Identifying a Standardized Pre-Incident Planning Process Fort Myers Fire Department

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CERTIFICATION STATEMENT

I hereby certify that this paper constitutes my own product, that where language of others is set forth, quotation marks so indicate, and the appropriate credit is given where I have used language, ideas, expressions or writings of another.

Signed: 

Date: 4-19-17

Abstract

The problem is the Fort Myers Fire Department (FMFD) does not have a standardized process to complete and access pre-incident plans in a consistent and timely manner, which increases the risk of losing lives and property. The Purpose of this applied research paper (ARP) is to determine what components might standardize the pre-incident planning process to improve the effectiveness of protecting lives and property. Descriptive research method will be used to answer the following research questions: (1) What are the objectives of pre-incident planning? (2) What are the standards and methods that exist to accomplish effective pre-incident planning? (3) How are pre-incident plans completed and accessed in other fire departments? (4) What are the current challenges to the FMFD pre incident planning program? The procedures for this ARP were developed using literature review of journals, books, and Executive Fire Officer Program (EFOP) ARP's. An internal and external survey, interview, and review of data were utilized to identify ways other fire departments conduct pre-incident-planning. Results identified that standards to exist in the fire service for pre-incident planning but are not always utilized. Also, in order for a program to be effective the proper level of training and expectation must occur. The recommendation is that FMFD clarifies the purpose of pre-planning and provides the training based on a developed standardized process delivered through an effective policy.

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Introduction

The fire service has evolved from one that is reactionary in putting out fires to one that is proactive in preparation and prevention. Planning and preparation is something that many organizations in both the public and private sector are taking advantage of. One way is they are working within their mission to reach their goals for the future. Some fire departments conduct planning through budgets, emergency management planning, and strategic planning. One way of being proactive is conducting pre-incident plans of buildings within a fire departments area of protection.

Pre-incident planning is the process of gathering useful data from a building to assist in the decision making process for emergency situations. The process is primarily seen as important for fire incidents, but can be just as beneficial in potential incidents like emergency medical, hazardous materials, and technical rescue incidents. This process of pre-incident planning allows for successful management and preparation before an incident occurs (Fleming, 2010, p. 210-211)

At the Fort Myers Fire Department (FMFD) a pre-incident planning process is in place which expects one pre-plan to be completed monthly by each company officer. The problem is the FMFD does not have a standardized process to complete and access pre-incident plans in a consistent and timely manner, which increases the risk of losing lives and property. Ward (2006) explains, life safety at an emergency in regards to both the general public and the fire department personnel, is always a top priority. Through conducting a preplan, knowledge of the building construction, water sources, and resources needed, the department can ensure successful life safety and building protection.

The purpose of this applied research paper (ARP) is to determine what components might standardize the pre-incident planning process, to improve the effectiveness of protecting lives and property. The intent is to make justified suggestions for proper implementation of an effective pre-incident planning program.

The descriptive research method will be used to answer the following research questions: (a) What are the objectives of pre-incident planning? (b) What are the standards and methods that exist to accomplish effective pre-incident planning? (c) How are pre-incident plans completed and accessed in other fire departments? (d) What are the current challenges to the FMFD Pre-Incident Planning Program (PIPP)?

Background and Significance

The City of Fort Myers (CFM) is located in Southwest Florida along the Caloosahatchee River. The CFM holds the Lee County seat and provides emergency protection to a variety of historical and important target hazard occupancies. The fire department records show that the department was established in 1901 as a volunteer department to become a paid career department in 1950 (V. Dicristofalo, Personal Communication, March 10, 2017). The author found the Census (2015) to state that the city spans 39.96 sq. miles with a population of 74,030. The department consists of 125 uniformed personnel within the operations division. Three, 24-hours shifts, provide protection across 6 fire stations within the CFM. Each shift operates with one Battalion Chief, twenty one Captains, thirteen Engineers, and twenty three Firefighters per shift. The FMFD provides a variety of emergency and non-emergency core services such as fire suppression, emergency medical response through Advanced Life Support (ALS) non-transport, special operations, marine response, and emergency management to the CFM and surrounding districts (Judith Hartwell, Personal Communication, March 10, 2017).

Since 2006, FMFD's vision and mission statement have been in place to guide the direction of the organization and its members to meet the core services and programs. The mission statement reads, The Fort Myers Fire Department's mission is to meet the community's needs . . . through exceptional emergency response, life safety, and community support services (Fort Myers Fire Department, 2017). Pre-incident planning is an example of one way the department can protect lives and provide exceptional emergency response. Pre-fire plans have been a part of the organization for years with each station apparatus having a 3 ring binder known as a complex book. Each book contained hand drawn plans for many of the buildings within the stations primary response area. These plans although useful were not completed under a direction of one specific guide or policy. With a mix of color coding, symbols, dots, hand drawings, computer created, etc. the complex book pre-fire plans were only useful to those that created them. The pre-fire plans took a backseat to the many other requirements of the fire department ranging from annual training, equipment and hose testing, emergency responses, and public relations among many others. The complex books were not being updated on a regular basis, which lead to incorrect information in a time of need. Examples of this are when buildings changed occupancy name, renovated the structure, and/or changed door numbers. The Complex Book was only useful if the information was up to date and correct.

As time went on, in 2012 the Insurance Service Organization (ISO), conducted an assessment on the department evaluating many areas within the departments operations. The ISO provides points for pre-incident planning performed by the department. The FMFD, in 2012 had not established a PIPP, therefore ISO gave minimal points. ISO determined that plans were not being maintained or updated. The overall Public Protection Class rating that was given by the ISO was a Class 3 rating (V. Dicristofalo, Personal Communication, January 5, 2017). In an

effort to receive a higher point score in the next evaluation performed by the ISO, the department worked with the Fire Prevention Bureau to identify a program that would meet the needs for both operations and prevention.

In 2013, the FMFD purchased an inspection and pre-plan management program called, Mobile Eyes to assist in gathering, storing, and accessing building information (S. Wirth, Personal Communication, April 10, 2017). Prior to the purchase of Mobile Eyes, the department used hand drawn diagrams of the buildings that were placed in a binder on each apparatus. As the need for better management and access of information presented itself the departments had an opportunity to purchase a program that assisted with both the inspection and pre-plan needs.

The initial department program introduced using Mobile Eyes, was a hybrid of company level inspections with a pre-plan component. The purpose of this combination was to conduct company level inspections to assist the shorthanded Fire Prevention Bureau in meeting their standards while working toward improving pre-plan completions. The Training Division expected within the monthly training plan one company level inspection and a pre-plan would be completed each month. This would relate to eighteen per month, and two hundred eighteen annually. The challenges presented during this hybrid program were the out of service times for units conducting inspections and pre-plans, the lack of coverage for the emergency and non-emergency responses, and the level of inspection training provided. Over time the importance began to diminish and the inspections became less of a benefit and more of a liability. Both the occupant and the organization could be subject to negative outcomes due to the quality of inspections occurring. Robertson (2005) advises that although the concept of pre-fire planning and inspections are relatable, they should not be done together because of differences in the overall purpose.

In 2015 the training division removed the requirement of company level inspections and only required one pre-incident plan be completed each month by each station Captain. Each station district was provided an initial list in a Microsoft Excel spreadsheet identifying target hazard buildings to be pre-planned. Pre-incident planning forms were provided that identified what information was to be collected. The form was created using the information requirements of the Mobile Eyes inspection software program.

At the present time one pre-incident plan is assigned to each Captain of the engine to be completed each month. The crew has one month to schedule a time to meet at the occupancy identified and gather the information needed to complete the form. The crew also draws a site plan and marks the important items such as hydrants, fire alarm panels, and fire department connections. The process of drawing the layout of the structure is done in different ways such as utilizing Google Maps in satellite view or hand drawing them. The only consistent item is the form used to collect information based on the Mobile Eyes inspection data fields.

Each Mobile Data Computer (MDC) has the Mobile Eyes Responder installed on it so information about buildings can be known. Once information is recorded within the administrator program the information can be searched for by typing in the building address. The primary use of this program in the field is to look up building contact information for fire alarms that units respond to for occupancy contact information. The information that is available for use is only what is provided to the administrative staff position entering it. Pre-plans once completed, are forwarded to the Operations Division. The process for redrawing the plans using a CAD program was not identified, therefore overtime the completed pre-plans began to collect in a folder making them not accessible to the front line personnel.

The future impacts to department effectiveness are a potential loss of life and or property. Each shift, the department has a potential for responding to an emergency incident that presents both known and unknown hazards. By getting to know a building before an incident occurs these hazards can be identified. This identification helps firefighters to effectively complete their tasks. Overtime the process has become something that when completed it was done with varied levels of quality. The quality of response and safety at an emergency scene have high potential for poor outcomes due to many factors. One of these factors can be managed with a higher quality of pre-incident plans that are accessible in a timely manner.

The Executive Fire Officer Program (EFOP), *Executive Development,* R0123 course (National Fire Academy [NFA], 2016) is relevant to the applied research problem with the following definite links to the curriculum. First, Unit 5, Change Management in relation to identifying the problem, having a clear purpose, identifying issues in a change effort, and steps in transition. Last, Unit 7, Organizational Culture and Change in relation to understanding an organization culture to make informed changes. This research problem relates to the United States Fire Administration (USFA) established strategic goals for the 2014-2018 fiscal year. The following goals have a direct link (a) promote response, local planning and preparedness for all hazards; and (b) enhance the fire and emergency services capability for response to and recovery from all hazards (USFA, 2016).

Literature Review

The research for the literature review was first started at the National Fire Academy's Learning Research Center while attending the first year Executive Development course. Additional research was conducted using the internet, local public library, and previous research reports covering the same topic. Pre-incident planning under many different

explanations, definitions, and even names still has the same purpose of identifying the facts of a building prior to an event. The prefix pre can be defined to mean before, early, and prior to (dictionary.com, 2016.).

As explained by Clark (1991) a fire department has the ability to learn about a building before it even occurs. This is done by getting out to a building and pre-planning it. Clark (1991) states that there are two ways to gain knowledge on a structure, the first is through the building permit process and secondly through pre-incident planning. He explains that pre-planning is the process of preparing to handle an incident at a certain location before it happens. These plans document key information such as hazards, protection systems, and access points so information is known early for rapid and effective fire operations.

Once identifying the various definitions of pre-planning, research was led to identifying the definition from the group that creates standards within the fire service. A search was conducted for fire service standards on pre-incident planning. The National Fire Protection Agency (NFPA), defines a pre incident plan as “a document developed by gathering general and detailed data that is used by responding personnel in effectively managing emergencies for the protection of occupants, responding personnel, the property, and the environment (NFPA, 2015-b). "

With the importance of planning immense, a search was conducted to identify what firefighters should be documenting within a pre-plan. Pre-incident planning is an entire process of gaining information, evaluating it, creating procedures using the information, and reviewing it. During the process the plan needs to be developed by those that will use it, the line personnel, with support from the fire prevention bureau in the areas of owner/occupant contacts, understanding of the complex suppression systems, and updates to information or changes during

annual fire inspections (Lacey & Valentine, 2009). Brannigan (1992) expresses that the value of pre-fire planning to firefighters is high because it gives firefighters the ability to be prepared instead of reactive to potential hazards. More important than the exact correctness of the definition are the components that make pre-planning useful for protecting lives and property.

When conducting a pre-plan the building survey should identify items that fall within building features, occupancy features, and fire protection features and equipment (Hickey, 2002). Cote (2008) breaks down the following data components for pre-incident planning.

- Building construction
- Occupancy
- Protection
- Site considerations
- Outside assistance

Galvin (2006) stresses the importance of making pre-incident planning a priority within every fire department because it can help to ensure firefighters remain safe. With pre-planning made a priority, the personnel can be better prepared. Massey (2004) states, “Pre-plans can make or break the entire operation, whether it be in a chemical plant, hospital, shopping mall or high-rise building.” He believes that effective pre-planning is the key to success aiding the incident commander of a scene in reducing the loss of life or property, no matter the type of incident.

The all-encompassing process of pre-incident planning involves many components. According to Lacey (2009) pre-incident planning consists of functions such as developing relationships with property owners, site surveys, managing the pre-incident data, and

developing the actual pre-incident plan, all of which are critical to overall safety at an emergency scene. Brannigan (1992) also agrees that one important component is the planning surveys themselves, especially when the company officer shows the importance to both the occupant and other firefighters. Pre-planning paid off as Clark (2014) explains, when a church fire broke out in an area that was not serviced by hydrants. He writes that due to pre-planning that crews did prior to the fire the initial actions of calling for a tanker among other action plan steps were able to be carried out in route, getting the proper resources to the scene early.

Pre-incident planning provides the personnel the time in a controlled environment to study the building and its hazards. Each building should be looked at as its own challenge or problem because each building is different. Studying and documenting the automatic sprinkler status, water supply, construction type, roof structure, and occupancy type all help to gather the necessary information for a proper pre-incident plan (Cote, 2008).

Pre-Incident planning is a process that takes time when done correctly. By doing thorough analysis of the building the potential response is improved. This improvement gives the firefighters the resources and training to increase the potential of saving lives and property. This thoroughness can only occur if those conducting the pre-plans are trained to do so. It is important to be trained so the right questions are asked to ensure features of the building are identified as opposed to just walking through the building (Cote, 2008).

The research led to determining if the lack of effective pre-planning has led to loss of life or property in the past. Although many times firefighter deaths or injuries at a fire incident can occur from many factors, pre-incident planning is often a recommendation of lessening the occurrence. The National Institute for Occupational Safety and Health (NIOSH) is a research agency that conducts studies of worker safety and health. This research agency is part of the

Center for Disease Control and Prevention, started under the Occupational Safety and Health Act of 1970. As a goal of the agency, NIOSH works to track and investigate work related injuries, illness, and exposures that occur (NIOSH, 2016). NIOSH reports published by the agency present the information of incidents that occur in a report. In the fire service these NIOSH reports can be used to improve agency operations and firefighter safety.

In June of 2001, three career firefighters died when an explosion occurred in a basement of a hardware store. These firefighters were working together to conduct an interior attack on the fire and perform exterior ventilation of the building. The explosion caused a collapse of debris to fall onto the firefighters carrying out there tasks. NIOSH conducted an investigation and released recommendations to lessen an incident from happening again. Recommendation #1 stated the department should ensure pre-incident plans are updated and used on mercantile occupancies. NIOSH stated that pre-plans are to be conducted to ensure firefighters are prepared to manage emergencies. The identification of protection systems, building construction, ingress and egress points, and specific hazards are important to an effective pre-incident building assessment. The constant updating of pre-incident plans is equally important to ensure any occupancy changes are known by all possible responders (NIOSH, 2003).

On August 13, 2006 a career engineer died and one firefighter was injured while conducting a primary search of a residential occupancy. While making entry and starting a left had search just inside the front door the floor collapsed sending them down into the basement. One recommendation from the NIOSH report was that the department should conduct pre-incident planning and inspections of buildings within their area so that tactics and strategies can be selected appropriately (NIOSH, 2007).

Another report with the same recommendation from an incident that occurred in May of 2009 was a structure fire in a commercial building. A career firefighter was injured from an overhang of a bowstring truss roof system that failed and hit him. The recommendation explains that by conducting a pre-incident plan, hazards and building construction can be known ahead of time. This advanced knowledge allows for deviations from typical strategies and tactics. This information can be gathered and available to all responding units as well as dispatch as a note in the computer to assist in reminding the emergency responders of the hazards present at the occupancy. Many jurisdictions have an abundance of structures that need a pre-plan done on. This often times is difficult to accomplish so departments should give priority to buildings that have unusual fire hazards and life safety considerations. The report also states that the mnemonic BECOME SAFE can be used to assess the risks of the specific building being pre-planned (NIOSH, 2010).

The Mnemonic BECOME SAFE stands for the following (NIOSH, 2010):

- Building
- Evaluation
- Construction/Occupancy
- Manage time and elements
- Engagement
- Situational awareness
- Assessment and risk analysis
- Fire behavior and effects

- Evaluate and execute

The information that is gathered while performing a site survey form must be available to firefighters when responding to emergencies. This information has assisted emergency responders from preventing possible injury and death (Robertson, 2005).

The driving force for a standard method in many areas of the fire service is the NFPA. The first standard that relates is NFPA Standard 1021, *Fire Officer Professional Qualifications*. The 1021 standard requires a Fire Officer I to be able to identify features of a building that contribute to the spread of fire. This identification done through a pre incident form can be completed for various types of structures that exist. Fire officers should have requisite skill in areas of building construction, alarms, and suppression systems to aid in meeting the job performance requirement (NFPA, 2014)

The actual standard that covers pre-incident planning is NFPA 1620: Standard for Pre-Incident Planning. This standard has evolved since its original numbering of NFPA 1410. This standard, "provides criteria for pre-incident plans for use by personnel responding to emergencies." The document goes on to state a purpose of, "developing pre-incident plans to assist personnel in effectively managing incidents and events for the protection of occupants, responding personnel, property, and the environment." (NFPA, 2015-b)

The standard for Pre-Incident Planning, NFPA 1620 (2015-b) provides many recommendations on the planning process, site considerations, vacant structures, and emergency operations. The authority having jurisdiction (AHJ) shall be responsible for approving a format, working with all staff, identifying responsibilities, and establishing a program. The following

components should be considered when establishing a program for developing pre-incident plans:

- Potential life safety hazard, including emergency responder safety
- structure size and operations complexity
- Economic impact
- Importance to the community
- Location of seasonal variations
- Presence of hazardous materials
- Susceptibility to natural disasters

The symbols for pre-incident planning can be found in the NFPA 170: Standard for Fire Safety and Emergency Symbols. This standard provides a consistent document of symbols that fire departments can use to display site hazards to all that view the plan. The use of these consistent symbols aids in eliminating confusion through common pictures for a building item. This standard assists the pre plan creator with improving communication about the occupancy site. (NFPA, 2015-a)

Standards in the fire service exist for every aspect of operations from water supply to apparatus maintenance. The standards of pre-incident planning have been created through thorough research because of incidents that have occurred in the past. Each department creates standard operating policies to assist with providing clear consistent operations in the same way the NFPA 160 and 170 would if they were adopted by the department.

The Insurance Service Organization (ISO) is an advisory organization that provides information about property and casualty insurance risk. Insurance companies can choose to use the information that is provided or not based on the recommendation provided (ISO, 2017). On the fire side, ISO utilizes a Public Protection Classification (PPC) Program as one of several elements to establish a property insurance rating through a fire departments ability to protect lives and property through a good rating with the PPC program premiums for fire insurance is lowered and better protection is provided (ISO, 2012).

ISO uses a measuring system called the Fire Suppression Rating Schedule (FSRS). The purpose of the FSRS is to outline objectively the department's ability to provide prevention and fire suppression to the community. This evaluation provides a PPC rating on a scale from 1-10 with a classification of 1 relating to a department that provides the highest protection. The three major items that are evaluated are receiving and handling fire alarms, fire department, and water supply (Cote, A, 2008 Volume 2, pg12-16)

Pre-incident planning is one of several objective criteria measurements used to evaluate a fire department. A total of 12 points can be awarded for annual pre-incident planning. ISO recommends that the building familiarization and pre-incident planning be in accordance with the NFPA 1620 standard recommendations. The main criteria for points to be awarded is each commercial, industrial, institutional, and similar buildings are pre-planned, documented, and available. (ISO, 2012) The formula used to calculate points for building familiarization for pre-incident planning is as follows:

T8= Frequency X (Number of Pre-Planned Buildings / Number of Buildings) X 12 (ISO, 2012)

Cote (2008) explains that pre-fire plans help firefighters identify hazards before an incident which is placed in a plan that should be available to firefighters at the emergency as quickly as possible. Once information has been identified, collected, and documented it must be placed into a usable form for the firefighters on scene. There are many programs available to assist with getting the information into a form that is usable. The department can choose any method of storing and accessing plans but having a good information management system helps. Some methods that exist are paper copies kept in the apparatus, survey sheets that dispatch sends through facsimile, and apparatus computers. A key to being able to use the information collected is identifying what is important to the responders that will be using the information (Cote, 2008).

Galvin (2006) explains that ISO has a duel role of providing insurance agencies and the communities a fair evaluation into the abilities of their fire department's response to a structure fire. The ISO works with the fire departments to assist in the process of ensuring both these roles are met. The challenge is that better ISO ratings are tied to departments that are ready to provide a high level of service which is difficult without proper budgets, equipment, and personnel, all the resources that are needed to be well prepared.

Conducting a needs assessment is an important step in creating a policy, more specifically a standard operating procedure. A needs assessment analyzes a few different areas with one focusing on the standards of practice. Identifying federal, state, and local laws; regulations, standards, and local needs a well suited and appropriate policy can be created. (Grusenmeyer, 1999)

SOP's provide a target for employees to meet when conducting a procedure. They also allow work to be duplicated over and over at a desired level across the organization. This level

of structure within the organization allows for quality control, performance management, and replication. (Bianca, n.d.)

The literature review started with a primary focus of determining what components make up a pre-plan program, but limited information existed on entire parts of an actual program. Research was adapted to this and searches were done through breaking up various components such as policy, standards, and purpose. The end result was information that could be used to answer research questions and overall picture of program components.

Procedures

The procedures used to complete the research were done through a literature review, interview conducted with the Division Chief of Training who is in charge of the program, an internal survey of the entire department, and an external survey of fire departments through the International Fire Chiefs Association (IAFC). Each of these procedures assisted with identifying the problems and solutions needed to address them.

Research for this applied research project initially started at the National Fire Academy's Learning Resource Center while attending the Executive Development course. A general search of pre-incident planning was conducted on the computer to identify other previous completed research papers, books, and journal articles. Upon return home from the National Fire Academy, the local library was used to perform google.com internet searches finding similar sources of information pertaining to pre-incident planning. Internet searches were conducted for various topics in regards to pre planning with search terms such as ISO, NFPA standards, fire department policies, and components of pre-incident planning. The purpose of the literature review was to conduct research to help answer the following research questions:

- What are the objectives of Pre-Incident Planning?
- What are the standards and methods that exist to accomplish effective pre-incident planning?
- How are pre-incident plans completed and accessed in other fire departments?

The next procedure used was a survey. In order to collect data pertaining to the completion and accessibility of pre-incident plans in the FMFD and other fire departments, two surveys were created using the online site, Surveymonkey.com allowing up to ten questions with the free version. The first survey administered was an internal survey to the members of the FMFD. An email was sent to the entire fire department on December 11, 2016 explaining the survey purpose and a provided link in the body of the email to participate (Appendix1). The survey called *Pre-Incident Planning Internal Survey* (Appendix 2), attempted to identify how the department viewed the importance of pre incident plans to the fire service versus the effectiveness of the current program. Other areas polled were pre-incident plan training, purpose, need for a formal policy, reference material, and information needed to successfully mitigate an emergency with a pre-incident plan. This survey was closed from data collection on January 15, 2017, which provided an opportunity of thirty five days to respond. The survey was sent to one hundred twenty four fire department personnel on the city wide email system receiving twenty nine responses back.

The results of the survey were compiled into a Microsoft Word document titled, *Internal Survey Results* (Appendix 3). The data was then analyzed to help answer the following research question:

- What are the current challenges to the FMFD pre incident planning program?

The second survey called *Pre-Incident Planning External Survey* (Appendix 4), also created at the online site, Surveymonkey.com, and was an external survey used to identify how outside agencies conduct, create, and access their pre-incident plans. This survey was distributed through the International Association Fire Chiefs (IAFC) website. On the website, a link was selected that allows EFO students to submit a survey to the registered members of the site. This distribution option was chosen to receive a wide response from across the United States (US). It is unknown what the sample size was for who received the survey link through the website process. This survey was submitted on January 24, 2017 and closed from collection initially on February 10, 2017, but it was extended until February 20, 2017 to allow more time to collect information. Over the period of twenty seven days, the survey received a total of twenty seven responses back.

The results of the second survey were compiled into a Microsoft Word document titled, External Survey Results (Appendix 5). The data results were then analyzed to help answer the following research question:

- How are pre-incident plans completed and accessed in other fire departments?

The current PIPP in place was initially started under the Division of Operations Chief where the program and documents utilized were created. Overtime and organizational structure changes, the Division of Training was created and assigned to oversee that the pre-plans were being completed. An email requesting an interview was sent to the Division Chief of Training as well as the Division Chief of Operations to set up an interview discussing the current requirements, gaps in the program, and future improvements that could be made in regards to the PIPP currently in place. The interview also aided in answering the following research questions:

- What are the objectives of Pre-Incident Planning?
- What are the standards and methods that exist to accomplish effective pre-incident planning?
- What are the current challenges to the FMFD pre incident planning program?

These Chiefs were selected due to their roles and responsibilities with the program since the start date. An interview with the Division Chief of Training was conducted on December 08, 2016. The interview consisting of twelve questions was conducted in the FMFD Battalion Chiefs office lasting a total of nineteen (19) minutes The Division Chief of Operation did not respond to the initial email sent (appendix 6), but offered assistance if needed at a later date. An interview with the Operations Chief was never rescheduled. . The interview questions asked by the author can be found in Appendix 7, *Pre-Plan EFO Interview*.

There were some limitations noted with the procedures used to collect the data needed. The first limitation was the small percentage of respondents to the surveys. The external survey was sent to a large group within the IAFC with only twenty seven responses back, which doesn't truly represent the large number of fire departments across the US. The Internal survey only received a 36% response rate from the entire department, once again not necessarily representing the overall feelings towards pre-planning. The second limitation was that the Surveymonkey.com site only allows ten free questions to be asked before a subscription is required. This limited number of questions restrained the overall results. The third limitation was the interviewee was just recently assigned the responsibilities of the pre-incident plan program. The fourth limitation was the rating scales used in the surveys did not have labels

which may have led to a less defined answer based on perception. The final limitation was that emails containing the links were being delivered to spam or clutter folders.

Results

Through descriptive research using internal and external surveys, literature review, an interview, and analysis of the survey data the following research questions were addressed.

Research Question a: What are the objectives of Pre-Incident Planning?

The objectives of pre-planning are to get to know a building before an emergency occurs. The value of getting personnel into buildings within the area cannot be stressed. Pre-plans are being conducted with various objectives checked off along the way. A level of training accompanies a pre-plan by learning the route to get there, protection systems, alarm systems, hazards, etc. Also, an aspect of fire prevention is occurring in an informal way as crews notice code violations they can be communicated to the occupancy owner or the fire prevention office (Dicristofalo, 2017)

The literature review further identified that Galvin (2006), Clark (1991), and Massey (2004) all agree that one of the primary objectives is getting to know the building through ahead of time so that the personnel can be prepared for any incident that may occur. Massey (2004) believes that being prepared for all incidents is the key to saving lives and property.

The ISO during an evaluation gives points to a department for conducting building pre-plans annually. They award up to 12 points based on a department's ability to conduct, store, and access plans (ISO, 2012). The author believes, that objectives such as having a department program that explains how a plan for each target hazard building will be completed, as well as a plan to review them each year would assist with meeting the ISO stated objectives. This

achievement of having each target hazard building that can be referenced in a time of need would assist with the primary objective of reducing loss of lives and property in the community.

The internal survey results pointed out the most important building site assessments to those that will use the plans identified building protection systems, locations of the fire alarm control panel, hydrants, site address, and building specific hazards as the most useful. Each of these can assist the crews with mitigating an incident in a timely manner.

The findings identified the objectives of pre-planning to be based on information needed to effectively mitigate a scene from hazards that are present. By knowing the building and its features the information can be used to be successful. Through following recommendations, recognizing building features, and having clear understanding of the purpose the objectives can be met.

Research Question b: What are the standards and methods that exist to accomplish effective pre-incident planning?

This question was answered through conducting a literature review and a personal interview to identify what standards and methods are use either in the fire service or the FMFD. Through a review of information found on the internet and text books, the identification of NFPA standards were identified.

There are standards that exist through the NFPA such as NFPA 170 and 1620 that provide recommendation for symbols and pre-plans. The FMFD is aware that these exist and can be utilized but the standards were never attached to the program or provided for personnel to use (Dicristofalo, 2017). As stated by Younger (2016) NFPA may list requirements

but there is no enforcement for not following those requirements. Also, others like ISO have standards but they are only specific to frequency not how the pre-plans are to be conducted.

NFPA 1620 has various portions that outline what the pre-incident process involves and how to conduct it. The following was found to relate to effective pre-incident planning through standards and methods (NFPA, 2014-b).

- 4.1.2 General- The pre-incident plan developer should be competent and familiar with the basic information to be collected and included.
- 4.5 Pre-Incident Plan Document- A standardized pre-incident plan document shall be utilized throughout the authority having jurisdictions response area.
- 4.6 Pre-Incident Plan Sketches- The symbols provided in NFPA 170 shall be utilized for consistency among pre-incident plan users
- 4.8 Training- The pre-incident planning process shall include a provision for training and education in areas that are unique and unusual

The primary methods and standards identified through the literature review and other procedures identified that NFPA, ISO, and the needs of the AHJ are what drive the pre-planning process. A process of pre-planning hinged on the findings would lead to a more effective planning process for pre-incident plans.

Research Question c: How are pre-incident plans completed and accessed in other fire departments?

Through review of standards and text pertaining to pre-incident plans, it was identified that standard guidelines do exist though the NFPA 1620 standard but they are only a recommendation. Although a common goal exists with pre-incident planning, as explained by

Cote (2008) each department has the opportunity to access and complete pre-plans in line with their needs and the standards that exist. To answer this research question an external survey was utilized to identify how other departments across the nation complete and access their pre-plans. This survey was sent through the IAFC website to all members in order to collect a wide variety of responses.

Survey question #1, asked respondents to provide basic information about rank, years of service, and department size. The external survey produced twenty six (26) respondents at a rank of Lieutenant/Captain or up to Fire Chief. With the rank structure of departments being different across the US, the question did not allow for further information identifying if the specific rank listed was an administrative or line position. The average years of service was twenty one (21) years out of twenty six (26) responses, with the least being nine (9) years and the highest was thirty seven (37) years. The importance of pre-plans to the respondent in terms of usefulness for protecting lives and property was rated highly important by fifteen of twenty seven (56.6%). The lowest rating was by two of twenty seven (7.4%) at a 4 on the 0-10 scale. This data showed a level of perspective on importance of pre-incident planning based on the factors of rank, years of service, and department size.

Survey question #2, asked respondents to rate the importance of pre-incident planning to the fire service. Fifteen of twenty seven responses (55.6%) rated the process of pre-planning highly important to the fire service. The lowest rating showed two of twenty seven (7%) respondents viewed pre-planning as a 5 of 10 on the rating scale provided. This data determined the importance of pre-planning to the fire service as a whole. Based on the data the majority of the responses understand that pre-planning is one of the many vital programs to the fire service.

Survey question #3, asked if the respondents had a standard operating procedure for pre-incident planning. Standard Operating Procedures (SOP) are used to ensure consistent and safe operations and guide the actions of personnel. Eleven of twenty seven (41%) have a written SOP that provides clear direction for completing pre-incident plans. There were three of twenty seven (11%) that have no written SOP to guide pre-planning actions. The largest number was from thirteen of twenty seven (48%) who have a verbalized expectation of what is to occur when conducting pre-incident plans, but no written policy exists to reference. This data was helpful in determining if other departments implemented a formal guiding document or expectation for performing pre-plans. Based on the results, most of the departments that responded had some form of explained expectation detailing the process of pre-planning which could create consistency in conducting and accessing the plans.

Survey question #4 asked respondents if their organization uses a pre-incident planning software program. Of the twenty seven responses only slightly more than half (51%) utilize a program to access and view their pre-plans that are completed. In the comments provided for those that had a program various programs were identified. The software program, Fire House, was listed the most by four of thirteen that use it. This data was useful in identifying specific programs that are being used to draw and view pre plans. The comments of some respondents identified that many programs exist. At the most basic level each program provides a place to store a plan to be viewed at a later time. The question did not provide insight into challenges of each specific program or if they were even effective.

Survey question #5, asked who is tasked with completing pre-incident plans. Twenty three of twenty seven (85%) of respondents answered that company officers and the crew are

responsible with completing the pre-incident plans. This data provided insight into who is primarily responsible for conducting the pre-plans in their department.

Survey question #6, asked how many pre-incident plans are required to be completed each month. Out of twenty seven responses the common result showed that pre-plans are usually assigned annually over monthly. The results varied for each response but this data was useful in identifying if departments have a pre-determined number of pre-plans required for completion. The data was hard to interpret due to the vast differences from department and community size.

Survey question #7, asked if pre plans completed are done in a consistent manner. Nine of twenty seven (33.3%) stated that pre-plan symbols and drawings as well as content are consistent across the department. The next highest response was eight of twenty seven (29.6%) claiming no the content, symbols, and drawings are not consistent across the department. This data was useful in determining consistencies or inconsistencies in the pre-planning process. Data was also helpful in identifying if it is the drawing or information collection that is not consistent. The results showed based on further evaluation of individual responses, that six of the nine (75%) who stated yes to the question also had a formal written policy on the process. The other two of the nine claimed no, the drawings and symbols are not consistently used across the department.

Survey question #8, asked respondents how pre-plans are stored and accessed for emergency incidents. The largest response was thirteen of twenty seven (48%) stating that pre-plans are accessed in a computerized format on the Mobile Data Computer (MDC). Eight of twenty seven (30%) use both a hard copy and computerized format to access the pre-plans at an emergency incident. This data was useful in determining how other departments are storing and

accessing their completed pre-plans. The data identified that twenty one of twenty seven (78%) are using both hard copy documents and computerized format to access pre-plans during an emergency situation.

Survey question #9, asked if the pre-incident plan provides the first alarm assignment the information needed to mitigate an emergency situation. Almost half of the respondents at 44% stated that the information collected during a pre plan is accessible in a timely manner and useful to the primary units for handling the emergency. There was 18% of the respondents that stated the information collected is neither accessible nor useful to the initial crews on an emergency. Nine of twenty seven (33%) claim the information is useful but accessing in a timely manner creates a challenge. This data was helpful in determining if the problem is accessibility or information being collected that creates a challenge for crews on scene. With the time factor of an incident for saving lives and property, having 51% of the respondent's state they cannot access the information in a timely manner identifies a challenge with usability of the plans as a tool in the tool box.

The results of the external survey identified that a written policy will aid in assisting departments with managing a consistent pre-plan process. Also, the ability to have access to the plan in the field on a call within a timely manner is identified as a challenge. With the factors of department size, community size, and possibly department budget, the challenges to completing pre-plans annually as recommended by ISO is identified. Lastly, the amount of software programs or ways to draw and document a plan across the US, creates a challenge to consistency in the fire service. Other departments are accessing the data but each with different programs. Pre-plans are completed and accessed differently across each department, but the survey assisted with identifying the common components.

Research Question d: What are the current challenges to the FMFD pre incident planning program?

A survey was conducted internally though an email with a survey link to all FMFD personnel. The survey produced twenty nine responses (36%) in total across the department. The survey was open to all ranks from Administration to entry level Firefighter.

Survey question #1, asked respondents to select their current rank. This data was helpful in identifying perspective differences based on their current rank. The primary contributors to the survey held a rank of Engineer or Captain making up 68% of the responses. On further review of the individual responses a trend was identified that seven of the ten Captains who responded all felt dissatisfied with the level of training and clarification of the purpose for pre-planning. Among the other ranks the level of satisfaction varied.

Survey question #2, asked the respondents to select their years in the fire service. Eleven of twenty nine (38%) had sixteen or more years of fire service experience. Ten of twenty nine (34.5%) had eleven to fifteen years of service. This data helped to determine perspective of pre-plans based on the individual's time in the fire service. Based on the years of service data those with more time on the department rated the importance of pre-planning versus other department programs actually lower than those individuals with less time in the fire service.

Survey question #3, asked respondents to rate the importance by usefulness of pre-planning to the fire service in terms of protecting lives. Eleven of twenty nine (37.9%) felt it was highly important. Twenty eight of twenty nine (96.6%) rated the act of pre-incident planning in the fire service at a seven or higher on the zero to ten scale provided, with the total weighted

average of 8.72. This data was useful to determine that the majority of respondents feel the pre-plans are useful to saving lives and property in the fire service.

Survey question #4, asked the respondents to rate the current overall effectiveness of the FMFD pre-incident planning program. The average weighted rating was 4.3 on a zero to ten scale used. This data is useful to determine how effective the FMFD's current PIPP is. With an overall average of four, the program does not measure up to the importance that the process has to the fire service. This data identifies a gap between the importance of creating an effective program based on the perception of the level it should be at versus the department's current state.

Survey question #5, asks if NFPA 1620 and 170 have been referenced when completing a pre-plan. The survey identified that eighteen of twenty nine (62%) have not referenced NFPA 1620 and/or 170 to assist them with completion of the pre-plans. Eleven of twenty nine (37.9%) have referenced the documents with six respondents specifically using NFPA 1620. This data was helpful in identifying if the nonuse of the NFPA standards may be leading to inconsistencies in the pre-planning process. Information shows 62% of respondents use the standards to assist with creating a consistent pre-plan.

Survey question #6, asked how satisfied the respondent is with training received towards the current pre-planning process. Training for the current pre-plan program was assessed resulting in fourteen of twenty nine (48.3%) that were somewhat to very dissatisfied with the training received towards the current pre-incident planning program. Only three of twenty nine (3.4%) were very satisfied. There were 31% of the respondents that were neither satisfied nor dissatisfied with the training received towards the current program. This data was useful in determining if training was received on how to properly conduct a pre-plan.

Survey question #7, asked the respondent if they agreed or disagreed that the purpose of the pre-incident planning program had been explained thoroughly. There were zero of twenty nine respondents (0%) that strongly agreed the purpose of the FMFD program had been explained. Ten of twenty nine (34.5%) agreed that the purpose was explained. Nineteen of twenty nine (64%) were not able to agree that the purpose had been explained. This data was helpful in determining if a clarified vision had been expressed for all to understand what was to be achieved with the pre-planning process.

Survey question #8, asks the respondents to prioritize the programs and requirements that most often effect operations. Pre-incident planning was prioritized as number two out of five after fire and emergency medical services (EMS) training. There was fourteen of twenty nine (48.2%) that rated it number two, with 24% of respondents placing it as there number one priority out of the list provided. This data was useful in identifying how the department programs currently taking place are viewed in terms of importance by the personnel. Data showed that those with ten years or less rated pre-incident planning higher at a two. The personnel that have eleven years or more was twenty of the response created an average of two and a half rating. Although, this is only a slight change by looking at the individual responses the date identified eight of twenty placing the priority at a 3 or greater versus the other department programs.

Survey question #9, asked each respondent to choose three of eleven choices that were found to be a challenge, in their opinion, to the current pre-planning program. Fifteen of twenty nine (51.7%) listed training on how to complete pre plans as one of their three choices. The next highest was the use of a pre-plan in a computerized format at 48% or fourteen of twenty nine responses. The third highest choice identified as a challenge was a tie between they are not

easily accessed and scheduling of the pre plan at 31%. This data identified gaps in the current components that make up the pre-plan program. By addressing these challenges the program effectiveness rating may improve.

Based on the results of the internal survey, there are current challenges to the FMFD identified. The lack of a guiding policy to ensure each pre-plan is done consistently creates pre plans that are not usable. Also, training could be provided to ensure that each individual completing a pre-plan understood how to do so. The final challenge identified based on the data points to computer access of the plans that are completed while on the scene. Currently the plans are only in a hard copy within the apparatus of the first due district. Accessibility on the computer would be department wide allowing information to be shared.

Pre-incident planning holds great value for the personnel and the department. The program importance hasn't been clearly explained in a way to get buy in from at least the company officer who is tasked with completion. There is a lack of understanding that exists for what the personnel are doing and why. This program wasn't something done in the past in a formal way so with any culture change it is important to clarify a purpose and expectation to ease the challenges. The perception of the pre-plans seems to be that they are busy work with the value to both the firefighters and community out of sight. Training for the current process was provided approximately 2 years ago, only this training had a primary concentration on company level inspection which is no longer something that is done at the company level. Initial training is not enough to ensure pre-plans are continuing to be completed effectively. There should be annual training as well as a pre-plan training module within the acting officer task book to ensure that personnel understand the process (Dicristofalo, 2017).

The documents and software programs in place were initially for the company level inspection and fire prevention aspects. As time went on pre-plans became a priority using the same documents and software to accomplish. Once pre-plans are completed they are to be forwarded to the office of the Operation Chief. Once received the process was that they would be drawn into the Mobile Eyes program using a drawing program. This was not occurring due to time constraints and inconsistent drawings. This challenge of accessibility for the firefighters has existed from the start. The document used for collection is cumbersome and lacks a direction for drawing the building being pre planned. When it comes to accessibility, as technology continues to evolve the computerized format of storing and accessing plans becomes easier to access in a quick manner. The department has been trying to move away from paper and into using a Mobile Data Computer (MDC) on the apparatus to view completed plans. This does come with drawbacks as computers have down time and a cost. A form of both computer access and hard copies would be ideal for accessing the plans in a timely manner (Dicristofalo, 2017)

Discussion

The problem is the Fort Myers Fire Department (FMFD) does not have a standardized process to complete and access pre-incident plans in a consistent and timely manner, which increases the risk of losing lives and property. A policy does not exist that guides the action of the personnel on how to perform pre-plans consistently. Bianca, (n,d) stated that SOP's allow work to be completed across an organization at desired level consistently. The results from the internal survey identified that 75% of external respondents had a formal policy or expectation that was explained. Without clarified purpose of what is to be done it becomes difficult for personnel to complete the task. With the lack of both clarified purpose and a formal written policy there is a greater challenge presented to having an effective pre-plan program.

Both internally and externally the results of the survey display that the importance of pre-planning is understood. There is an agreement across the fire service, based on the survey results and literature review, that proper pre-incident planning can be effective at protecting lives and property. With this understanding though comes the reality that not all departments utilize the components that represent that importance. The entire process of gaining information, evaluating it, creating procedures using the information rounds out what makes pre-planning effective. One way of making the pre-plan more important in the eyes of the firefighters is to allow them to take part in the development of the process. Through working with all three sides, fire prevention, the occupant, and the fire personnel the process can be more complete (Lacey & Valentine, 2009). The internal survey results identified that certain aspects of a pre-plan are important for use in the field. Items like the protection systems and alarm locations can assist with mitigating an incident in an emergency. The current pre-plan process does not require this information to be drawn on the site plan. Without a consistent policy it is hard to ensure all personnel are collecting the important information for an effective pre-plan.

Research found that ISO (2012) requires all commercial, institutional, industrial, and hazard specific buildings to be pre-planned annually. At the current expectation of the department only two hundred eighteen buildings are pre-planned each year. This is only one thousand ninety buildings in a five year period. The maximum point value from ISO cannot be obtained at the current rate. The department is aware of the ISO requirements and the recommendation of NFPA 1620, but has not ensured a proper implementation of the pre-planning process.

Access to the completed pre-plans has been the largest challenge. In the fire service, as seen by survey results, there are numerous software programs available to assist with completing

and accessing plans. In 2013 FMFD purchased Mobile Eyes which provides the ability to both draw and access the plans. The completed pre-plans have not made it into the software program causing them to not be usable. Internal survey results showed that access was a top three challenge to the pre-incident planning process. The information that is gathered while performing a site survey form must be available to firefighters when responding to emergencies. This information has assisted emergency responders from possible injury and death (Robertson, 2005).

It was identified that the current process could be improved. Due to the initial hybrid program the pre-incident planning process never received the importance needed for success. By actually creating a well-rounded PIPP through a proper implementation process that includes many of the identified components, standardization could be achieved. Areas such as a guiding document, clarified purpose and importance to all, and specific site survey items, would assist with improvements overall.

Recommendations

After conducting a literature review and research through surveys and an interview it was determined that the FMFD could improve the potential for loss of lives and property by formally implementing a PIPP with various components. The problem is the FMFD does not have a standardized process to complete and access pre-incident plans in a consistent and timely manner, which increases the risk of losing lives and property. The implementation of a standardized process will allow consistent completion and timely access to pre-incident plans. The FMFD should develop the components found to be effective for a successful PIPP. Based on the analysis of data the following recommendations are made by the author.

First, it is recommended that the FMFD identify the department's purpose and benefit of performing pre-incident plans. A focus should be placed on determining current standards, ISO recommendations, and expectations of the community and government officials to clarify a true purpose for all stakeholders involved. Without a clear vision for the PIPP, the effectiveness would be lacking. By identifying the standards, expectations, and purpose all stakeholders would be reminded of the importance of pre-incident planning.

Second, it is recommended that the FMFD develops a formal Standard Operating Procedure (SOP) that guides the personnel in completion and understanding of the purpose, scope, and actions steps involved in the process of performing pre-incident plans. A policy that can be referenced and used to guide actions would allow for standardized completion of pre-plans. Also, a level of accountability would exist with a formal guiding document.

Third, it is recommended that the FMFD develops a survey for local departments to specifically identify the software program commonly used for plan documentation and access in the Lee County area. With the Lee County departments working together on a daily basis the ability to share information on target hazard buildings is priceless. By identifying a common program the consistency across the area can be improved.

Fourth, The FMFD should develop a training course for the PIPP to be delivered annually. As seen in the results of the internal survey, the respondents felt training was not provided at a proper level to achieve successful pre-incident plans. Implementation of a formal training course that focusses not only on initial aspects but continued efforts would help to achieve standardization of the PIPP. This course would include at least the following:

- Overview of the PIPP and purpose

- Review of the SOP, standards, and requirements
- Training on utilized forms and programs

Finally, The FMFD should perform an evaluation of the implementation process and its effectiveness. Constant evaluation should be conducted by those completing the pre-plans as well as the Administration personnel overseeing the program. The evaluation process would lead to improvements in consistency and effectiveness.

A recommendation to the future readers of this ARP is to conduct further research into the pre-incident planning programs available for use. Although components have been identified that would assist with standardization of the current program, one challenge still appears to be the software program being used. By identifying other software programs and researching possible ArcGIS uses that are usable, an effective and consistent PIPP could be achieved.

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Appendix 1

From: David Jacobs
Sent: Sunday, December 11, 2016 5:39 PM
To: Fire Department
Subject: EFO Research Survey-your input is needed

To All,

I am currently in my first year of the National Fire Academy, Executive Fire Officer Program (EFOP) conducting research for my applied research paper (ARP). The purpose of this research is to determine important components for standardizing and implementing an effective program, usable to the responding companies for protecting lives and property. Please take 5-8 minutes to complete this short 10 question survey pertaining to the current pre-incident planning process used at the FMFD. Thank you in advance for your time.

Follow the link to access the survey:
https://www.surveymonkey.com/r/K23FH9C

Respectfully,

David Jacobs

Appendix 2

Pre Incident Planning Internal Survey

Pre-Incident Planning Internal Survey

I am currently in my first year of the National Fire Academies, Executive Fire Officer Program (EFOP) conducting research for my applied research paper (ARP). The purpose of this research is to determine important components for standardizing and implementing an effective program, usable to the responding companies for protecting lives and property. Please take 5-8 minutes to complete this short 10 question survey pertaining to the current pre-incident planning process used at the FMFD. Thank you in advance for your time.

---

1. What is your current rank?

- Firefighter
- Engineer
- Captain
- Battalion Chief
- Administration

2. How many years have you completed in the fire service?

- 5 or less
- 6-10
- 11-15
- 16 or more

3. On a scale from 1-10, In general how would you rate the importance of pre incident planning to the fire service in terms of usefulness for protecting lives and property? 10 is highly important.

Not important **highly important**

4. On a scale from 1-10, in your opinion how effective is the Fort Myers Fire Department's current pre-incident planning program? Rate the overall process of completing walk through, collecting info, drawing plans, and accessing them to assist in protecting lives and property.

Not effective **Highly effective**

5. Have you referenced NFPA 1620 Standard for Pre Incident Planning or NFPA 170 Standard for Fire Safety and Emergency Symbols to assist with completing a pre-plan?

- Yes
- No

Which one did you reference?

6. How satisfied or dissatisfied are you with the amount of TRAINING you have received towards the pre-incident planning process we currently utilize?

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied
- Somewhat dissatisfied
- Very dissatisfied

7. Would you agree or disagree that the PURPOSE of the Fort Myers Fire Department's pre-incident planning program has been explained thoroughly?

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

8. How would you rank the priority of the following programs/requirements? Order them with 1 being the most important and 5 being the least.

Hydrants

Pre-incident planning

Fire and EMS training

Public relation events and talks

Building Inspections

9. Choose 3 of the following choices that represent the largest challenges/complaints to the current pre-incident planning process at the FMFD. Identify 3 that you think, if corrected, would make the pre-incident planning process more effective.

- ☐ Poor survey form/ information sheet
- ☐ Absent SOP/SOG
- ☐ Training on how to complete a pre plan
- ☐ Lack of time during the month to complete
- ☐ Inconsistent symbols or lack of identified symbols
- ☐ Scheduling of the pre plan
- ☐ Identification of buildings that should be pre-planned
- ☐ Drawing the building layout
- ☐ Use of the pre plan in a computerized format
- ☐ To much information needed
- ☐ Not easily accessed enroute / not able to access enroute

Other challenges/complaints not listed: 

10. From the choices provided below, choose the information you feel you would be most important while enroute to a structure fire/ fire alarm. *Remember that there is only a limited amount of time while enroute to the scene to gather information, so your choices should be what you would need initially to mitigate the situation.*

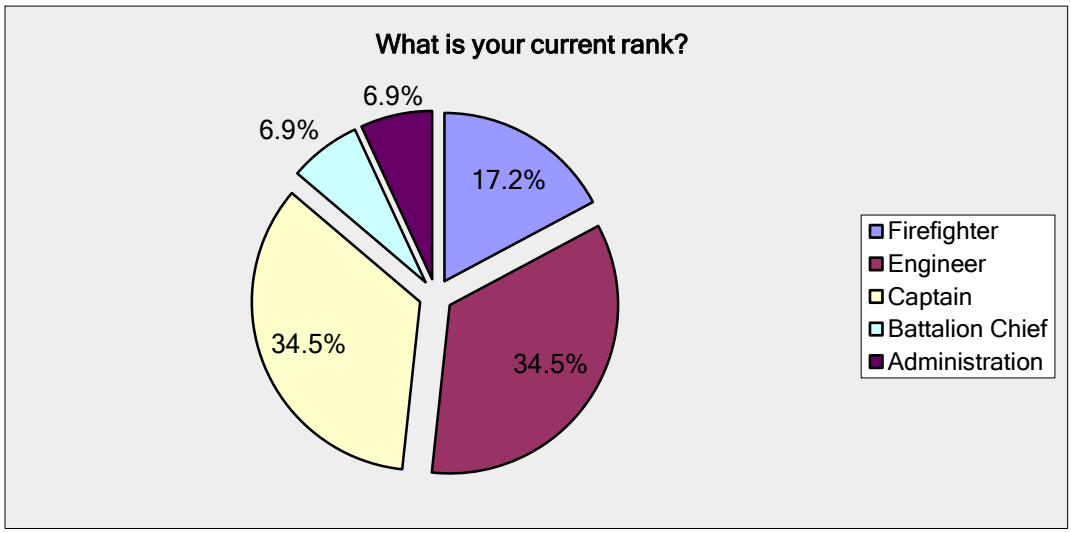
- ☐ Address
- ☐ LxW of structure
- ☐ Business name
- ☐ Hydrant location
- ☐ Initial actions to be taken
- ☐ Hydrant GPM/flow
- ☐ Knox box location
- ☐ # of floors
- ☐ Protection systems, sprinkler shut offs, FDC's etc.
- ☐ FACP location
- ☐ Exposures
- ☐ Utility shut off
- ☐ Roof type
- ☐ Electrical panel
- ☐ Construction type

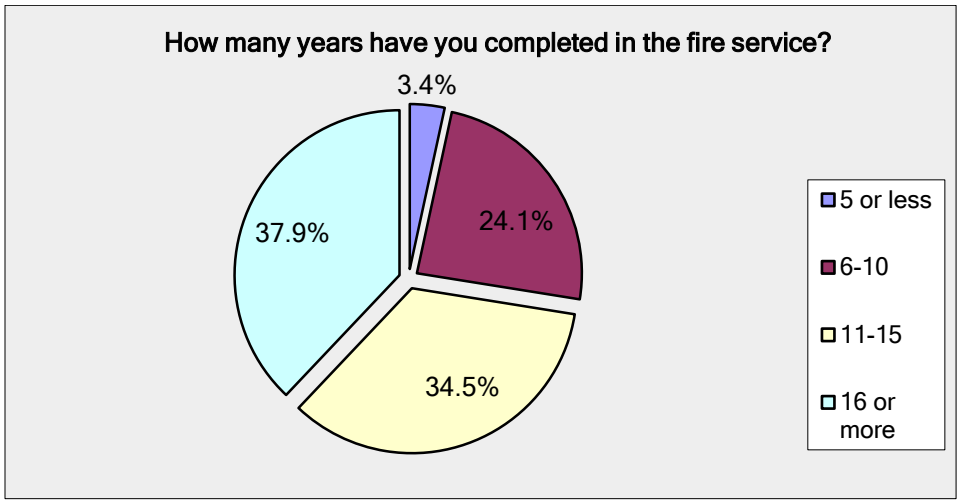
- ☐ Directions to the address
- ☐ Building access and egress points
- ☐ Hazards

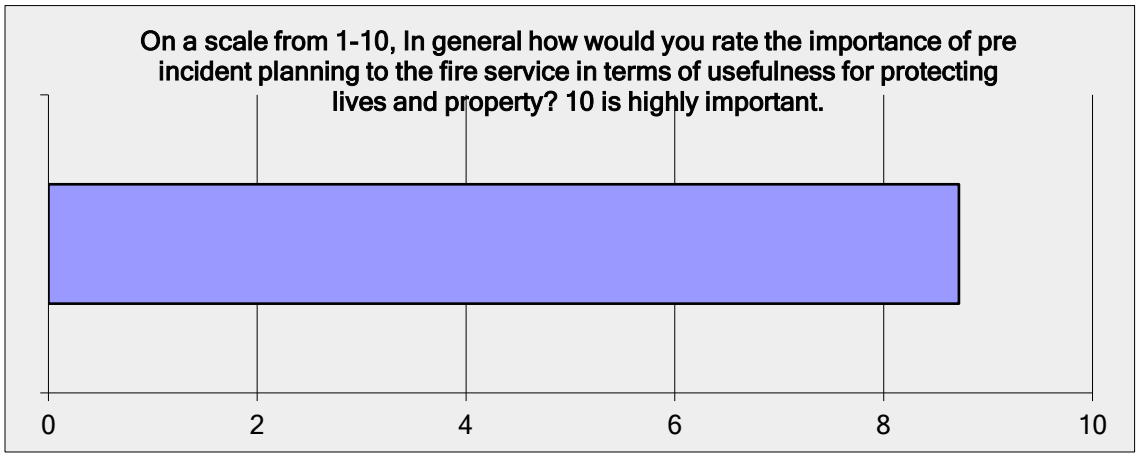
Other 

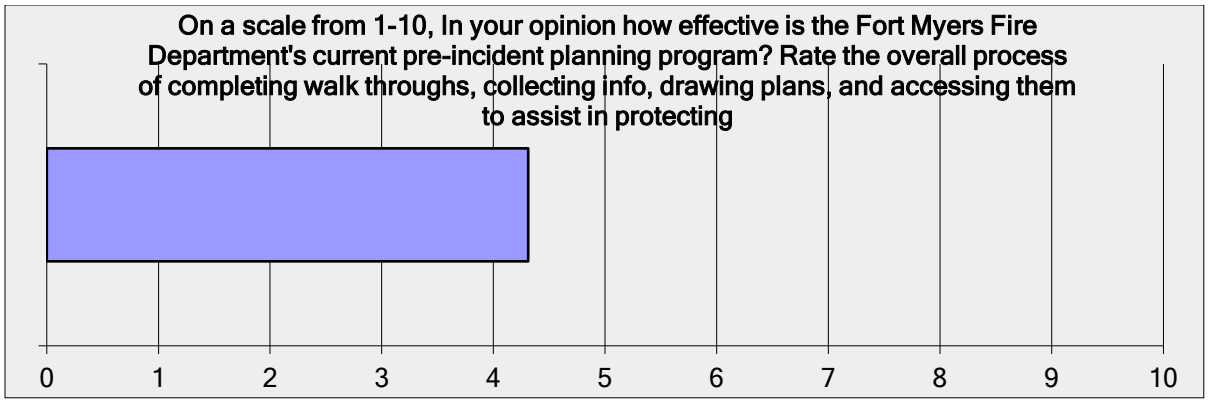
Appendix 3

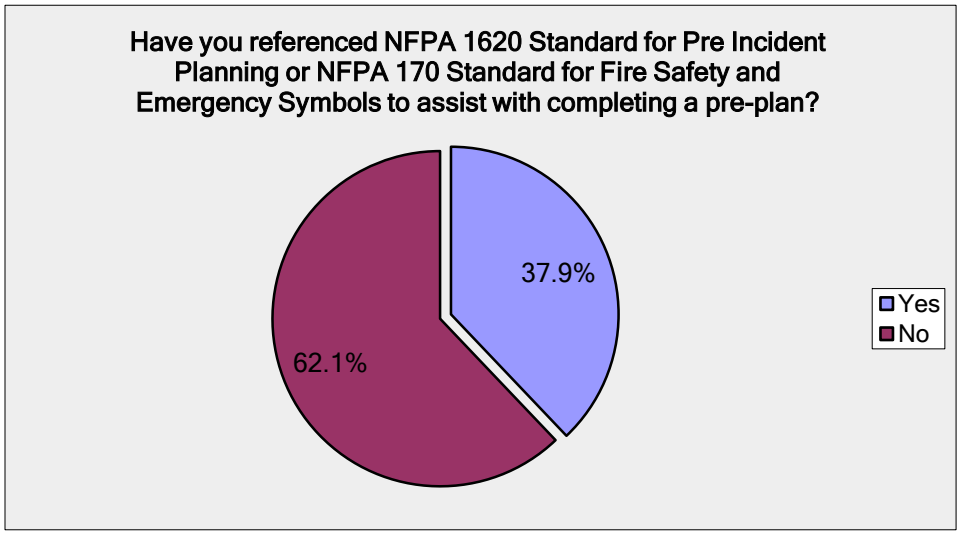
Internal Survey Results

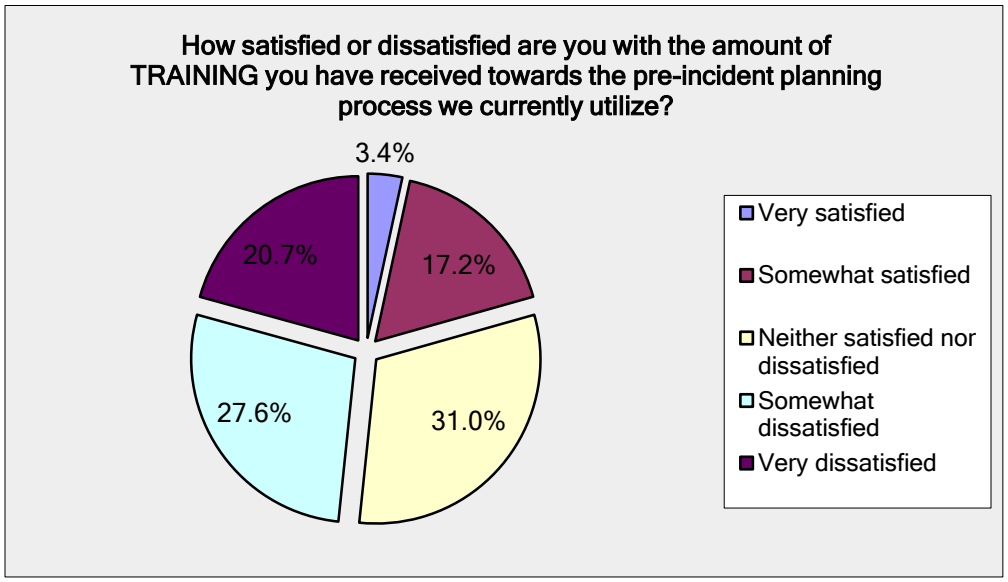


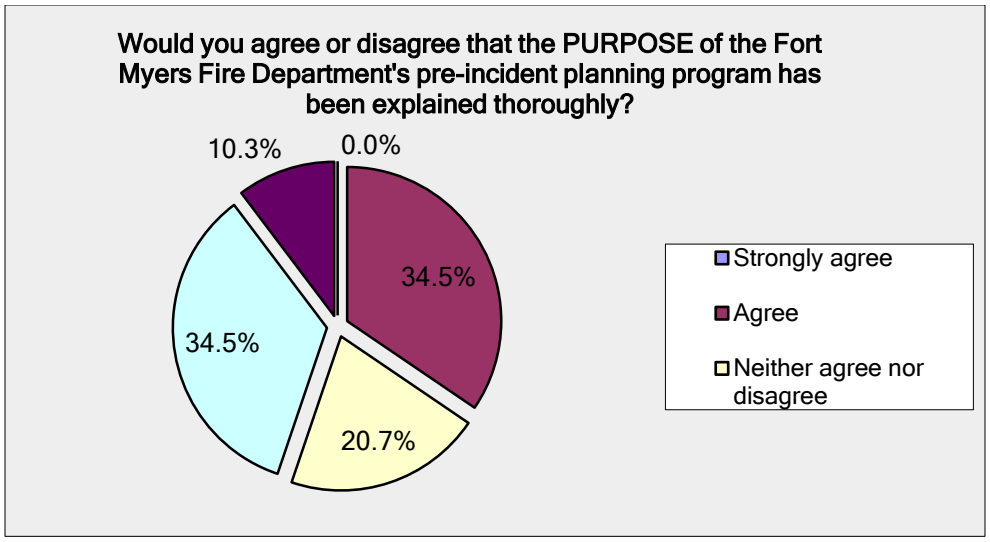


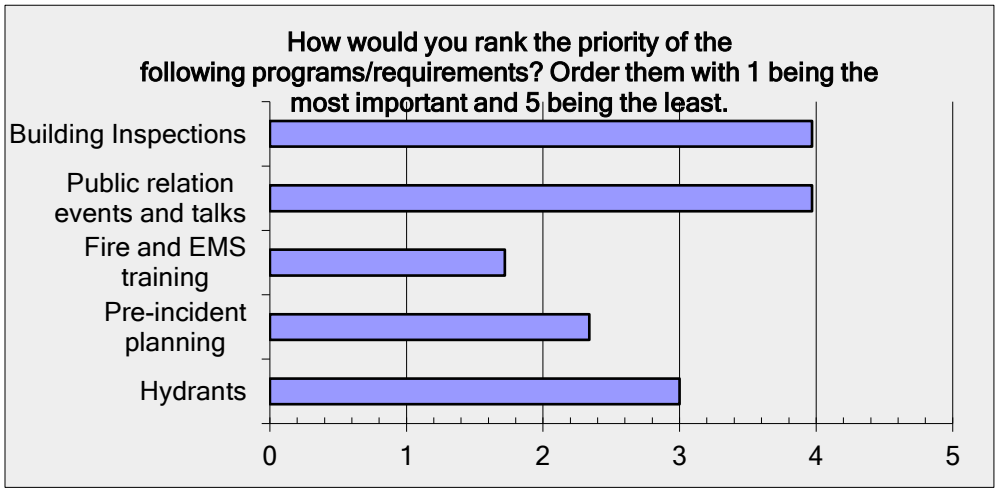


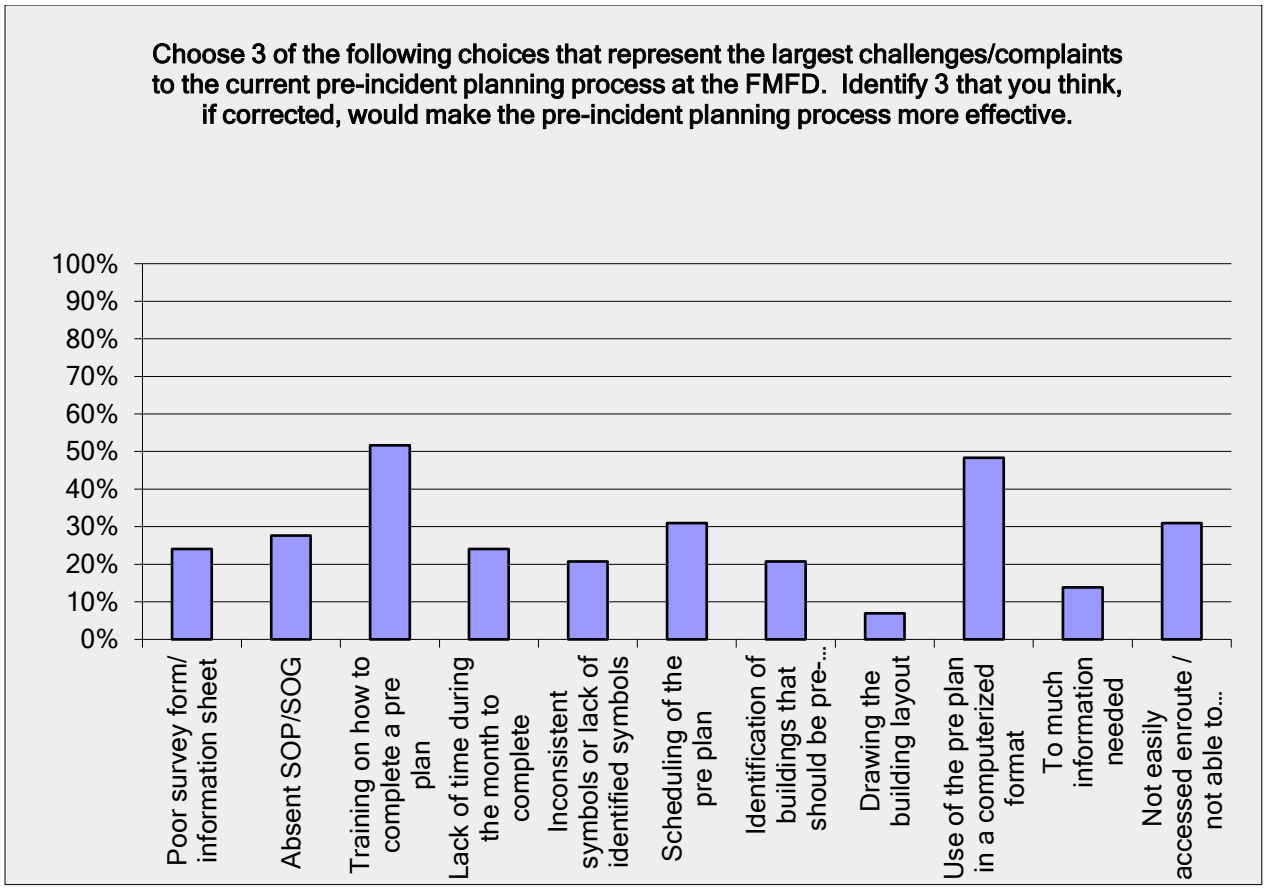

On a scale from 1-10, In your opinion how effective is the Fort Myers Fire Department's current pre-incident planning program? Rate the overall process of completing walk throughs, collecting info, drawing plans, and accessing them to assist in protecting
0
1
2
3
4
5
6
7
8
9
10

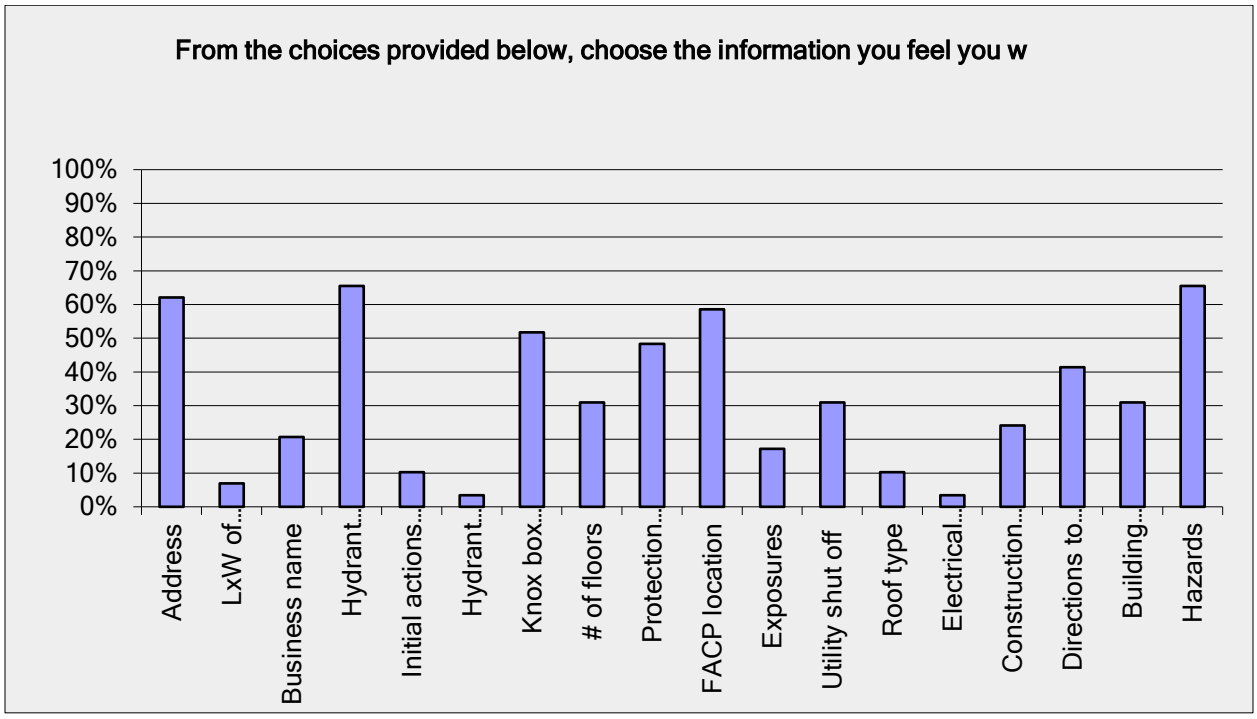

Have you referenced NFPA 1620 Standard for Pre Incident Planning or NFPA 170 Standard for Fire Safety and Emergency Symbols to assist with completing a pre-plan?
37.9%
62.1%
Yes
No


How satisfied or dissatisfied are you with the amount of TRAINING you have received towards the pre-incident planning process we currently utilize?
3.4%
17.2%
31.0%
27.6%
20.7%
Very satisfied
Somewhat satisfied
Neither satisfied nor dissatisfied
Somewhat dissatisfied
Very dissatisfied


Would you agree or disagree that the PURPOSE of the Fort Myers Fire Department's pre-incident planning program has been explained thoroughly?
10.3%
0.0%
34.5%
34.5%
20.7%
Strongly agree
Agree
Neither agree nor disagree


How would you rank the priority of the following programs/requirements? Order them with 1 being the most important and 5 being the least.
Building Inspections
Public relation events and talks
Fire and EMS training
Pre-incident planning
Hydrants
0
1
2
3
4
5


Choose 3 of the following choices that represent the largest challenges/complaints to the current pre-incident planning process at the FMFD. Identify 3 that you think, if corrected, would make the pre-incident planning process more effective.
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Poor survey form/ information sheet
Absent SOP/SOG
Training on how to complete a pre plan
Lack of time during the month to complete
Inconsistent symbols or lack of identified symbols
Scheduling of the pre plan
Identification of buildings that should be pre-...
Drawing the building layout
Use of the pre plan in a computerized format
To much information needed
Not easily accessed enroute / not able to...


From the choices provided below, choose the information you feel you w
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Address
LxW of...
Business name
Hydrant...
Initial actions...
Hydrant...
Knox box...
# of floors
Protection...
FACP location
Exposures
Utility shut off
Roof type
Electrical...
Construction...
Directions to...
Building...
Hazards

Appendix 4

Pre-Incident Planning Survey External

Pre-Incident Planning External Survey

As a first year student of the National Fire Academy's Executive Fire Officer Program: Executive Development course, this survey is being conducted as part of the Applied Research Paper (ARP) to identify how other departments view, access, and use pre-incident plans. Please take a few moments to answer the questions found below and complete by the requested end date of February 10, 2017. Thank you for your time and feel free to pass the survey link onto others!

---

1. Would you please provide the following information?

Name of Department:

Rank/Title:

Years of service:

Department size (approx. # of personnel):

Does your department conduct pre-incident plans?

Email address:

2. On a scale from 1-10, In general how would you rate the importance of pre incident planning to the fire service in terms of usefulness for protecting lives and property? 10 is highly important.

Not important								**highly important**
○	○	○	○	○	○	○	○	○

3. Does your organization have a written SOP/SOG that covers the process of completing pre-incident plans?

- ○ Yes, there is a policy that provides clear direction for completing pre-incident plans
- ○ Sort of, a verbalized communication of what is expected exists but a specific policy has not been created
- ○ No, there are no policies that provide for consistent completion of pre-incident plans

4. Does your organization utilize a pre-incident planning software program? If yes, what is the name of the program used?

- ○ Yes
- ○ No

What is the name of the program you use?

5. Who is tasked with completing the pre-incident plans?

- Company Officer / crew
- Fire Prevention
- Outside Agency

Other (please specify)

6. How many pre-incident plans are required to be completed each month?

7. In your opinion, are the pre-incident plans your department completes done in a consistent manner across all stations/districts, providing a useful plan in the end?

- Yes, the content and drawings/symbols are consistent across the department
- Somewhat, the collected building information is consistent but drawings/symbols are not
- Somewhat, the drawings/symbols are consistent but required building information is not
- No, the content and drawings/symbols are not consistent across the department

Explain if needed

8. How does your department store pre-incident plans for future use on an emergency incident?

- In a binder or book (hard copy), carried on the apparatus
- Computerized format, accessible on scene through a mobile computer
- Both
- None of the above

Other (please specify)

9. In your opinion, does the pre-incident plans your organization produces from its current process, provide the initial operating personnel (first alarm) with the information necessary to mitigate an emergency situation?

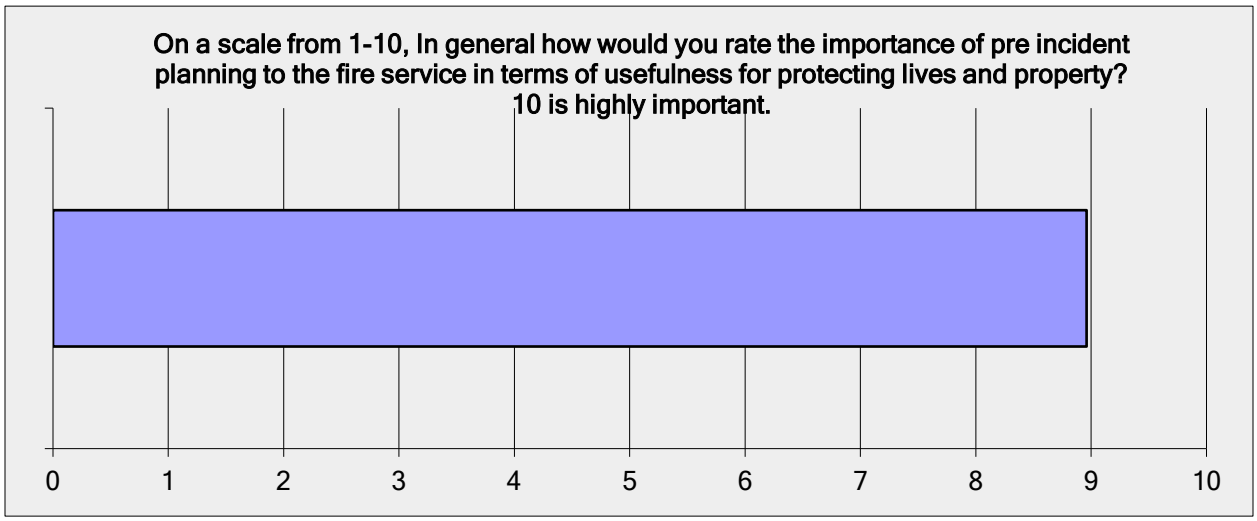
- Yes, the information collected, is accessible in a timely manner and useful to the initial units to ensure safe effective operations at the scene.
- Somewhat, the information collected is useful but not easily accessed
- Somewhat, the information collected is accessible but not useful
- No, the information collected, is not accessible in a timely manner and not useful to the initial units to ensure safe effective operations at the scene.

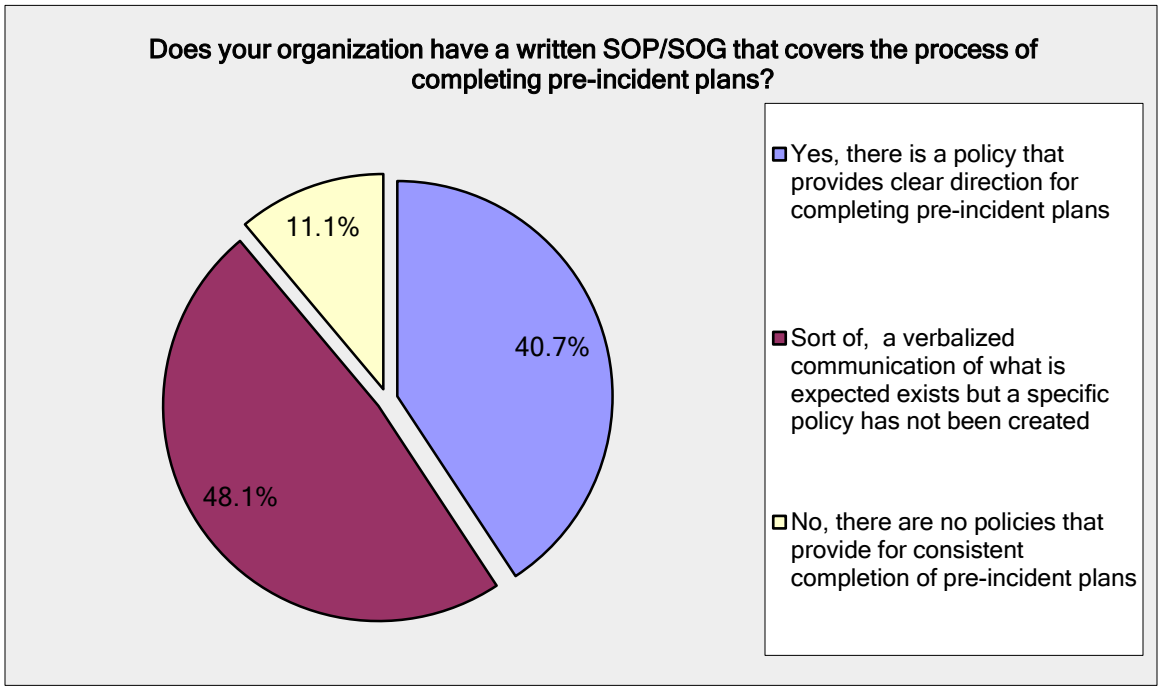
Other (please specify)

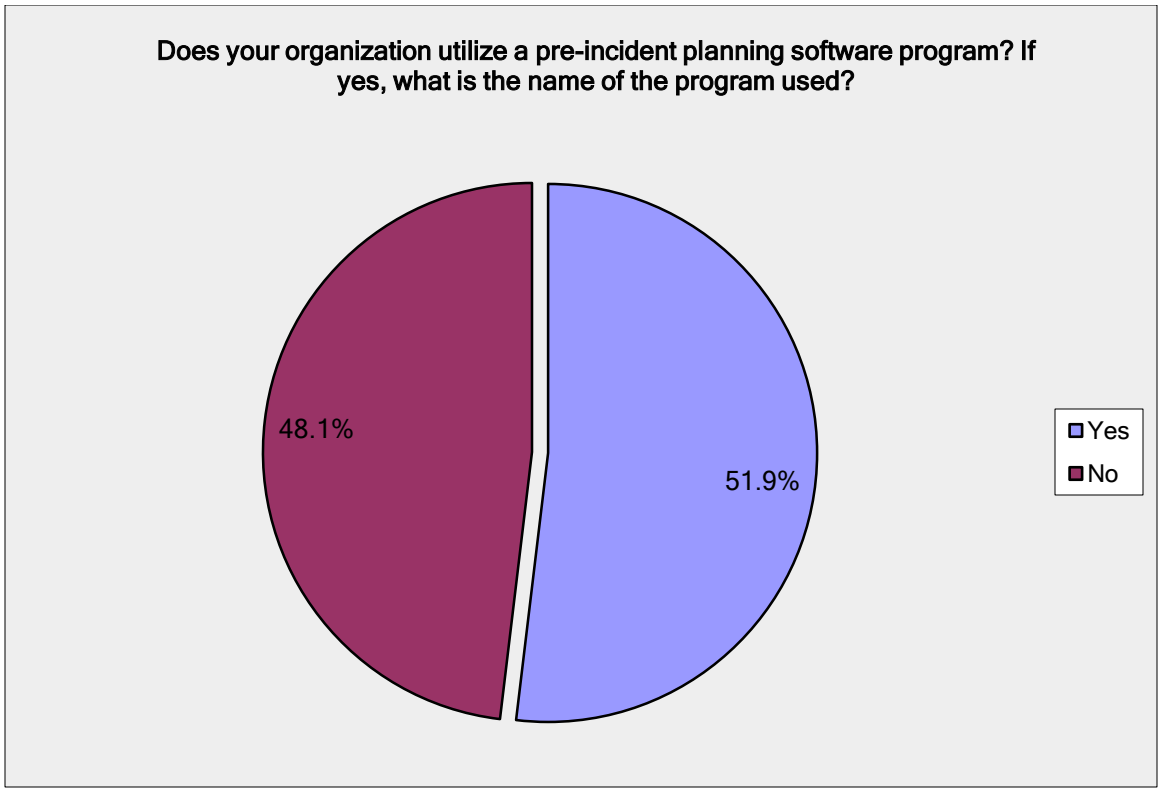
10. Provide any comments in regards to pre-incident planning that may not have been asked but you feel would be important to identifying how your organization completes and accesses pre-incident plans.

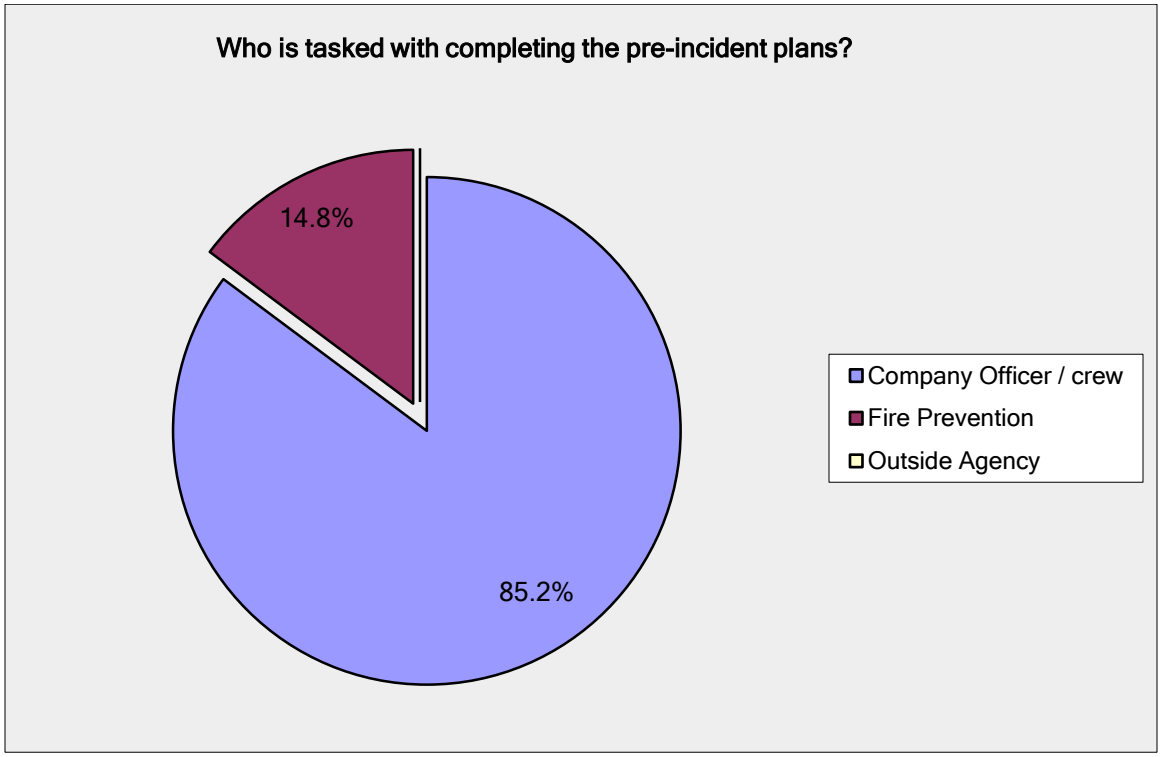
Appendix 5

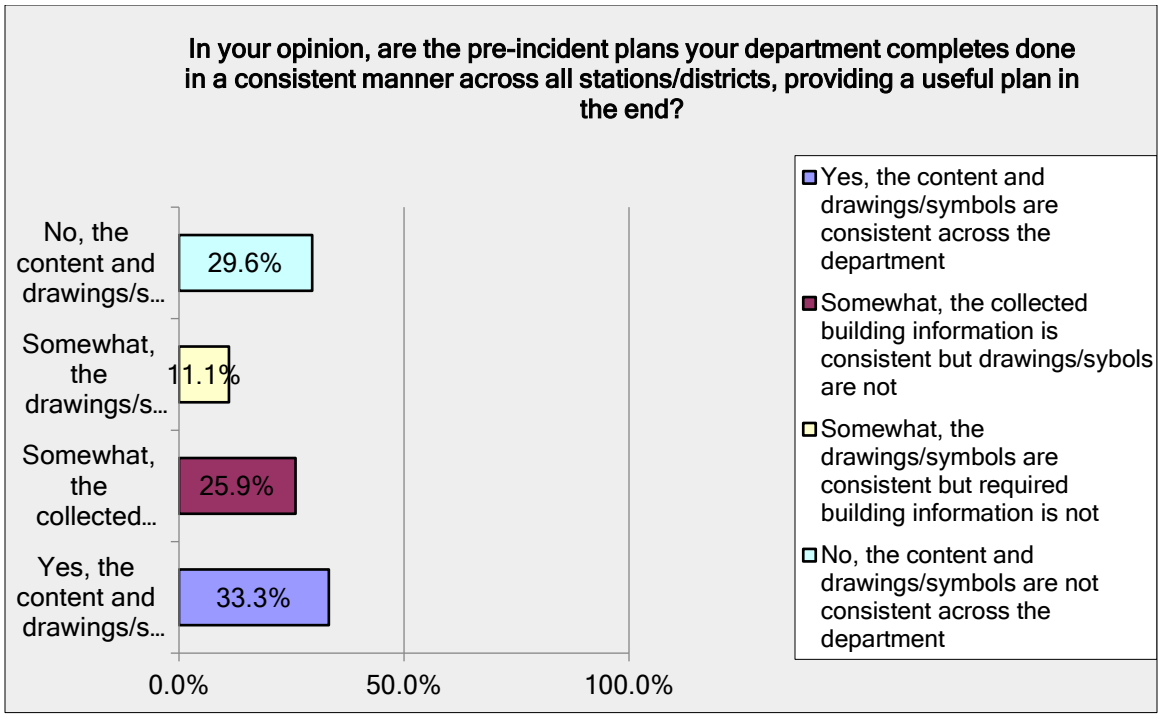
External Survey Results

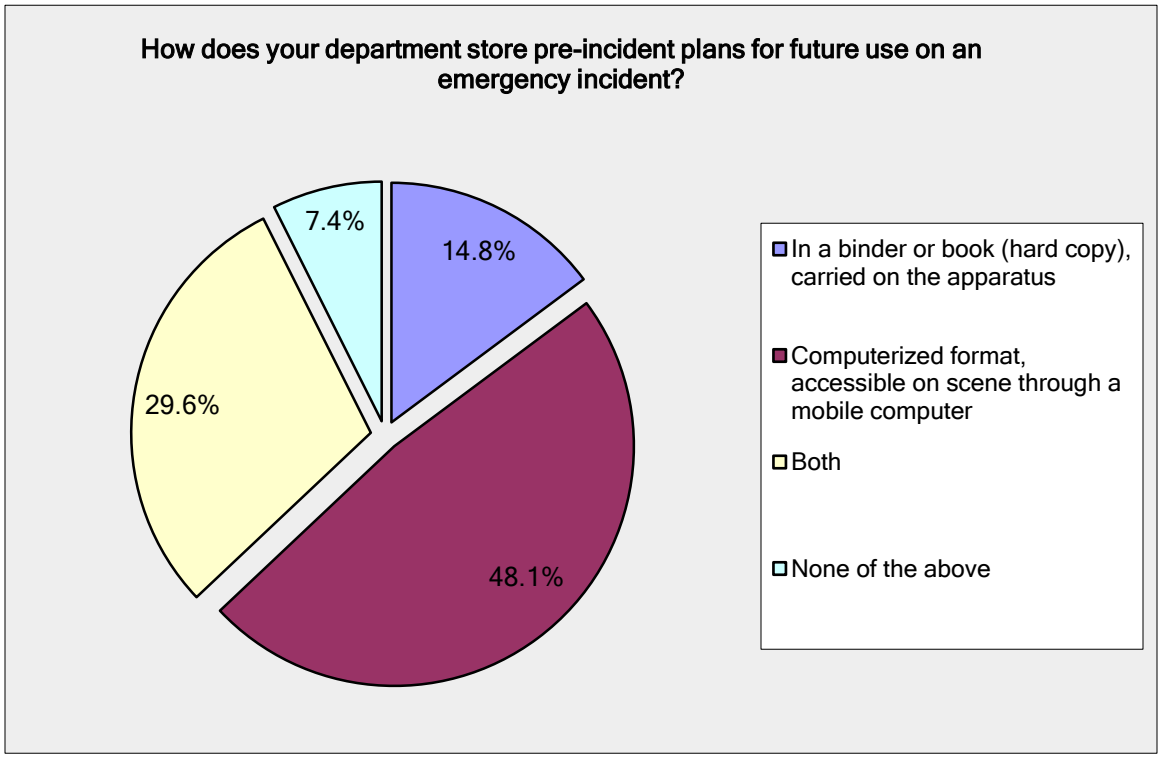


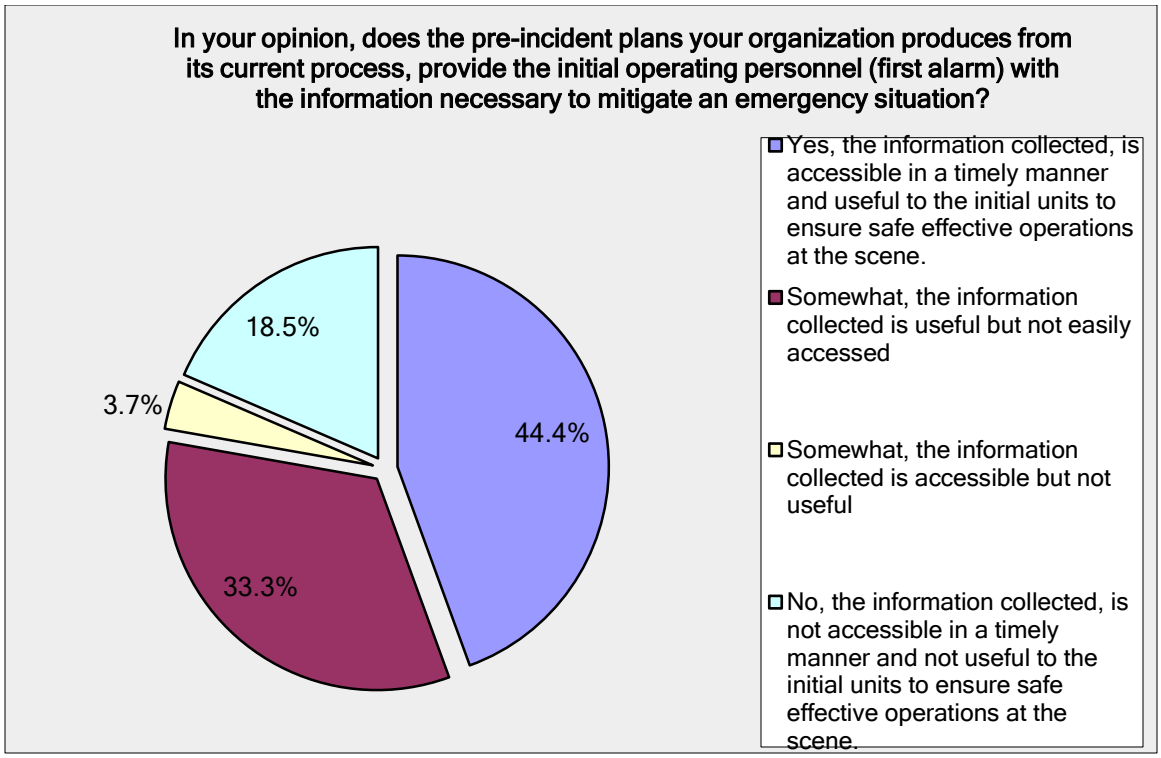



Does your organization utilize a pre-incident planning software program? If yes, what is the name of the program used?
48.1%
51.9%
Yes
No


Who is tasked with completing the pre-incident plans?
14.8%
85.2%
Company Officer / crew
Fire Prevention
Outside Agency


In your opinion, are the pre-incident plans your department completes done in a consistent manner across all stations/districts, providing a useful plan in the end?
No, the content and drawings/s...
29.6%
Somewhat, the drawings/s...
11.1%
Somewhat, the collected...
25.9%
Yes, the content and drawings/s...
33.3%
0.0%
50.0%
100.0%
Yes, the content and drawings/symbols are consistent across the department
Somewhat, the collected building information is consistent but drawings/sybols are not
Somewhat, the drawings/symbols are consistent but required building information is not
No, the content and drawings/symbols are not consistent across the department


How does your department store pre-incident plans for future use on an emergency incident?
7.4%
14.8%
29.6%
48.1%
In a binder or book (hard copy), carried on the apparatus
Computerized format, accessible on scene through a mobile computer
Both
None of the above


In your opinion, does the pre-incident plans your organization produces from its current process, provide the initial operating personnel (first alarm) with the information necessary to mitigate an emergency situation?
18.5%
3.7%
44.4%
33.3%
Yes, the information collected, is accessible in a timely manner and useful to the initial units to ensure safe effective operations at the scene.
Somewhat, the information collected is useful but not easily accessed
Somewhat, the information collected is accessible but not useful
No, the information collected, is not accessible in a timely manner and not useful to the initial units to ensure safe effective operations at the scene.

Appendix 6

David Jacobs <djacobsfd@gmail.com> 12/7/16
To Scott, Vincent

Chief,

As part of the National Fire Academy Executive Fire Officer Program (EFOP), I am conducting research for my Applied Research Paper. I am researching the pre-incident planning components and challenges in both the fire service and our organization. I am requesting a time to meet and interview you in the near future. This interview will help document, identify, and evaluate the current practices of our program against national standards and programs that are successful. If you should have any questions don't hesitate to ask. I look forward to our meeting.

Respectfully,

David Jacobs
Battalion Chief- A Shift
City of Fort Myers Fire Department

Appendix 7

Pre Plan EFO Interview

What's your current involvement with pre-planning program from your rank? What are your responsibilities with pre-planning?

What are you and or the department looking for from the training position?

What is the importance of pre-incident planning to our personnel?

What is the importance of pre-incident planning to the community?

On a scale of 1 to 10, rate the importance of pre planning to the fire service.

Do you feel the line personnel completing the pre-plans have all the training and resources needed to accomplish them? Why?

What do you feel are the core components to an effective pre incident planning program?

What are the specific information we should be gathering when in the field completing a pre-plan?

Have we in the history of our department had a review process for pre-plans?

Do we use and follow the standards of NFPA 1620 and 170? Why or why not?

Where do pre-plans go once they are completed and forwarded through the chain of command?

How are Pre-plan sites chosen to complete for each station?

What is our formal guidance document and/or expectation for the pre-incident planning process?

What are the challenges to our current pre-incident planning program? If these challenges are known, why haven't they been addressed to improve the program?