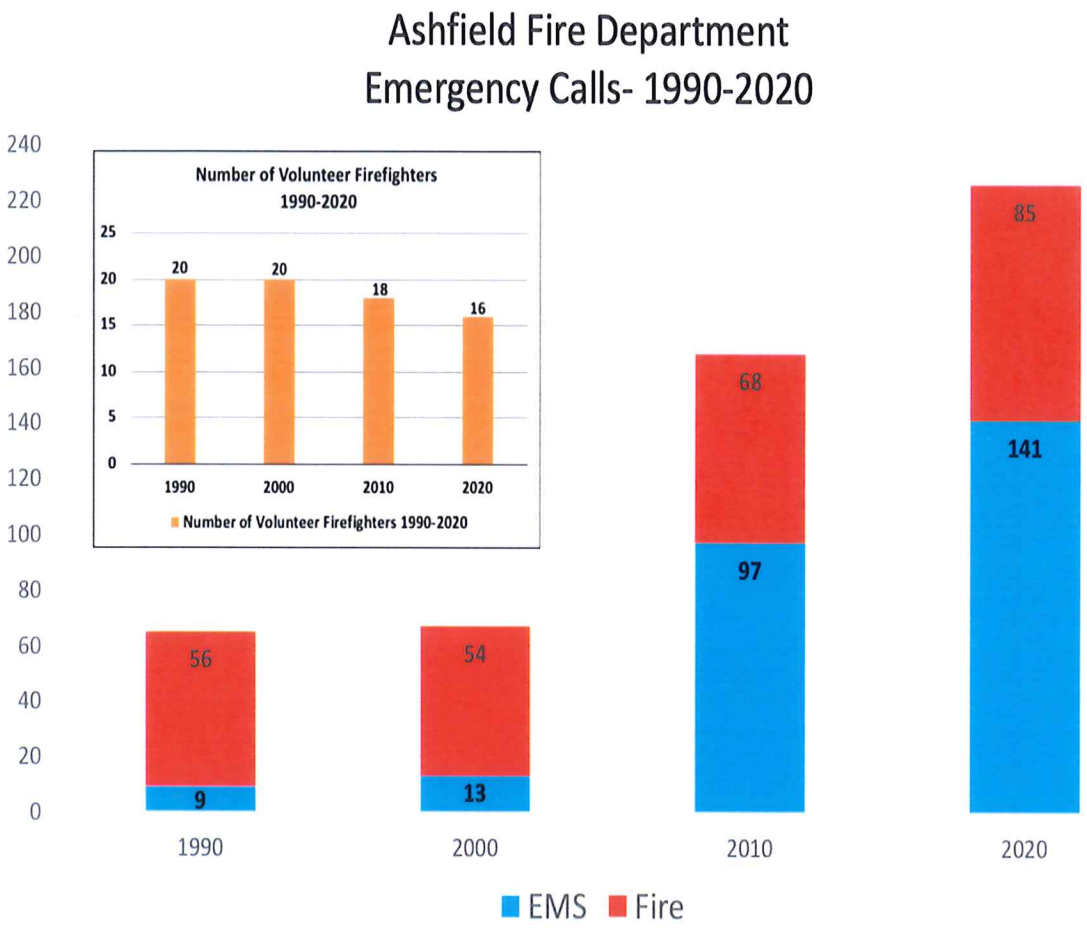
Ashfield Fire Department

Review, Recommendations & Strategic Plan

March 3, 2021



The population of Ashfield is about the same in 2020 as in 1990. What changed? Ashfield is aging. The average age of Ashfield's residents has increased from about 38 years old to 52 years old. An older population is more reliant on emergency services.

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Review, Recommendations and a Strategic Plan for the Ashfield Fire Department

March 3, 2021

Eating an Elephant

Question: How Do You Eat An Elephant?
Answer: One Bite At A Time.

As I worked on this project I became concerned that I was going to so greatly overwhelm everyone with information, suggestions, and recommendations that they will throw up their hands in defeat, and declare we can't do this.

Let me start this review by acknowledging and warning you that there is a lot here. There is too much here for anyone one person or board to accomplish. Ashfield needs many mouths to eat this elephant. If the Select Board takes one piece of the plan and tackles it one bite at time, while the firefighters take another piece of the plan and tackle it one bite at time, and the new chief does the same, the challenges facing the Ashfield Fire Department will be solved. The barriers to future success will fall away.

A true and complete community wide effort is called for.

All of this cannot be accomplished at once or in two or three years. Patience and steady incremental improvement is the path to success. Most of what I recommend can be done or at least be underway in three to five years. Some of what I will recommend is going to take ten years to get to. This is a road map for a lengthy journey, not a shopping list for today's trip to the store. Ashfield and its fire department have the ability to modify this road map as circumstances change and as opportunities present themselves.

Many of the suggestions and recommendations will present themselves over time as choices to make and paths to follow. The choices you make will alter the need, timing, and costs of other suggestions and recommendations.

While it might seem overwhelming, and there will be voices saying it can't be done, I am confident that Ashfield has the ability to accomplish the goals laid out in this report. I find that Ashfield has a strong group firefighters who have been doing great work with few resources. But, without more help, more resources and a greater appreciation for their efforts and for the role they play in making Ashfield a great place to live, the community risks losing them. Such a loss would foreclose many of the suggestions and recommendations of this report, and it would lead to more expensive and less responsive alternatives.

As you read this report, think about what one aspect of it you can work on today, and start changing things for the better one bite at a time.

Process

In early 2020, Fire Chief Del Haskins and Ashfield Town Administrator, Jenn Morse, asked me to review the Ashfield Fire Department and make recommendations for its future, with a particular emphasis on the fact that Chief Haskins was planning to retire on or about July 1, 2021, and that they felt the department needed a plan for finding a new chief. Chief Haskins felt that the fire/EMS needs of the town were growing both in complexity and volume, and that the department needed a full-time chief to move it into the future. The chief was also concerned that if the chief's position was volunteer or part-time, that none of the department's current members would be willing to promote to the chief's position, and that hiring a chief from out of town faced a number of practical and cultural barriers.

In addition, they felt that a complete assessment of the department was in order and that the transition between chiefs was the right time to look at the big picture.

Then along came the COVID-19 pandemic and caused a delay getting this project underway. The project did not get underway until November 2020.

In order to provide the requested review and recommendations, I meet with and solicited input from the following stakeholders:

Chief Del Haskins
AFD Officers
AFD Firefighters
Board of Selectman
Finance Committee
Town Administrator Jenn Morse
Police Chief Beth Bezio
Chief Herb Guyette - Buckland & Shelburne Falls FD
Mike Rock, Director of Highland EMS
Chief Robert Baker - Conway FD
Tom Hutchinson, Conway Town Administrator
Chief Susan Labrie – Goshen FD
Chief Bernie Forgea (Retired) – Cummington FD
Chief David Alvord – Plainfield FD
Chief Gregory Cox – Hawley FD

I have also reviewed the department's records, budget, and data to understand its operations.

Data, Demographics & Operational Review

The Town of Ashfield, Massachusetts is a rural community located in Franklin County. It has a population of about 1800 people. The age distribution of its population at the 2010 US Census was:

Under 18 Years Old	24%	432 people
18 to 24 Years Old	5%	90 people
25 to 44 Years Old	27%	486 people
45 to 64 Years Old	33%	594 people
65 Years Old & Over	12%	216 people

The 2020 US Census data is not yet available to us. However, anecdotal information indicates an aging demographic being driven by retirees moving to town and the residents of Ashfield aging in place. According to Town Charts, an online database of town demographic data, the median age of Ashfield's residents is 51.3 years old compared to the Massachusetts median age of 39.4 years old.

Town Charts indicates the following age distribution of the Ashfield population:

Under 20 Years Old	16%
20 to 29 Years Old	10%
30 to 39 Years Old	6%
40 to 49 Years Old	14%
50 to 59 Years Old	19%
60 to 69 Years Old	21%
70 Years Old & Over	13%

Roughly regrouping the Town Charts data to help compare it against the 2010 census data you see that number of older residents in Ashfield has grown. The over age 60 population is today about 33% of the town, compared to 12% over 65 in 2010. Even with the comparison gap between 60 and 65 (in how the two data sets are reported), the data indicates aging.

A similar pattern is decodable at the lower end of the age groups in Ashfield. People less than 18 years old represented 24% of the town's population in 2010 and Town Charts data indicates that today, People 19 and under represent 16% of the population. There are fewer families with children and more senior citizens today.

Another indicator of this trend is enrollment at the Mohawk Regional School System. Fifteen years ago the school system had about 2000 students and today it has about 950 students.

The importance of this trend will become apparent when considering the increased Emergency Medical Services (EMS) demands in the community, and the long-term sustainability of the current volunteer fire department model. Statewide data indicates that people over the age of

60 represent about 50% of all ambulance trips to the hospital in Massachusetts. This means they are more than twice as likely to call an ambulance as persons under 60. In my observation this increased need for EMS also applies to all other public safety or emergency needs. People over 60 will call the fire and police department about twice as much as people under age 60.

In 2020, no children died in fires in Massachusetts (for the first time in recorded history), but 39 adults died in house fires and 16 of them (or 40%) were over age 65. The fire death rate for seniors is twice their representation in the statewide population. Communities where the over 60 population is starting to skew to two or three times the statewide average, should expect the need for emergency services, of all types, to increase.

Ashfield is a rural community with a population density of 43 people/square mile. The town is located on 40 square miles of land. (FEMA's definition of rural for fire grants is a community that generally has a significant portion of its response area that is undeveloped. There are few or no fire hydrants, virtually no multistory buildings, sparse population and small number of commercial areas.) Ashfield is the 45th largest city or town by land area in Massachusetts.

Ashfield has twenty-nine fire hydrants within the center of town. They are supplied by a 150,000 gallon water tank and are generally capable of flowing 800 gallons per minute. The Ashfield Water District maintains the hydrant system. Outside the town center, the community relies upon water tanker shuttle operations or natural water sources (ponds & creeks) to deliver water to a fire. There are ten dry hydrants (hydrants set up to allow for drawing water from ponds or streams) located outside of the center of town.

Ashfield has no four story buildings. According to Massachusetts Department of Revenue data the building and housing stock is mostly single family homes as follows:

Single Family Homes	608
Two Family Homes	27
Three Family Homes	5
Apartments	2
Commercial Buildings	13
Industrial Buildings	6
Tax-Exempt Parcels/Buildings	76

The total taxable value of real estate in Ashfield is $260,899,141 (FY2020).

The Ashfield Fire Department is a Call Fire Department. A Call Fire Department is one where the members of the department are deployed in the same manner as a typical small town volunteer fire department, except the members get paid an hourly rate for responding to

emergency calls and training. This model is common in small towns throughout Massachusetts, but less common nationally. The term "Call/Volunteer Fire Department" is sometimes used to describe these departments because they are mostly like a volunteer fire department, but there is pay for the members. Call/Volunteer firefighters are paid $15 per hour and earn an average of about $1300 per year.

The Ashfield Fire Department has sixteen (16) call/volunteer firefighters and three (3) auxiliary members.

The Ashfield Fire Department provides fire suppression, EMS first response, hazmat response (operational level), and rescue (primarily auto extrication, water rescue, and missing person search). The call volume is as follows:

Year	Fire	Medical	Total Calls
2020	85	141	226
2019	82	99	181
2018	76	108	184
2017	90	76	166
2016	83	101	184
2015	70	104	174

The Ashfield Fire Department does not operate an ambulance. Highland EMS (a non-profit corporation based in Goshen) provides ambulance service to the town. The fire department does provide emergency medical service (EMS) first response to all calls for an ambulance in Ashfield. This means that whenever there is a request for an ambulance in Ashfield the fire department is simultaneously dispatched along with the ambulance. Fire department members respond to the EMS incident to provide scene/situational size-up and safety, patient assessment, and first aid (CPR, AED, bleeding control, etc.) until the ambulance arrives.

The Town of Ashfield pays $100,000 per year to Highland EMS to provide ambulance service to Ashfield. Additionally, Highland Ambulance bills for service receiving payment from patients, Medicare/Medicaid and private insurance.

Providing EMS has become the primary function of most fire departments in the United States. Fire Departments are of all sizes and types are typically experiencing 50% to 75% of their emergency calls as EMS. According to the National Fire Protection Association (NFPA) 4th Needs Assessment of the US Fire Service (2015) of the 12,933 fire departments in communities under 2500 population, 56% provide EMS.

911 calls for the Ashfield Fire Department (and the ambulance) are received by the Massachusetts State Police and the state police serve as the fire department's dispatcher.

The Ashfield Fire Department operates from a centrally located single fire station, at the center of town, 420 Main Street, (RT 116). It operates four trucks as follows:

Engine 2: 1990 Engine/Tanker that carries 2500 gallons of water and pumps 1500 gallons of water per minute. It has a two-firefighter cab. This trucks primary role is to provide water for firefighting in areas without fire hydrants. Its secondary role is to function as a fire engine for fire attack.

Engine 3: 1996 Engine that carries 1500 gallons of water and pumps 1000 gallons of water per minute. It has a three-firefighter cab[1]. This truck's role is to function as a fire engine for fire attack.

Rescue 1: A 2013 Ford F-550 4x4 that carries 250 gallons of water and pumps 300 gallons per minute. It has three-firefighter crew cab. This is multi-mission truck that can respond to motor vehicle crashes, small fires, EMS incidents, water rescue, hazmat incidents, and supports fire ground operations.

Brush 1: A 1985 Chevy 4x4 Pickup Truck that carries 125 gallons of water and pumps 200 gallons of water per minute. It has a three-firefighter cab[2]. This truck primarily responds to brush fires.

The Ashfield FD has an Insurance Services Office (ISO) Public Protection Classification (PPC) of Class 5. The ISO rates all fire departments in the USA on a scale of 1 to 10, with 1 being the best. This rating is based upon the department's ability to extinguish fires relative to the community need. Nationally, there are about 9200 fire departments rated as Class 5. There are about 12,500 departments rated Class 1 through 4, and approximately 19,500 departments rated Class 6 to Class 10.

The Ashfield FD has an excellent community education program. The department is very good at getting Commonwealth of Massachusetts SAFE Grants. These grants provide funding for fire safety programs in the school and targeted to senior citizens. The AFD just received a SAFE grant for $5974. It is one of the few departments in the region conducting this level of community education, and its programs get high marks.

The Ashfield FD has a good relationship with the Ashfield Police Department and the State Police. Unfortunately, the norm in public safety is that police and fire tend to be at odds with each other. Ashfield bucks the trend and its citizens reap rewards because the police and fire

[1] Many would call this a two-firefighter cab. It is a bench seat where a third firefighter can ride between the "driver position" and the "officer position".

[2] Many would call this a two-firefighter cab. It is a bench seat where a third firefighter can ride between the "driver position" and the "officer position".

departments see each other in a collaborative way, and act as force multipliers for each other. The credit for this lies with the two chiefs who make sure this approach trickles down to their members.

The membership and structure of the Ashfield Fire Department is as follows:

Chief of Department:	Del Haskins
Assistant Chief:	Alan Taylor
Captains:	Matt Haskins Mike Purcell
Lieutenants:	Colleen Walker Kyle Walker
Firefighters:	Amanda De Los Santos Lucas De Los Santos Bill Burnett Dave Christenson Deb Craven Donna Sarro Hector Cabrera Jared Taylor Malik Johnson Raine Leue Raymond Szewczyk Tiertza – Leah Schwartz Tim Williams Doug Mollison

SWOT Exercise

SWOT = Strengths, Weakness, Opportunities, & Threats

As part of my review of the department, I conducted an online SWOT Exercise with firefighters and public officials. A SWOT exercise is a strategic planning tool that asks people to identify the strengths, weaknesses, opportunities, and threats that an organization faces.

The SWOT exercise revealed or confirmed the following general points about the Ashfield FD:

Strengths:

1. **Chief Del Haskins**: Del's commitment and leadership is clear. In my experience, chiefs don't get a lot of accolades from their firefighters. When given a chance to speak

anonymously, firefighters have a cultural tendency to berate their chiefs. Del has clearly done a great job and his retirement will be a loss to the community.

2. **Dedication of the Call/Volunteer Firefighters**: Clearly the current group of firefighters is a strength of the department. In addition, this group is seen as knowledgeable, diverse, and well trained.
3. **Teamwork**: The department lacks internal strife that is common in many fire departments, particularly here in the northeast. There is an odd cultural tendency for fire departments in our region to be factionalized and full of drama. Ashfield seems to avoid this.

Weaknesses:

1. **Too Few Firefighters**: It is clear that everyone sees the need for more help. Adding additional firefighters was the dominate response.
2. **Old Trucks**: The age of the department's fire apparatus is clearly a concern and a significant weakness.
3. **The Fire Station**: People recognize that the fire station is too small, obsolete and doesn't support the mission as it should.
4. **Training**: This showed up as both a weakness and a strength. In the later, open-ended comments, the need to expand the scope of training is noted.

Opportunities:

1. **Multi-Town Cooperation**: Many see this time as the time to start pursing additional collaboration with other fire departments.
2. **Full Time Staff**: Many of the answers reference full-time staff, some limited this to the chief position and others saw this as need for daytime operations.
3. **Updating the Fire Station & Trucks**: There is definitely a thread of thought throughout the comments regarding the need to use this transition to deal with the fire station and trucks.

Threats:

1. **Funding**: The comments clearly indicate a chronic lack of funding for the department as one of the two top threats to the department. Outdated trucks and the condition of the fire station are among the top comments (even in the later open ended questions) indicating a lack of support for the department.
2. **Staffing**: Too few volunteers and low response to calls stands out as one of the two top threats to the department's future.

In the comments to the open-end questions asking about what changes people suggest, what actions to avoid, and general free thoughts, a few trends developed.

Participants feel that now is the time to act. There comments indicate that now is time for Ashfield to hire a professional chief who can move the department forward by increasing staffing, to professionalize training, and motivate members to respond to more calls. Participants see the need for more effective deployment model.

Participants also see regionalization (of some kind) as both good and bad. I think there is fear that it could hurt the department because other departments also have their problems. They don't want to have the problems of other departments piled on to Ashfield. I think sharing members and having stronger collaborations with things like training and responding (automatic aid) are generally seen in a positive light.

The complete, unedited, responses to the SWOT Exercise are attached as Appendix A.

ANNALYSIS & RECOMMENDATIONS

The Fire Chief

It is time for the Ashfield Fire Department to have a full-time, career fire chief.

I come to this recommendation because the department staff, many town officials, and the retiring chief all believe this to be the case. I found nobody advocating for a volunteer or part-time chief to succeed Chief Del Haskins. In fact, most people admire and respect Chief Haskins for having done the job in a part-time capacity for a long time, for little money, and well-past the point when most people would have walked away telling the town it was time for them to hire a full-time chief.

I also come to this recommendation because the data indicates that the fire department and the needs of the community require a more complex organization. Overall emergency call activity has increased, and in particular, emergency medical service (EMS) calls are rising sharply as the community ages. Community expectations will rise as incidents increase and the current volunteer system will be stressed as it struggles to meet community (and their own) expectations.

The new fire chief needs to provide the leadership and management of the department that will lead it to new deployment models, additional training, and the esprit de corps needed to face the coming challenges while meeting the needs and expectations of the community. The new fire chief needs to be committed to improving and growing, not just maintaining, the volunteer model.

What would a career fire chief do that can't or isn't done by a part-time, on-call, or volunteer chief? Here is a list:

1. **Recruitment of Call/Volunteer Firefighters & EMS Providers**: Ashfield does not have the financial resources to support a paid/career fire department. Even the most modest career model of three firefighters on-duty 24/7 is unaffordable and unrealistic. A modest career department will cost $850,000 to $1 million in payroll alone (see **Appendix B**). The top priority for the new chief is to create and management a comprehensive program for recruiting new members and ensuring the health of the current call/volunteer system. This is arguably the most important part of the chief's job. Without volunteers little else matters. Strong leadership skills are critical to this part of the job.

2. **Strategic Planning**: The AFD does not currently have a strategic plan. It has never had one. In decades past, there wasn't a pressing need for strategic planning because the mission of the department was less complex, and the world in which the department operated was not as demanding. Today, the extreme capital costs for things such as fire trucks, hose, personal protective equipment (PPE), and fire stations require annual capital planning. Strategic planning is necessary to project volunteer staffing needs. Strategic planning is necessary to determine and meet community expectations.

3. **Management of the Response Deployment Model**: Call/volunteer fire departments have dynamic staffing and deployment models. Career fire departments have static staffing and deployment models. In other words, a career fire department has a pre-determined number of staff on-duty and a completely predicable response to emergencies. The staffing and response from a call/volunteer department is constantly shifting and changing due to a wide range of factors (time of day, nature of incident, number of volunteers, morale, weather, and call volume, just to name a few). This type of system requires a much greater level of active management by the fire chief, than career systems do. Strong leadership skills are needed to be successful in this aspect of the job of fire chief.

4. **Management of Preparatory Systems**: Much of the cost of an effective fire and EMS department is the cost of being prepared, not simply the cost of responding. One of those costs is the time and effort by the fire chief to insure that the department is prepared (for its 90^{th} or 95^{th} percentile incidents – no department is prepared for 100% of what could happen). These systems include apparatus maintenance so that the trucks are always ready to go, portable equipment maintenance so that chain saws and rescue tools start and work on a moments notice, and training so that firefighters and EMS providers are prepared, confident and successful.

5. **Pre-Planning**: While technically pre-planning might be also be part of management of preparatory systems, I think it is worth calling out because it is greatly discussed in the fire service, but greatly ignored when it comes to taking action. Every building and property open to the public should be pre-planned by the fire department for

fires, hazardous materials, and special rescue situations. These pre-plans need to be reviewed and updated annually. This process requires site visits. Firefighters need to be trained on the contents of these plans.

6. **Financial Management**: As departments grow in complexity and budgets increase, financial management becomes more important to the success of the department and the quality of the service it provides to citizens. Money must be well spent. The fire chief needs to be seeking alternate funding sources including donations and grants. Grant management is important to keeping a department well funded, and departments that are best at grant management tend to get more grants.

7. **Compliance Management**: In 2018, Massachusetts reversed decades of policy and put municipal government, including call/volunteer fire departments under "OSHA"[3] regulation. This brought pages and pages of new regulatory compliance to the fire service. While enforcement of these new regulations has so far been soft, failure to plan for and start complying with these regulations is a set-up for lawsuits, fines, and staff problems. "OSHA" is just an example of the growing need for regulatory compliance that call/volunteer fire departments formerly didn't worry about. There are also state ethics regulations, state/federal discrimination requirements, labor rules (i.e. the Fair Labor Standards Act regulations for call and volunteer firefighters can be a minefield), and DEP/EPA regulations that need to be addressed. Yes, these issues haven't come up much and you might go years without a problem, but when something does go wrong, the cost in legal fees, fines, and the internal staff strife resulting in the loss of volunteers, will be destructive to the department. (Note that what usually goes wrong is a disgruntled firefighter – typically the result of poor leadership and lax compliance – files a complaint.)

8. **Inspectional Services:** The fire chief (by state law) is responsible for fire code enforcement and inspections. The most common fire inspection in a town like Ashfield are going to be smoke and carbon monoxide detector inspections at the sale of a house, the construction of new house, or the renovation of an existing house. The Ashfield fire chief conducts about 55 of these inspections each year. Additionally, the fire chief should be inspecting all public occupancies such as restaurants, theater spaces, stores, child-care facilities, and schools. Some of these inspections are tied to annual license renewals. Some, such as conducting quarterly fire drills at schools, is required by law. While Ashfield's inspectional needs are modest, the fire chief is responsible for getting them done and having the basic knowledge and skills to conduction them. At a minimum, the fire chief should be credentialed as Massachusetts Fire Prevention Officer – Basic.

[3] I am using "OSHA" as a short-hand for the Massachusetts Department of Labor Standards. This department is not technically OSHA (a federal agency), but it uses much OSHA guidance and regulations, it operates in the same manner an OSHA on a state level, and in day to day discussion, people tend to refer to it as OSHA.

9. **Emergency Incident Management**: This is what most people think is the primary reason to hire a fire chief. It's not. It is important that the fire chief is clear headed and calm in an emergency, and that he/she knows how to handle the emergency. But, lots of firefighters of all ranks are good at this. A fire chief who is a great leader, but only an average firefighter, will have much greater success (and so will the department) than a chief who is the best firefighter, but a poor leader. A good chief will have good officers who can handle emergency operations.

10. **Collaboration**: Creating partnerships with other agencies, individuals and with businesses has become part of the job of fire chief. A few decades ago most fire departments were insular to their towns and had little need to partner with anyone else except the neighboring fire department for the occasional big fire. Today, automatic aid agreements where neighboring fire departments respond together on a routine basis are becoming normal. Interaction with state and federal agencies is routine. Partnering with local businesses, individuals, non-profits, and other organizations such as AmeriCorps is a way to stretch resources. And, specific to Ashield's needs, there may come a time when the AFD Chief might be in a position to serve as chief in neighboring communities and these kinds of skills will be critical.

11. **Risk Management**: A big part of any modern fire chief's job is managing risk for the community and for the firefighters and EMS responders. This is reflected across all of these other disciplines. The training program is a part of risk management. The deployment model is about risk management. Conducting and maintaining a community risk analysis is an important part of the new chief's job. Being able to engage in cost-benefit analysis is another important skill along these lines.

12. **Change Management:** We live in a rapidly changing world. In a few years your I-Phone will be obsolete. Think about everything that has changed in the last few years. It is unrealistic to think that the AFD can successfully resist changing. Whatever the AFD does in the next 3-5 years to improve itself will also be obsolete and the department will have to reinvent itself once again. The pace at which all organizations (businesses, non-profits, and fire departments) must change is accelerating. The new fire chief will have to manage this change to keep the department relevant and to meet community expectations. Again, leadership skills are critical to success.

Doing all of this, and doing it well, requires more than few hours a week.

In Ashfield, at this moment, there is a pressing need for fire/EMS responders in the daytime. Most of the volunteer force is currently not available to respond to emergency calls Monday through Friday, from roughly 8AM to 6PM. Having a career fire chief generally available during those hours will help to solve the low staffing issues during that time, however, this is the least important reason to hire a career chief. The chief is not personally the staffing solution. The chief must be the person who finds people and motivates people to be the staffing solution.

Additionally, a key reason for recommending that the town hire a full-time/career fire chief when Chief Haskins retirees is that the likelihood of finding someone both willing and qualified to do the job on a part-time or volunteer basis is slim. My discussions with the department members leads me to believe that nobody on the department will take the position of fire chief on a part-time or volunteer basis. Those interested in the position have full-time jobs and family commitments that would preclude them from taking the position on a part-time basis.

It's possible someone from out of town might take the job on a part-time basis, but bringing an outsider (especially part-time) in to lead a small volunteer fire department is risky. The primary risk is that there will not be a cultural fit between the chief, the volunteers, and the town itself. A chief that doesn't understand the politics and culture of the town may clash with the community and its elected officials. He/she may not fit well with the volunteers and the department ends up with an "it's him/her or me" scenario. If an outsider is hired, there must be strong support for the idea among the existing volunteers and the town's leadership must make a strong and clear case identifying the skills and abilities the new chief has, that someone local couldn't provide.

In any case, whoever becomes chief will result in one or more people leaving the fire department. This is almost always the case when a long-time chief retirees and someone new takes charge. It is normal that some members of the department will dislike the new chief or dislike the new systems or approaches. The town must be prepared for this to happen, and the new chief must have excellent leadership skills to minimize this and adjust for it.

It can be difficult for the town administrator and Select Board to identify when volunteers are leaving the department simply because they don't like the new chief or aren't willing to accept the change in systems and methods, verses people leaving because the chief is a poor leader or lacks other critical skills. One approach to handling this is for the Select Board to institute a formal review process for the fire chief. This requires a written job description and regular written evaluations. At the hiring of the new chief is the perfect time to institute a job description and evaluation system.

Attached, as **Appendix C,** is a suggested job description for the Ashfield Fire Chief and a suggested annual review document. I strongly suggest that the Town Administrator and Select Board conduct a public annual review of the fire chief. Because it might be difficult to find a person who fits all of the qualifications in the job description who is both willing and able to take the job, the Select Board can ask that the person selected meet the requirement of the job over time. Depending on what might be needed, three years to obtain a list of qualifications would not be unreasonable. A candidate who is committed to personal professional growth is one who is likely to be committed to improving the fire department. I reiterate that the most important qualification – leadership ability – is the one thing you must get up front and can't wait for.

The town administrator also needs to open up a clear line of communication with the volunteers in order to better assess the chief's effectiveness and leadership skills. There is a danger in this. One or two chronic complainers can take over the process and paint the wrong picture. This must also be done in a way that firefighters don't think they can bypass the fire chief every time they don't like a decision or a new procedure (and get the Select Board to overturn it). If someone complains to or makes a suggestion to the town administrator, she must immediately pass it on to the fire chief and the Select Board.

Members of the Select Board must also be careful not to undermine the new chief. If they get complaints or good reports from firefighters, both must be passed on to the town administrator and the fire chief. A best practice is for the town administrator to be the doorkeeper between the firefighters and the Select Board, so that one or a few can't bypass everyone with their personal agendas. Communication, everyone's in the loop, is critical to maximizing the success of the new fire chief.

And, to the firefighters there must be no secrets. The fire chief needs to be constantly communicating all of his/her ideas and discussions with the town administrator, Select Board, and others so that the firefighters never feel out of the loop. Volunteers can't be expected to embrace new policies and procedures, or support a capital expenditure, if they've been blindsided or their ideas were ignored. Poor communications is a fast way to lose volunteers and end up having to hire staff.

In addition to the specific projects and areas of responsibility listed above, and whether full-time, part-time or volunteer, the chief's job should be first and foremost strategic, not day to day operational. The chief needs to be planning for the future, recruiting new volunteers, researching and testing new deployments and tactics, creating and managing systems for the maintenance of portable equipment, trucks, and the fire station, and financial planning. If done well, the chief should be creating and managing the overall strategic operation of the department so that his/her physical presence isn't required at every call. (For a more detailed discussion of the leadership skills critical for a small town fire chief, please see **Appendix D**.)

Secondarily, the chief is responsible for management. Management and leadership is not the same thing. Management is about designing and implementing systems. In a fire department setting, management means gathering data, analyzing that data, identifying strengths and weaknesses, and then designing a system for maintaining or improving the strengths and correcting the weaknesses or compensating for the weaknesses. Leadership is getting the members of the fire department to embrace and implement the new system.

Suburban and urban fire departments can afford to have different people or entirely different divisions to execute leadership, management, and planning for the department. In a small town these duties fall to one person – the fire chief. This makes the job of fire chief in a small town different and more difficult than the tradition suburban or urban chief. Finding someone who can do both jobs at the same time is more difficult, but a necessity.

Fire chiefs are also responsible for a wide range of administrative tasks. These are such things as maintaining personnel files, tracking drill/training attendance, filling out incident reports, filing, getting price quotes, taking and relaying messages, and ordering office supplies. While the fire chief is responsible for these administrative tasks, he or she doesn't necessarily have to be the person who actually does them. A chief with good leadership and management skills will be able to delegate many of these tasks.

There is a danger in these administrative tasks when a small town hires a fire chief. It is easy to hire a chief whose administrative skills are superior to his/her leadership skills. This is partly because administrative skills are easier to see and understand as job tasks, and easier to measure completion or success, than leadership. Determining someone's leadership skills is harder than determining their administrative skills.

In my experience and observation, call/volunteer fire departments (and small combination fire departments) with chiefs who have poor leadership skills, but great administrative skills, fail. Morale is poor. Volunteers quit. Recruitment is difficult. Service to the community is inferior.

Another, overrated skill for fire chiefs is firefighting. The best firefighters don't necessarily make the best fire chiefs.

I recommend that Ashfield hire a full-time, career fire chief.

There is a significant cost to hiring a full-time career fire chief. Using a salary of $65,000 per year the overall cost to the town, with benefits and other expenses that grow out of hiring a new position, will be between $88,500 and $102,000 per year. (See **Appendix E** for the calculation.) While this is a lot of money to suddenly add to the town budget, it is a bargain relative to the industry and for the amount of value added to the fire department and the community. Firefighters in Northampton, for instance, earn between $60,000 and $120,000 per year and they don't do all of the strategic level work that Ashfield requires from its chief. Yes, department heads in the Hill Towns are typically paid less than their counterparts in larger communities, but there is little to compare when it comes to the fire service.

I strongly recommend that the Ashfield Select Board use an assessment center model for hiring its next fire chief (whether volunteer, part-time, or career).

An assessment center is method of hiring senior leaders/managers based on an assessment of their behavior after participating in multiple evaluations including: job-related simulations, interviews, technical tests, and presentations. For instance, fire chief candidates might be asked to review the town and department budget and then prepare/present a budget proposal to the interview committee, then give a presentation to firefighters about implementing a new policy or procedure, then participate in a fire ground simulation where they have to command the incident, and other similar exercises.

It is very difficult and maybe even impossible to determine leadership skills with the traditional resume review and interview process. It is so important that Ashfield get a chief with excellent leadership skills that they must invest in the best process to find the best person.

Another critical factor is that the new chief must be accepted by the firefighters as someone who was chosen well and has proven they have the skills to lead. An assessment center model helps to ensure a fair process and assessment for all of the applicants, and creates credibility for the hiring process, and credibility for the new chief.

Maintaining the Call/Volunteer System

I've already mentioned it a few times, but I think it is important to discuss directly the critical element of maintaining the Ashfield Fire Department as a call/volunteer or mostly call/volunteer fire department. Every decision made about the future of the fire department will have an impact on recruitment and retention of the town's volunteer firefighters and EMS responders. It is important to consider the impact of each decision on the volunteers. The cumulative effect of failing to consider the volunteers will be a steady loss of their service and greater expense to the taxpayer.

The call/volunteer force currently saves the town more than $1 million in firefighter salaries. This is about $1261 per household per year. Each volunteer is responsible for saving the town budget about $67,000 per year. (See **Appendix B.)** These calculations are based upon the National Volunteer Fire Council (NVFC) Volunteer Firefighter Savings Calculator. A modest annual salary of $60,000 per firefighter --- less than Northampton Firefighters are paid – was used as the labor cost basis.

While nobody joins a call/volunteer fire department to help the town save money, from the town's perspective this is a critical reason to maintain an effective call/volunteer firefighting force.

Yes, you can say that Ashfield is too small to ever hire career firefighters. I would agree that it should not have to. But, if the call/volunteer system fails, what's the alternative? Many other communities have found themselves in this dilemma – a failed call/volunteer system verses the high cost of a minimal career fire department. The decisions that the Town of Ashfield make now, and over the next few years, with regard to its fire chief, its fire department capital needs, and the structure of its fire department, will seal the fate of what the department is to become. All too often, these decisions are made without understanding or trying to understand their long-term impact.

From the firefighter's perspective, they are joining the fire department to help people. They are joining to contribute to their community and its quality of life. They are joining because they enjoy being emergency responders, fighting fires, solving problems, and saving lives.

It is important that the town understands the difference in perspective between the town and the firefighters. The town must avoid monetizing every single aspect of the fire department as if money – saving it or spending it – was the motivation of its volunteers.

Volunteer firefighters don't advocate purchasing a fire truck because they want to spend money; they do it in order to do their job better and safer. How the town responds to the needs of the department must demonstrate appreciation and understanding that their request isn't about spending money, even if the town can't buy the truck. If you monetize actions and behaviors that people will provide freely, the unintended consequence is that the people who have been giving freely will adopt the town's perspective and start putting everything in terms of money. At that point everything becomes about money and everyone loses.

For instance, volunteer firefighters are motivated by recognition from public officials and the community. They need appreciation. I experienced a community where town officials were puzzled by their rapidly shrinking volunteer force. They couldn't see that the chief's budget policy that required them to buy their own T-shirts and wear outdated gear was the problem. It's a variation on the old "pennywise and pound foolish" approach. Save $100 a year not buying your volunteers new logo shirts because the old ones aren't worn out yet or by trying to put off purchasing a new pair of $200 fire boots, and the next thing you know you're hiring full time firefighters at $60,000 each. The cumulative effect of telling volunteers they aren't worth a couple hundred dollars a year or even a few thousand dollars a year in gear will drive them off.

The next consideration when thinking about the importance of maintaining the call/volunteer nature of the AFD, is a discussion of how many call/volunteer firefighters is appropriate. Unfortunately, there is no easy formula for determining this.

The AFD has sixteen call/volunteer firefighters. This is too few. In 1990, the department had 20 volunteers and handled half as many emergencies. You are now asking fewer volunteers to handle more emergency calls. The AFD will benefit greatly from increasing its call/volunteer force no matter what else it does.

For additional information regarding how many call/volunteer firefighters the AFD should have please see **Appendix F**.

EMS First Response & the Ashfield Fire Department

As is common in the American Fire Service, the Ashield FD provides EMS first response to medical emergencies and traumatic injuries. EMS first response is the most common type of emergency call the Ashfield Fire Department (AFD) handles. In 2020, the AFD had 141 EMS calls verses 85 fire calls.

About 62% of all fire departments in the United States provide EMS[4]. Of those departments that provide EMS, medical calls typically represent 50% to 75% of their total emergency call volume[5]. EMS represents 62% of the calls that the AFD responds to.

In fire departments that do not operate an ambulance, the most common EMS service level is EMS first response at the "first responder level" or basic life support (BLS) level. This is what the AFD provides. Of fire departments providing EMS, about 89% are the BLS level[6].

Highland EMS, the ambulance provider for Ashfield, considers the EMS first response role as an important element of a tiered EMS response system. While Highland EMS provides the ambulance and the required paramedic and EMT, additional responders from local fire departments are needed for the majority of EMS incidents.

When the ambulance arrives at an Ashfield EMS incident it is staffed with two EMS providers (typically an EMT and a Paramedic). While this is common and appropriate (and meets the minimum legal staffing level to transport a patient to the hospital), it does not address the entire need. Having additional EMS providers from the AFD on location will result in a higher standard of care for Ashfield residents. For instance, when the ambulance is traveling to the hospital, serious ill or injured patients get better care if there is a second EMS provider in the patient compartment (instead of the typical one provider). The second provider results in better efficiency and reduces medical errors.

The extra AFD personal on location at an EMS call also reduce injuries to the EMS providers and firefighters because three or four people can more safely lift the typical patient. Many patients weight 250 to 300 pounds. Two EMS providers cannot safely or quickly get these patients from the second floor to the ambulance without help.

When AFD firefighters arrive at an EMS incident they perform the following tasks:

1. **Scene Safety & Size-Up:** Before the ambulance even arrives, they can scout the incident scene for hazards. They can determine where the patient actually is. Many times when an ambulance arrives, critical time is lost locating the patient – they might way out back in the yard, or in a basement, attic or barn. Having firefighters locate the patient ahead of the ambulance gets care to the patient faster.

2. **Patient Assessment:** An important role for AFD firefighters is to assess the patient (both medical and trauma) and relay that information to the ambulance crew by radio and on arrival. This is key action because the first responders can determine if more resources are needed – maybe multiple ambulances, extra

[4] United States Fire Department Profile 2018, National Fire Protection Association (NFPA), February 2020.
[5] United States Fire Department Profile 2018, National Fire Protection Association (NFPA), February 2020
[6] United States Fire Department Profile 2018, National Fire Protection Association (NFPA), February 2020

firefighters for lifting, or the air-ambulance helicopter will be needed. Firefighters gather important patient information (medical history, prescriptions, symptoms, etc.).

3. **First Aid/BLS**: While waiting for the ambulance, firefighters can provide basic life support and first aid. They can do CPR and apply the AED. If a cardiac arrest patient doesn't get shocked from the AED in 6-8 minutes, the chances of survival are poor. Firefighters can stop bleeding before the ambulance arrives. AFD EMS responders don't have to be EMTs. Well trained first responders can provide excellent patient care in this scenario.

4. **Supplement the Ambulance Crew**: Firefighters can ride in the ambulance to assist the ambulance crew. The higher the patient priority, the more important this is to the patient's care and outcome. Or, the firefighter can drive the ambulance to hospital and free up the second EMT to help treat the patient. This is a common action throughout the country.

5. **Clearing Snow & Securing Animals**: While this seems a bit specific, I include it because it was specifically noted by Highland EMS as something that firefighters do that results in reaching the patient faster and getting the patient loaded in the ambulance faster. In many cases, firefighters arrive in advance of the ambulance and can clear a path to and from the house for the stretcher. If firefighters don't do this, one ambulance crewmember must do this while the other crewmember treats and stabilizes the patient. This results in long delays treating and transporting the patient. Securing animals is a similar issue. Ambulance crews routinely encounter a variety of animals that need to be secured before they can access and treat the patient. Having firefighters arrive before hand to do this improves EMS. (I once had to keep a pit bull at bay with CO2 fire extinguisher so the EMS crew could get to the patient.)

6. **Local Knowledge**: There are two elements to this, geographic and personalities. Highland EMS crews may not live in or around Ashfield, having volunteer firefighters who are residents can help locate patients faster. The firefighters know about driveways, detours, paths, and such so they can help direct the ambulance to the correct location. Additionally, local firefighters are more likely to know the patient or patient's family, and their situation. This helps build a rapport with patient and means the ambulance crew gets importance patient information faster.

Providing EMS and supporting Highland Ambulance is an important way that the AFD improves the quality of life in Ashfield.

Another important reason for the AFD to have a strong EMS first response is that the Highland EMS ambulance response comes from Goshen. The ambulance travel time to most homes in

Ashfield is 7 to 15 minutes. When you take into account that handling the 911 call and dispatching the Highland EMS ambulance takes about 1 minute, and it takes the ambulance crew about 1 minute to get their gear on and leave the station, that means most people in Ashfield are waiting 9 to 17 minutes for an ambulance to arrive in front of their house. Additional delays due to weather, road condition, and locating some properties are common.

The longer people wait for emergency medical care, the less desirable the outcome. The faster EMS (with or without the ambulance) arrives at the patient the better the medical outcome.[7] Ashfield needs a fire department that can get EMS responders to a patient before the ambulance arrives. When this happens, outcomes are better and the quality of life improves. And, in fact, this routinely occurs in Ashfield. According to Highland EMS, Chief Del Haskins, routinely arrives about five minutes ahead of the ambulance.

There are occasions when Highland EMS cannot immediately send an ambulance to Ashfield when requested. This occurs when their ambulance is tied up at another EMS call. When this happens, Highland EMS calls for ("tones out for") an off-duty/volunteer staff to come and get their second ambulance. This results in a significant delay reaching the patient. In some cases, Highland will have to call for a mutual aid ambulance from another ambulance service (for example, Shelburne Falls and Conway). This also results in a delayed response for the ambulance. The AFD EMS response in these situations takes on an even greater importance.

Other times, the Highland Ambulance is delayed because of weather, such as snowstorms. Under these conditions, a reliable AFD EMS response is important for patient care.

It should also be noted that the firefighters of the AFD are the primary providers of rescue and EMS at motor vehicle accidents. The AFD has the primary role of extricating patients, managing the incident scene, providing medical care, and providing for Triage. In this area, the department gets high marks from everyone I spoke to.

Highland EMS has reported that the number of AFD firefighters responding to EMS incidents in Ashfield has dropped in recent years and that the community is highly reliant upon Chief Haskins to single-handily fill this role. There are numerous reasons for this. First, there are fewer volunteer firefighters available to respond to EMS calls. The number of AFD volunteers has dropped from 20 to 16 since 1990, while the number of emergency calls has jumped from 65 to 226.

Second, there may be hesitancy by some AFD members to respond to EMS calls. This is a result of not enough EMS training and a resulting lack of confidence in their EMS skills. Additional EMS training and support for members who respond to EMS calls is needed. And, the department should be looking to recruit people whose primary interest is EMS, and are

[7] Shortening Ambulance Response Time Increases Survival in Out of Hospital Cardiac Arrest, Journal of the American Heart Association, October 27, 2020.

secondarily firefighters. (Also see the discussion of Duty Squads under the heading "Deployment Models".)

Another factor is that Chief Haskins may have picked up the slack too much. Some people commented that they felt others didn't respond to EMS calls because "The chiefs got it, I'm not needed." This attitude is a common issue in small volunteer fire departments. The new chief needs to develop a deployment model that spreads the workload and doesn't require the chief to go to every call. This means developing EMS oriented volunteers, frequent and quality EMS training, and building the confidence of all the volunteer responders. This should be an important goal of the new fire chief.

Training Improvement

The typical AFD firefighter trains about 30 to 40 hours per year. The department holds about 40 training sessions per year, usually on a Wednesday night starting at 6:30pm. The firefighters have had basic firefighter training that meets national standards (NFPA 1001, Firefighter 1 & 2 level). The average Wednesday evening training session is about 2 ½ hours long and the average attendance is about 6 firefighters.

Compared to similar Massachusetts departments, AFD training is above average. Access to training facilities, instructors and props is weak in Massachusetts[8], especially for Western Massachusetts departments. Given its resources, Ashfield does well.

There are significant areas for improvement of training at the AFD. Looking at the training/drill topics and their arrangement over the past few years indicate that the training program isn't programmatic or as comprehensive as it should be. There is an over-reliance on "truck training". There isn't an annual training cycle to ensure key topics are repeated. EMS and HAZMAT training needs to be incorporated into the program more frequently and in a cyclical manner.

Training also seems to lack a lot of hands-on field exercises where firefighters practice their skills as a whole package, not individually. For instance, at a traditional ladder drill, firefighters simply practice raising and lowering ladders. At SCBA drills, firefighters just practice using their air packs. There is an important place for these single-skill drills, but equally or more important, are multi-discipline drills where firefighters practice arriving on the truck, putting on their SCBA and then raising a ladder are practiced all together. These drills are typically calls "Engine Company Evolutions" and "Multi-Engine Company Evolutions".

[8] For instance, every county in Connecticut has a training academy to support their volunteer departments. Most NY Counties have volunteer academies. Many states have fire training facilities co-located with Community Colleges.

I also recommend that trucks checks be separated from Wednesday night training sessions. Fire trucks and the equipment on them needs to be checked and tested every week (more often if you can do it). Traditionally, some of this has been done as part of weekly or monthly drills in small fire departments. Doing this can result in not having sufficient time for other important training topics, and it can contribute to low turnout for drills because truck checks aren't particularly interesting (except maybe to a handful of members).

All department members should participate in truck and equipment checks (even if they don't find them interesting). And, truck checks do have a training value because it is essential that everyone on the department knows where everything is located on the trucks. There are a number of ways to set up a system of truck checks. The department should look at some type of system that assigns two or three person teams to check each truck on a regular schedule.

For instance, many departments assign teams every Saturday morning or Monday night. A team of three could do the Engine and brush truck together in about an hour or so. Another team could check the tanker and the squad at the same time. The teams don't have to do their checks at the same time. There should be a written check sheet filled out for each truck check, and the truck checks can still be logged as training. In the ideal situation, everyone participates in one truck check session a month.

Another weakness is the low participation in training. The AFD is averaging about 6 firefighters per training session. This represents about 1/3 attendance. The department should be experiencing about 55% to 60% attendance at any particular training session in order to ensure the knowledge and procedures are sinking into the department as a whole.

I recommend that the department immediately start increasing its training and develop a more comprehensive training program.

Starting with hours of training, **I recommend that the goal of the department is to increase the amount of training from about 40 hours per year per firefighter to about 80 hours per year per firefighter over the next three years, and then try to increase to at least 100 hours per year within five years.**

The most direct method of doing this would be increase the training sessions to weekly. If each session should last 2 to 2 1/2 hours, and you take off 4 weeks for some of the major holidays (Independence Day, Thanksgiving, Christmas, New Year's) and a week or two for town events, the department will hold about 46 training sessions per year. At 2 or 2 ½ hours each (they will vary) this will get the offered training to about 100 hours per year. If 60%[9] of firefighters attend the training, the department will average about 60 hours of training.

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[9] Weekly drill/training attendance will never consistently be 100%. It will more likely be 55% to 70%. Getting attendance to at least 55% each week is an important goal for the new chief.

To get additional training (beyond what you can accomplish on Wednesday nights) traditional in-person training should be supplemented by self-study training for about 10 hours per year.

Each year add a few hours of individualized/self-study online training to the training/drill schedule. For instance, firefighters could annually do one of National Grid's online HAZMAT classes for first responders. These run 2 to 4 hours each. Underwriters Laboratory (UL) has a half dozen excellent 1 ½ to 2 hour online fire training classes that firefighters could rotate through – one each year for five years. The Massachusetts Firefighting Academy and the National Volunteer Fire Council also offer online training that could be incorporated in the AFD's training cycle.

As the department increases its volunteer staff, it will find many new members will need more flexible training schedules than the traditional Wednesday night drills. Online options can help fill in the gaps and make it possible for these people to volunteer.

Ideally, the department should settle into a programmatic and somewhat predicable schedule that looks something like this:

First Wednesday	Department Meeting & Administrative Training
Second Wednesday	Engine Company Training Evolutions
Third Wednesday	EMS/Rescue Training
Fourth Wednesday	General Fire Training
Fifth Wednesday	Hazmat Training (not all months)

A written quarterly or semi-annual training schedule should be created and issued to everyone.

This type of schedule means that the department is planning and implementing training for all of its core missions. Fire training is twice a month because it is a high-risk operation and requires extra training. Regular EMS/rescue training for all of the department members is going to be critical as the number of EMS calls grows and it becomes the core department activity.

Currently, the AFD provides a triennial 18-hour EMS class called "First Responder" to its firefighters. This is a basic first aid program that is required by Massachusetts law for all police and firefighters. The curriculum has been around for decades. This approach was designed for a different time period when EMS responses by fire departments were secondary or even occasional to their mission. Monthly EMS training is far superior. Monthly EMS training can eliminate the need for the triennial class, as AFD members will accumulate much more than the legal minimum amount of training. (AFD members also do CPR training every two years as required by state law.)

The Department Meeting and Administrative Training sessions will cover a variety of all-hazards topics, as well as cover the legally mandated OSHA type trainings and human resources topics.

The hazmat training should be focused on the types of HAZMAT incidents most common or likely to occur in Ashfield, including Carbon Monoxide incidents, fuel spills, propane leaks, UPS truck crashes (lots of small hazardous packages), and how to decontaminate an individual or a crowd. The AFD should add a series of small field exercises to its annual training where the department practices damming a fuel spill to keep the fuel out of the groundwater or a stream, or practicing to decontaminate a dozen people exposed to a pesticide. These are all HAZMAT topics that can be done without special equipment or special instructors. A sample annual schedule of HAZMAT Training is shown in **Appendix G.**

Engine Company Training Evolutions means individual companies (small groups of firefighters who staff one truck together) practicing fire attack skills. Each truck would go out with a crew and practice for the first 5 to 10 minutes of fire attack based upon that trucks crew, equipment and mission. The engine would practice setting up for pumping, stretching a hose line, putting water on a simulated fire, raising a rescue ladder and such. The brush truck could practice how to stretch and position hose lines to protect a house. These are short, quick drills that can be repeated two or three times in an hour, so firefighters get to rotate jobs and to become consistent.

Engine Company Training Evolutions are multi-discipline sessions that bring all of the necessary skills and tasks together to be practiced together as they are needed in the field. Engine Company Training Evolutions don't need any special training facilities or instructors, so these are a great tool for small departments such as the AFD.

Recent science has shown that the faster an engine company can get water on the fire the better the situation gets. Water applied rapidly, even from the exterior of the building, results in a significant decrease in the heat release rate from the fire, lowers the temperatures inside the building and increases the available oxygen inside the building. This in turn results in better chances for survival by any occupants, and it makes it easier to firefighters to enter the building to rescue occupants and extinguish the fire. Repetitive engine company evolution drills will greatly improve the speed and effectiveness that an AFD engine company puts water on the fire.

The National Fire Protection Association (NFPA), Massachusetts Call/Volunteer Firefighters Association (MCVFA) and National Volunteer Fire Council (NVFC) all have engine company training guides with standard drills that are quick, easy and effective. No special equipment or instructors are needed. The department should settle on three or four standard drills and practice them over and over again. A sample of these drills is attached as **Appendix H.**

The twelve EMS/rescue drills would be primarily focused on the department's EMS role. Each session would be a mix of classroom and hands-on training. Each month would be a different topic. For a sample schedule see **Appendix I**.

In addition to increasing the amount of training, I suggest two additions to the weekly drill that is focused on quality. First, each session should start with a 2-5 minute safety message from

the department's safety officer (or his/her assignee). These are a short, simple reminder or heads-up message. They can range from a heads-up about expected bad weather or road issues. They can be a review of a safety policy or procedure. They can be a training tip related to safety or a review of some personal protective equipment. And, after drill (the next morning) the safety officer should email this safety message to all department members. This way it makes it to anyone who missed the drill and it reinforces the safety message to those who already heard it.

The second addition is to add a 10-minute (more or less) mini-topic to most drills. (It can be skipped when there are guest instructors, complex hands-on drills or other time sensitive issues.) The 10-minute drill should be taught by a host of different firefighters. These are review topics or short new topics. For instance, one could be review of how to recharge the pressurized water extinguisher, the pre-plan for any number of businesses or public buildings, how to make-up a hydrant, how to connect to the sprinkler connection on building, or a review on how to start or use a tool that isn't used frequently. For a list of possible topics see **Appendix J**.

These 10-minute drills help build individual firefighter confidence in whatever topic they have been assigned to present. They refresh firefighter knowledge on items or topics that don't happen often or are not used often. They help all firefighters learn to be good instructors and coaches.

Adding the safety message and 10-minute mini-topic means increasing most training sessions by 15 minutes.

In my observation, volunteer fire departments that provide the best training programs tend to have better recruitment and retention of volunteers. People want to join and be part of departments with excellent reputations for training. It shows a concern for the firefighters, as well as a concern for the quality of the service provided to the citizens.

Increasing the quantity and quality of training at the AFD should be a critical part of the new fire chief's job.

New & Different Deployment Models

The new AFD fire chief should investigate and implement new deployment models for the department.

Currently, the AFD follows a traditional deployment model. When someone calls 911, the firefighter's pagers are activated, the siren blows, and text message is sent to cell phones. Any volunteer who is available rushes to the fire station, gets his/her PPE, staffs an appropriate truck and responds to the emergency. This has been the model for decades.

While this model still has a place in the AFD's approach to emergency responses, it must be recognized that it was developed in and for a different era when the number of emergency calls was less than today, when the number of volunteers on the department was greater and the volunteers worked in town, and the scope or nature of the calls were strictly (or almost strictly) for fires.

Today, there are fewer volunteers and most work outside of Ashfield. This means Ashfield, as with many other small towns in New England and across the country, has developed a chronic volunteer firefighter shortage during the daytime, particularly during the workday. Also, there are more emergency calls today, so volunteers are being asked to drop what they are doing and respond more often than those who served before them.

Call/volunteer departments need to look at different approaches to deploying their firefighters. Here are some suggestions based upon what has been successful for other departments:

Duty Squads:

One common approach is to spread out the workload by breaking the department into squads (companies, groups, shifts, etc.) and having the duty of responding to routine emergency calls assigned to the groups on a rotating basis. This approach is designed to get at problems that arise from a handful of volunteers having to carry an unequal burden of the calls. It helps avoid issues of volunteers picking and choosing what types of calls they go to. It ensures that there is a specific fire officer and specific firefighters responsible for handling any emergency during their duty schedule. It creates accountability. It insures a minimum response to the more common emergency calls.

Duty squads tend to work best for nighttime coverage, and weekends when volunteers are generally more available.

With eighteen members, the AFD could be divided into three groups of six. Each group would be on-call to respond to any emergency on a rotating basis, eleven nights per month, from about 6PM to 8AM the next morning. Each group would be led by a company officer (captain or lieutenant) and have a similar profile of skill sets (EMTs, driver/operators, etc.) and maybe a similar geographic distribution among its members.

An eight day or longer rotation would mean that groups don't keep getting the same holidays and weekends.

In a three squad system, each squad might be on-call one night, then off the next night, then on the third night, and then off for the next three nights, and then restart the sequence.

For a visual look at how different squad rotations would work, see **Appendix K.**

Six members are about the smallest squad size that works well. It coincides with the minimum number of firefighters who can safely attack a building fire. It can easily handle an EMS call, a typical motor vehicle crash, or any service call that might come in during their duty period.

More complex or high-risk calls would be dispatched as "all-calls" or "full-department calls" and switch to the more traditional deployment model of everyone available responds. For instance, if there is a call for beeping fire alarm in house, but no fire, only the duty squad would be expected to respond. This gives the rest of the department members a break from responding multiple nights and it allows them to plan for nights out or simply nights off. But, if there is a building fire (low frequency – high risk), everyone would be expected to respond.

One issue that arises with duty squads are those who want to respond to more than just their duty squad calls. This can cause some social difficulties in the department. Sometimes these people are seen as "poaching" other people's calls. It is important to deal with this upfront. I recommend that there be no rule that prevents anyone from responding to extra calls, because ultimately the mission is to help the citizens and get them an appropriate crew as quick as possible. Leaving an available firefighter behind or waiting for the correct responder is contrary to a successful mission outcome.

A more difficult issue with duty squads is resistance to being told you must respond on your assigned squad nights. The system of coming when you are available – at your discretion – has been around a long time and deeply ingrained into the culture of small town fire departments. Overcoming this is where the fire chief's leadership skills are critical. It is only through leadership (not rules and punishment) that this issue will resolve for the benefit of the department and town.

A variation on this is four duty squads. Going to four squads reduces the number of nights that each squad is on duty to eight per month. The rotation pattern would be one night on, one night off, one night on, and then five nights off. If the department increased its volunteers to twenty-four members, it could have four groups of six.

And yet another variation is to have duty squads that work a week on and two or three weeks off, depending on if you have three or four squads. Duty coverage would start every Monday night and run each night through Sunday night. The next squad would take over on Monday.

Some departments also use duty squads for Saturday and Sunday daytime coverage, where everyone is assigned to one Saturday/Sunday a month.

There are dozens of variations on the duty squad model. Whichever version the AFD chooses, it should be customized by the new chief and the members of the department to best suit the resources and needs of the AFD.

I recommend that the AFD adopt a duty squad system.

Direct EMS Responders:

Similar to duty squads (and it could be part of broader duty squad system), the AFD could designate members to respond directly to the location of any emergency medical service (EMS) call to provide scene size-up, patient assessment, and emergency first aid until the ambulance arrives. This person would be equipped with a radio, a BLS kit and AED, and EMS PPE.

Given the potential for long response times for an ambulance in many parts of Ashfield, a direct EMS responder would arrive quickly enough to substantially improve the quality of EMS provided to each patient.

The direct EMS responders would be first responders or EMTs. If they are first responders their training should be above and beyond the minimum requirement for first responders. The extra training accomplishes a few goals. First, the responders will be more confident and more capable. Many firefighters who have only had the minimum of first responder training lack confidence in their skills and are uncomfortable in many EMS situations. This is sometimes a reason that volunteer firefighters don't respond to EMS calls.

The fire department responders also improve the efficiency and effectiveness of the ambulance crew. Having a third or fourth responder on scene makes extrication of the patient from the house safer and faster. And, with high priority patients, they can either drive the ambulance or ride with the patient. This improves patient care and reduces medical errors by the crew.

Some departments provide a shared response vehicle (SUV, pickup truck, etc.) that the direct EMS responders share. They pick it up at the start of their coverage period and have it with them at all times, and then they swap it to the next responder. Other departments equip each responder with a radio and set of equipment for his/her private car.

Direct responders can be assigned day or night. Since only one person is assigned, there is a better chance of recruiting enough volunteers for this duty, so that you have one person assigned each workday.

Part-Time Fire Station Staffing:

If the AFD is unable to provide for an appropriate minimum response during the daytime using only call/volunteer firefighters, the new chief should consider hiring part-time firefighters to work at the fire station during the daytime.

The AFD could hiring five part-time firefighters and assign each one a weekday to work at the fire station. This would give the department a basic daytime staffing of one part-time firefighter plus the fire chief (generally), along with available volunteers.

Hiring people to sit at the Ashfield fire station and wait for emergency calls is not a particularly efficient or a good use of money. This means that each part-time firefighter must add value to the department and community in other ways. Each part-time firefighter must have one or more specialized duties. These duties could be training officer, compliance officer, portable equipment maintenance coordinator, pre-plan manager, administrative aide to the chief, PPE manager and apparatus preventive maintenance.

A possible model might look like this:

Monday	Firefighter A	Administration & Compliance
Tuesday	Firefighter B	Portable Equipment Maintenance
Wednesday	Firefighter C	Training Coordinator
Thursday	Firefighter D	Pre-Plan Manager & Inspector
Friday	Firefighter E	PPE Manager

Additionally, each firefighter would share responsibilities for daily truck checks, building maintenance, and conducting at least one hour of training each day (individually or with others).

Each firefighter would work a shift that starts are either 7AM or 8AM and runs to either 5PM or 6PM, depending on the work pattern of the volunteers and when they are generally available. This would typically be a 10 or 11 hour work day (the Fair Labor Standards Act (FLSA) would not require overtime for these hours). In addition, they would be paid for attending Wednesday Night Drills and coming back to emergency calls. They will typically work about 15 to 18 hours per week.

State law limits municipal part-time scheduled work to less than 20 hours per week, or they become entitled to full time employee benefits. The hours they log responding to off-duty emergencies (in the same way that call firefighters do) does not count towards the 20 hour per week limitation. (For a detailed explanation of these work rules for part-time firefighters please see the publication "Part-Time Firefighter or Per-Diem Firefighter Guidance and Best Practices" dated October 15, 2018 and published by the Fire Chief Association of Massachusetts (FCAM).

These part-time firefighters do not have to live in Ashfield. They can be call/volunteer members of the AFD who are available for a permanent part-time job. But, these can be firefighters from any other community who commute to Ashfield for their shift. The AFD could tap into the student population in the greater Amherst area to hire students who are also

firefighters. The AFD could hire firefighters from other Hill Towns. This flexibility is what makes this system work.

A system like this would cost about $54,600 per year. The annualized cost for each part-time firefighter might look like this:

Ten-Hour Shift(10 hours x $15/hour)$150 per week or $7800 per year

Two-Hours Drill (2 hours x $15/hour)$30 per week or $1560 per year (Wednesday Night Drill)

Two-Hours Call-Back (2 hours x $15/hour) $30 per week or $1560 year (one callback per week)

Total Cost $10,920 per year per firefighter

The total cost of this staff, $54,600 per year, is about half of what the City of Northampton pays for in salary and overtime for one career firefighter. It would be a good value for Ashfield.

These positions would not have any retirement or health insurance costs affiliated with them.

The big benefit to the people of Ashfield would be a faster and well-trained response to emergency calls, particularly EMS calls during the daytime. These part-time firefighters would act as a force multiplier for the volunteer members of the department. They would allow the department to use a different and potentially faster deployment model during the daytime.

Paid Drivers/Volunteers Direct to Scene

If the AFD had a part-time firefighter to drive the first fire engine to the scene, the small group of available volunteer firefighters, in the daytime, could respond directly to the incident scene in their own car and staff the engine.

This is a more complex deployment model. You need good leadership and strict safety rules to make it work, but it can result in getting the engine and firefighters to an emergency scene faster than the traditional model of everyone going to the station first. (There is some mythology that says this approach does not meet national firefighting response standards, but it does. See NFPA 1720 for the relevant national deployment standards for volunteer fire departments such as the AFD.)

Career Firefighter – Daytime

In the extreme, it might be necessary for the AFD to have one or two career firefighters who work daytimes to supplement the volunteer force. This is an expensive option and the department should try other staffing/response models before considering this.

One approach would be to add a career firefighter (maybe an Assistant Chief) to staff the station alongside the daily part-time firefighters, so that there are always two people available to immediately respond with an engine until additional volunteer staff can be assembled. (Note, I don't recommend counting the fire chief as station staffing or expecting him/her to be station staffing. The chief needs to be able to move about in order to fulfill the most strategic aspects of his/her job. Being tied to the fire station and waiting for emergency calls is a poor use of his/her time and abilities. The chief needs to be attending regional and state meetings, going to professional development programs and training, meeting with people in surrounding communities, and moving about the town.)

Or, a career firefighter could substitute for the recommended part-time positions.

Or, two career firefighters could work together, maybe on some kind of overlapping schedule that spreads their coverage over 10 hours a day, five days a week. For instance one works from 7AM to 2PM and the other works from 10AM to 6PM.

The cost of one career firefighter, based upon a base pay of $45,000 per year, would be between $85,000 and $105,000 per year in pay and benefits. A career firefighter costs as much as a full-time fire chief primarily because the chief is exempt from overtime and the career firefighter is entitled to overtime. In this cost estimate, $45,000 is about the base salary of career firefighter in Easthampton. Its assumes about seven hours of overtime each week for training, being held over at the end of a shift because of an incident, attending a staffing meeting and such. (It is common for a career firefighter to be paid more than a fire chief.)

Given this cost, it should be apparent how important it is for Ashfield to retain and grow its volunteer force.

In the event that Ashfield ever decided to hire full-time firefighters, it should file an application to the SAFER Grant Program (FEMA) that will pay the cost of hiring career firefighters for their first three years of employment. Many departments use this source to hire their first daytime firefighters. These are highly competitive grants and you shouldn't assume you'll get one. ($355 million available for FY 2020.) SAFER funding may also be available for the first three years of salaries for part-time firefighters.

Whatever deployment model or models the AFD settles on, they need to be designed to fit the needs and resources of Ashfield, not some other community. While you can look to other places for ideas, be careful adopting them in whole without making sure they fit your needs. Make sure you modify them to fit your needs.

Improved Communications

Better communications between department members can result in better-coordinated and faster responses to emergency calls. The new chief and the department members should explore improving the information set to all members when the emergency call is dispatched. Currently (I believe) that only the officers get a text message from dispatch with all of the call details. The best practice would be for all members to get this text message on their cell phones. (I understand there is in expensive app that members can purchase on their own that provides additional information. It's not one I've used or know about. The department should provide it to everyone.)

Once the response starts, it would be good if officers knew who else was responding, so they could judge the need for additional resources without waiting too long.

Even better, members should be able to communicate with each other when responding. Imagine a system where a firefighter who is close to an EMS call, could indicate that by radio or text to the rest of the department, and the officer in charge of the response could direct them to the scene. This would get help to people faster.

Some of the systems that the department could consider are iamresponding.com and edispatches. Iamresponding.com is an online service where firefighters can push one button on their phone to indicate they are responding to the emergency call. Everyone can see who is coming to the call. edispatches is a cloud system where everyone can hear all of the department's live radio traffic on their cell phones. Another system is called Bryx 911 and it includes emergency call mapping. These services are all inexpensive.

Additionally, some departments provide portable radios to all of their officers and key EMS responders, and others even issue radios to all members of the department. Goshen FD provides radios to its members. In these systems, the officer in charge of a response is able to direct nearby responders to patients, or give assignments to people while they are still en route to the fire station. It allows for more efficient use of time and resources.

Regionalization – Generally

Regionalization means a lot of different things to different people, and I see these differences throughout my conversations and the SWOT data. There are number of regional initiatives that the AFD can and should champion going forward.

Automatic aid agreements are an easy first step. Automatic aid is when neighboring resources are automatically and simultaneously dispatched to your community on the report of certain

serious or complex incidents. For instance, if a building fire is reported in my community we have a ladder truck automatically responding from a neighboring town and a tanker automatically responding from another town. This ensures that our first responding engine is going to be backed up by two additional companies and it ensures that we have an aerial ladder and we have extra water if we need it. Most times, we end up returning these companies without using them.

Ashfield should analyze its needs and consider using automatic aid agreements to fill gaps. You might have agreements for daytime verses nighttime. Maybe get more tankers on the road for building fires or focus on firefighters to increase staffing numbers.

Automatic aid should be reciprocal. If a department asks the AFD to respond automatically to their building fires, then the AFD should provide them the same opportunity.

Automatic aid differs from mutual aid in that automatic aid happens faster and is automatic. Traditional mutual aid happens when the local department gets to the location of an incident and determines they need help. Waiting to call for help until you reach the incident scene means a delay in getting help.

Automatic aid agreements should be in writing and spell out each department's expectations and responsibilities.

Automatic aid will result in a stronger working relationship between the departments involved (than does traditional mutual aid). This can lead to greater regionalization.

Joint training is another way departments can collaborate and share resources (instructors, materials, props). More importantly, department members learn to work better with each other and develop trust between the two organizations. This trust is critical to moving into more complex collaborations in the future.

As departments use more automatic aid and more mutual aid, joint training becomes even more important. With three departments responding to the same incident, it is critical that all three are trained to do things the same way. Otherwise you end up with uncoordinated and unsafe operations. This tends to run counter to tradition. Firefighters and their departments have traditionally done things their way, and looked at how they are done at neighboring departments with suspicion and even disdain. Everyone needs to start standardizing what we call things and how we perform tasks.

There are a host of administrative tasks that towns could provide for their fire departments and fire chiefs on a regional basis. I think most chiefs would look to get free of much of the administrative paperwork that clutters their desk and their mind.

Fire chiefs need to be chosen for their leadership and management skills, not their administrative skills. A person who worked in a law office, doctors office, insurance agency or similar setting where filing, scheduling, chasing people for pieces of paper, getting documents to the right person on time, and such would be a great administrator to support the chief. Two or three towns could get together and hire one person to do all this for their individual chiefs.

For instance, three similar sized and adjacent towns such as Ashfield, Conway, and Goshen could hire a fire administrator (not a fire chief) to handle all of the administrative work on behalf of the fire chief. One town could host the position (full or part-time) and the other two could pay a fee for the service. Essentially the host town would be a vendor or contractor to the other two towns. There is far less legal complexity to this verse a shared fire chief or some kind of merger.

Similarly, a larger group of towns could hire a regional fire inspector. This would relieve chiefs of having to conduct inspections. The fire chiefs would still be the ultimate legal authority, but they could rely upon a good inspector to handle most inspections for them[10]. Also consider, that maybe Ashfield's new career chief could act as inspector for a few smaller towns.

Regionalization sometimes comes up as the idea of sharing fire apparatus or equipment, in a more extreme way than automatic aid. Unfortunately, that sense of the term doesn't fit Ashfield and its needs. The current AFD's complement of trucks is well suited to the town and its needs, but it is the bare minimum of apparatus that the town should have. There isn't any truck the department could go without and simply rely upon a neighboring station for.

Sometimes those calling for regionalization are really hoping that a regional plan might result in someone else solving your problems for you. Or, maybe they think it's a way of gaining more resources without paying for them. This approach does not work out.

Listening to comments from other communities; there has been a thread within them that indicates they perceive Ashfield as looking to get another community to solve their fire department issues. When pursuing regional solutions, it is important to understand the perspective of your potential partners.

When you look at the number of emergency calls handled by all of the surrounding towns, and compare the resources they invest in far fewer emergencies than does Ashfield, a critical question needs to be answered. Why join with Ashfield, when Ashfield has twice as many emergencies and fewer resources than the other communities?

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[10] I often hear chiefs say that since they are legally responsible for inspections that they must do them and it is somehow improper to let someone else handle them. To this, please keep in mind that the Chief of the Boston Fire Department is also legally responsible for all inspections, but he doesn't actually conduct any of the 50,000 or more done by the department each year.

For instance, the Conway FD only responded to 85 emergencies in 2020 and the Ashfield FD responded to 226 emergencies in 2020. The Conway FD has 28 volunteers and Ashfield has 16 volunteers. The Conway FD has two engines and a tanker (all fairly new), and Ashfield has one engine and one tanker (both old). The question Ashfield needs to answer is, what does Conway gain by joining with Ashfield?

Below is chart showing the emergency call activity and resources of Ashfield compared to its surrounding departments.

Ashfield Area Fire Department Data – 2020

Department	Fire Calls	EMS Calls	Total Emergencies	# of Volunteers	Engines & Tankers	Ambulance
Ashfield FD	85	141	226	16	1 Engine 1 Tanker	Highland EMS
Cummington FD	54	41	95	14	2 Engines 1 Tanker	Highland EMS
Conway	58	NA	58	28	2 Engines 1 Tanker	Conway Ambulance
Buckland	66	26	92	8	1 Engine 1 Tanker	Shelburne Falls FD
Shelburne Falls (Fire & Ambulance Department)	111	314	425	24	2 Engines (1 Ladder)	Shelburne Falls FD
Goshen FD	41	76	117	24	2 Engines	Highland EMS
Hawley FD	33	27	60	11	2 Engines 1 Tanker	Charlemont Ambulance
Plainfield FD	48	57	105	20	2 Engines 1 Tanker	Highland EMS

When you look at the emergency call volume verses the resources that each town provides, if Ashfield pushed for regionalization now, it would be perceived as trying to lead regionalization from a position of weakness, rather than a position of strength. This is difficult to sell to your potential partners. Instead, Ashfield should be strengthen its position over the next 3-5 years so it is has as much to offer as it has to gain.

Regionalization also comes up when with regard to purchasing. There is sense that group purchasing of goods and services will result in cost savings for everyone. It is a good thought and one that does in fact work, except maybe with Massachusetts municipal purchasing. All fire and EMS departments can use the Massachusetts municipal collective purchasing program to get the best price. Ashfield can purchase fire helmets at the same price as Springfield would pay through this program.

The Fire Chiefs Association of Massachusetts (FCAM) even has a collective purchasing program for fire apparatus through the Metropolitan Area Planning Council (MAPC). The Franklin Regional Council of Governments (frcog) has a collective purchasing program for fuel, and it might available for other products. Plymouth County has a program for buy police cruisers and fire chiefs cars that anyone can join and use. Barnstable County does office supplies as a collective procurement. There is isn't much room in the Massachusetts market place for additional savings on goods and services by regionalizing fire departments.

There are geographic and response time issues that complicate regionalization of fire and EMS service, that don't typically complicate other types of regionalization. The location of fire stations and trucks needs to be close to the properties protected. This can be a barrier to multiple towns creating a single large staffed station to cover a wide area. For instance, the Insurance Services Office (ISO) won't credit your property with having fire protection is the nearest fire engine is more than 5 miles away. This determination is based upon the analysis of millions of responses across 30,000 fire departments each year. Similarly, if the fire hydrant is more than 1000 feet from the house, it doesn't count towards that homes fire protection. In this case, your homeowners' insurance rates or commercial fire insurance rates will skyrocket because you have no recognized fire protection. You'll pay the highest premiums allowed.

Currently Ashfield residents pay about average fire insurance premiums because the AFD is rated as a Class 5 department by the insurance industry. Removing apparatus or shifting the station, staffing and apparatus further away will result in a higher (worse) rating.

Think of it this way, if five towns combined their DPWs into a single location the response times and deployment of the snow plows is unlikely to be much different. Whether you have five towns each deploying two plows from five locations, or five towns deploying ten plows from one location, the streets will still get plowed in about the same time and to the same extent. This is isn't true with fire and EMS. The further out people are from the fire station, the less effective service they will receive. This is one reason why the AFD's EMS first response role is important to Highland EMS and to patients.

All too often regionalizing fire department services comes up as an idea when some major change (such as the retirement of the fire chief) is upon the community. Leaders gather with leaders of other towns and there is a lot of talk, a long list of barriers to regionalizing, and unclear or different visions for what everyone wants. Most of the time, the people you expect to carry out the regionalization, the volunteer firefighter and EMS responders, are left out of the discussions. Fear and distrust set in. Ultimately nothing happens or nothing good happens.

Instead, take regionalization in small steps. Understand that for any kind of merger of departments to ever work, the people in those departments must trust each other, be similarly

trained and be willing to try. Mergers that work come from two strong organizations coming to together to provide better service, not weak organizations thinking that getting bigger will eliminate those weaknesses. Trying to regionalize suddenly because you need a new fire chief on July 1st is too fast to accomplish something good and lasting.

Regionalization – Conway FD Specifically

There have been some discussions about sharing a fire chief with the Conway FD or regionalizing fire department services with Conway. These discussions appear to have sporadically occurred over the past year or two. They have not resulted in any plan or actions. However, there is some merit in reviving or continuing these conversations, even after Ashfield finds a new fire chief.

Conway is a similar town to Ashfield in population, demographics, housing/building mix, and finances. The types of fires and other emergency calls are similar to those experienced by Ashfield. As does Ashfield, Conway has a single fire station and volunteer fire department.

Conway is different in that the Conway FD does not generally respond to EMS calls because the town has a separate ambulance department that is staffed mostly by the same people who belong to the fire department. Conway has 28 volunteer firefighters and experiences a much higher turnout for each emergency call than Ashfield does. The Conway FD trains twice a month and holds an officer meeting once per month.

The Conway FD has new apparatus, especially when compared to Ashfield. Conway FD operates a 2017 Engine, a 2001 Engine, and 2010 Tanker. The Conway FD is about to renovate the town's former DPW garage into a fire station. Conway doesn't appear to have as acute a need to address fire department capital costs as does Ashfield.

The Conway fire chief is nearing retirement after having served 41 years. He indicated a personal willingness to serve as chief of both departments, but this would be short-term at best until he retired. Chief Baker thinks a single chief, but two separate department model might work in the future. And, it might.

There are three examples in Massachusetts of two towns sharing a fire chief and maintaining their separate fire departments. In one of those cases, the chief indicates that it works, but hasn't led to any greater regionalization. The visions of a greater impact or merger have never materialized, despite lots of talk. He reports that it is much more complex than people seem to think it is. In another situation, the smaller of the two departments is experiencing some morale issues based on their perception that the chief (formerly of the bigger department) favors the other department and treats them and their needs as less important.

The political, legal, technical issues of a shared fire chief between the two towns are complex. (Not to mention the potential cultural issues for both fire departments.) The two fire departments are established and legally formed differently – one is "strong chief" and the other is "weak chief". There are issues of employment involving the pension system, the different health insurance benefits, and who does the annual employment review. There are other insurance issues and liability issues that need to be addressed. The list goes on for two pages or more.

The point of acknowledging this list of issues to overcome is not to say it can't be done, but say it can't be done by July 1st. Figuring out these issues and negotiating them can take a year or two. This brings us back to the place of Ashfield will have to get a new chief place and then that chief (after addressing some of Ashfields needs and strengthening the AFD) should be responsible for pursuing a study or plan along these lines.

At the moment, Conway does not seem particularly interested in pursuing regionalization with Ashfield. There does not seem to be any issues driving Conway in this direction. It appears unrealistic to think that some kind of regionalization plan between the two towns can happen in the immediate future.

Additionally, as noted in the prior section above, there is general sense that Ashfield doesn't bring enough to the table to entice Conway into a greater partnership.

Capital Needs

The Ashfield Fire Department has significant capital needs. Its fire station is obsolete, and its apparatus is old. It also has some small and portable equipment that is beyond its life expectancy. The Select Board, Finance Committee and the new fire chief must create and implement a capital plan for the department.

The Trucks

Three of the department's four trucks are in need of replacement.

There is not currently an apparatus replacement plan. The Select Board and Finance Committee need to work with the fire chief to create an apparatus replacement plan and schedule. Generally, Ashfield's fire apparatus is in need of immediate replacement.

The Town has put $75,000 aside towards the replacement of Engine 2 and recognizes the need to replace it.

There is a sense within the community that "we are frugal" and that the town should wait for the apparatus to break before replacing it, and that these trucks still work. While the trucks are not "broken" in the literal sense, they are obsolete and worn out.

It's also been stated that Ashfield simply can't afford the cost of replacing its fire apparatus and its fire station. As things stand today, that is an accurate statement. However, all of the other similar towns (population, budget, tax base/valuation, etc.) in the region have found a way to fund the replacement of their fire trucks and to update their fire stations[11]. My sense is that the issues because Ashfield didn't plan to replace for the replacement of the trucks or a renovation/replacement of its fire station that it can't afford to do so today. Planning is the key.

Here is a truck-by-truck review of the department's needs for apparatus.

Engine 3 (2-E-3):

Engine 3 is a 1996. It is 25 years old. It's the town's primary firefighting truck. It needs to be replaced. Nationally, about 17% of fire engines are this old or older. When looking only at small towns (populations under 2500) about 25% of fire engines are this age or older, but most of them are in reserve or secondary status.

Engine 3 is one of the two oldest primary fire trucks in use among the Hill Towns, only Shelburne Falls operates an older primary engine (a 1992). Florida has a 1995, and Monroe and Charlemont each have a 1997 engine. Otherwise, the next oldest in the region is Hawley's 2002.

Apparatus of his age lack modern safety features such as anti-lock brakes, traction control, air bags, and stability control. This problem is intensified because most of the people driving these trucks at emergency speed, often under adverse road/weather conditions, are not professional truck drivers. In fact, many of the people operating these trucks have little experience driving a heavy truck, as the fire truck is the only one they operate. It is unrealistic to expect them to successfully handle a skid or a wheel off the pavement in a heavy truck requiring "old-school" driving skills when every other vehicle they drive has safety technology that eliminates the need for such techniques as pumping the brakes and steering into a skid. Fire trucks of this age are accidents waiting to happen.

One element of managing risk related to fire apparatus accidents is to use as new an engine, with up to date safety features, as possible.

Apparatus of this age is unreliable. Ashfield's Engine looks great and still runs. It is clean, well maintained, has low miles, and is kept in a garage. This care results in the untrained eye being

[11] For example, Hawley, with a population of 300 people, operates two fire engines and tanker truck that are all newer than Ashfield's one engine and one tanker. Hawley has more trucks and they are all newer than Ashfield's.

tricked into thinking it is newer than it really is, and that it will work great at 3 o'clock this morning when someone's house is one fire. As apparatus ages "surprise" failures increase. Tires blow out responding at emergency speed if they are more than 7 to 10 years old, no matter how good the tread looks. Pump seals fail from age, not use, and then water is pouring out the bottom of the truck and not out of the fire hoses. Trucks of this age fail to start without warning.

Additionally, as fire apparatus gets to be 30 or 35 years old, the manufacturers stop supporting the mechanical systems in them. This dramatically increases maintenance and repair costs. It makes is harder and more expensive to get parts. It the department's budget cannot keep pace with increasing maintenance and repair costs, maintenance suffers and problems increase. This results in departments taking inappropriate chances performing ad hoc repairs.

While not yet on borrowed time (because Ashfield's firefighters do a good job checking and maintaining it), Engine 3 is close to being on borrowed time.

Replacing Engine 3 should be a high priority for the Select Board, Finance Committee and new fire chief.

A similar engine, purchased new, will cost about $250,000 to $400,000. At least for planning purposes, plan on a 15 year life expectancy, but 20 is still possible and likely town such as Ashfield. (Modern fire trucks don't last as long as trucks from vintage years. They are dependent upon technology that changes rapidly, they seem to rust out faster, and they just don't seem to hold up as well. Think about how long iPhones last and how often they need updates and replacement.)

Additionally, a four or five firefighter cab engine should be strongly considered. The current engine typically carries two firefighters – a driver/operator and an officer/firefighter. (There is space for a third firefighter to ride in the middle of the front bench seat. It's tight and not the best practice. It is unlikely that modern trucks can be configured this way.) Arriving at a fire with two people on the truck is not the best plan, even if for most fire departments this is something that happens routinely. Short-staffing is a necessity and all fire departments like Ashfield's should be well-trained and practiced on how two people can safely attack a fire, but the department should not artificially limit its response to two people for the next twenty years by purchasing a engine with a 2-person cab.

Data and studies have indicated that four firefighters is the most efficient number of firefighters to arrive on the engine together (and that five firefighters is more effective, but not necessarily more efficient). A total of six firefighters are needed at building fire to safely initiate an entry into the building to extinguish the fire. It is increasing common for volunteer fire departments to purchase their primary fire attack engine with a cab that has seating for five or six firefighters.

In light of the data, purchasing a fire truck that you will own and operate for twenty or more years that limits its crew size to two firefighters is not a recommended choice. The truck should be designed to take advantage of those occasions (as a result of improved staffing or other factors that might occur in the decades ahead) to bring a full crew.

The cost of a new engine with a five-firefighter crew cab runs between $400,000 and $650,000.

On a procedural note, from the time the decision is made to purchase a new fire engine to the time it is delivered (and paid for) is running about 12 to 18 months.

I recommend that Replacing Engine 3 should be the number one capital priority of the Town of Ashfield and the Ashfield FD.

Engine 2 (2-E-2):

Engine 2 is more than engine, it is an engine-tanker and this report will refer to that way as an additional way to differentiate from Engine 3. Engine-Tanker 2 is a 1990. It is 31 years old. It is at the end of its life expectancy, and while some fire departments still operate 30-year-old tankers, most of these trucks are operating in a reserve role as the secondary tanker. Ashfield's is still operating as part of the front line (and only tanker) and it is used in a dual role as primary water tanker and as the secondary engine.

Most small towns (population under 2500) operate two fire engines – a primary and a secondary. (For some local examples, the Hawley FD, the Conway FD, the Buckland FD, and Whately FD operate two engines and tanker.) Ashfield's approach has been to use its tanker as the secondary engine. While there are pros and cons to this approach, it is an appropriate choice for Ashfield, especially with no space in the fire station for a second engine and given the department's limited funding.

Engine-Tanker 2 is well suited to the needs of Ashfield. Much of the town is without fire hydrants and the fire department must bring its own water to fires. Engine-Tanker 2 carries 2500 gallons of water. It would typically arrive after Engine 3 and support Engine 2 by pumping its water to the engine, and by providing additional tools and equipment needed at the fire scene. It also has the ability to pump water at a fire as if it was an engine and it carries the minimum of tools and equipment to fight a small or modest fire without an engine. The weakness of the dual role is that the truck can only serve in one role at a time.

At 31 years old, all of the safety, repair and maintenance issues relevant to Engine 3 are also relevant to Engine-Tanker 2. There is not any clear national data on the ages of fire department tankers. Locally, the age of fire department tankers is as follows:

Ashfield Tanker	**1990**
Hawley Tanker	2005
Buckland Tanker	2006
Charlemont Tanker	2005
Chester Tanker	2002
Clarksburg Tanker	2005
Conway Tanker	2010
Cummington Tanker	2011
Florida Tanker	2007
Leyden Tanker	2008
Plainfield Tanker	2013
Rowe Tanker	2004
Savoy Tanker	2015
Shelburne Tanker	2020
Whately Tanker	2000
Windsor Tanker	1989
Worthington Tanker	2019

When this engine- tanker is replaced, the town should consider replacing it with a 3000-gallon tanker, rather than a 2500-gallon (currently) tanker. The extra water is essential to firefighting in modern homes.

Today's homes flashover and burn furiously after about 8 minutes from the start of the fire. Prior to about 1980, houses flashed over after about 20 minutes from the start of the fire. **(See Appendix L for an explanation of this.)** Post-flashover firefighting requires significantly more water than pre-flashover firefighting. The Ashfield FD (and all fire departments) is encountering faster, more advanced, and more dangerous fires than they did forty years ago. The more water the fire department has on arrival improves the chances of making a quick, safe, and effective knockdown of the fire.

A new 3000 gallon tanker will cost at least $300,000, but configured as an engine-tanker can cost as much as $800,000.

The current truck is designed for a crew of two (as is the engine). Two firefighter crews are more common and a more appropriate choice for a tanker. However, because Ashfield doesn't operate a second engine and uses its tanker as the second engine, there should be consideration given to a four-firefighter cab.

Replacement of this truck is high priority. I recommend that replacement of Engine-Tanker 2 is second only to replacing Engine 3. Typically, I would recommend replacing the older truck first; however, in this case, both trucks are close in age and in similar overall condition. Engine 3 is the department's workhorse and has a broader mission, so it makes sense to replace it first and replace the tanker second. I also recognize that the AFD has filed a 2020 AFG grant with

FEMA to replace Engine-Tanker 2. These grants are hard to get and the town needs to plan for replacement without the federal money.

Brush 1 (2-B-1):

Brush 1 is a 1985 Chevy 4x4 Chevy Pickup Truck that carries 200 gallons of water for forest/brush firefighting. It is 36 years old. It serves an essential role because it can reach areas inaccessible to traditional fire apparatus. It can respond to emergencies over snow covered roads. And, Ashfield has lots of open space and woods so that effective wildland firefighting is an important part of the AFD's mission.

This truck's configuration and equipment is typical. Almost every fire department in the country has at least one truck that looks a lot like this one.

As with the rest of Ashfield's trucks, it is kept clean and well maintained by the firefighters. Because Brush 1 is a Chevy pickup truck this means that parts and maintenance are not a serious problem.

However, it is 36 years old. It needs replacing. Fortunately, it is one of the easier and least expensive fire apparatus to replace.

The easy, but more expensive option is to purchase a purpose built forestry truck for between $80,000 and $120,000. But, is it common and appropriate to spend about $8000 to purchase skid unit (a pre-fab pump & water tank on a platform) and slide it into the bed of newer truck. A flatbed Ford F-450 or F-550, a Chevy 4500 or 5500, or a Dodge 4500 is the appropriate platform because of the weight of the water. 200 gallons of water weighs 1700 pounds. The skid unit, tools, hoses, and two-firefighters added to the weight of the water puts you close to 3000 pounds. Modern lighter duty trucks (such as the F-150 to F-350 series) will experience dangerous handling problems with that much weight on-board and their brakes won't stop them well.

I recommend that replacing Brush 1 is the third capital priority for the department and town. However, I also recommend that this third place priority be considered flexible and that it move up in the event an opportunity to replace the truck presents itself. For instance, if someone were to offer to donate $10,000 to the town/department, purchasing the new skid unit would be a good use of funds because it represents a substantial part of the cost of replacing this truck when compared to other projects. Additionally, if a surplus truck or a well-priced used truck became available, I suggest seizing the opportunity and moving this project to the top of the list.

Rescue 1 (2-R-1)

Rescue 1 was built in 2013. It is in excellent condition. It serves its role well responding to EMS calls, motor vehicle crashes, special rescue situations, and in a supporting role at fires. It is built on an F-550 chassis; probably the most common chassis for light and medium duty fire and rescue trucks in the country. (This is the chassis I would suggest as ideal for replacing Brush 1.) This truck should serve the department and the community well for another 10 to 15 years as long as it is well maintained and cared for.

I recommend that the town start putting aside about one-twentieth (1/20th) of its estimated replacement cost into a segregated stabilization fund[12] so that its replacement can be purchased with cash on hand, or mostly with cash on hand. This truck cost about $150,000 new.

Grant Funding for Fire Trucks

The only significant source of grant funds for fire trucks is the Assistance to Firefighters Grant Program (AFG) from FEMA. Each year, AFG funds about 300 requests for new fire trucks. (About $110 Million per Year) This works out to roughly 300 trucks across 30,000 fire departments. On average, it looks like AFG awards about six trucks per state per year. The odds of winning a truck are long.

Ashfield should be filing an AFG grant request to replace one of is apparatus every year. Sometimes it can take five or six years for a department to be successful in getting an apparatus grant. Perseverance is critical to success. However, Ashfield can't wait five or six years to replace at least one of its trucks.

The AFG program is also best for low-priced trucks (seemingly except for urban/metro departments). Applications for low cost options tend to do better. The reviewers and FEMA staff may see this as way to get more trucks for more departments. A $350,000 engine application will do better than a $500,000 application.

AFG allows a department to apply for apparatus even if it is also applying for personal protective equipment or safety equipment. An application for safety equipment and a new engine is divided onto two separate tracks by FEMA. This means that the review team doesn't see or know about both requests. There is no downside to requesting a truck and firefighter safety equipment such as SCBA or PPE. Departments that win an AFG grant must contribute 5% of the project cost or 10% for regional applications.

[12] The Town of Hawley does this. They have four stabilization funds that they annually contribute to and one is dedicated to replacing fire apparatus. My department, places $25,000 per year into an Ambulance Stabilization Fund to replace the ambulance every ten years, and $30,000 into a general fire department Stabilization Fund.

The AFD has, in fact, applied for AFG funding to replace its engine-tanker (Engine 2) in the current AFG application round (applications closed February 12, 2021). It should hear about this grant late in the year, maybe November or December. Therefore, it makes sense to keep applying for federal money to replace the engine-tanker, and use town funding to replace the engine (Engine 3).

Until the trucks are replaced, never stop applying for an AFG grant.

Used Fire Apparatus

Purchasing a 10 year-old engine might be better than continuing to use a 30 year old engine.

There are a lot of reasons to avoid used fire apparatus. You don't want to purchase someone else's problem. Since towns tend to hang on to fire apparatus until they can't possibly keep it any longer, a lot of the trucks on the used market are in poor shape. However, there are towns that replace trucks on a regular schedule whether the truck is in great shape or not. It is possible to find trucks that have been retired and traded-in because they were scheduled to be traded-in, not because they finally broke down.

Typically, you might say that the old truck you know well (and have all the maintenance info for) is better than the newer, but used one that you don't know much about. However, the age of Ashfield's apparatus is such that I think the risk-benefit analysis is rapidly shifting towards purchasing at least one 10 year old truck. I would strongly suggest that at least one of Ashfield's two engines must be purchased new in order to have long-term value and ensure long-term reliability.

Some departments have been successful finding trucks from "wealthy" volunteer fire departments that buy new trucks on a schedule, and come from places that don't cover their roads in salt. A truck in the 10 to 15 year old range, in very good shape, might only cost $175,000 instead of $400,000 or $500,000.

There are cultural barriers in the fire service to purchasing used apparatus, particularly if the truck is going to be a primary unit. It would be a poor investment to spend $175,000 on truck that the firefighters will shun. The firefighters need to be involved in this decision and be on-board with it.

The Cost of Waiting

After 25 or 30 years without purchasing a new fire engine or tanker, Ashfield will experience sticker shock at the price of today's trucks. In an effort to be conservative with spending, there is tendency to put off purchasing new trucks longer and longer. You think that you can save money by putting off the purchase so long as the old trucks still "work". At some point this becomes a false economy.

The cost of purchasing a new fire truck is increasing between 3% and 6% each year. Even assuming a 3% rate of inflation per year, the cost of waiting to replace a truck is costing more than the purchase would because interest rates are less than 3%. The Town of Ashfield can borrow money from the Commonwealth (State House Serial Loan Notes) at about 2% interest. That 1% difference between purchasing the truck now and waiting five years represents a savings of $22,078. Here's the math:

5 years of inflation on a $400,000 fire truck at 3% per year:	$63,710
5 years of interest on a $400,000 loan at 2% per year:	$41,632

Savings from inflation realized by purchasing now, rather than in 5 years: $22,078

What this means is that if Ashfield purchases a new fire engine in FY 2022 for $400,000 and it borrows all the money at 2% for five years, it will pay less for the truck, including interest, than it will if it pays cash for the same truck five years from now. Waiting five more years might mean borrowing $463,000 for a truck that could have been purchased now for $400,000.

Maintenance costs increase as fire trucks age. In the first five years of ownership, fire apparatus is relatively inexpensive to maintenance. Warranties might cover many repairs. Generally, the trucks don't need much other than routine preventive maintenance. In the period 5 – 10 years, you'll experience an increase in repairs and maintenance, but the trucks are generally not prone to major repairs. (Keep in mind, that replacing six tires on a fire truck after seven years costs about $5000 and this a minor repair.) From 10 to 20 years, repair costs start to escalate.

In Ashfield's case, its trucks are 25 and 31 years old. Both of these trucks could become money pits that make waiting even more expensive. You could start to pour money into these trucks with no guarantee it's going to last for another year or five years before it needs another big investment. The combined cost of repairs over the next five years when added to the cost of inflation over the same five years could mean having to spend an extra $30,000 to $40,000.

Ashfield's trucks are so old that they have almost no trade-in or resale value.

Ashfield's fire trucks have reached the point where delaying is costing more money than buying a new truck.

The Fire Station

The Ashfield Fire Station needs to be replaced or it needs a major renovation with additions. Overall, the building is obsolete and no longer matches the needs of the community and the department. The fire station is reasonably well located to serve the town based upon geography and the road network.

Ashfield needs call/volunteer firefighters. Ashfield's tax base will not support a paid, career fire/rescue department at any time in its foreseeable future. Retaining the existing volunteer firefighters is critical to the department's future success and for maintaining appropriate public safety. Recruiting and retaining new call/volunteer firefighters is also critical and should be among the highest strategic priorities of the town and the department.

The Ashfield Fire Station is a detriment to recruiting and retaining future call/volunteer firefighters.

A successful call/volunteer fire department needs a fire station that screams "join us" to the community. The current Ashfield fire station says nothing at best, and says "avert your eyes, nothing important going on here" at worse.

In today's world, fire departments are competing with a wide range of community activities, social activities, and leisure activities for the same group of volunteers. It was different fifty years ago; there were fewer ways for people to contribute to their town and fewer ways to spend their time. Expectations were different. At the same time, the demands placed upon call/volunteer firefighters have grown. There are more emergency calls to respond to, emergency calls are more complex, and the community expects better outcomes. If you are going to win over people to volunteer their time as firefighters and EMS responders, they need to feel that what they are doing is valuable, rewarding and appreciated.

To most people walking by or driving by, the current Ashfield Fire Station is nothing more than old garage. Yes, it has a sign, but a passerby might see the sign and wonder where the new the fire station is and what you keep in the old one. Based upon this building there is no reason anyone would stop by and ask about joining.

Appendix M contains a comparison of the visual impact of the current AFD fire station compared to two conceptual photos of how an improved look might help with recruitment of volunteers.

Technically, the fire station is obsolete. It was built in an era (1945) when a small town fire station was just a garage, and essentially that's what it still is. It lacks numerous technical spaces and systems that are essential to even the smallest fire stations in 2021. For example:

1. The station lacks a proper storage area for the firefighter's personal protective equipment (PPE). PPE is hung on the wall where it is exposed to diesel soot from the trucks. Cancer from contaminated PPE is a growing problem in the fire service. Some departments are reporting people declining to volunteer because of health concerns related to cancer. Diesel engines, especially older ones like Engines 2 & 3, fill the station will carcinogenic particulate matter that gets on the firefighters PPE. (See **Appendix N.**)

The station must have a PPE area that is separate from the trucks or a system for removing diesel soot/exhaust from the air in the station. I believe a separate space is more cost-effective and better for the Ashfield Fire Station. Even having a separate stand-alone building next to the fire station would be an improvement and a reasonable interim solution.

2. The station needs a decontamination space to clean PPE. All PPE needs regular washing, as well as washing after every fire. The toxic smoke from fires permeates the PPE and then off-gases toxic chemicals for days after the fire unless it is washed. Firefighter PPE is too heavy for residential washing machines and fire station should be equipped with an "Extractor" or commercial washing machine. There is no space to install this kind of washing machine at the Ashfield Fire Station. Additionally, a drying area is needed.

   There also needs to be shower for men and women at the fire station. Cancer prevention best practices call for firefighters to shower immediately after all fires and before returning home. A shower is also essential in the event of a hazardous materials exposure.

   EMS PPE and medical supplies need a separate clean space for storage. These must be stored in a room or storage closest that prevents cross-contamination and their exposure to diesel soot and fire gases.

3. The fire station needs room for modern fire apparatus. I suspect that one reason the department has hung on to its 1990 vintage fire trucks is that they fit in the garage. Going forward, it would be poor strategic and financial planning to purchase upwards of a million dollars' worth of fire apparatus that you'll operate for at least 20 years, based upon what fits in a 75 year old garage.

   While the current configuration of an engine, an engine-tanker, a brush truck and a rescue truck is a good mix of apparatus for Ashfield, there should be additional space for apparatus in the future. New or expanding missions might require a fifth truck of some type. Space for a hazmat trailer or a boat would be appropriate. As it is now, the department is limited by the size of its building, not by community need and mission.

4. The station needs a modern training room, not the current space back behind the trucks. Fire and EMS training requires access to online sources and use of computers, simulators, smart boards, and such. Volunteers expect that when they come for training they will have clean, comfortable and uncrowded classrooms. This isn't an unreasonable expectation considering what the community is asking them to do. The AFD needs to increase its number of volunteers and increase drill attendance. Having an appropriate training space is critical to accomplishing these needs.

5. The fire chief needs an office. The chief needs a private space to meet with three or four people. He/she needs a place to keep locked personnel files. There needs to be place where the chief can meet privately with individuals to discuss sensitive or legally protected issues.

6. The fire station does not meet any modern fire, safety, or health codes.

Replacing the fire station should be a high priority, possibly the top priority for the community. However, replacing the fire station is a lengthy and expensive process so it should not stand in the way of other capital needs and department improvements. Replacing the fire station is probably the most difficult of all the issues that need to be addressed. A commitment to replace the station needs to be in place, so other improvements can be based upon the upgraded fire station.

A process to start building a new fire station would take about three to five years, even if everyone were in total agreement today as to what was to be built and how to pay for it. If a replacement project were to start today, it would take about a year to fund and create a preliminary conceptual design. Then another year would be needed for detailed engineering and architectural drawings, and to secure funding. A temporary fire station would have to be secured (if the old one was to be razed or incorporated into the new station). A biding and award process would follow this, and the town would end up in the builder's queue of projects. Three years from town approval of a fire station project would be fast and probably unrealistically optimistic.

The point of considering the time needed to build (or renovate) the fire station is so that we can best visualize this importance of the project and how its timing is related to other capital and operational needs and improvements to the Ashfield FD, as well as when the town would be in a position to fund the project.

A new fire station is likely to cost between $2 million and $6 million. It's a wide and expensive cost range depending on site work, interest rates, state construction/bidding laws, the size of the building, and inflation (over the years it takes to approve and start the project). Currently, Bernardston, Massachusetts is planning a $1.7 million fire station. Hadley just started construction on a $3.5 million dollar fire station to replace a 1950's building.

It is also possible that the department and community could choose to renovate around the existing fire station and incorporate it into an expanded, modern facility. However, this practice is falling out of favor because the expected cost savings are tending not to develop. Part of the issue is that state law will require bring the existing building up to code when you renovate and add on to it. The cost of bringing the old building up to code is usually far more expensive than people think.

Maybe as an interim step, a PPE storage and cleaning room could be added to the current building. Some visual improvements could be made to assist with recruiting efforts, but long-term replacing the fire station is still the town's best option.

Another option might be to build a separate fire department office/training building next to the fire station. This creates the missing spaces at the current fire station, upgrade the training room, and get the PPE out of the diesel soot. It could prove cost effective, at a least in the short-term. Doing this would leave the fire trucks, and only the fire trucks, in the old building. As long as the two buildings are not connected by any interior spaces, the building code won't require upgrading the old building. (The town of Sandwich did something similar by recently putting a $2 million dollar+ addition next to its old fire station. They connected the two buildings with a covered walkway.)

There are no federal or state grant programs for replacing or renovating fire stations. In Massachusetts, the entire cost of a fire station falls to the local community. There is 40 year, low-interest, financing available for small towns through the USDA.

Personal Protective Equipment (PPE)

Traditionally, Firefighter's PPE has been treated as a capital expensive. It's not wrong to categorize it this way, but more departments are starting to see PPE as an operational expense rather than a capital expense.

Part of this change from capital to operational expense is that structural firefighting PPE now has a 10-year life. After ten years it should be disposed of. While this is not written in statutory law, it is a strong industry standard and some regulations may require it. A firefighter will not be allowed to take a Massachusetts Fire Academy class if any part of his/her PPE is 10 or more years old. Firefighter injury and death investigations by NIOSH focus on the age of the PPE. The Massachusetts Division of Labor Standards (state "OSHA") says PPE should be less than 10 years old.

Structural PPE consist of a helmet, eye protection, a hood, a coat and pants (with suspenders), a pair of boots and a pair of gloves. All of these elements must meet specific manufacturing requires for structural firefighting. The ensemble of PPE costs between $2500 per firefighter and $3500 per firefighter depending on size and options.

Using the traditional capital approach, towns and departments would engage in a bulk purchase of new PPE at regular intervals. For the AFD, if you replaced all of the PPE every ten years a capital appropriation of about $40,000 (in 2021 dollars) would be needed ($2500 x 16 firefighters).

The downside to this approach is that departments are not well funded for providing PPE to new members or replacing PPE that has been damaged. At six or eight years out from the

purchase, departments find themselves struggling to keep their firefighters in good PPE. And, there is tendency in the fire service for the ten-year replacement date to come and go without funding.

The alternative is for the town to appropriate funds to the department's annual operating budget to purchase three sets of PPE per year so that the department could maintain an inventory of 30 sets of PPE that is less than 10 years old. This would cost about $7500 to $9000 per year. One advantage to this approach is that it would allow for extra PPE in inventory for new members or for short-term use when PPE is being cleaned or repaired, or when a set of PPE is damaged beyond repair. It allows the department to adjust its sizes as is needed by new members.

Ordering and receiving PPE takes months, so having spare PPE in inventory is essential to dealing with short-term needs or bringing new staff on-board quickly.

At no time should any AFD firefighter be responding to a fire wearing PPE that is 10 or more years old.

At the moment, the AFD needs 5 new sets of structural PPE because 5 firefighters are wearing gear that is more than 10 years old. There is plan to purchase 2 sets in the spring. This will still leave 3 firefighters wearing unsafe PPE. (See below for a funding recommendation.) And, there is no spare PPE in the event someone new wishes to volunteer. (Another solution to this might be a multi-town cache of spare PPE that can be borrowed for short-term needs, until PPE can be purchased or repaired.)

Additionally, each firefighter should be issued a second hood and spare set of structural firefighting gloves. The current fire industry best practices for preventing cancer among firefighters are to issue two full sets of structural firefighting PPE to all firefighters. This allows for thorough cleaning between fires. It is, however, too expensive for most small towns. Instead, hoods and gloves should be doubled up because these have been singled out as items that particularly accumulate and transmit toxic chemicals to firefighters.

In addition to structural PPE, each AFD firefighter should have a complete set of wildland PPE, that consists of a lightweight brush helmet, eye protection, gloves, a jacket and pants, and they need EMS PPE that consist of an EMS jacket that is blood borne pathogen resistant and meets the requirements for traffic safety reflectiveness and color, and a pair extraction gloves, eye protection and a helmet (structural or brush will do). These items of PPE are less expensive and somewhat less regulated than structural firefighting PPE.

Each firefighter should have an inexpensive (breakaway) reflective traffic safety vest to wear over his/her structural firefighting PPE whenever they are working in or near the roadway and not directly engaged in firefighting. For instance they need this vest when they are dealing with downed power lines or working at a motor vehicle crash. These vests cost about $25 to $30 each.

See **Appendix O** for additional information about specific PPE elements and prices.

There is one additional item of essential PPE or firefighter safety that falls into the capital needs category and that is Self-Contained Breathing Apparatus (SCBA).

SCBA (commonly called "Air Packs") allow firefighters to breath in toxic environments. An SCBA unit consists of an air bottle, a harness, a regulator, a mask, and a spare bottle. One SCBA unit costs about $8500 and has a life expectancy of up to 15 years.

The AFD has 8 SCBA. Its SCBA are 17 to 19 years old and are in immediate need of replacement. The AFD should have a minimum of four SCBA for each engine and rescue truck, or twelve units.

At $8500 each, replacing the AFD's inventory of SCBA will cost at total of $102,000 (12 x $8500).

There is a temptation to replace SCBA a few at time in order to spread out the cost. This can be done to manage costs, but you must avoid ending up with SCBA that are not identical to each other. If an element of the SCBA is redesigned or changed between purchases, you will create a substantial training and safety hazard. Firefighters must be able to operate SCBA in zero visibility, under difficult conditions. Don't make firefighters try to learn two different systems in the dark.

PPE and SCBA are relatively easy to fund through the Assistance to Firefighters Grant Program (AFG), a federal program through FEMA. These are considered high priority items for funding. The department has written a grant (in collaboration with the Shelburne Falls FD) for SCBA replacement in the current AFG cycle (closed February 12, 2021). Once caught up on PPE, I recommend starting to fund replacement PPE through an increase in the AFD budget.

I recommend that the AFD continue requesting an AFG grant to replace its SCBA[13] and that it continuously files an AFG grant for SCBA in future years until it either wins the grant or another funding method is found. The town and the new fire chief should be exploring alternate funding for SCBA as this is a critical safety issue.

I recommend that the AFD budget be increased by at least $7500 per year so that the fire chief is able to purchase replacement or additional PPE as needed.

Wildland PPE can be purchased through a small grant program called the Volunteer Fire Assistance (VFA) grant program. VFA grants are federal money managed by state wildland fire programs. In Massachusetts, the Massachusetts Department of Conservation and Recreation (DCR) manages this program. It is a small grant program. The annual award to any one department is $2000. It is a 50% match program, so if the fire department spends $4000 on

[13] The AFD has joined with Shelburne Falls to file a 2020 Regional AFG grant to replace SCBA.

wildland firefighting PPE (or other eligible items – hose, training, skid units, foam, chain saws, etc.) the VFA grant will reimburse the department $2000. This is a competitive grant program, so there is no guarantee of funding, but the AFD checks all of the boxes that meet the grant program's criteria. **The AFD should be applying to this program annually to maintain its wildland PPE inventory, as well as for training costs and forestry equipment.**

At such time as the AFD might purchase a replacement skid unit (slide-in pump, water tank & hose reel) for its forestry truck, a VFA grant would be a good way to get $2000 towards the purchase.

Closing Thoughts

The members of the Ashfield FD have been carrying a heavy load for the community without a lot of resources. They are good people and give a great deal of service and value to the community. While everyone thanks them for their service, what they do and how much they do is not well understood. Without additional resources and community support, such as a chief with excellent leadership skills, a new engine, replacement PPE, and more members, they won't be able to succeed long into the future. Now is the time for the community to step up and provide the members of the Ashfield FD the support they need.

There is a lot to be done. I have confidence that Ashfield, its community, and its firefighters can accomplish everything I've suggested here. Divide up the work, spread the suggested improvements over years, not weeks or months, and focus on accomplishing tasks in small bites.

To help organize these recommendations and suggestions I have create a matrix identifying each strategic recommendation, who the primary actor is, when you should or might plan on accomplishing it, and an estimate of what it will cost. This is attached as **Appendix P**.

In some cases, I've listed more than one person or entity as the actor or responsible party. When I've done this, the first person/entity listed is the primary party, the person/entity that should be pushing to get it done. When I listed secondary actors, it is mostly as a reminder that the project is more complex and that everyone will need to significant role in its success.

It has been a pleasure to meet and talk with everyone. I enjoyed learning about the Ashfield FD. I have a great of respect for the members of the Ashfield FD and its chief, Del Haskins.

I am available for further assistance anytime you need it. If you want help writing grants, feel free to call me. If you have questions about this report don't hesitate to ask me. My goal is the success of the Ashfield Volunteer Fire Department.

Respectfully Submitted
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