in a specific or general way, in terms of how they are to be performed?

4) Is the department broken down by function or are people expected to know how to perform the full range of jobs?

5) What is the span of control?

6) Are tasks delegated by the leadership to the members for their performance?

It is important to note that people will catch on very quickly to the type of organization to which they belong. Let me offer you this warning at this point. Highly centralized organizations, where power and control lie in the hands of a few will stifle individual initiative and limit individual freedom. Decentralized organizations where people are trained and empowered to do their tasks, will allow individuals to grow and encourage development. Volunteer fire departments and their leaders have to walk a careful balance between structure and delegation/empowerment. While a fire department and fire district must be top down and have clear chain of command members should have input, involvement and a way to bring concerns to the attention of leaders and have these ideas, at the very least taken under consideration. Members also must understand that simply because their

ideas or suggestions have been made final decision authority may still be in the hands of the members, community, officers or board based on the particular situation.

Stakeholder Interviews

During the course of this review the consultant conducted stakeholder interviews with a random group of individuals. These interviews were conducted in private over a multi-day period and the participants were assured reasonable confidentiality and only their comments in general would be reflected in this report and not the names of the individuals who made them. The following represents the questions that were asked of all interviewees and the corresponding responses received:

Boston Area Fire Dept. Stakeholder Interviews: page 73-90

1) Please share with me your thoughts either pro or con on the Fire Departments partnering on this study?
   a. We should not just shoot from the hip, we should get an educated outside opinion. My concern is that I do not want to see this study used as a political tool. (NBFD)
   b. It is good to get various thoughts out in the open. (NBFD)
   c. It will be beneficial to us moving forward. (NBFD)
   d. It's fine that they are doing it. One of the town board members was upset that we want ahead with our own study but we should be the proactive ones since we are the fire service and we should look at ourselves objectively and make sure we are providing good service to our "customers" the community. (NBFD)
   e. It is a good thing the fire companies are being proactive. (NBFD)
   f. I am pro, the more info the better (NBFD)
   g. It is good that the FDs are taking the lead vs. the town. (P)
   h. I feel it is positive that they are getting together to do this. There is some friction sometimes between companies however

Fire Apparatus – Vehicle Review

During my onsite visits to your three fire departments I spent some time reviewing your fire apparatus and vehicle fleet. In the fire service you can always find differing opinions regarding the type and configuration or favorite make/model of apparatus that a department should operate however for this report most of my general review considers the following points only:

a) Do you have reasonably appropriate apparatus/vehicles to mount a proper first due response in your department's coverage area?

b) What is the general condition and serviceability of your vehicles?

c) What is the general replacement schedule for a fleet like yours?

d) What specialized apparatus/vehicles do I as a consultant feel could enhance your ability to offer services to your community or make your member's jobs easier?

Based on the information I have gathered along with a series of photographs, it is quite clear that the three Fire Departments have taken steps to update and operate a more modern, safe and dependable fleet of vehicles only restricted by the financial constraints of each organization. It is my opinion that each department can mount a first due fire attack in most one or two family dwellings or commercial occupancies in each first due area with your current fleet of vehicles. Currently, despite each company having a fleet of vehicles with some modern apparatus that is in good front line service a few minor issues or "consultant's concerns" exist in the area of apparatus for two of the three companies. The concerns this consultant sees based on visits and vehicle assessments are as follows:

1) The Boston Fire Company has made a very responsible purchase of a used Kenworth/Pierce Class A pumper. This vehicle was obtained in very good condition for a competitive price. However Boston still will have three (3) apparatus in service that were built in the early 1990s. This may present a challenge for them having just purchased the new/used pumper coupled with the costs of completing their much needed new truckhouse facility.

2) Patchin is operating a modern vehicle fleet however two of the vehicles R7 and E1 were born in the same year. They also have some debt for their fleet of vehicles. Patchin should make steps to pay down truck debt and carefully follow the recommended replacement plan provided in this document.

As the three Fire Departments consider fleet replacement and fleet planning philosophies the following key points should always be considered.

1) The specific needs of the protection area covered by each department.
2) The apparatus needs and protection challenges for the entire area of the Town of Boston as a secondary consideration in apparatus/fleet replacement and selection considerations.
3) Established "years of service goals" for your apparatus and vehicle fleet based on three "service life phases"
    a. First due
    b. Second due

c. Reserve

4) Cost of replacement vs. cost of maintenance of existing rigs

5) Technology or lack of it in current rigs vs. available new needed or required technology available in new rigs

6) Safety features and improvements available in new rigs

7) Actual usage of apparatus

8) Changes in equipment standards that have developed over the life of your current rigs

There are several different classes of apparatus available to fire departments today and this wide range of equipment is reflected in the current fleet of the Boston area fire departments. These classes or categories are pumpers (including rescue pumpers), rescues, aerials and utility or service vehicles. The goal for the replacement of pumping apparatus regardless of department size or configuration should be to replace the apparatus in a systematic manner and before the apparatus becomes undependable, costly to maintain or unsafe. The useful life of a pumper or pumper/tanker in the Town of Boston due to lower call volume will most likely be longer than some other suburban volunteer departments with higher call volumes however high call volume urban areas such as the City of Buffalo may experience replacement needs much sooner than in the Town of Boston.

It is this consultant's opinion that the useful life for a pumping or pumper tanker apparatus in the Town of Boston that is a pre-1991 apparatus that is currently in service in the Town of Boston should not exceed 20 years. For this review this consultant is going to recommend a 20-25 year life cycle

goal for all apparatus 1991 and newer and for new large apparatus purchases in the Town of Boston based on the following chart.

Replacement Goals for Pumpers & Pumper/Tankers

Type of Duty	Town of Boston Stages of Pumper Useful Life	Average Volunteer Dept. Moderate to Low Use Dept.	Comments
Active Service	First 10 years of useful life	Stage 1 (12 years)	At this stage the apparatus is used as a front-line response unit
Active Service Second Due	Second 10 years of useful life	Stage 2 (12 years)	Truck responds when front line rig is on a call or during major incidents
Non-active Reserve or stand by status	Third and final 3-5 years of useful life	Stage 3 Reserve or awaiting sale	Responds when "younger" units are OOS or during major incidents. May not have full compliment of equipment

Based on current call volume in the Town of Boston a 15 year life expectancy can be planned for light rescues, smaller squads or utility vehicles that may be on commercial chassis such as the F-350 or F-450 or equivalent.

In the future the fire departments or single fire district may consider using certain support vehicles such as S.U.V. chief's vehicles and/or pick up trucks. The national Association of Fleet Managers (NAFM) recommends replacement of autos, vans, and light trucks/SUVs in accordance with the following general standard:

Vehicle Type	NAFM Age Standard	NAFM Miles Standard
Passenger Auto	5.5	88,000
Van	7.5	88,000
Light Truck/SUV	7.5	92,000

Currently North Boston and Patchin do not have station issues that may dictate apparatus purchasing and Boston in the very near future will be in their new truckhouse which will reduce this issue for all three fire departments which is a plus for both safety and apparatus purchasing costs. The acquisition and operation of specialized equipment such as heavy rescues, boats, ATVs, ice rescue equipment, trailers etc are not clearly specified for in the various guides and standards written for the fire service. Pumping and aerial apparatus are specified for while the need for specialized vehicles and equipment are left up to the individual fire department or districts to determine if need exists and to select the proper equipment or vehicle to address said need. Currently the Boston Fire Company operates an

off road Gator style unit. Firefighters interviewed have indicated the possible need or desire to have tracks to make this unit more versatile however this is a service that might be best if not limited to one fire company. The fire companies should work together to evaluate the need for town wide ATV off road rescue jointly operated by the three fire departments as this consultant feels agricultural, recreational and hiking/hunting activities in the entire Boston area do justify this type of service with multiple ATV units for safety and manpower operated by the three Fire Departments. This proposed off road team, vehicles and equipment can be housed in a racing style 24 to 28 ft trailer lettered "Town of Boston – Joint Fire Department Special Operations Unit" that can be pulled by a fire department vehicle when activated. This can also help build interoperability and camaraderie between all three fire departments. With those points made, my review of your rigs is as follows:

BOSTON 4

1992 FORD/E-1

MINI-PUMPER – 12,869 MILES

Condition/Comments:

Good overall condition for age

Vehicle has reached end of service life as emergency vehicle.

BOSTON 7

1996 FORD DIESEL – 8,201 MILES

LITE RESCUE

Condition/Comments:

Good overall condition for age

Past recommended service life as emergency vehicle

BOSTON ENGINE 1

1995 FORD PUMPER – 16,544 MILES

Condition/Comments:

Average condition for age

BOSTON NEW ENGINE

2005 KENWORTH/PIERCE – 0000 MILES

CLASS A PUMPER

Condition/Comments:

Excellent condition

Purchased used

Responsible purchase, will serve first due area well

BOSTON 5

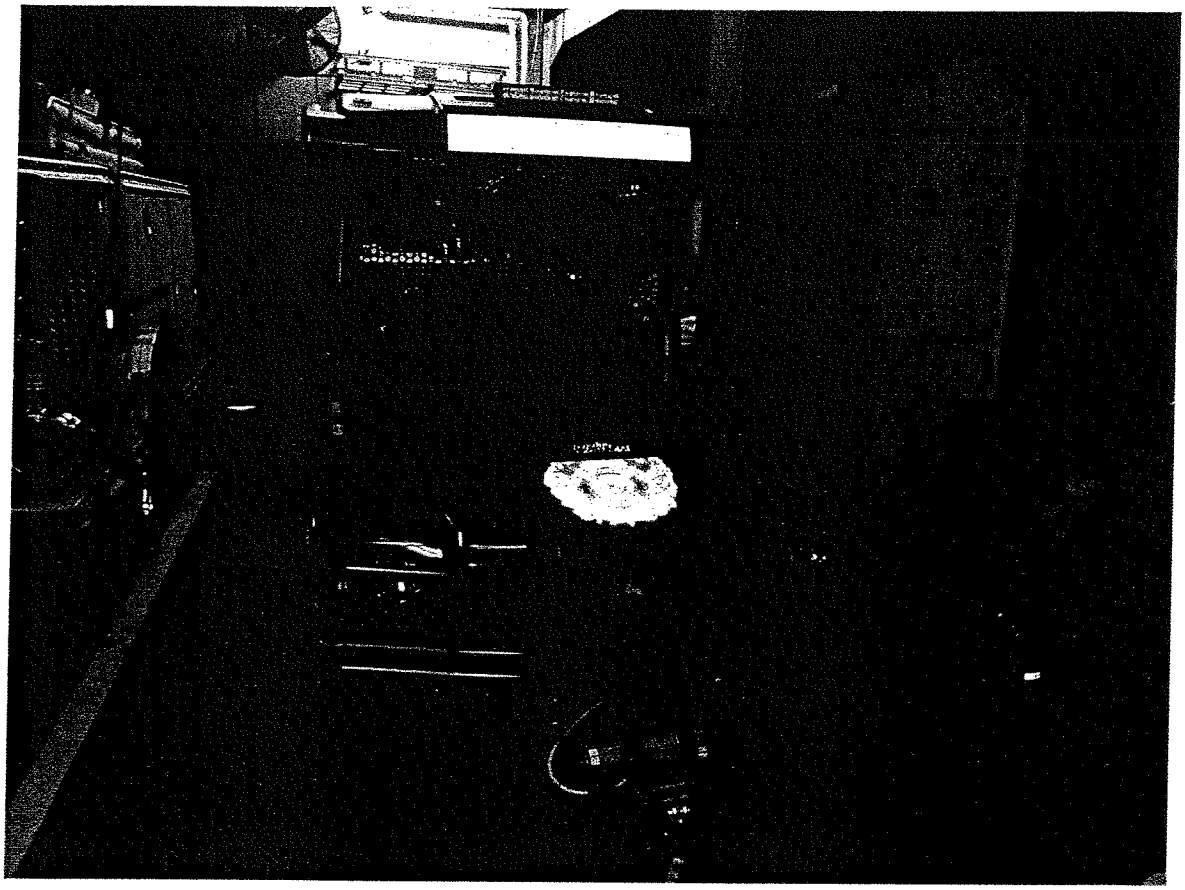
2005 KENWORTH – 6,984 MILES

TANKER

Condition/Comments:

Very good condition for age

No vehicle concerns



BOSTON GATOR

JOHN DEERE – 0000 MILES

OFF ROAD/SUPPORT VEHICLE

Condition/Comments:

Average for age

NORTH BOSTON 7-2

2001 GMC – 16,071 MILES

LITE RESCUE/UTILITY

Condition/Comments:

Excellent condition for age

Improve securement of traffic management signs

NORTH BOSTON 3

2006 HME/TOYNE – PUMPER

DIESEL

Condition/Comments:

New condition

NORTH BOSTON 2

1994 SPARTAN/RD MURRAY – 11,225 MILES

Condition/Comments:

Very good condition for age

NORTH BOSTON 7

1999 FREIGHTLINER/RD MURRAY - 5889 MILES

RESCUE

Condition/Comments:

Very good condition – no comment items noted

PATCHIN 7

2008 GMC/FERRARA – 3010 MILES

Condition/Comments:

Very good condition for age

PATCHIN ENGINE 1

2008 FERRARA – 7807 MILES

PUMPER

Condition/Comments:

Good condition for age

PATCHIN QUINT 6

2001 FERRARA – 12115 MILES

Condition/Comments:

Very good condition

Chart #1

Apparatus Replacement Schedule			
Vehicle ID	**Year**	**Replace Year**	**Replacement Type**
BOSTON 4	1992	Past Service Life	Replace
N BOSTON 2	1994	2014 (20 yrs)	Similar Vehicle
BOSTON 1	1994	2014 (20 yrs)	Similar Vehicle
BOSTON 7	1996	Past Service Life	Replace
N BOSTON 7	1999	2019 (20 yrs)	Similar Vehicle
N BOSTON 7-2	2001	2015 (14 yrs)	Similar Vehicle
PATCHIN Q6	2001	2026 (25 yrs)	Similar Vehicle
BOSTON E2	2005	2025 (20 yrs)	Similar Vehicle
BOSTON T5	2005	2030 (25 yrs)	Similar Vehicle based on need
N BOSTON E3	2006	2026 (20 yrs)	Similar Vehicle

PATCHIN E1	2008	2028 (20 Yrs)	Similar Vehicle
PATCHIN R7	2008	2023 (15 yrs)	Similar Vehicle

*Note: Tankers listed above for 25 year replacement as "similar vehicle" such as Boston T5 may at the time be replaced with a class A pumper w/1750 gpm pump capacity if at the time of replacement there is an increased availability of municipal water.

*Replacement schedule listed above as independent fire companies.

*It is the belief of this consultant that the Boston Fire Company could potentially design a vehicle to achieve the goals of Boston 4 and Boston 7 thereby being able to phase out two aging vehicles and combine their function into one modern vehicle. This would potentially reduce Boston's fleet by one vehicle.

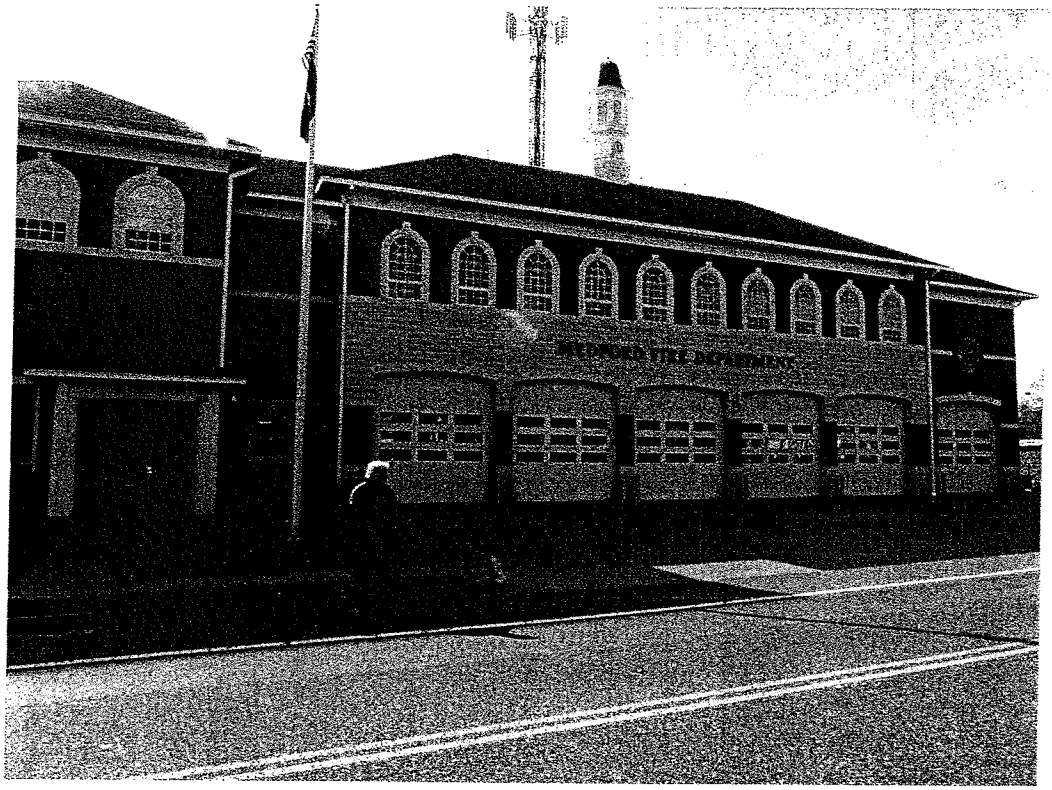
*The fleet size of the North Boston Fire Company is appropriate as is the fleet of the Patchin Fire Company. There is also great debate in communities all over our country regarding apparatus equipped with aerial type devices. Often townspeople and old school firefighters equate aerial apparatus solely to high rise firefighting. Clearly an aerial device does have an evolving role in modern firefighting even in traditionally rural communities. A reasonably equipped and cost effective aerial device, strategically placed in the center of a community can be a vital asset. It is this consultant's opinion that the Town of Boston having one such apparatus is not overkill nor is it wasteful spending.

*It is the belief of this consultant that potentially as a town wide fire district with three individual companies under that umbrella that a single class A pumper could be run from each station (plus one reserve pumper in town) with a tanker also running out of Boston Station 2, supported by a town wide aerial, Patchin 7 and NB 7 and a town wide midi pumper/brush truck bringing the total vehicles from the 13 listed above to 10. Strategically placed trailers instead of dedicated emergency vehicles can be used for occasionally needed items such as haz-mat gear, mass casualty incident gear or fire prevention items.

*In the single fire district configuration listed above, rescue pumpers that also meet Class A requirements could be used to replace traditional "rescues" for further reductions as needed.

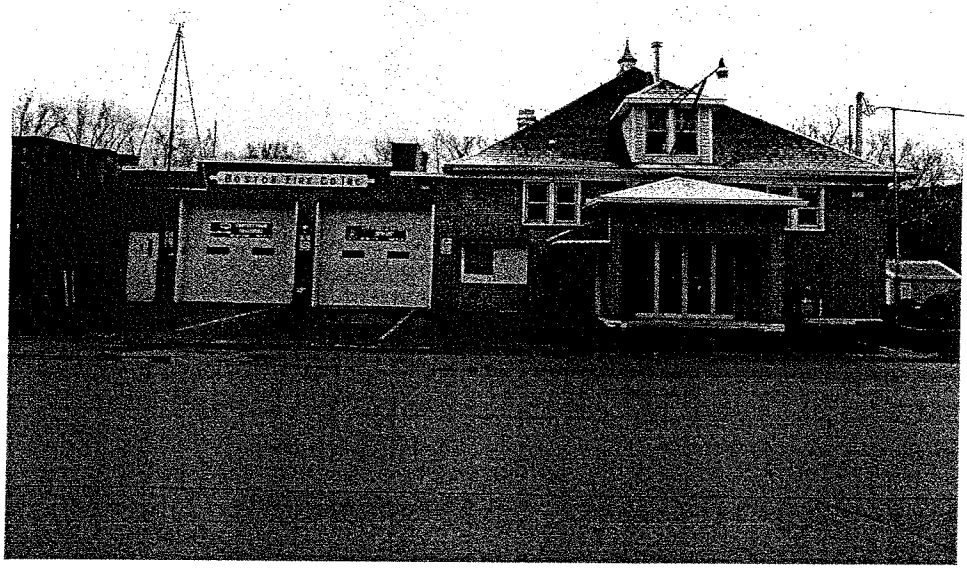
Fire Department Facilities

Fire department facilities ie; stations, are always a topic of discussion during recent studies of volunteer fire departments. This topic has become more of an issue as budgets have grown tighter and government leaders and citizens have become more watchful of their tax dollars. When discussions do turn to fire station facilities, a common theme seems to generate three conversations; how many stations do we need, how much is too much with regards to the type or configuration of stations and lastly life expectancy ie; when has a station reached the end of its serviceable life as a fire station? Clearly based on the next two photos there is a wide range when it comes to the type and size of fire station needed to house and operate a modern fire department and the vehicles and people needed to make it function.




LYSANDER
FIRE DISTRICT STATION #2

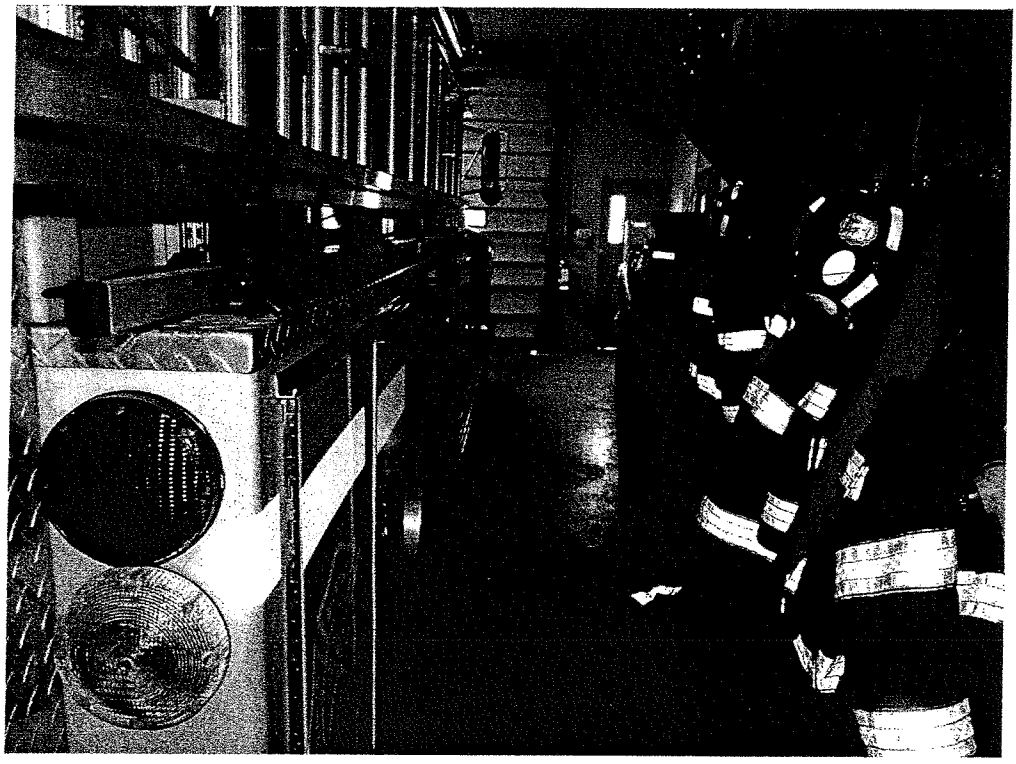
The time this consultant spent in the Town of Boston showed at least to this consultant, that there has been no inappropriate or over the top spending on the facilities used to house the three fire companies. It is worth noting that in most communities there always seems to be somewhat of a split on this topic between stakeholders who speak of concerns for the taxpayers, those who cannot seem to disconnect from the "good old days" of the fire service when the old firehouse was good enough and full of the "memories of days gone by" and those who desire to make improvements. This consultant was able to spend enough time onsite at each firehouse to become reasonably acquainted with the stations and various other accessory structures operated by the three companies. The following photos represent some key concerns/comments but not all concerns/comments noted during this review:



Boston FC Main Firehouse Has Outlived Purpose as a Firehouse

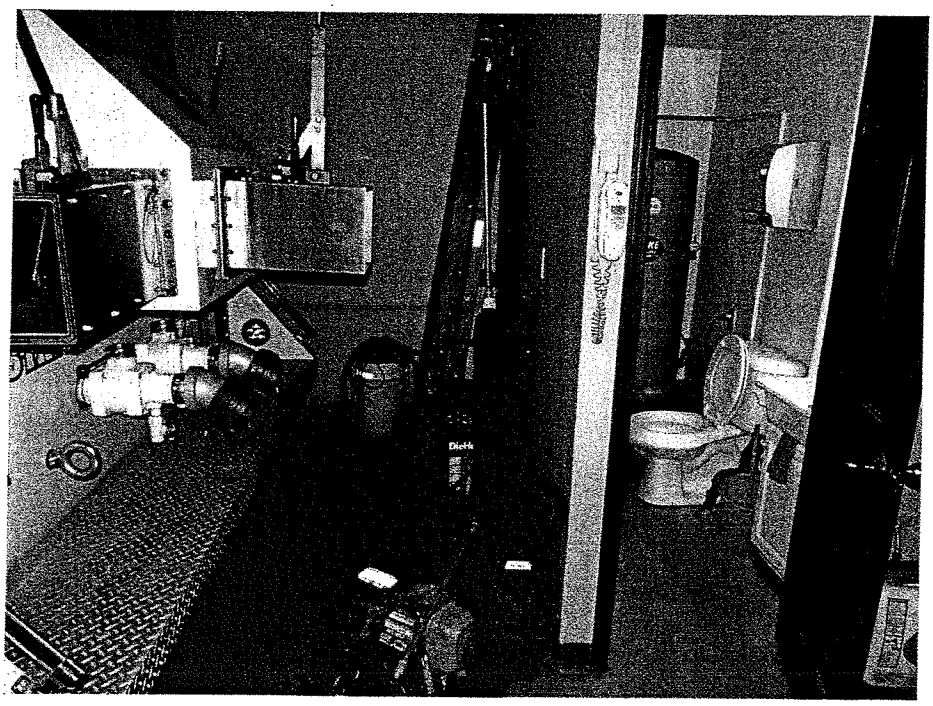
New Boston FC Engine House Much Needed, Responsible Improvement

Dangerous Pinch Points Between Apparatus

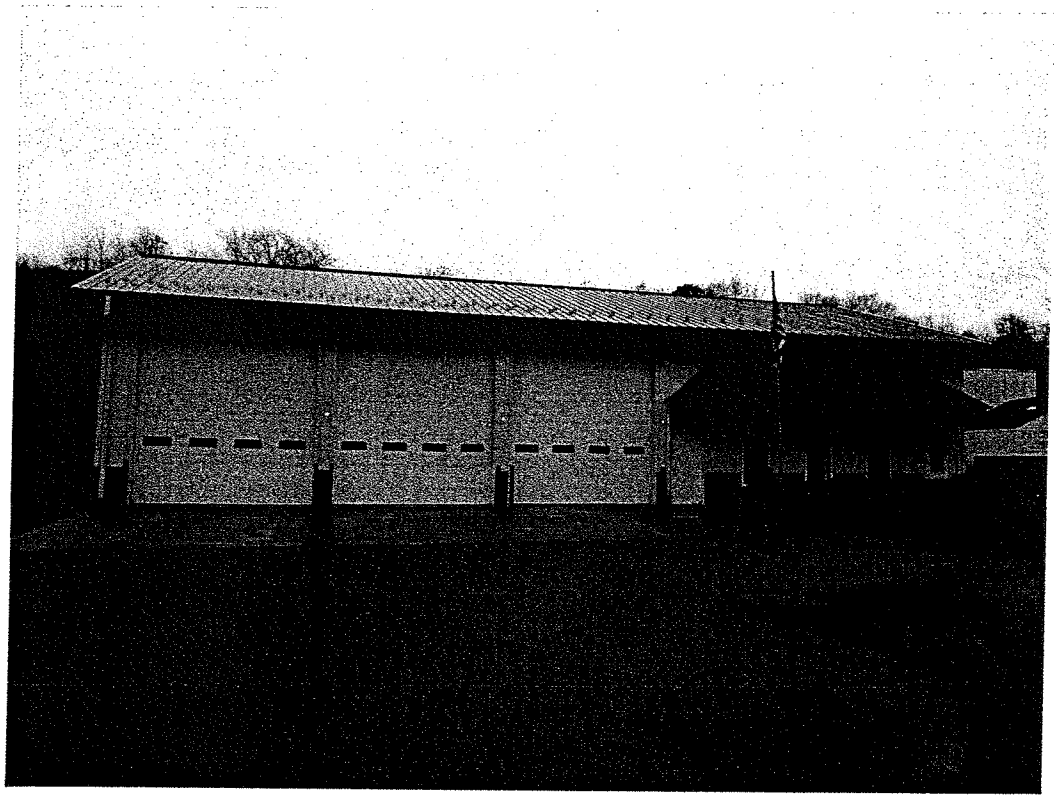


Lack of Safe Space for Personnel to Operate Around Vehicles

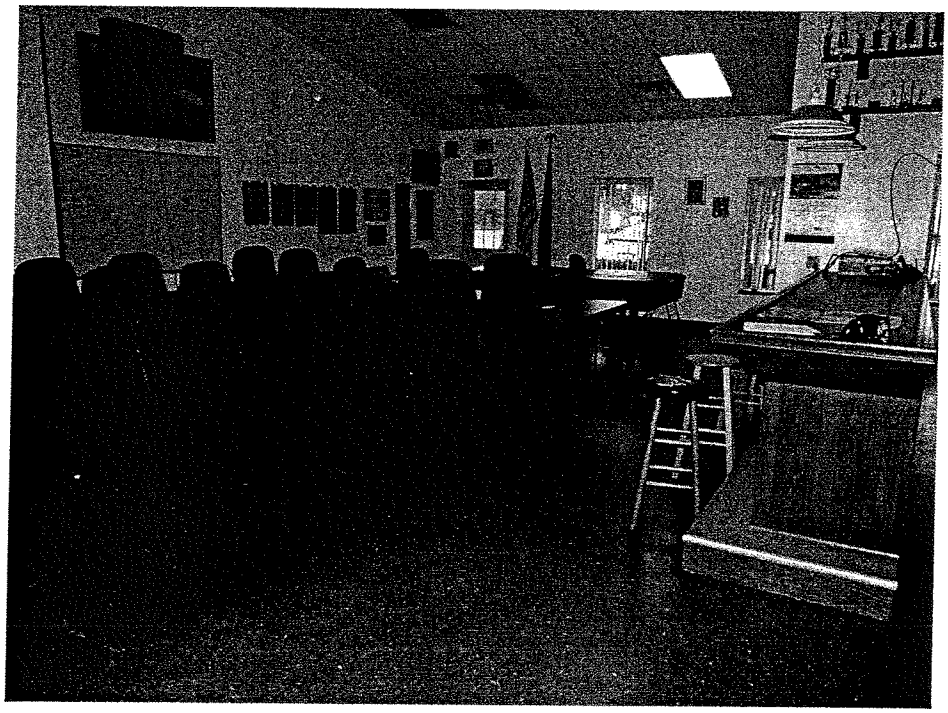
Lack of Appropriate Space Cushion Between Apparatus & Firefighters



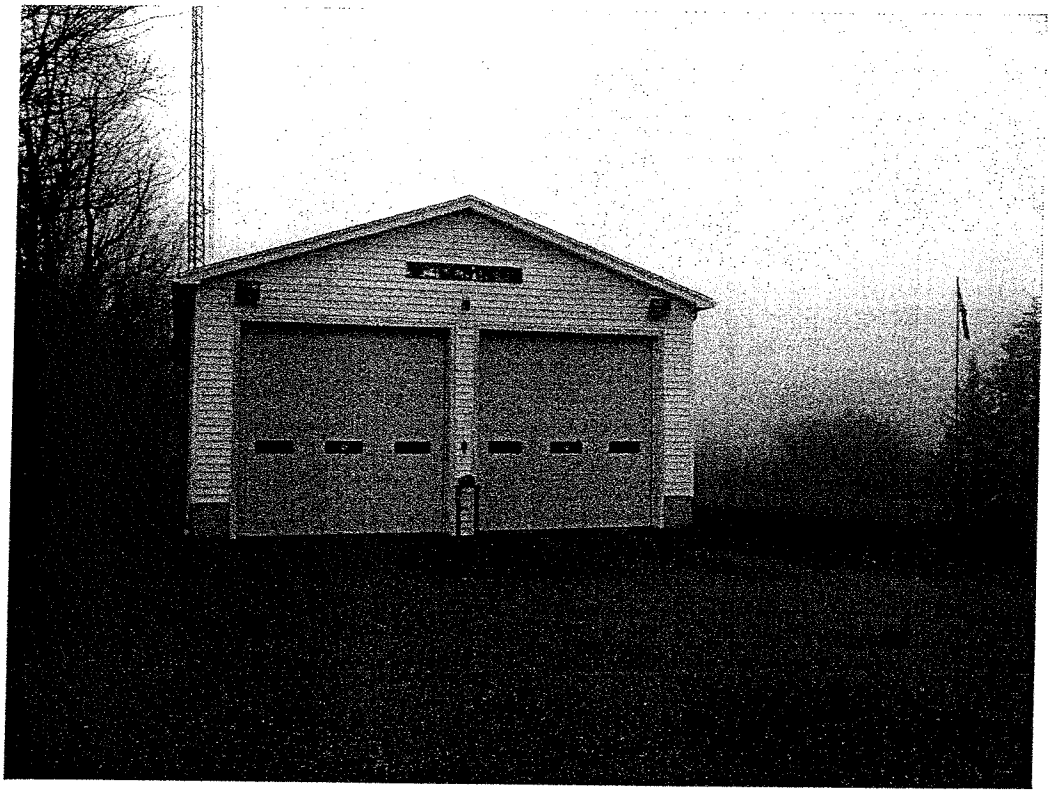
Backing Apparatus Could Enter Restroom Area Resulting in Firefighter Injury/Death



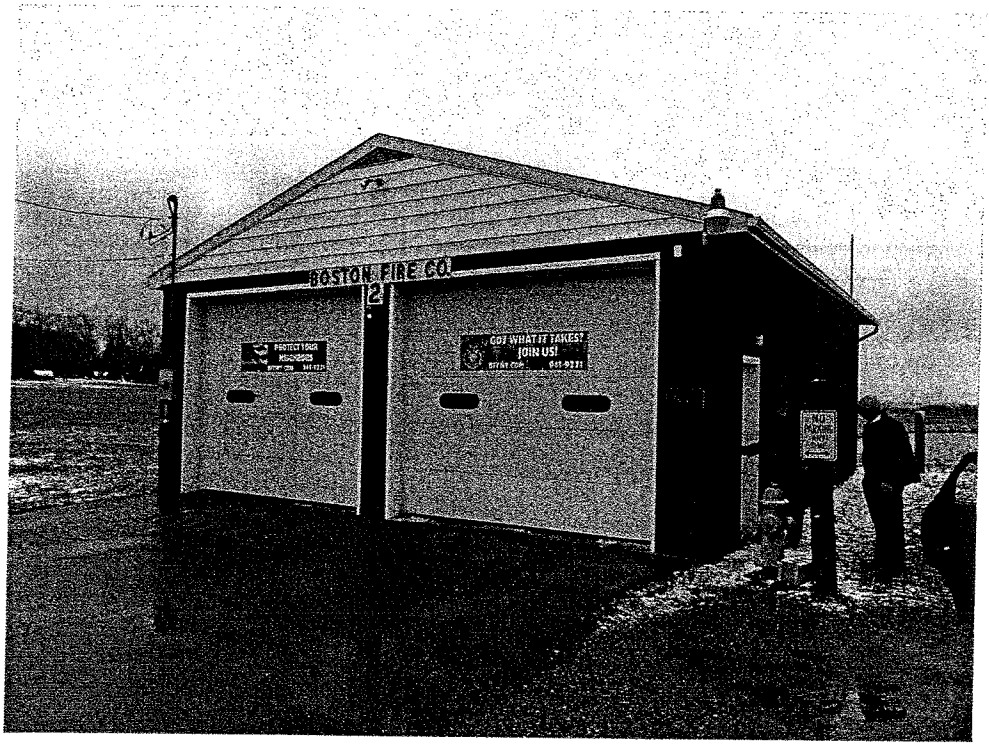
Patchin Facility – Appropriate But Could Use General Maintenance



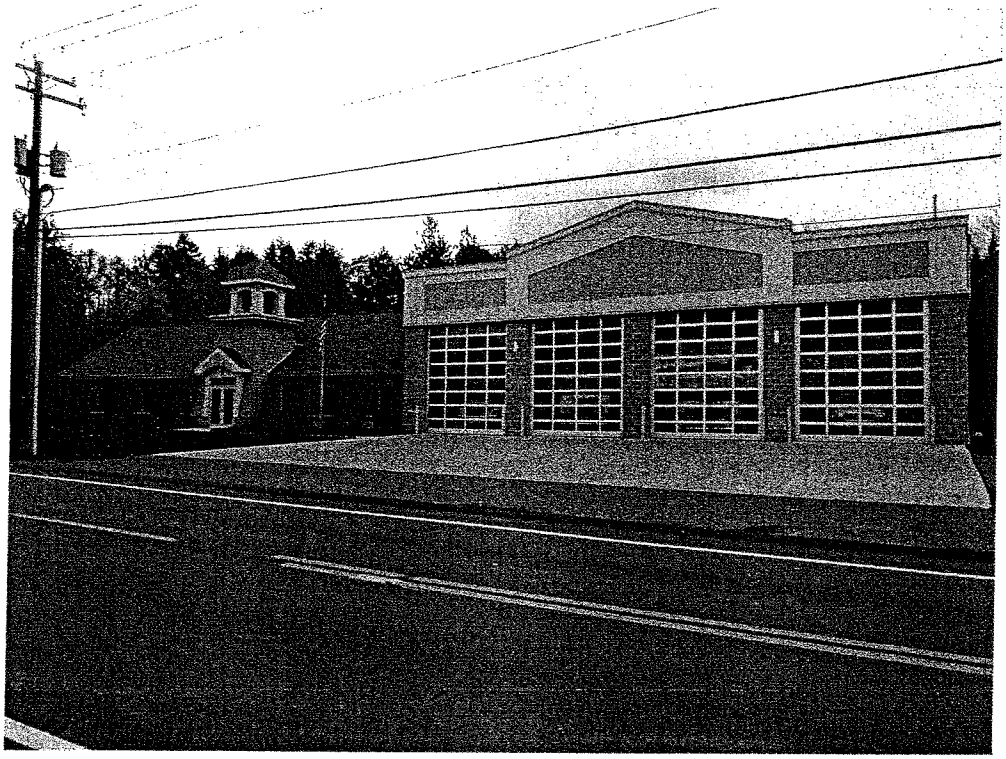
Multi-Purpose Dayroom Could be Geared More to FF Comfort



Patchin Station 2 – Basic Truck House



Boston Station 2 – Basic Truck House



NBFC – Excellent Facility – Center of Community Pride

Basic Day Room – Nothing Over the Top

Appropriate, Well Planned Facility at NBFC

Currently in the Town of Boston, the facilities operated by the three fire companies range from appropriate to need. Comments are as follows by company:

Boston Fire Company:

Upon evaluation of the facilities of the Boston Fire Company this consultant would have been strongly recommending replacement of at least the truck house portion of the existing Boston Fire Company station had the truck house project not been underway at the time of this study. However this consultant stands firmly behind the Boston Fire Company's decision to build the new truck house that is currently being built. This new facility will almost entirely address truck safety and operational concerns with the exception of vehicle backing due to the lack of drive through bays however

this facility again makes considerable strides in meeting desired goals at an appropriate cost. With regards to station #2 it is recommended that the Boston Fire Company begin to establish a savings account and begin fundraising efforts to replace their station #2 so similar vehicle/personnel interaction operational concerns can be addressed.

North Boston Fire Company:

There were no maintenance, vehicle/personnel operational safety concerns or other concerns noted by the consultant during the visit to the North Boston Fire Company. The current NBFC facility in this consultant's opinion is a community jewel. The individuals who were involved with the planning and construction of the facility clearly built a facility that could easily serve the community for at least 50 years or more with regular maintenance. The facility balances safety and operational needs with member and community spaces while at the same time being aesthetically pleasing to the eye.

Patchin Fire Company:

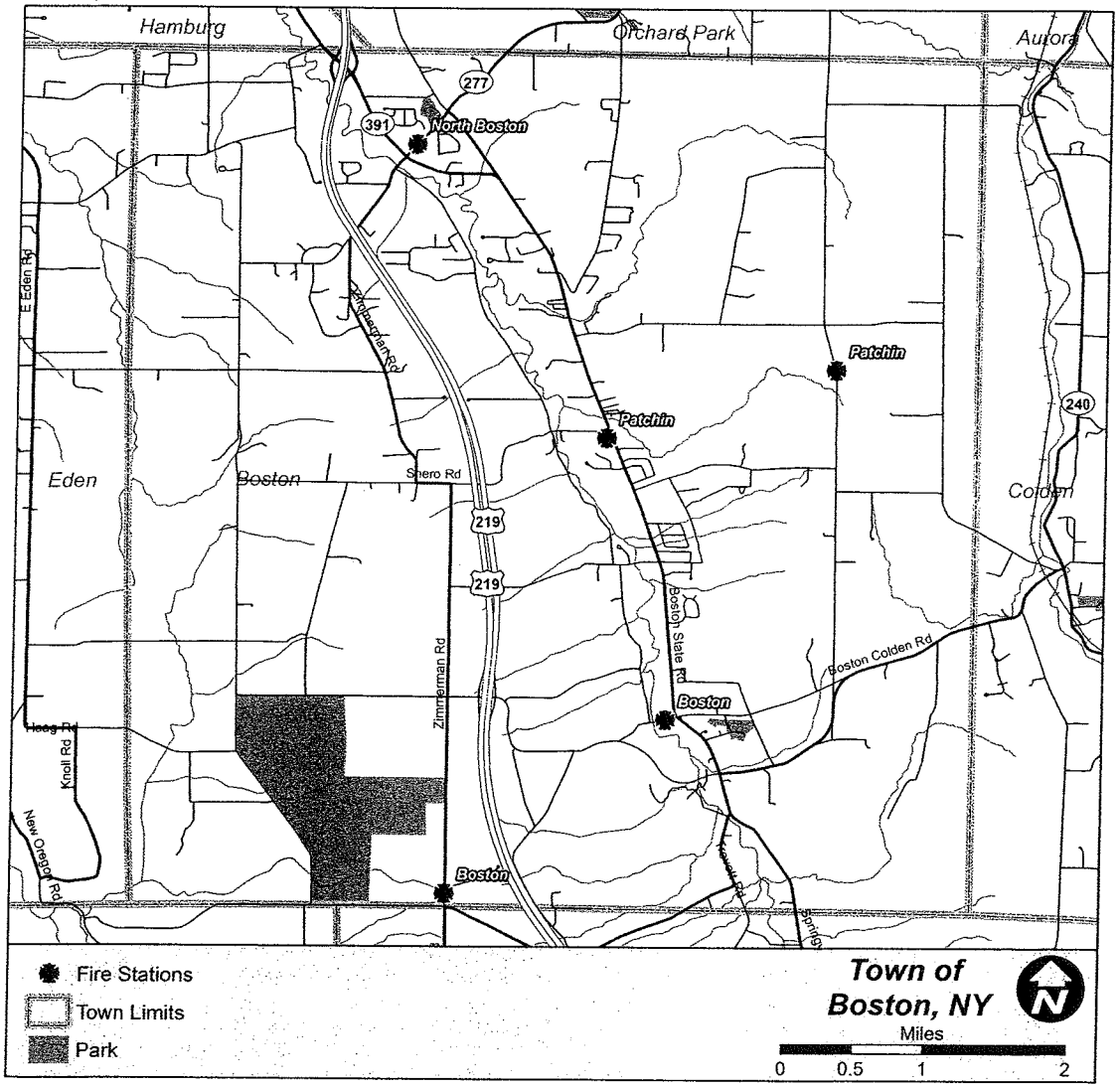
The current station #1 operated by the Patchin Fire Company is a basic fire station facility that provides an area for housing apparatus and provides for some basic member needs such as a meeting/training/social area. The facility is a bit cramped and does seem to lack some needed storage however at this point it is not believed to be a safety hazard to personnel. The facility is in the need for some general maintenance. General wear and tear was noted along with some exposed pipes in the rest room and some grounds work that could be completed. The company still operates and maintains the former firehouse/truck house located at the street entrance to the current station #1.

It was noted during the Patchin visit that there is some discussion taking place regarding the possible addition of a larger community/meeting space at the new station #1 facility followed potentially by the demolition or sale of the former station #1 facility. This consultant agrees that this is probably an appropriate move on the part of the Patchin Fire Company. The cost vs. benefit for the long term care and maintenance of the former station #1 facility when compared to the cost vs. benefit of adding a simple meeting/community space to the current station #1 and eliminating the additional structure from the fire companies overhead is the preferable option going forward. Regarding Patchin station #2 this consultant feels comments made about the Boston Fire Company station #2 equally apply to Patchin station #2 as well.

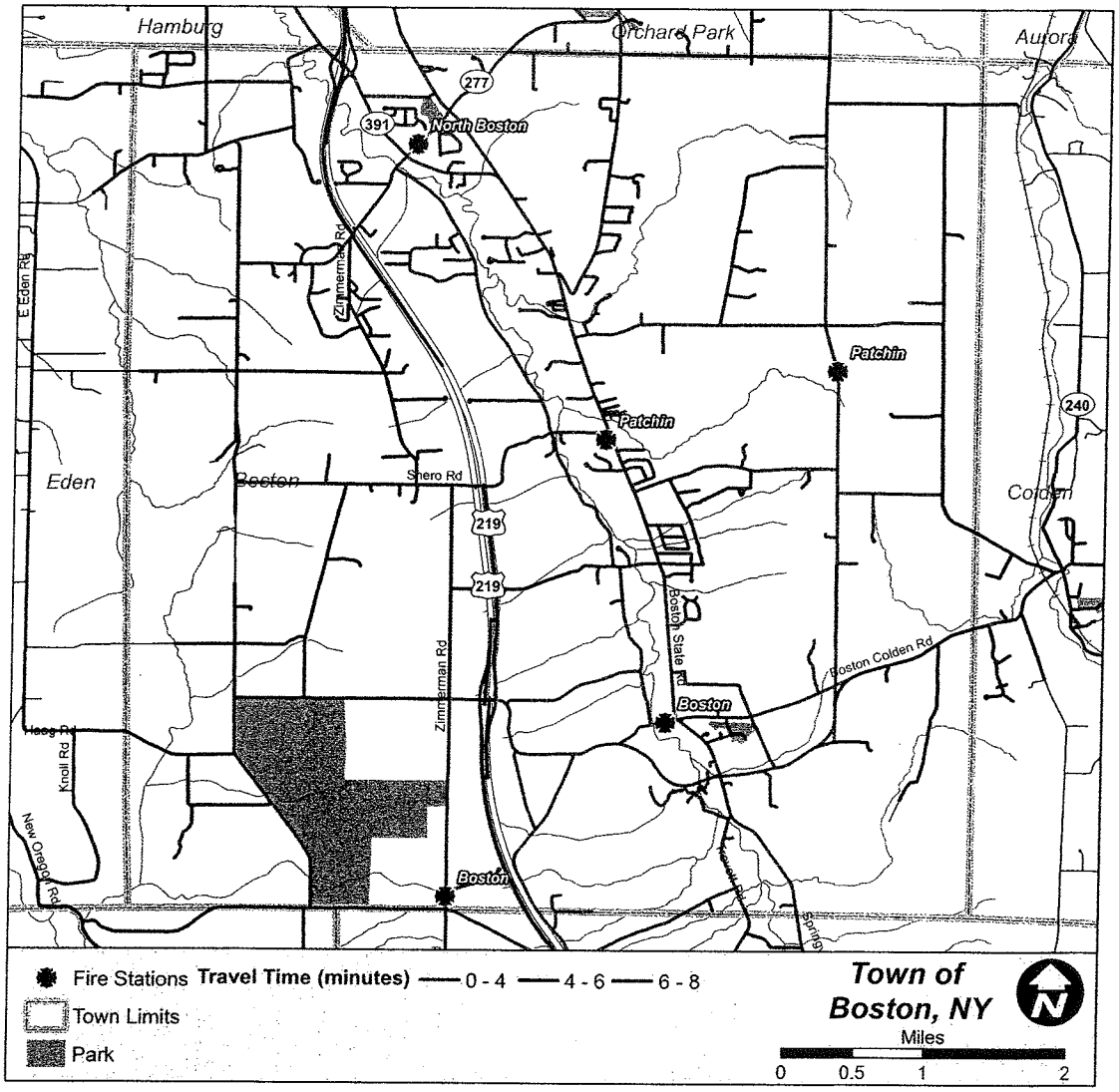
Station Placement/Need:

Occasionally when completing studies and reviews such as this one the consultant hears questions and/or comments that inquire as to the need for multiple stations or questions/comments directed to the placement of stations. To evaluate this one must employ the use of data vs. opinion and one of the best sources possible to use to make this evaluation is GIS mapping. If one were to build a planned community from the ground up you could use this mapping to perfectly lay out emergency service and housing right from the start. If you were able to do that your fire stations might be in different locations however a fully established town lacks the ability to act as if they were building ground up. If mapping indicated that a movement of stations would be appropriate to improve service most communities would prefer to avoid the potentially millions of dollars of new construction required to build new stations and "fix" the location issues and in most cases

take the "if it aint broke, don't fix it" mind set. As the following mapping shows the station locations in the Town of Boston seem to provide very healthy coverage to the community and it is further demonstrated that if you were to possibly reduce a station, stations or fire company there WILL be negative impact on station to incident response times and coverage.

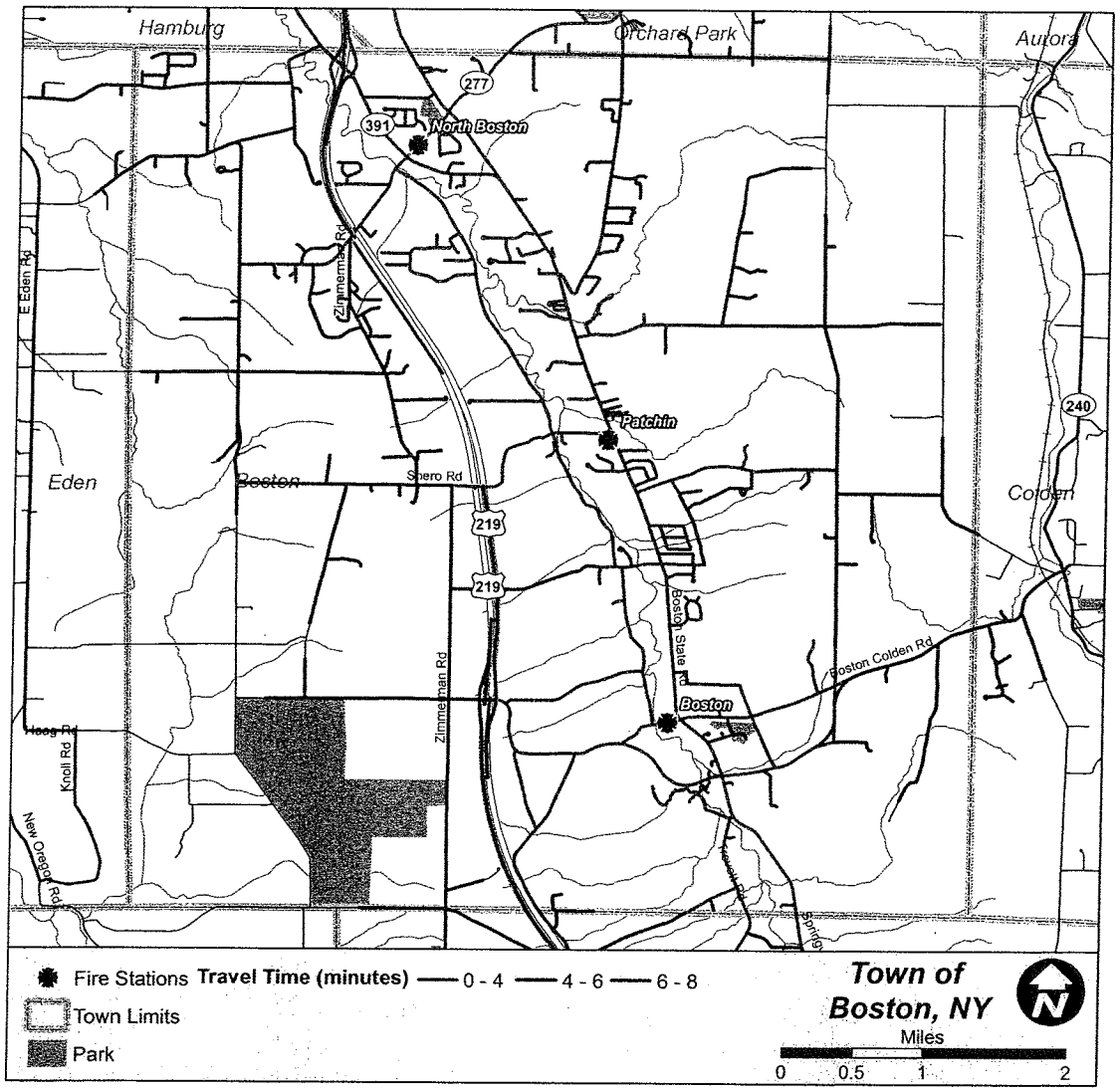


Current Town of Boston Fire Station Base Map



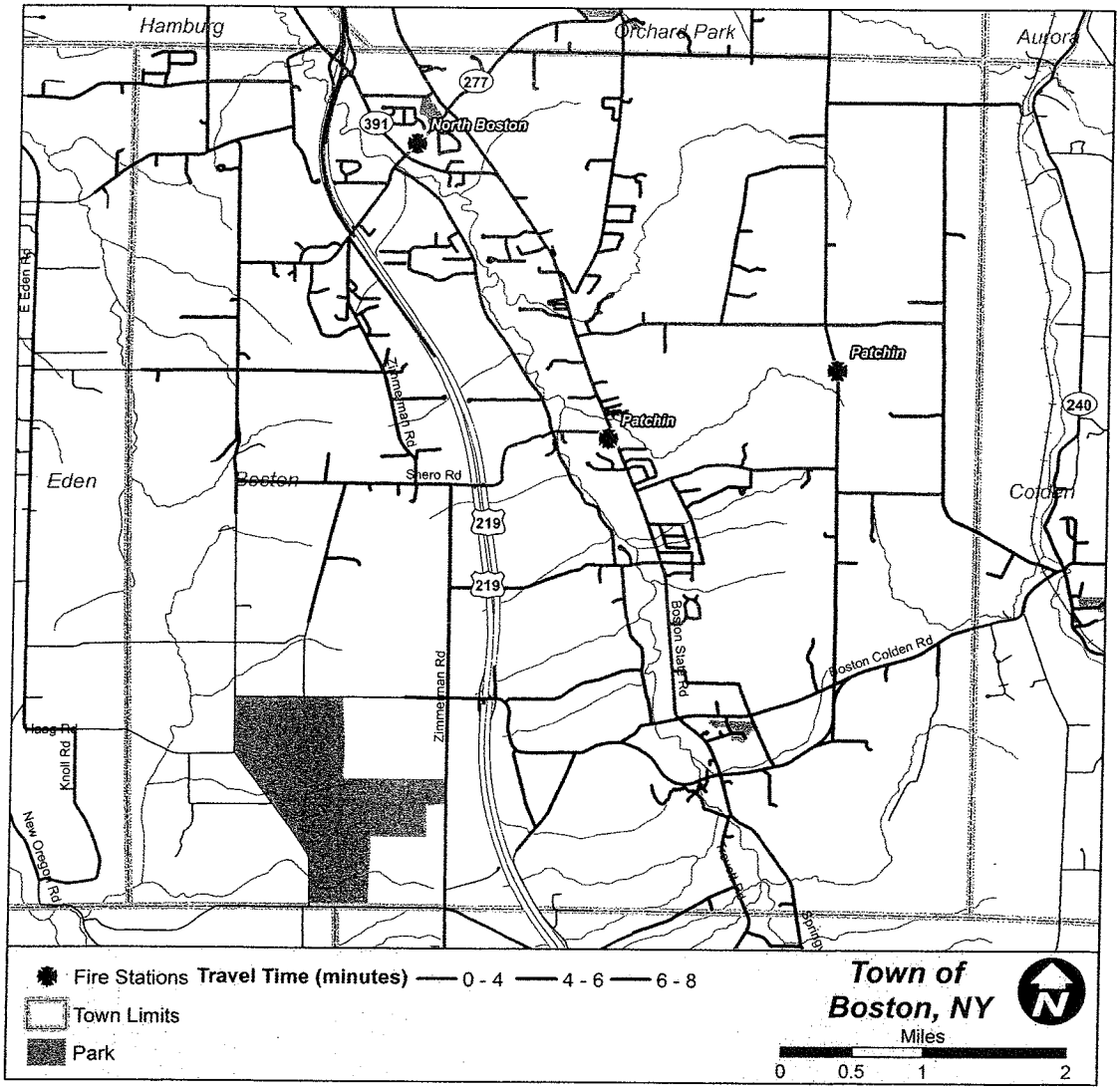
Current Response Times w/All Existing Stations

This map shows strong station to incident response times in the 0-4 minute range using the current network of stations in the town.

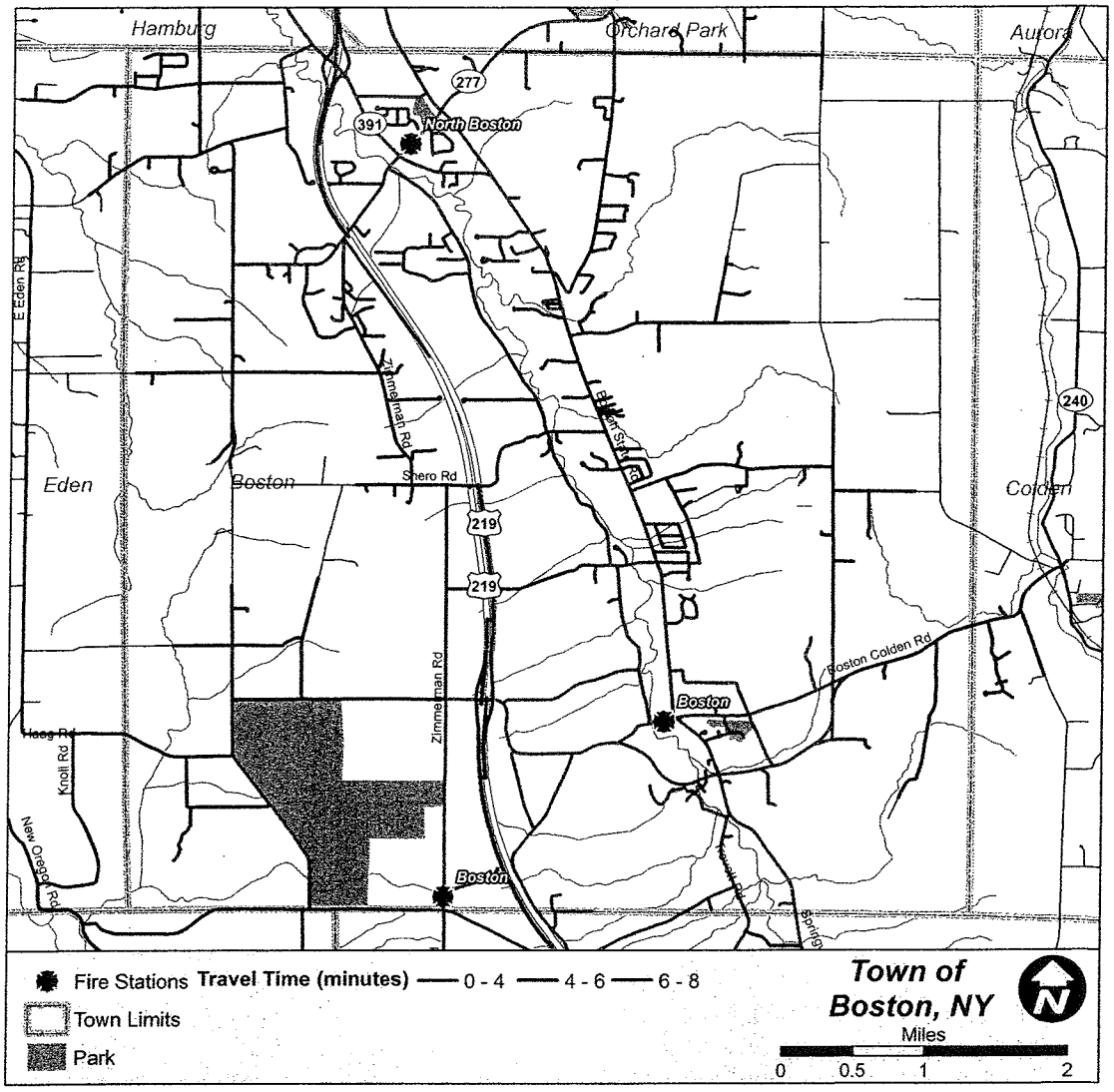


Response Times w/Closure of Station #2 Facilities

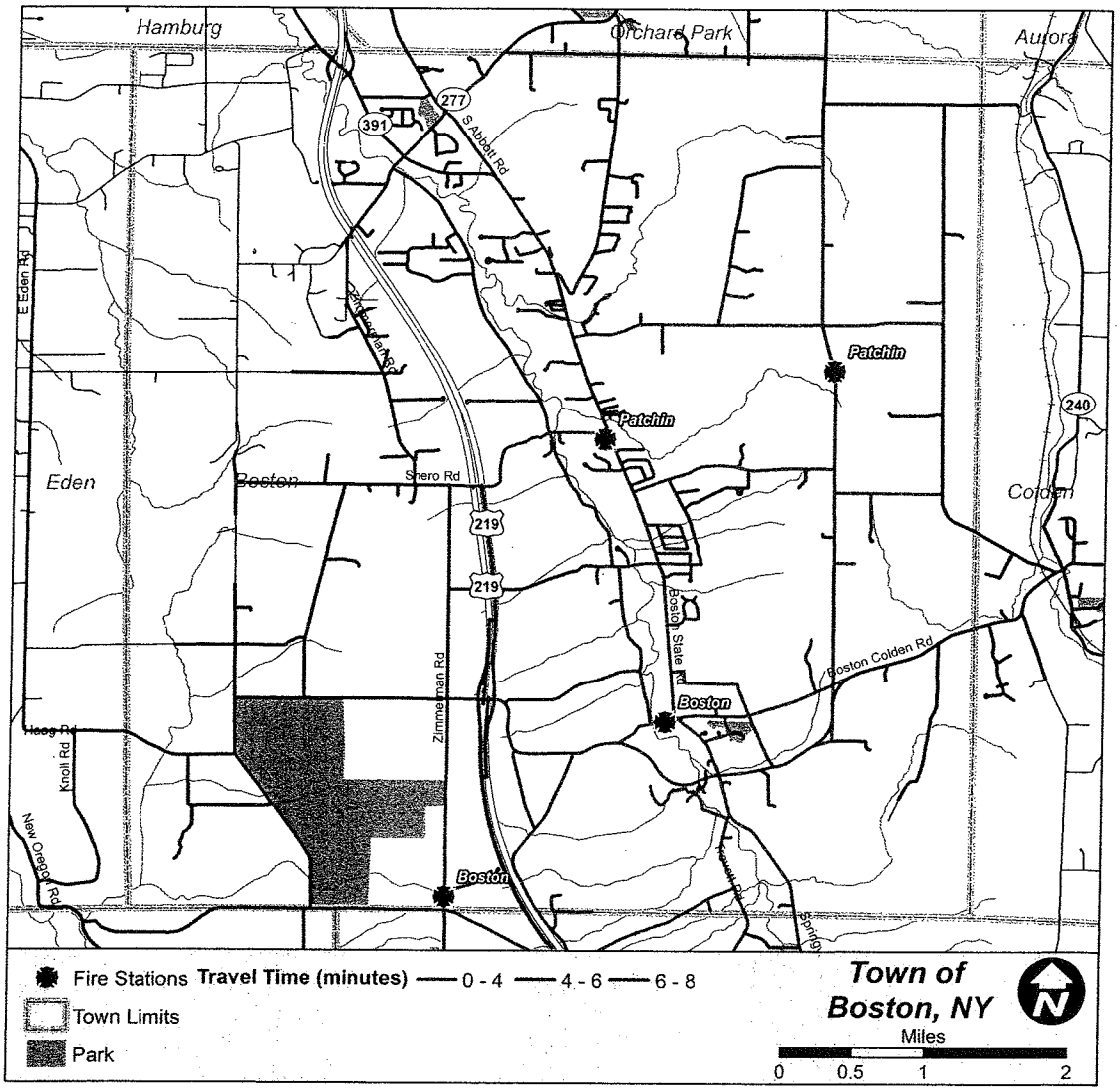
This map shoes the impact on station to incident response times in the event the second stations of Boston and Patchin were to be closed as a cost savings effort.



Impact on Station to Incident Response Times w/o Boston FC



Impact on Station to Incident Response Times w/o Patchin FC



Impact on Station to Incident Response Times w/o N. Boston FC

Some have questioned the need for the community/meeting rooms and whether or not there is a department or a community need for the space. On the date this consultant visited one of the fire companies their community room was being prepared for a party/rental so there does appear to be some need for community gathering space. A fire department much like a church or school does often act as a center of a community where there are chicken BBQs, birthdays, showers, weddings and other similar events. Couple that with the operations of a volunteer fire department and the community rooms can be used for meetings, shelter, training or even Red Cross blood drives, etc. In the case of North Boston their community/meeting room is part of a sheltering plan for the elementary school covered in their first due area. Along the line of fire station construction and/or renovation often community leaders must apply the "once in 50 years" concept to this type of project. There is sometimes a mindset to build just what you need at the time you are building and nothing more. However at the time of original construction the cost of an additional truck bay or 500 or 900 square feet of additional community room space is marginal over the life of the building. It is generally this consultant's recommendation whenever possible to build for the future.

The following is a list of recommendations that all fire companies should keep in mind when they are considering building or renovating fire stations or second stations:

1) Appropriate meeting/records storage space

2) Multi-media training room

3) Training props such as bail out/breach or ventilation simulator

4) Appropriate area for auto extrication training

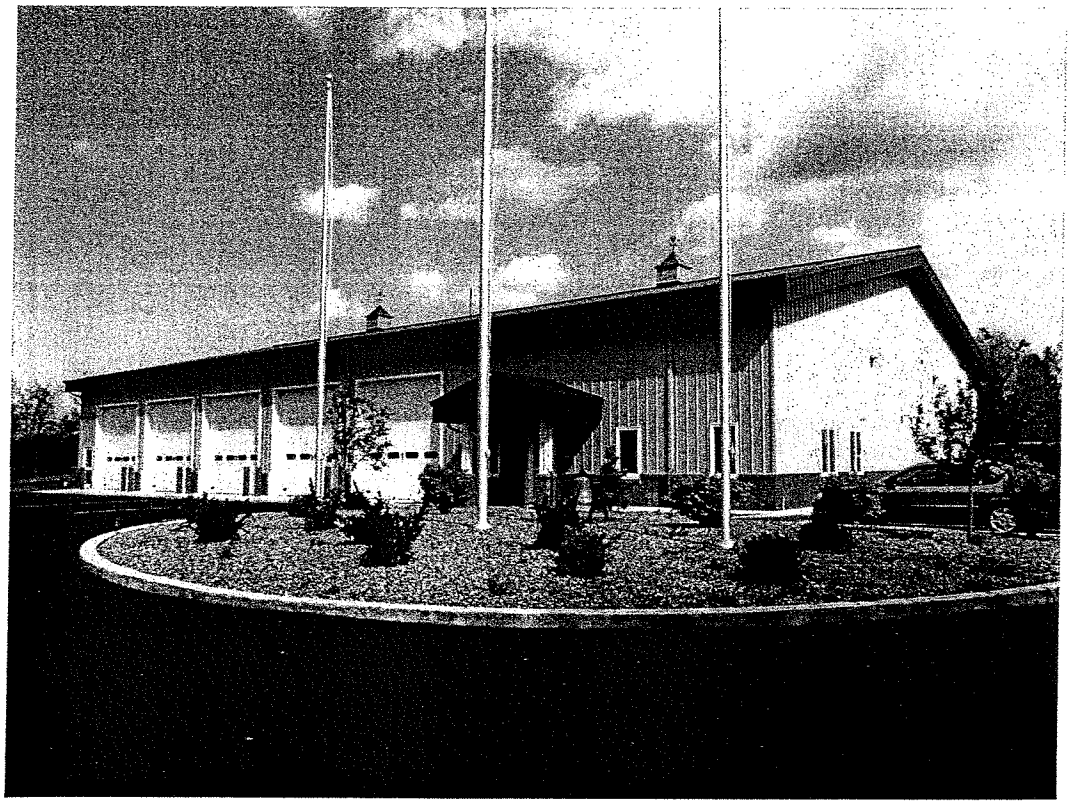
5) Clean, safe, decon showers & toilet facilities off truck bays

6) Organized parking and improved flow for arriving responders

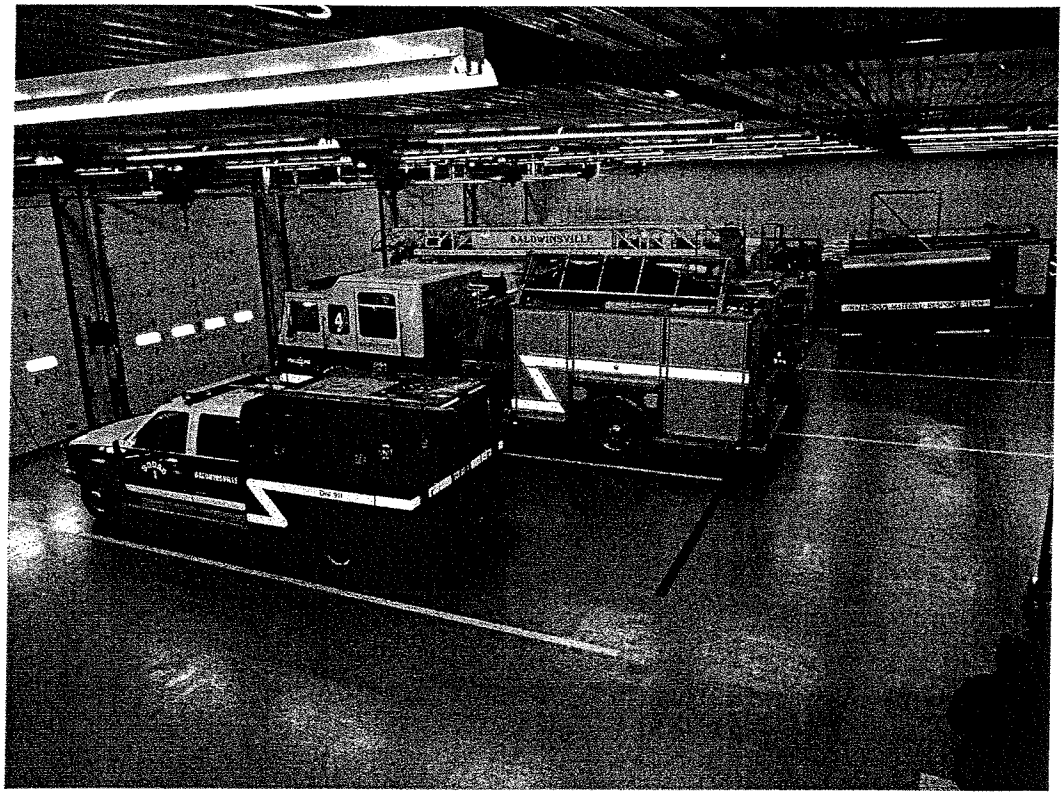
7) Increased, organized storage for spare turnout gear

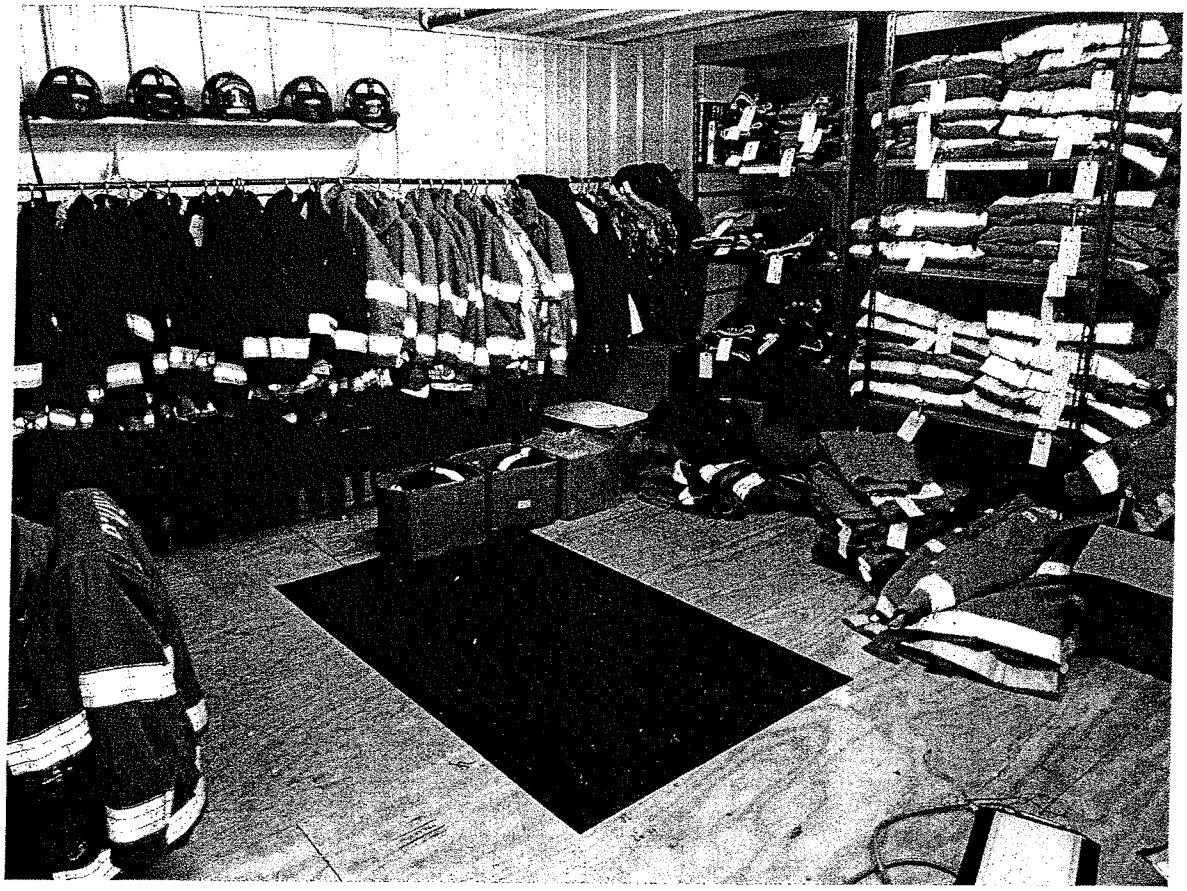
8) Turnout gear area away from apparatus

This consultant agrees with the items noted above as desirable by firefighters. To this consultant it makes good sense to build facilities that will provide the open spaces needed to address parking, possible drive thru bays to reduce backing apparatus, outdoor training and other points noted above. Construction costs are reasonable and there are very good values available in steel buildings built by manufacturers such as "Morton" where fire departments can get considerable bang for their construction buck. The following photos are of a new station erected by another client of mine, the Baldwinsville Fire Company in Onondaga County, NY:



Cost Effective, Attractive Main Firehouse w/5 Drive thru Bays





Spare Turnout Gear Loft Storage @ Baldwinsville Fire Co.

In certain parts of New York State volunteer and/or combination fire departments have upgraded stations or done complete tear downs and ground up construction of new stations. I can confidently say that as a result of my visits to the Town of Boston that the fire companies have truly been conservative when it comes to firehouse facilities and in my opinion have maximized the life of their existing stations and have properly been making improvements as funds allow.

Company Policies, Department By-Laws

While this was primarily a review of each fire company's overall operations and current and long range equipment/facility needs issues, this consultant did take time to review various documents associated with the operation and management of the various Fire Department organizations. Each organization was able to produce copies of policies, s.o.g.s, and/or constitution and by-laws. A general review of the documents provided found them to be in good order and appropriate for organizations of their size and funding level. You can find a wide range of S.O.G. or S.O.P.s as you evaluate fire companies based on size, funding level, call volume and configuration of community and/or first due area. The following are the consultant's recommendations for what I would determine the "minimum" up to date S.O.G.s your organizations should have:

Alarms and Response Procedures	Medical Emergencies
Alarm Response Procedures	Operational Guidelines for Medical Aid Responses
Alarm Response Areas	Operations with Ambulance Personnel
Automatic Aid	Emergency Medical Technician - Defibrillator (EMT-D)
Mutual Aid	Major Medical Incidents
Contractual Agreements	Triage
Fire Company Operations	Exposure to Infectious Diseases and Hazardous Materials
Standard Company Operations	Suspected Drug Overdose
First to Arrive Duties	Animal Bites
Returning Companies to Service	Vial of Life and Medic Alert Tags
Use of Civilians	Attempted Suicide
Fire Scene Investigations	Suspected Homicide
High Volume Smoke Removal System	DOA (Dead on Arrival)
Personal Alert Safety Devices	Suspected Child Abuse
On-Scene Equipment Inventory	Suspected Sexual Assault
Personnel Accountability System	Hospital Disaster Notification
2 IN 2 OUT	EMS Reports
Initial Fireground Operations	EMS Radio Procedures
Fluorescent Safety Vests	Drug Box Exchange Policy
Highway Incident Safety	BLS Rules and Regulations
Command Operations	ALS Rules and Regulations
General Strategic Guidelines	**Electrical Emergencies**
Incident Management System	Electrical Emergency Operations
Command Post Procedures	**Rescue Operations**
Welfare	Vehicle Rescue and Extrication
Helicopter Operations	Life Line Operations
Public health Considerations	Rescue from Machinery
Incident Critique	Escalator Emergencies
Area Evacuation	Elevator Emergencies
Incident Command Resource Request	Cave-in and Manhole Rescues
Building Evacuation	Building Collapse
Firefighting	Rescue at Structure Fires
Metal Fires	**Transportation Emergencies**
Structure Fires (General)	Interstate Operations
Operations in Sprinklered Buildings	Railroad Emergencies
On-Site Auxiliary Fire Equipment	Aircraft Emergencies
High Rise Fires	Hazardous Materials Incidents
Wildland Fires	Hazardous Materials (General)
Vehicle Fires	Flammable Fuel Spill (Liquid or Gas)
Fire Stream Management	LPG Emergencies
Industrial Dumpster Fires	Fumigation Emergencies
Fire Watch Detail	Explosives and Bombs

S.O.G.s Continued

Fire in US Mailboxes	PCBs
High Rise Pack	Pesticide Procedures
Bowstring Truss Roof - Operations Procedures	Radioactive Materials
Carbon Monoxide Hazards	Natural Gas Filled Structures - No Fire
Thermal Image Camera	Natural Gas Fed Fire - Inside Structure
Broken Natural Gas Main – Fire	
Broken Natural Gas Main - No Fire	

Suggested S.O.G.s for Non-Emergency Operations

Station Operations	Color Coding Equipment
Station Operations - General	Radio Repair Procedure
Station Maintenance	Pressure Vessel Maintenance
Station Alerting System	Hose Maintenance
Purchasing Procedures	Self-Contained Breathing Apparatus (SCBA)
National Flag/National Anthem	Preventive Maintenance - SCBA's
Equipment Loan Out	Respiratory Breathing Air Systems
Yard Maintenance	Ladder Maintenance
Emergency Power Systems	Nozzle Maintenance
Miscellaneous Station Duties	Fire Extinguishers
Personal Locker Assignments	Hydrant Maintenance
Telephone Use	Hand Tool Maintenance
Station Libraries	Power Tool Maintenance
Scheduling Use of Media Center	Chainsaw Operation and Maintenance
Energy Conservation	Circular Saw Operation and Maintenance
Apparatus Operations	Public Education
Apparatus Maintenance	General Policy
Vehicle Out of Service Procedure	Public Education Scheduling Policy
Testing Apparatus Pumps	Public Relations
Driving Emergency Vehicles	Station Tours
Warning Devices	Fire Extinguisher Demonstrations
Apparatus Operational Limits	Engine Demonstrations
Fueling Procedure	Special Activities Engine - Engine One
Reserve Apparatus	Radio Controlled Education Robots
Apparatus Snow Chains	Fire Prevention
Apparatus Movement to Training Center	Fire Company Fire Prevention Inspections - General
Driver Operator - Pump Certification	Fire Prevention Inspection Guideline
Equipment Operations	Fire Investigation
Equipment Repairs	Related Codes
Equipment Out of Service	Pre-Fire Plans

Please note that not all of the items on the aforementioned list(s) may pertain directly to your department or first due area, however the Chief and his/her S.O.G. committee or officer group can determine the level of S.O.G.s needed for company operations using the above lists as a starting point.

While each volunteer fire department's by-laws were not a specific area of focus each set of by-laws were also reviewed and found to be in generally good order when compared to other similarly sized organizations with similar resources. The following comments about the by-laws are for general purposes only and each organization can make their own decisions regarding if they feel these points need to be addressed:

1) Drills – In the by-laws provided by the Boston Fire Company it appeared that in Section 6e active firefighters are required to only attend 6 drills annually. It is the opinion of this consultant that keeping active firefighters up on their skills and familiar with equipment would require greater attendance at drills such as 9-12 drills annually.

2) Dues – Fire companies have always been fraternal organizations and the payment of a nominal dues has been used as one of the mechanisms to determine if a member is a member in good standing and if the member is eligible to vote in annual elections. However as our fire departments have become more of a business and the time that a volunteer firefighter has to put in to train and respond to calls has grown, it has become almost insulting to ask a volunteer for $3.00 or $5.00 annual dues and to label them "not in good standing" for the

non-payment of said dues. Also many fire departments have mechanisms included in their by-laws that can result in an active volunteer firefighter being taken OOS or even worse, expelled over something as small as $3.00 in dues. Fire departments spend thousands of dollars in recruiting, training and equipping firefighters and they are truly needed in their communities. To risk losing an experienced firefighter over an issue such as non-payment of dues is truly inappropriate in today's world. For that reason this consultant recommends the elimination of nominal annual dues payments.

3) In the by-laws provided by the Patchin Fire Company a wording that requires new volunteer firefighters to attend ALL meetings, drills, work details or fund raisers during a new member's first year may be considered too overwhelming in today's society with people balancing family and possibly unstable employment situations. Clearly this consultant feels that a member's first year should be spent focusing on training courses, drills, calls and work details. A reduced focus should be placed on meetings and fund raising if a new member's schedule makes that portion of the requirements difficult. All fire companies should work to insure education and call response is the primary focus of first year members.

4) Also in the by-laws provided by Patchin a section that covered life members read that life membership could be approved by an action of the Board. The attainment of life membership should be automatic for active members who have completed 20 years of active service and who are in good standing at the time they reach 20 years.

5) In the by-laws provided by the BFC sections were included that clearly spelled out what would happen to the organization and its assets in the event of dissolution and/or the creation of a fire district. Each fire company's by-laws should be adjusted to make sure this language is included and is up to date.

Joint Station & Engine 91 Program

I would be remiss in this report if I did not at least take a few moments and make mention in a positive way of two programs that exist in the departments of clients of this consultant in Onondaga county that the Town of Boston Fire Departments could consider that in this consultant's opinion serve as a model to fire service organizations around the country. First of all as various government leaders and anti-tax groups call for the merger, consolidation or in Suffolk County the down right elimination of a fire district(s) two of my clients, Lakeside FD and Baldwinsville FD have developed a station lease agreement resulting in a shared station #2 by both organizations. I believe that the joint station shared by Lakeside and Baldwinsville is a win-win for all parties involved including the general public and the local governments served by these two organizations. This arrangement is fiscally responsible, provides improved and more stable service in the two areas covered by the station, provides optimum use of available manpower, and results in cross training and cross department camaraderie for participating members. In essence Lakeside leases a bay from Baldwinsville at their station #2 which gives Lakeside greater coverage at a distant end of their district and places an engine close to the residences of a group of their members. The cross training element allows for both Baldwinsville and Lakeside members to ride out on each others rigs at that

station to calls in either district thereby enhancing available manpower and responding rigs. A truly model program.

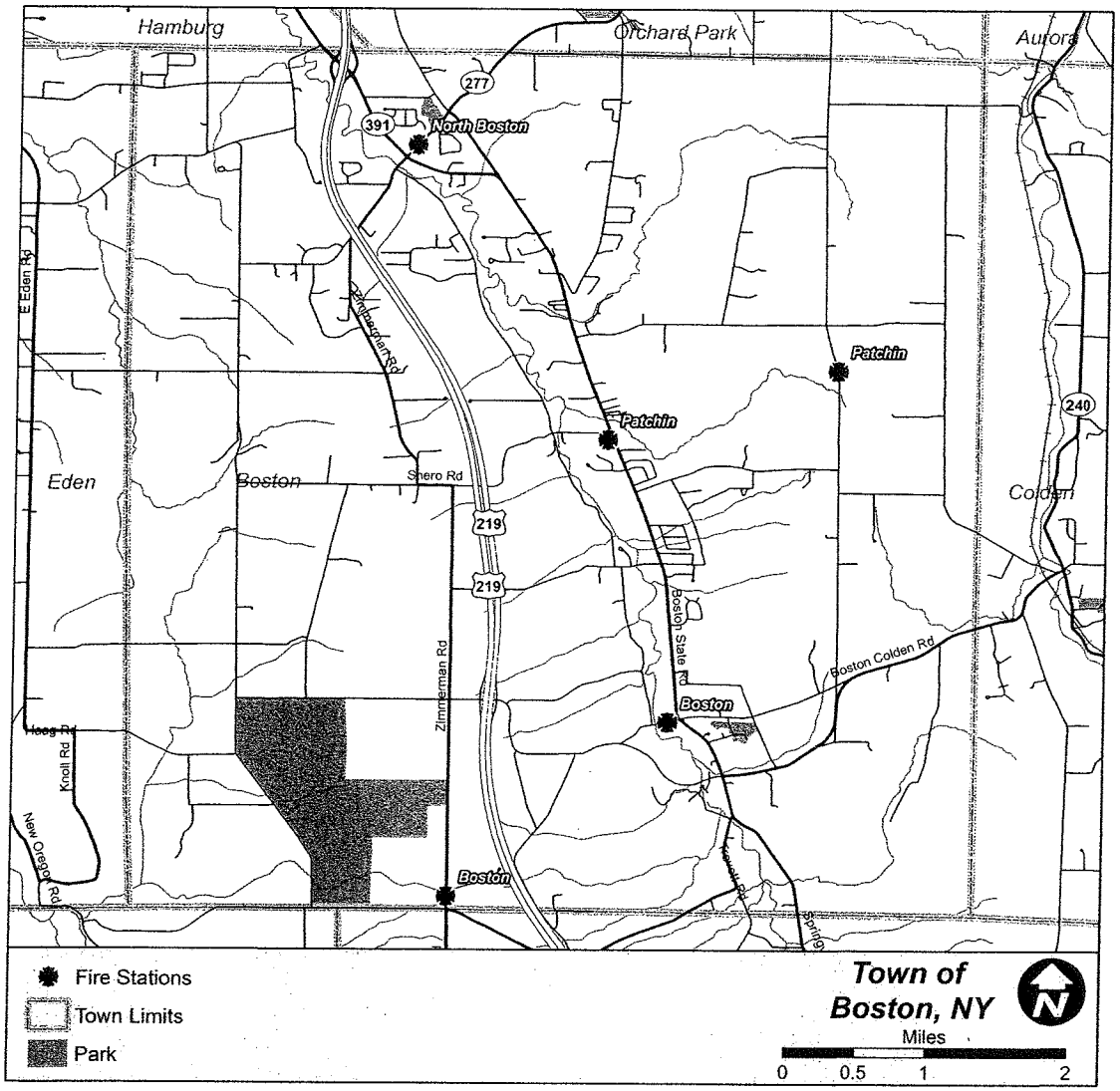
Second, the Engine 91 program is another excellent program aimed at providing dependable service through shared services. The Engine 91 program is a joint effort between multiple departments whereby one engine is staffed with members of the same multiple departments who respond to incidents in all of the participating department's response areas. Onondaga County's Engine 91 Program with an engine responding town-wide made up of a volunteer stand by crew of qualified interior firefighters from all three departments. For more information on how the Engine 91 program works please do not hesitate to contact Michael P. Dallessandro and Associates for contact information at the Lakeside or Baldwinsville Fire Departments.

E.M.S. an EVOLVING FIRE DEPT. MISSION

When assessing needs, we must look at what services are essential for fire departments to provide to their customers. The fire service should not only provide an emergency response role to its community, but also provide support functions that make the fire departments a valuable asset to their community's safety. Other programs in which this consultant feels are valuable is the training of kids with a fire safety house and a juvenile fire setters program. Currently in the Town of Boston EMS is provided by the Boston Emergency Squad. While it is not rare that the volunteer fire departments in the Town of Boston do not provide the EMS function for the community (with the exception of Patchin doing some first responder

support) this arrangement might seem attractive to a few fire purists, it can in some ways make the departments less active. Often younger members of the volunteer fire department want more "action" and the ability to obtain EMS certifications while at the same time older members caution that EMS can tax or burn out good firefighters this consultant feels that EMS can be a vital community connection and under a larger fire district structure can provide the workload for part time or per diem firefighter/EMTs when the need for additional day time firefighters eventually grows down the road. New firefighters and per diems would most likely welcome a broader mission and have the talent in the organization to accept a broader role in emergency response. For the present, resources and time are both limited so the fire department is restricted fairly well to providing only basic fire and M.V.A. rescue services. With the eventual addition of possible per diem in-station personnel, new activities can be better supported in the future. As currently organized and equipped the fire departments in the town will continue to serve the fire protection needs of the community but should be open to an expanding mission in the future. Because of the close relationship between fire service and EMS services the Fire Departments should, to the extent possible continue to assist the EMS agency in their mission and be receptive to assistance in return.

Mergers & Consolidation



Communities desire prompt, professional, dedicated first responders and firefighters in a cost effective manner. This has clearly been spelled out in countless interviews of citizens in fire studies conducted around our country. In most cases volunteer fire companies save considerable dollars for rural and small suburban communities through the use of manpower that does not receive a paycheck, NYS Retirement System contribution and/or health benefits. The Town of Boston should provide continuing assistance to these

agencies by positively publicizing the need for volunteers. The Town should also foster cooperation among the fire companies such as sharing equipment and staff when possible. The entire topic of mergers and consolidation of once all volunteer fire departments rich with history and tradition is not an easy pill for this consultant to swallow. However the facts remain that in some areas choices will eventually have to be made. The question remains who will make those choices, the members of the fire service who have the knowledge and background to do it correctly or will those changes be forced by external organizations such as political figures or town's people? Hopefully the leaders of the various fire departments that serve the Town of Boston will have the clear heads to get to the table and at least have civil discussions about shared services or mergers that is respectful of their organization's proud past and cognizant of sound fire service management practices of the future. At the start of this review this consultant proposed that the he would look at this project from 4 viewpoints.

1) No change
2) Increased mutual aide
3) Increased shared services
4) Joint or Merged Fire Departments or Fire District.

A survey question about fire department service levels that was posed in a rural town in New York State showed that 74% of the people responding felt that there should be no change in the level of fire department services while 15% felt fire department services should increase and the remaining number of respondents suggested some level of reduction. It is this consultant's opinion that overall today's Boston community would most likely respond

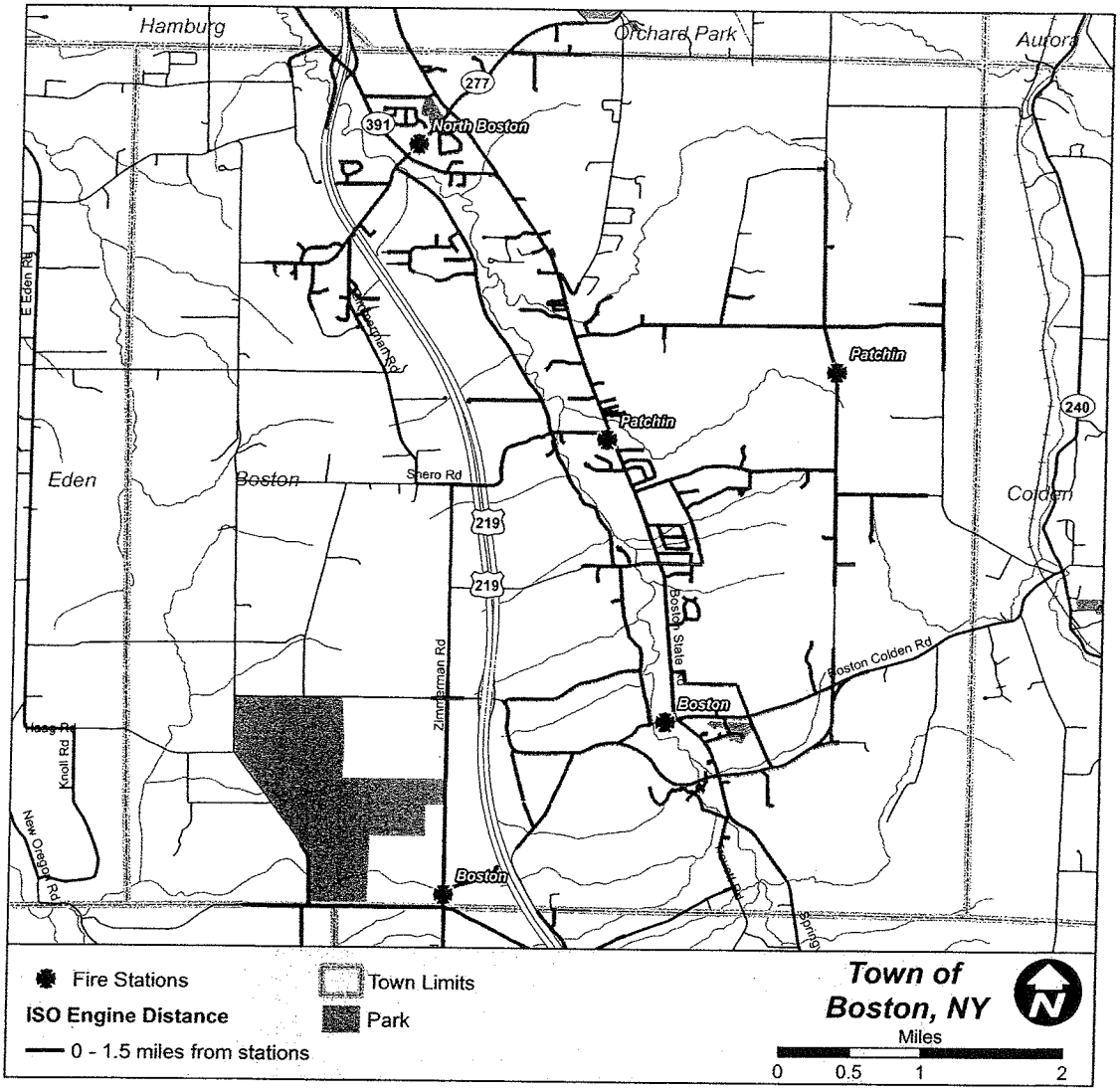
the same way to this same question regarding their desired level of fire department services. Regarding **"no change"** it is the belief of this consultant that based on current call volume and a low number of housing starts in the Town of Boston (*00 in 0000-0000 *per Town of Boston Code Enforcement Officer*) that each fire department would continue to march along doing their best to serve their respective response areas restricted only by their financial or lack of financial resources and limited manpower. Would facilities and apparatus concerns be addressed? Would volunteer firefighters be available during the day when needed? Would the organizations be prepared for the changes and mandates that will continue to come down the road for all fire departments in the state of New York? Will tax cap legislation or additional scrutiny of special districts cause greater financial concerns for small volunteer fire departments? While there are no sure answers to these questions it is the belief of this consultant that small rural fire departments and fire districts are the least prepared to handle increased management and training mandates and the lack of volunteer members going forward. Larger volunteer fire departments with operation budgets well into the high six figures are feeling the pinch of mandates such as bail-out ropes, high cost accountant's audits and the additional career staff to address the inability of working individuals with families to dedicate the considerable hours meeting training and membership requirements of today's all volunteer fire departments. Sadly this consultant believes that small, rural organizations will not be able to "go it alone" much longer so "no change" is not a viable option looking out much more than 5 years.

Increased mutual aide is often touted by community leaders as the answer to equipment needs and manpower needs for communities who have volunteer

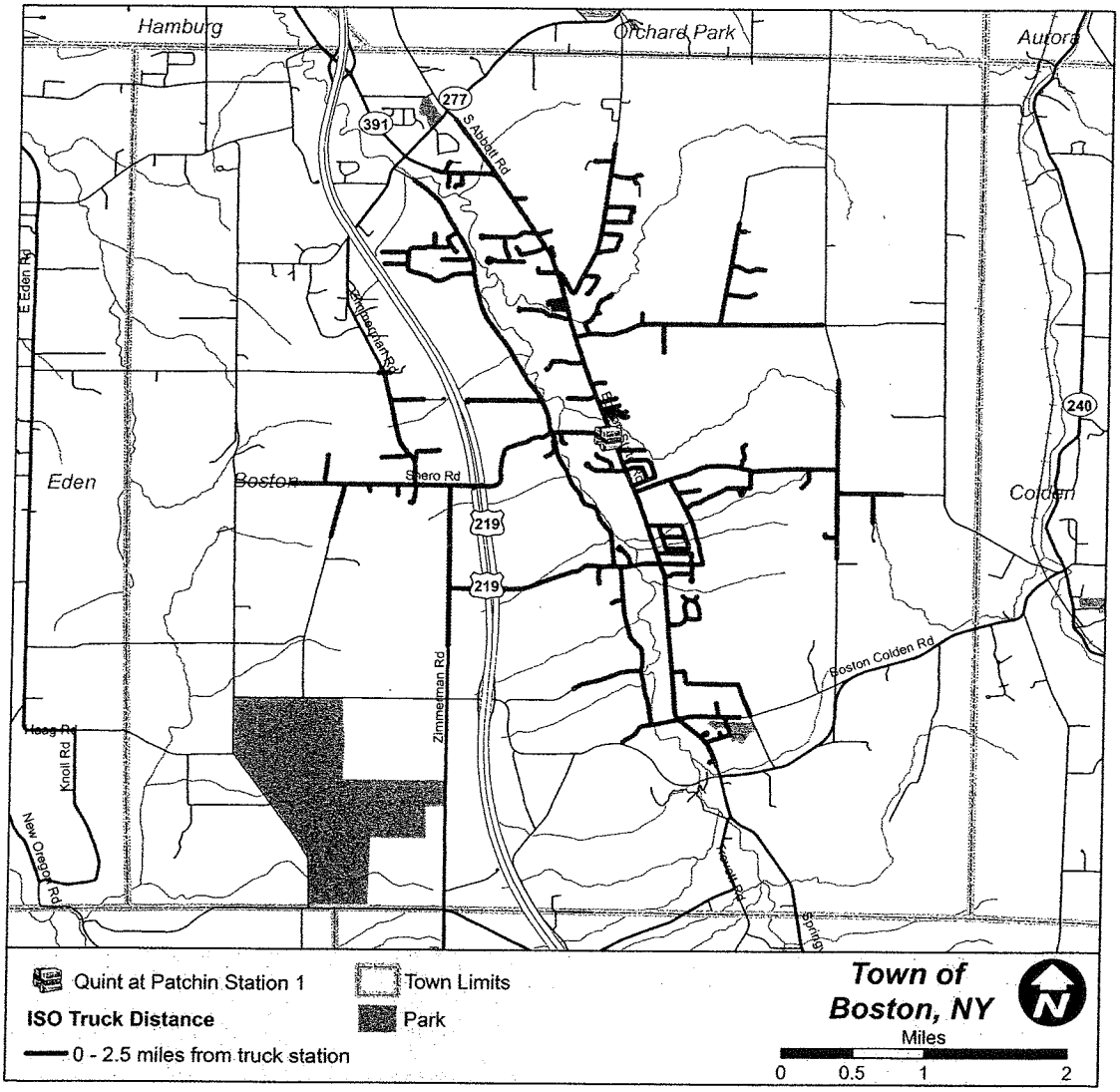
fire departments that are struggling. First of all this consultant believes that in many areas of our state mutual aide is already an accepted standard for delivering fire and emergency services for medium to large incidents. Mutual aide has never been intended to serve as an option for providing day to day fire and emergency services to a community. Currently all Boston area fire companies have working mutual aide agreements/relationships with neighboring or bordering organizations providing cross community coverage and for structural alarms multiple fire companies are activated immediately to bring an appropriate first due response. While this consultant feels that this is admirable and has fostered an excellent relationship between many organizations including those from Hamburg and other areas this consultant feels that the three companies within the Town of Boston should and could be working more closely together which would increase knowledge of each department's resources, personnel, vehicles, leadership styles, etc. This consultant, while desiring a greater working relationship among Town of Boston Fire Departments does not see increased mutual aide as providing the best long term service delivery or financial stability option for the Town of Boston. Regarding the additional option of shared services this consultant is a strong proponent of shared services when there is considerable redundancy among larger well funded fire departments in one community. Such as communities that may have multiple large rescue units or aerial devices. The fire departments that serve the Town of Boston each has a basic compliment of fire protection equipment with little if any redundancy of specialized equipment, vehicles or tools. Therefore a recommendation of increased shared services is not seen by this consultant as a viable option for the future cost management or delivery of Town of Boston fire services.

The last option to be considered and the option that this consultant will recommend to insure the long term viability of the fire services in the Town of Boston is a joint or merged town wide Fire District structure. Clearly from the stakeholder interviews and information obtained from a variety of sources the community and the firefighters place significant value on "their" community based organizations. It is quite clear to this consultant that no later than 2014 a committee made up of representatives of each fire company, a local government representative, a county representative and an attorney experienced in the creation of fire districts should be established to move towards the creation of a single town wide fire district responsible for providing the fire protection throughout the town of Boston to be completed and created no later than January 1, 2016.

Current I.S.O. Coverage Based on the Current Station Model



Current ISO for Patchin Aerial/Quint Coverage



Page #1 of the 02/03 edition of the ISO's fire suppression rating schedule document item #101 Scope reads "*the schedule is a fire insurance rating tool, and is not intended to analyze all aspects of a comprehensive public fire protection program. It should not be used for purposes other than insurance ratings*" makes the statement quite clear that ISO is not the "be all/end all" for fire protection and is basically only used for the determination of business insurance rates and not residential. State Farm

Insurance has drifted away from using ISO as the sole determining factor for formulating insurance rates. Nonetheless travel distance is travel distance and under the current five station, three fire company model in the Town of Boston there is both strong response time and strong ISO coverage in the town.

Scenario	Travel Time Percent of Road Miles Covered		
	4 minutes	6 minutes	8 minutes
All Stations	65.93%	88.94%	96.60%
No Pacthin Fire	47.90%	73.81%	87.90%
No Boston Fire	47.17%	72.11%	84.88%
No North Boston	47.66%	69.82%	85.04%
No 2nd Stations	51.37%	75.06%	87.05%
Clean Slate			

689749 All roads in
130.6343 All roads in

As you can see from the above chart and maps included in this document reductions in stations and potentially companies will directly result in a reduction in service and coverage to the town. Clearly maintaining the current five station/three fire company model preserves service levels and community/company identity while creating a single fire district provides the community with the stability of a larger management entity which can result in the following benefits:

1) Equal distribution of fire protection dollars and resources on a town wide level.

2) Increased buying power for all things fire department such as turn out gear, apparatus, tools, equipment, etc.

3) Ability to establish capitol reserves faster via the combined budgets of the three companies creating one new unified budget.

4) Town wide representation on the single Board of Fire Commissioners.

5) Ability to manage EMS or for the provision of E.M.S. through the ability to hire part-time/per diem or career firefighter/EMTs as the long term need presents itself.

6) Possible increased representation for fire department needs at the County or State level via a single fire district in the Town of Boston.

INSURANCE SERVICES OFFICE (ISO)

Nationally, the frequency and severity of fires are declining. Although fire suppression services are, in terms of total responses, becoming less frequent, they remain the most important services delivered by the fire departments when fires do occur. The Insurance Services Office (ISO) is an independent auditing organization funded by insurance companies. The ISO conducts a thorough site visit to the community and analyzes fire stations, staffing levels, fire apparatus, equipment carried on apparatus, training records, water supply, and all the other component parts that affect the quality of fire service delivery. The ISO rates fire departments on a scale of 1 (the very best) to 10 (the most deficient). As previously mentioned although *State Farm* and some other large insurance companies have discontinued using ISO ratings in favor of a —zip code based rating system, the ISO rating scale remains the most widely accepted objective measure of fire protection.

This agency, which is administered under a coalition of the large insurance carriers throughout North America, performs audits of fire service delivery capabilities in communities on a regular basis. In some improving rural areas

of the country residential rates are improved as the classification improves beyond a 9 up to the rating of 6. Ratings of 1 to 6 provide the same lower premiums for *residential* units. Commercial savings continue with lower classifications from 1 to 6.

Firefighter Training

The expression in the volunteer fire service that "we do things this way because we have always done them that way." or "100 years of tradition not impeded by progress" is no longer acceptable in the fire and rescue services career or volunteer. The above statements are often based upon information remembered from training or "drill nights" from the "good ole days" that spent more time flowing water and later playing cards at the firehouse by those making such statements. Today there are current nationally recognized standards, rules and laws regarding safety operations at every type of incident, training, and incident command, just to mention a few areas. Failure of any agency to follow those standards, even when a department or community has not formally adopted them, brings the risk of public scrutiny and the possibility of successful legal action against the fire departments, the governing body and/or the individuals in charge.

Individuals and their agencies can be assured that if they are involved in a legal action for perceived failures to follow generally accepted standards for performance, their individual training records or lack thereof combined with the skills of the trainers will be used to establish the foundation for those failures. Beyond the potential for negative legal actions, the failure to maintain current training in Safety and Incident Management by those who are in, or may be in, command positions also creates a potential for failure of

the primary mission of all officers to assure the safety of those in their command as well as assuring the safety of the public they serve.

There is a wide range of mandated training across this nation that applies to fire and rescue services. In New York State, the authority having jurisdiction, i.e., the fire department or local government sets standards for volunteer firefighters. However, the Public Employees Safety and Health Act, Article 27a, New York State Labor Law, requires that all individuals be trained to the task or job they are to perform. Under the PESH Act, volunteer firefighters are considered public employees, (case reference: Harnett v Ballston Spa). It is important to note that even when an agency may have well qualified instructors within the agency, it is vital for the safety of all responders that personnel from every station receive the same level of training and that the training is recorded properly. New York State has mandated training for paid firefighters under NYS paid ff §426.7 In-service fire training; permanently appointed firefighters and fire officers normally assigned to command company operations at emergencies shall annually receive a minimum of 100 contact hours of in- service training .... in a wide range of subject areas. While this NY law applies to paid firefighters, the fact remains that career and volunteer firefighters all face the same dangers. Volunteers and career firefighters all make the same life and death decisions in the performance of their duties and must be properly trained to do so for their own safety and the community's safety. This is the primary reason that The New York State Office of Fire Prevention and Control and NYS Labor Laws and PESH article 27 recognize volunteer firefighters as employees. Many states today require public safety agencies to adopt the National Incident Management System Incident Command System (NIMS ICS).

NIMS ICS is a system that provides a consistent nationwide approach for federal, state and local governments to work effectively together to prepare, respond and recover from domestic incidents, regardless of the cause, size or complexity. Proper training for incident management by all personnel and leaders is a primary safety concern for responders and the community. One of the most basic training requirements has long been a part of the ISO fire protection rating program. The following is a summary of the training issues ISO considers when reviewing a community's training for firefighters:

- Facilities and aids: Drill tower, Fire building (including smoke room), Combustible-liquid pit, Library and training manuals, Slide or overhead projectors, Movie projector or VCR, Pump cutaway, Hydrant cutaway
- Use: Half-day (3-hour) drills, 8 per year; Half-day (3-hour) multiple-company drills, 4 per year; Night drills (3-hour), 2 per year
- Company training: Company training at fire stations, 20 hours per member per month for full training credit
- Classes for officers: 2 days (6 hours each) per year for all officers
- Driver and operator training: 4 half-day (3-hour) sessions per year
- New-driver and operator training: Classes for new drivers and operators, 40 hours
- Training on radioactivity or hazardous materials: 1 half-day (3-hour) session per member per year
- Recruit training: 240 hours per recruit

During this review each individual fire department was asked for their drill and or training information. While each organization did in fact produce documents that provided proof that regular training is being conducted and attendance is being recorded some drill sheets lacked a clear designation as to what the drill lesson was for the session. For example a drill sheet provided by the Patchin Fire Company listed items such as "truck check" or "maintenance" as a part of their drill schedule and attendance record. It should be the goal of each fire company to include the lesson plan and desired learning goals or objectives for each drill with their drill attendance records. It should also be the goal of the three companies as a group to move towards a single town wide training schedule that provides the opportunity for firefighters to meet the aforementioned training goals via weeknight training dates, week day training dates and weekend training dates. It is recommended that to achieve this town wide training goal and increased interoperability and camaraderie that a training committee be established with a chief and training officer from each department to annually develop the training calendar and to recruit, train and mentor trainers for each drill session to insure a quality program occurs.

General Strategies and Goals for Success:

1) Review this report for information and general recommendations.

2) Advance sub-station construction/renovations as funds allow.

3) Consider a town wide drill schedule for improved training.

4) Review apparatus recommendations and replacement schedule

5) Establish a task force with the Volunteer Fire Companies, neighboring fire departments and Town of Boston local government leaders to address recruitment and retention issues.

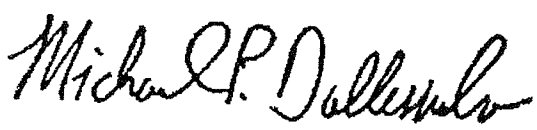
6) Encourage meetings to drive discussions for long term success in the fact finding on the topic of a single town wide fire district so the fire service leaders in your community can provide the answers for taxpayers and government leaders as to whether the concept can work or not work for your area. In other words the fire service leaders should "drive the bus" – not the citizens or government on discussions about mergers or consolidations in the fire service.

7) Elected officials should always work to represent the needs of all community stakeholders equally and should make every effort to positively promote the vital services provided by the town's volunteer firefighters and should always promote the positives of joining the ranks of these organizations.

Closing Remarks:

It has been this consultant's sincere honor and privilege to serve the fire companies of the Town of Boston. I also appreciated being able to get a more in-depth look at each company's operations. The all volunteer fire service as we know it, is facing many challenges in 2012 and beyond, such as increased training and call requirements, increased costs coupled with greater competition for a member's free time from outside sources and competing recreational and employment based activities. The years ahead will not be easy for volunteer fire departments especially the smaller rural operations including those in the Town of Boston. In this consultant's opinion I believe that the organizations in the Town of Boston will do the right thing by working to preserve the valuable fire department operations currently found in the Town of Boston while at the same time STRONGLY looking towards a single fire district model to insure that the groundwork is mapped out for future generations to be in a solid position to build a "lean and mean" fire/rescue operation for the future. By simply thinking out of the traditional box and commissioning a review such as this I believe you have already taken progressive measures or are a major part of progressive measures in your area to prepare for these challenges.

Respectfully Submitted,



Michael P. Dallessandro www.respondsmart.com