# INCORPORATING COMMERCIAL AND HIGH LIFE HAZARD OCCUPANCY FIRE PREVENTION VISITS INTO ROUTINE ACTIVITIES OF THE OPERATIONAL STAFF OF THE EUREKA FIRE PROTECTION DISTRICT

#### LEADING COMMUNITY RISK REDUCTION

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An Applied Research Project submitted to the National Fire Academy as part of the Executive Fire Officer Program

## **CERTIFICATION STATEMENT**

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

Signed.	
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#### Abstract

The problem was that the operational staff of the Eureka Fire Protection District (EFPD) had limited knowledge of commercial and high life hazard occupancies. This lack of familiarity was caused by the cessation of company commercial fire prevention inspections several years ago.

The purpose of this research was to describe various types of activities that occur during company fire prevention visits to commercial and high life hazard occupancies. It described benefits and disadvantages to both firefighting personnel and occupants and owners of commercial and high life hazard occupancies when company personnel accomplished fire prevention visits to these buildings. This descriptive research project included the following research questions:

- 1. What types of activities occur during company fire prevention visits to commercial and high life hazard occupancies?
- 2. What are the benefits to firefighting personnel in doing fire prevention visits to commercial and high life hazard occupancies?
- 3. What are the disadvantages to firefighting personnel in doing fire prevention visits to commercial and high life hazard occupancies?
- 4. What are the benefits to occupants and owners in company personnel doing fire prevention visits to commercial and high life hazard occupancies?
- 5. What are the disadvantages to occupants and owners in company personnel doing fire prevention visits to commercial and high life hazard occupancies?

A literature review conducted at the Learning Resource Center of the National Fire

Academy started the procedural process for the research. Other procedures included a business

survey of the businesses in the EFPD and a fire department survey of fire departments in the Greater St. Louis Region Fire Chief's Association.

The results showed that in service inspections were a vital component of the fire prevention program both for reducing hazards and for firefighter familiarization.

The researcher recommended that a modified inspection and familiarization program be implemented at the EFPD.

## Table of Contents

Certification State	ment	2
Abstract		3
Table of Contents		5
List of Figures		6
Introduction		7
Background		8
Literature Review		11
Procedures		18
Results		19
Discussion		29
Recommendations		33
References		35
Appendix A	Learning Resource Center Literature Request Listing	36
Appendix B	List of Executive Fire Officer Applied Research Projects	38
	Requested from the Author	
Appendix C	Business Questionnaire	40
Appendix D	Eureka Chamber of Commerce Business Listing	42
Appendix E	Fire Department Survey	51
Appendix F	Greater St. Louis Region Fire Chief's Association Listing	53

# List of Figures

Figure 1 Business survey responses to question one. (s=103)	21
Figure 2 Business survey responses to question two. (s=103)	22
Figure 3 Business survey responses to question three. (s=72)	23
Figure 4 Business survey responses to question four. (s=78)	23
Figure 5 Business survey responses to question five. (s=69)	24
Figure 6 Fire department survey question one. (s=35)	25
Figure 7 Fire department survey question two. (s=35)	25
Figure 8 Fire department survey question three. (s=35)	26
Figure 9 Fire department survey question four. (s=35)	26
Figure 10 Fire department survey question five. (s=35)	27
Figure 11 Fire department survey question seven. (s=35)	28
Figure 12 Fire department survey question eight. (s=35)	28
Figure 13 Fire department survey question nine. (s=35)	29

#### Introduction

The problem is that the operational staff of the Eureka Fire Protection District has limited knowledge of commercial and high life hazard occupancies including: building layout, utilities, water supply, and fire load. This lack of familiarity is caused by employee turnover and the cessation of company commercial fire prevention inspections several years ago. This substantially increases the risk of death or injury to firefighters operating at fires in these often complex and hazardous structures.

The purpose of this research is to describe various types of activities that occur during company fire prevention visits to commercial and high life hazard occupancies. It will describe benefits and disadvantages to both firefighting personnel and occupants and owners of commercial and high life hazard occupancies when company personnel accomplish fire prevention visits to these buildings. This descriptive research project includes the following research questions:

- 1. What types of activities occur during company fire prevention visits to commercial and high life hazard occupancies?
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#### Background & Significance

The Eureka Fire Protection District (EFPD), a property and real estate tax supported governmental entity, was created by a vote of the citizens in November of 1970. Prior to this election fire protection was provided by the all volunteer Eureka Volunteer Fire Department which was funded by a membership fee paid by the property owners in the community and other nominal fund raising efforts. The Eureka Volunteer Fire Department was formed as a result of a serious fire that threatened the unprotected community in 1944. Before the formation of the EFPD the growth of the community exceeded the capability of the Eureka Volunteer Fire Department to provide effective services.

The EFPD protects an 82 square mile community in southwestern St. Louis County and northwestern Jefferson County. The EFPD protection area includes 11 miles of interstate highway, 37 miles of rivers, a major theme park with adjoining water park, a medium security prison, the fifth largest Boy Scout reservation in the United States and a rare Midwestern ski resort. The population routinely is between 25,000 and 30,000 people in the predominantly bedroom community. The population during seasonal activities can increase to between 50,000 and 70,000 people. The Eureka Fire Protection District provides fire suppression, education, and prevention activities as well as advanced life support transport ambulance service.

The EFPD hired the former volunteer Fire Chief George Manetzke, Jr. to lead the department as the first paid Fire Chief and first paid employee. Unfortunately Chief Manetzke became the only EFPD firefighter killed in the line of duty during a propane truck explosion in November of 1971. Since that time the Eureka Fire Protection District has hired full time staff over the years and currently has 35 full time employees both line and support, and volunteer staff that numbers about 60 line members at any time.

Beginning in 1971 with the appointment of the first volunteer Fire Marshal the EFPD initiated a fire inspection program that included commercial and high life hazard occupancies and new construction inspections. After the hiring of the first full time firefighters in 1974 the engine companies at various times accompanied the Fire Marshal and also completed on their own fire prevention inspections of commercial occupancies that were at reduced risk, for instance occupancies that were scheduled for an annual inspection only. At various times in the following years company fire prevention inspections were irregularly conducted based on the administration perception of the workload of the paid staff. There were consistent fire prevention inspections conducted by the fire prevention bureau personnel that included the Fire Marshal, part time and full time inspectors.

In 1993 the current Fire Chief and this researcher became the first State of Missouri Certified Fire Inspectors in the department. He was the Fire Marshal and this researcher was a Captain on shift then. At that time we were consistently accomplishing between three and six company fire prevention inspections per month per station. There was minimal training for the staff conducting these inspections. The occupants of these businesses were therefore frustrated at times with the quality and application of the codes in regards to these inspections.

In 1996 the current Fire Chief and the former Fire Chief switched jobs with the former Fire Chief once again becoming the Fire Marshal, a position he had a long tenure in prior to his appointment as the Fire Chief in 1991. At this time the Eureka Fire Protection District also hired a full time fire inspector. In this arrangement the company fire prevention inspections came to an end. The Eureka Fire Protection District since 1996 has not conducted company fire prevention inspections.

Staff turnover (an average of two full time staff per year), increased training and public relations commitments and other workload requirements have all contributed to the low priority placed on conducting company fire prevention inspections. Recently the full time staff has become increasingly vocal in their interest in some sort of familiarization program for commercial structures and high life hazard occupancies. This applied research project is a method to discern various activities that are being accomplished in company fire prevention inspections and also to identify new types of company fire prevention activities that are less adversarial than inspections.

This research project submitted following the December 8 through 19, 2003 Leading Community Risk Reduction course at the National Fire Academy relates to Unit 2 Assessing Community Risk and Unit 4 Intervention Strategies portions of the course. By providing recommendations to improve the familiarization and knowledge of the staff of the Eureka Fire Protection District this research project directly relates to the operational directives of the United States Fire Administration in that it will "reduce the loss of life from fire of firefighters" (Executive Fire Officer Program Applied Research Guidelines p II-2) and the increased opportunity to provide additional guidance, education, and a less adversarial approach to fire prevention for commercial and high life hazard occupancies will address the directive "to promote within communities a comprehensive, multi-hazard risk reduction plan led by the fire service organization." (Executive Fire Officer Program Applied Research Guidelines p II-2)

#### Literature Review

Performance of the literature review allowed the author extensive background information compiled from applied research projects, books, and electronic media. The review began at the Learning Resource Center at the National Fire Academy and also included Internet resources, the St. Louis Community College Library, Forest Park Campus the library at the Eureka Fire Protection District Training Center, and the researcher's personal library.

Research question number one asks: What types of activities occur during company fire prevention visits to commercial and high life hazard occupancies? Robertson (2000) states that "many cities assign fire suppression companies to conduct code enforcement inspections. Training must be provided to participating fire company personnel." (p. 61). He also outlines several factors that should be adhered to while conducting a successful fire prevention inspection. The first is that the inspector should be well prepared (p. 70). Preparation for the inspection should include a "thorough knowledge of the local fire safety code, as well as other relevant municipal or state codes that might apply" (p.70). Time requirements should be such that there would be sufficient time to conduct the inspection (p.71). In preparing for the inspection the frequency should be considered based on staff availability and hazards associated with the occupancy (p.71). The inspector should familiarize themselves with reports of previous inspections so that efforts on the part of the occupant in correcting deficiencies can be confirmed (p.72). Robertson (2000) continues that in preparation the inspector should present themselves in the most professional possible manner of dress (p.72). The inspector should also be prepared to make notes of the findings of the inspection either written or electronic (p.72). Once the preparation is complete the inspector should, upon arrival at the occupancy, identify himself and ask for permission to inspect the premises (p.73). Permission should be obtained from a duly

authorized person representing the occupancy (p.74). The inspection tour should encompass all areas of the facility in a systematic approach (p.74). During the tour special considerations should include exposures, potential fire hazards, potential causes of fire, potential for spread of fire, water supplies and any extinguishing systems, and life safety features of the facility (p.74-78). A discussion of the findings and an exit interview should be part of the communication with the authorized representative for the occupancy (p.79). The report of inspection should be appropriately documented and filed with notations on violations and the need for re-inspection (p.80).

IFSTA (1998) in chapter one states that "In many jurisdictions, basic inspections are performed by fire companies." (p. 5). Inspections include preparing for an inspection, conducting the inspection including taking photographs and using checklists, conducting a closing interview, creating drawings, and finally submitting a written report (p. 29-36).

Mullins (2003) states that in his department engine companies were limited to performing inspections on commercial buildings of less than ten thousand square feet. Fire Inspectors covered the other buildings (p. 6)

Research question two asks: What are the benefits to firefighting personnel in doing fire prevention visits to commercial and high life hazard occupancies?

Robertson (2000) states that "The firefighter gains knowledge that is helpful in fire suppression duties. In conducting fire inspections and prefire planning surveys, the firefighter has an opportunity to learn about conditions in the buildings in the community before a fire occurs. This information can be of great help when entering a building during a fire emergency." (p. 56). He continues that by using suppression personnel in a fire prevention setting preconceived stereotypical depictions of the firefighter waiting at the station for a call can be

reduced or changed (p. 57). This will benefit the firefighters by enhancing the public perception of the fire department when the time comes to ask for increased funding for staff or equipment (p.58).

IFSTA (1998) defines pre-fire planning as "advance planning of firefighting operations at a particular location, taking into account all factors that will influence firefighting tactics" (p. 452).

Feeney (2003) reported that exposure to commercial properties will benefit the firefighters doing inspections; he also stated that issues such as firefighter safety and familiarity with buildings in the firefighters district would be enhanced. Other benefits are increased productivity and an enhanced public image. (p. 21)

Mullins (2003) recorded that pre-fire inspections not only correct potential fire hazards and enforce code compliance they also can gain valuable information on the buildings that are inspected (p. 11)

Morgenthaler (1998) describes that the members of his department are excited about the implementation of a program of company fire prevention inspections. They overwhelmingly look forward to the educational opportunity as well as the prefire planning opportunities that the proposed program will offer (p. 15)

Reece Jr. (1998) describes that many firefighters conducting fire prevention inspections in the Appleton Fire Department learn valuable information about building construction, hazards, and pre-incident tactics (p. 18)

Research question number three asks: What are the disadvantages to firefighting personnel in doing fire prevention visits to commercial and high life hazard occupancies? In his book Robertson (2000) clearly emphasizes that "Prefire planning surveys and fire prevention

inspections are devised for two different purposes, and combining the two into one inspection may place the property owner in a rather difficult position." (p. 61). "If the same firefighters are assigned to carry out both responsibilities at the same time, there is a possibility that the two undertakings will conflict with each other." (p. 61).

IFSTA (1998) states that "fire inspectors may be held liable for ministerial actions" (p. 7-8). IFSTA (1998) also states that "Frequently, fire inspectors will be confronted by code issues or conditions in an occupancy that are beyond their level of expertise." (p. 9)

A disadvantage in fire suppression companies conducting fire prevention inspections in the State of Florida is the significant amount of training and certification required by statute. While many departments are struggling to maintain required training in emergency response areas they cannot afford to provide the time or financial support to continue this type of inspection program (Mullins, 2003, p. 16)

In proposing a company fire inspection program in Castle Rock, Colorado the department will have to provide initial training and further annual proficiency training to the level of the International Fire Code Institute's Company Officer Fire Code Inspector certification. The time and budget to accomplish this will have to be determined (Morgenthaler, 1998, p. 18).

Time allotted and educational requirements were identified by the firefighters in the Appleton Fire Department as areas that they would like to see improvement (Reece Jr., 1998, p. 18-19).

Camp (1999) recommends that additional fire prevention training for firefighters along with advanced level training for company officers is essential in keeping the company fire inspection program successful (p. 28)

In 1994 the Murray City Fire Department implemented a self inspection program so that business owners in light or low hazard occupancies could complete an extensive checklist and return it to the fire department. This allowed engine company inspections to be focused on more hazardous occupancies reducing the workload on the engine companies (Camp, 1999, p. 8)

Research question number four asks: What are the benefits to occupants and owners in company personnel doing fire prevention visits to commercial and high life hazard occupancies?

Robertson (2000) cites a study conducted by The Urban Institute, the National Fire Protection Association, the National Science Foundation, and the US Fire Administration. One of the conclusions was that "cities that use fire suppression companies for a large share of their regular fire code inspections have substantially lower fire rates than cities that use full time fire inspectors exclusively" (p. 219). He states that "another result of public contacts by fire service personnel in fire prevention duties, especially if they are favorable in nature, is that, as citizens become more aware of the hazards of fire and gain confidence in the fire service they could well be encouraged to call the fire department without delay" (p. 57).

Feeney (2003) notes that "By preventing incidents which could mean lost productivity to the local business community, the public attitude toward the fire service and an inspection program can be greatly enhanced." (p. 21)

Mullins (2003) states that company inspections can help reduce the community's fire insurance cost because of the points awarded to the fire department for company's performing pre-fire inspections of many commercial structures within the department's response area (p. 12)

"In the current times of fiscal restraints, the fire service must strive to be effective, cost efficient and productive." (Reece Jr., 1998, p. 17)

Research question number five asks: What are the disadvantages to occupants and owners in company personnel doing fire prevention visits to commercial and high life hazard occupancies?

Robertson (2000) explains that "The property owner may be required to spend a great deal of money to comply with fire inspection requirements." (p. 80). In-service company inspections may not meet criteria for inspections as Robertson (2000) details in the section on preparation for performing the fire prevention inspection where he states "Under no conditions should an inspection be undertaken when the inspector is pressed for time and is thus unable to make a thorough inspection." (p. 71).

A self inspection program that replaced company in service inspections in Gwinnett County, Georgia has successfully responded to public pressure to reduce the involvement of the fire department in business and personal activities. In the Arvada Fire District in Colorado another self inspection program demonstrated high quality results as opposed to in service company fire inspections (McGee, 1997, p. 13-14)

The information reviewed for research question number one suggested that most departments are conducting standard fire prevention inspection utilizing suppression resources with the requisite record review, permission to inspect, a walkthrough of the facility, an exit interview with the escort, and an inspection report. Some departments also limit the types and sizes of facilities that are inspected by company personnel. In the research for question number two it is noted that these company fire inspections also frequently included prefire planning activities that included suppression personnel familiarization, information on building construction and features, automatic suppression and detection systems, water supply and firefighting access. Due to increased opportunities for personnel to interact with the public the

perception of firefighters may also be enhanced. One researcher outlined that there was an educational benefit to the firefighters due to increased training requirements and a change in attitudes when the inspections are accomplished. Overall the firefighter benefits are increased familiarity with structures, enhanced knowledge about building construction and features, and a further understanding of fire protection systems. These benefits also provide for enhanced firefighter safety during firefighting operations. A further benefit is that the increased visibility and interaction with the public produces attitude changes that may further benefit the fire department when they request an increase in funding or resources. Disadvantages to firefighting personnel outlined in the reviews for research question number three ranges from performing the multiple tasks of inspection and pre-fire planning undertaken during the inspection instead of focusing on just the inspection. There are also statutory requirements for training of personnel assigned to do inspection activities in many departments and locales. This additional training has caused a reduction in the inspection activities in many departments. Several departments found that increasing emergency responses have curtailed the time available to provide a quality in service inspection program. In one department the number of inspections were reduced by implementation of a self inspection program. When reviewing information for research question number four it was noted that materials consistently remarked that the reduction in fire hazards and actual fires due to increased company inspections provided a safety effect that minimizes lost production to the business community. The public image is also enhanced when the public interacts in a positive manner with in service suppression crews. Another benefit is realized when organizations like the Insurance Services Office award fire department ratings that improve the occupant's insurance rate thus saving the occupant money on their insurance premiums. Summarizing the information reviewed for research question number five shows that there may

be consequences both financial and legal if the company inspections reveal serious violations.

The business owners may also be negatively impacted if the in service inspections are inadequate or of poor quality. In fact in certain localities in service company inspections have been replaced with business self inspections with equivalent results in identifying hazards and violations.

#### **Procedures**

This research project was initiated by reviewing relevant literature on activities conducted by fire departments during suppression company fire prevention inspections. This review was conducted by utilizing the Learning Resource Center Online Card Catalogue at the National Fire Academy to request and download relevant applied research projects and books. This search of the card catalogue was accomplished by searching for the keywords inspection, company inspection, in service inspection, and fire prevention and subsequently downloading or requesting through interlibrary loan information that had been published after 1996. A listing of materials requested is attached as Appendix A. Additionally this researcher requested several Executive Fire Officer Applied Research Projects from the authors that were not available from the Learning Resource Center. This list is attached as Appendix B

The researcher also developed two survey instruments; the first questioned the Eureka Fire Protection District business owners listed in the 2004 Eureka Chamber of Commerce Directory. The survey is attached as Appendix C and the list of businesses that were sent the survey is attached as Appendix D. There were 333 surveys mailed to these occupancies and 103 (31 percent) were returned.

The second survey was mailed to the Fire Chief's or Fire Marshals of the member departments of the Greater St. Louis Region Fire Chief's Association. There were 48 surveys

mailed out and 35 (73 percent) were returned. The survey instrument is attached as Appendix E and the Greater St. Louis Region Fire Chief's Association mailing list is attached as Appendix F.

Recognized limitations for this effort included the timeliness of the majority of the literature was at least three years old. A variety of the literature that was available was significantly dated with the oldest that was accessed published in 1981. The fire department survey was limited to departments that were members of the Greater St. Louis Region Fire Chief's Association. Another limitation was the use of the Eureka Chamber of Commerce mailing list instead of the Eureka Fire Protection District Occupancy Inspection listing. The assumption that the Chamber of Commerce listing was more comprehensive was based on the researcher's personal involvement with the computer software used by the EFPD. A limitation that was also noted was a fault of the fire department survey instrument that failed to determine how many engine companies per department were conducting fire prevention inspections as opposed to the number of engine company fire prevention inspections conducted by department. *Definition of Terms* 

Company: A task related functional unit of fire suppression or emergency medical service personnel.

In Service: Fire suppression or emergency medical service companies available for emergency call.

Self Inspection: A fire safety inspection of a facility that is conducted by the building occupant without fire department personnel present.

#### Results

In reviewing the literature for research question number one several activities conducted during in service fire prevention inspections were described as a review of previous

inspection records prior to the inspections, gaining permission to conduct the inspection, the facility walkthrough looking for life safety, fire hazards and other hazards, operability of installed fire detection and suppression systems, building construction features, fire department access, adherence to code requirements, and educational information for the business owners.

The information revealed in the literature review for research question number two was generally based on the familiarization of the occupancies inspected by suppression personnel. The benefits for the firefighters in preplan activities enhance the safety of the firefighters during fire suppression activities at the previously inspected facilities. There is some evidence that the public image of the firefighters is also improved due to the company fire inspection. This improved public image is beneficial when the fire department has to justify to the taxpayers the need to increase finances and procure additional resources.

Question number three information concludes that the biggest disadvantage to firefighters performing company fire prevention inspections is that time constraints and training requirements may cause the fire suppression personnel to minimize their inspection activities or reduce the overall quality of the inspections.

The benefits to business owners in the literature referring to answering research question number four provides that any increase in the fire department's interaction with the business owner reduces the chance of having a disabling fire. The research shows that fire rates and losses are reduced when fire suppression personnel conduct in service fire prevention inspections. This lowering of the fire insurance rate is also financially beneficial to the building owner.

Research question number five is answered in the literature describing disadvantages for the business owner in fire company inspections. The literature states that a major

disadvantage can be that the business owner may have a considerable expense in correcting violations and hazards that were noted during an in service fire prevention inspection. Another disadvantage may be that in service fire suppression companies are still available for emergency call and may not have the time for an in service inspection causing an inconvenience for the business owner. Business owners in various localities have also implemented a self inspection program that minimizes the disruption and intrusion from fire department personnel and has proven to be equivalent to in service inspections in finding violations and hazards.

The survey instrument that was sent to business owners (Appendix C) based on the Eureka Chamber of Commerce 2004 Business Directory results follow. Out of 333 surveys mailed 103 (31 percent) surveys were returned. In answering the first survey question: "Does the Eureka Fire Protection District conduct fire prevention inspections at your business location?" 83 (81 percent) of the responses were yes and 20 (19 percent) were no. (Figure 1)

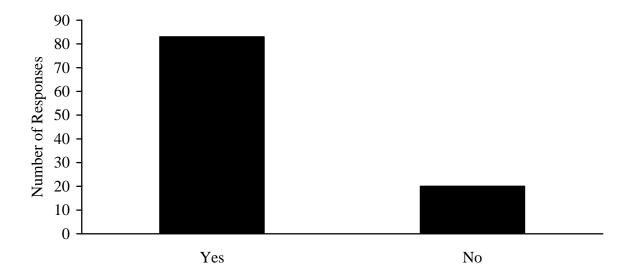


Figure 1 Business survey responses to question one. (s=103)

The second question on the business survey had the possibility of multiple answers and asked: What do you feel are important of the fire prevention inspection? 69 responded that the

overall fire safety review of the facility was important, 30 responded that specific inspection of fire protection systems and features was important, 41 felt that a fire department familiarization of the facility was important and seven others wrote in other important points of the inspection. (Figure 2)

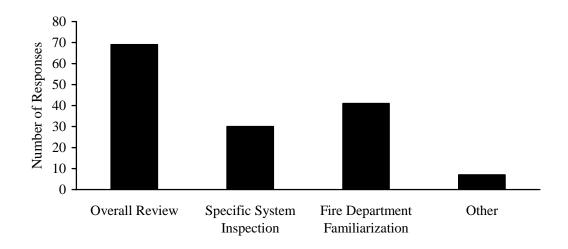


Figure 2 Business survey responses to question two. (s=103)

Business survey question three asked: "Would you be comfortable with using a self inspection checklist prior to a familiarization walkthrough by a small group of on duty firefighters or would you prefer a fire inspector conduct a fire prevention inspection?" of the 72 responses 22 (31 percent) preferred a self inspection and 50 (69 percent) preferred a traditional fire inspection. (Figure 3)

Answers to business survey question number four: "If you could change any part of the fire prevention inspection what would you change?" the 22 responses were in write in form. Of the 22 responses nine were strictly complimentary and five requested some form of self inspection checklist in reference to survey question number three. Four of the responses requested a scheduled inspection as the only change they would make. The individual comments included "aid us in requests to the landlord to have repairs made" and "I think they should truly

inspect the building. As it is now they just go through the motions." also "We have not had an inspection since we purchased the business since September 2003."

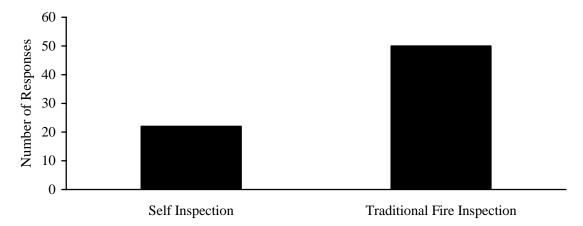


Figure 3 Business survey responses to question three. (s=72)

Business survey question number five asked: "Do you feel that the Fire Prevention Inspection is an imposition or a valuable tool to reduce risks from fire and other causes?" of the 78 responses four (five percent) felt that the inspections were and imposition and 74 (95 percent) felt that the inspection was a valuable tool. (Figure 4)

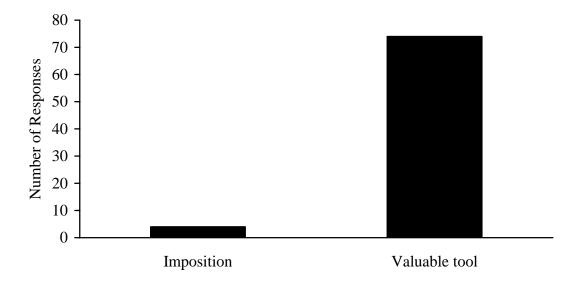


Figure 4 Business survey responses to question four. (s=78)

In answering business survey question number six: "Are you required by laws or regulations other than the ordinances of the Eureka Fire Protection District to have the fire department conduct Fire Prevention Inspections?" 15 (22 percent) out of 69 responded no and 54 (78 percent) responded yes. (Figure 5)

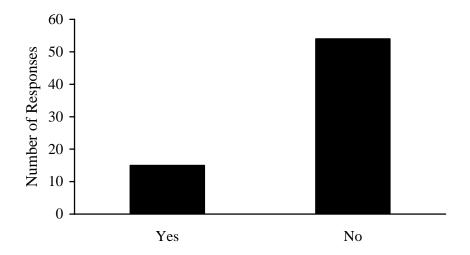


Figure 5 Business survey responses to question five. (s=69)

The results from the 35 (78 percent) returned of the 48 fire department surveys (Appendix E) follow.

#### *Summary*

Question number one asked: "Does your fire department conduct fire prevention inspections in commercial and high life hazard occupancies?" all 35 (100 percent) of the surveys that were returned answered yes. (Figure 6)

The second question on the fire department survey asked: "Does your fire department conduct engine company fire prevention inspections in commercial and high life hazard occupancies?" of the 35 responses 31 (89 percent) answered yes and four (11 percent) answered no. (Figure 7)

Results from the third question of the fire department survey that asked: "Do you provide fire prevention inspection training for the staff that conducts engine company fire prevention inspections in commercial and high life hazard occupancies?" showed that 29 (83 percent) answered yes and five (14 percent) answered no. (Figure 8)

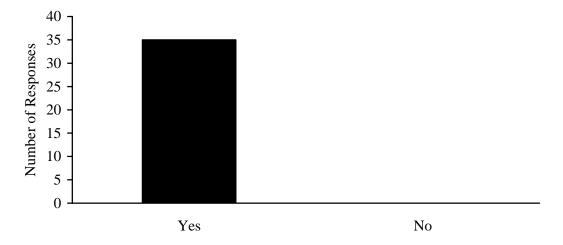


Figure 6 Fire department survey question one. (s=35)

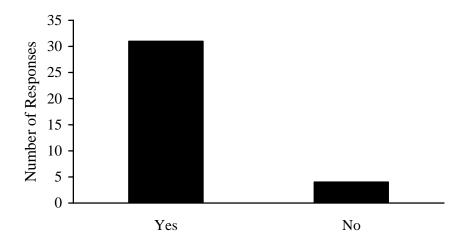


Figure 7 Fire department survey question two. (s=35)

Fire department survey question number four asked: "Are the engine company fire prevention inspections in commercial and high life hazard occupancies the only inspection

conducted for those buildings?" The responses revealed that 14 (40 percent) answered yes and 20 (57 percent) answered no. (Figure 9)

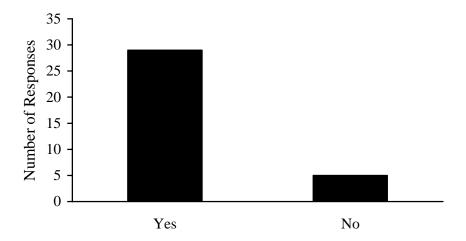


Figure 8 Fire department survey question three. (s=35)

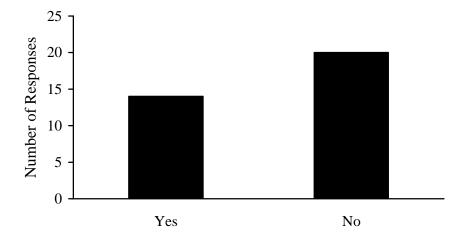


Figure 9 Fire department survey question four. (s=35)

Question number five on the fire department survey asked: "If the engine company fire prevention inspection reveals any violations is there a follow up inspection provided by a member of the fire prevention bureau?" The responses were 31 (89 percent) yes and two (six

percent) no. (Figure 10)

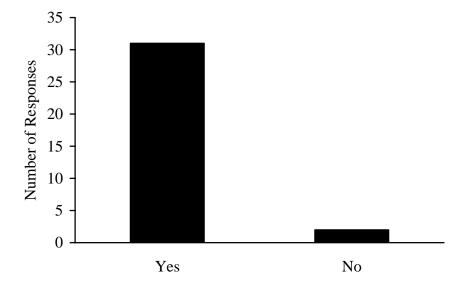


Figure 10 Fire department survey question five. (s=35)

Responses for fire department survey question number six which asked the departments to provide a number of engine company fire prevention inspections for various intervals. After tabulation all provided quantities were converted to an annual number for ease of comparison. There were 27 (77 percent) responses that indicated engine companies conducted fire prevention inspections. The minimum number of inspections that were indicated was ten per year and the maximum was 4000. The average number of engine company fire prevention inspections annually per department that responded that they conducted these inspections was 670.

Question number seven of the fire department survey that asked: "Please rate your overall idea of the reception by the business owners to your inspection program?" revealed that 34 (97 percent) of the responses were positive and one (three percent) was negative. (Figure 11)

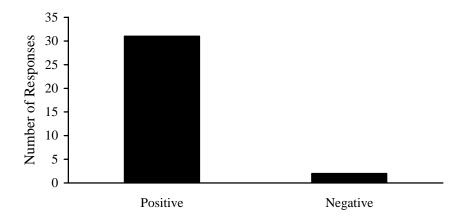


Figure 11 Fire department survey question seven. (s=35)

Responses for fire department survey question number eight that asked: "Please rate your overall idea of the reception by your staff to your inspection program?" showed that 24 (69 percent) were positive and nine (26 percent) were negative. (Figure 12)

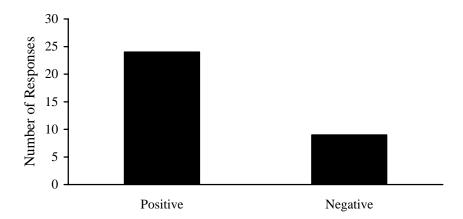


Figure 12 Fire department survey question eight. (s=35)

When the results for fire department survey question number nine that asked: "Overall do you consider your inspection program a public relations positive or a negative?" were reviewed they showed that 34 (97 percent) of the Fire Chiefs or Fire Marshals responded positively and one (three percent) responded negatively. (Figure 13)

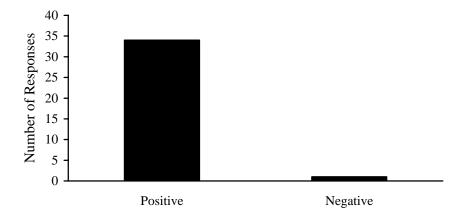


Figure 13 Fire department survey question nine. (s=35)

The last fire department survey question was a write in open comment question and the comments that were noted included "Engine companies should <u>not</u> do fire prevention inspections. This component of a comprehensive life safety program should be conducted by well trained professional fire inspectors." and "Engine companies only do follow up inspections." also "Each crew is assigned an area to inspect with an inspection season of late May to September 30<sup>th</sup> each year." Further comments included; "Inspections done by engine companies are not done under ideal conditions." and "I believe engine companies do not provide an effective inspection." Finally one responded "Overall fire prevention inspections are accepted well by business owners; however the biggest complaint I get is that there are inconsistencies from inspection to inspection due to different inspectors."

#### Discussion

It is evident from a majority of the literature reviewed that in service company fire prevention inspections play a vital role in a comprehensive fire prevention program. The activities described in the literature review for research question number one are consistent for standard fire prevention inspections throughout the fire service. Robertson (2000) outlines a

variety of tasks that should be included in the fire prevention inspection; including a review of the previous inspections reports, permission to inspect the facility, a systematic walk-through of the entire facility focusing on life safety features, fire hazards, potential for causes of fires, potential for fire spread and installed suppression and detection systems, an exit interview and a concise complete inspection report (p.74-78). Mullins (2003) says that his department limits the occupancies that in service companies are allowed to inspect (p. 6). In the fire department survey 89 percent of the responding departments conduct engine company fire prevention inspections in their jurisdictions. One of the main reasons this researcher chose this subject was an observation on the lack of fire inspections for occupancies in the Eureka Fire Protection District. Based on the study information this researcher agrees that a comprehensive fire prevention program should also include a quality fire prevention inspection program.

Significant benefits to firefighting personnel completing in service fire prevention inspections were outlined in the literature reviewed to answer research question number two.

Robertson (2000) says that firefighters gain knowledge that is helpful in firefighting activities if the building catches fire (p.56). Feeney (2003) remarks that firefighter safety will be greatly enhanced when firefighters are given the opportunity to familiarize themselves with commercial structures during fire prevention inspection or pre fire plan activities (p. 21). Mullins (2003) also states that there is a two sided benefit in that fire prevention inspections reduce the likelihood of fires by eliminating hazards and familiarity with occupancies also improves firefighter safety and effectiveness (p. 11). The fire department survey question number eight showed that 69 percent of the departments that responded had a positive rating from the firefighters that conducted in service fire prevention inspections. This researcher also felt that getting the suppression firefighters would be a great benefit if and when they had to combat a fire in the inspected

occupancies. The staff of the Eureka Fire Protection District presently has very little familiarity with the commercial and high life hazard occupancies as they do not conduct company fire prevention inspections.

IFSTA (1998) says that a drawback to company personnel conducting fire prevention inspections is that there may be occasions that they will be confronted with code enforcement situations that are beyond their level of training of expertise (p.9). In certain states such as Florida there are statutory requirements for training of any personnel that conduct fire prevention inspections. This significant amount of training with limited budgets may force decisions on the most productive training resources and may force the reduction of in service company inspections (Mullins, 2003, p. 16). Additional fire prevention training and even advanced level training for company officers is necessary to keep a company fire inspection program successful notes Camp (1999, p.28). The ever increasing workload of emergency response personnel has caused the implementation of a self inspection program for low risk occupancies in the Murray City Fire Department Response area (Camp, 1999, p.8). The fire department survey question number eight showed that responding departments had a negative response by their staff to the company fire prevention inspection program of 26 percent. Between increasing overall training requirements, increased demands for emergency and public service responses and general reduction in time available for all activities, there are some disadvantages to in service company fire service inspections. This is the main reason for the elimination of the program in the Eureka Fire Protection District. This researcher is interested in the self inspection program outlined in the literature as it reduces the need for certified inspectors on the engine companies yet the hazard reduction portion of the fire prevention program still is accomplished. A combination of

self inspection by reduced risk occupancies followed by a non inspection visit by an in service suppression company for familiarization may be more palatable for all involved.

Owners and occupants certainly benefit from in service fire prevention inspections due to the reduction in fires and other hazards described by Robertson (2000, p. 219). Feeney (2003) states that preventing fire incidents that could cause lost productivity is a benefit for owners and occupants derived from company fire prevention inspections (p.21). The reduction in insurance rates related to credit awarded for company fire inspections by insurance rating agencies is a direct cost benefit to business owners. (Mullins, 2003, p. 12). The responses to question number five in the business survey generated a 95 percent answer that the responding business owners felt that fire prevention inspections were a valuable tool to reduce risks from fires and other causes. This researcher concurs with the literature and survey that fire prevention inspections in whatever format are valuable in reducing loss from fire and other hazards that are commonly identified during these inspections. The businesses within the Eureka Fire Protection District would also benefit with increased opportunities for fire department interaction with the businesses to demonstrate that their hard earned tax dollars are being judiciously spent.

Businesses can have negative effects from company fire prevention inspections. As Robertson (2000) states there may be a significant cost to correct fire hazards and violations noted during these inspections (p. 80). Owners may find that in service company fire prevention inspections may be interrupted due to the need to respond to an emergency. Robertson (2000) says that no fire inspection should be curtailed once it has been started because it increases the imposition on the owner (p.71). Business owners in Gwinnett County, Georgia provided enough pressure that a self inspection program for low hazard occupancies has replaced the company fire inspection program with comparable results in fire hazard reduction and recognition (McGee,

1997, p. 13-14). In answering business survey question number four some respondents requested that all inspections be pre-scheduled and several stated that they would appreciate some form of self inspection checklist. This researcher agrees that at times the fire inspection process is adversarial and there are certainly reasons to minimize the negative impression that a fire inspection may cause. Due to the overwhelming support shown to the Eureka Fire Protection District by the citizens and businesses in a recent bond issue tax levy election that passed with a 74 percent approval rating any method to reduce the risk from fire and other hazards and bolster the public impression of the fire district certainly should be researched and implemented.

#### Recommendations

This study clearly demonstrates that comprehensive fire prevention programs benefit from in service company fire prevention inspections. Significant benefits also are derived by the firefighting personnel that conduct in service fire prevention inspections. There is also evidence that other methods of fire prevention inspections have also proven to be effective in the discovery of fire hazards without the use of in service personnel for inspections. The study also showed that most departments in the Greater St. Louis Region Fire Chief's Association use in service personnel to conduct fire prevention inspections.

Based on this study this researcher will recommend to the Chief of the Eureka Fire Protection District that a program of self inspections for low hazard occupancies, generally ones that are inspected annually at this time, be instituted followed by a fire prevention familiarization visit within 30 days by an in service company to review the inspection checklist with the occupant and to conduct a walkthrough familiarization visit for pre fire planning purposes. This

will address the problem of the familiarity of the suppression staff's familiarity with commercial and high life hazard occupancies with a less adversarial interaction with the business owners.

#### References

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  MD: National Fire Academy
- Robertson, J. (2000). *Introduction to Fire Prevention.* (5<sup>th</sup> ed.) Upper Saddle River, NJ: Prentice Hall Health

Appendix A

#### List of Materials Requested From the Learning Resource Center

1					
Self Inspection as an alternative fire prevention model	McGee	EFO Paper	26782	Υ	1996
Quality Service through Customer Oriented engine Co Inspections	Olson	EFO Paper	27201	Υ	1996
Fire prevention response a workplace priority	Campbell	Journal		Υ	1996
Aggressive code enforcement pays off	Kerrigan	Journal		Υ	1996
The basics of Fire Inspections	Murphy	Journal		Y	1996
Perceptional barriers of Providence FF for	Widipily	Joannai		† ·	1000
Career Opp in Fire Prevention	Costa	EFO Paper	27665	Υ	1997
Evaluation of dual certification in Broward county	Westbrook	EFO Paper	27368	Υ	1997
Fire Prevention Code Enforcement a study in					
Community Risk Reduction	Wilbur	EFO Paper	27667	Υ	1997
A better way to manage company inspections	Donner	Journal		Υ	1997
Proactive suppression through prevention and education	Jones	Journal		Υ	1997
Proactive Protectors	Cade	Journal		Y	1998
Anatomy of an inspection	Young	Journal		Y	1998
The fire safety management handbook	Della -	Journal		'	1000
The me daiety management handbook	Giustina	Book		Υ	1999
Fight significant many with focused fire prevention	Coleman	Journal		Y	1999
So you have to inspect a movie theater				Y	
Fire risk assessment a range of assessment	Corbett	Journal		ľ	1999
techniques	Marchant	Journal		Υ	1999
Criteria for a modern inspection program	Thorson	EFO Paper	23590	Υ	2000
Developing a company inspection program	DeLane	EFO Paper	33257	Υ	2001
Implementing a company inspection program for assembly occupancies	Dmuchowski	EFO Paper	32909	Υ	2001
Criteria for selecting program guidelines of engine and medic company fire inspections	Gillette	EFO Paper	15843	Υ	2001
Company inspection program for the Idaho Falls Fire Department	Johnson	EFO Paper	33147	Y	2001
Evaluating the Boca Raton FRS standard for	301113011	Его гареі	33141	I	2001
Fire Prevention Inspections	Johnson	EFO Paper	33256	Υ	2001
Analyzing and evaluating a fire departments inspection program	Ott	EFO Paper	32011	Υ	2001
Goshen Fire District Considerations to the self inspection program	Wood	EFO Paper	31665	Υ	2001
Self Inspection Pre-Fire Planning program	Scheerer	EFO Paper	32656	Y	2001
Soliciting Customer Feedback	Waters	EFO Paper	34810	Y	2002
Financial impact of pre-fire planning using self	114013	Li O i apci	0-010	+ '	2002
inspections	Scheerer	EFO Paper	34710	Υ	2002
Efficiency of fire inspections conducted by fire companies	Bradley	EFO Paper	35881	Υ	2003
The use of fire suppression personnel to conduct fire code inspections	Werner	EFO Paper	33484	Υ	2003
Constance Vigilance	Comeau	Journal	00101	Y	2003
	Joineau	Journal			2000

Appendix B

Company Level Fire Prevention Inspections		EFO		
	Morgenthaler	Abstract	N	1998
Fire prevention and building inspection cross				
training		EFO		
	Brandvold	Abstract	Ν	1999
Consolidation of Inspection Services		EFO		
	Ezekiel	Abstract	N	2000
Implementing an engine company safety				
survey program		EFO		
	Dishner	Abstract	Ν	2001
The development of a comprehensive pre-fire		EFO		
planning program	Krug	Abstract	Ν	2001
Company Fire Inspections evaluating an				
annual inspection program		EFO		
	Gill-Mulson	Abstract	Ν	2002
Implementation of a company based fire		EFO		
inspection program	Wilson	Abstract	Ν	2002
Required Inspection are Company Officers a		EFO		
viable alternative	Robinson	Abstract	Ν	2002
Analyzing the necessity of fire code		EFO		
inspections after business hours	Stephan	Abstract	N	2002
Development and implementation of an in		EFO		
service fire inspection program	Feeney	Abstract	Ν	2003
In Service Company Inspection Is There		EFO		
Enough Time In The Day	Mullins	Abstract	N	2003
Community Risk Reduction evaluating and				
implementing a program in a historical environment		EFO		
environment	Gill-Mulson	Abstract	Ν	2003

Appendix C

#### **Business Questionnaire**

1.	your business location?  Yes No  (If you answered no then you have completed the questionnaire. Thank You Please return in the envelope provided)
2.	What do you feel are important aspects of the fire prevention inspection?  Overall fire safety review of facility  Specific inspection of fire protection systems and features  Fire department familiarization of facility  Other
3.	Would you be comfortable with using a self inspection checklist prior to a familiarization walkthrough by a small group of on duty firefighters or would you prefer a fire inspector conduct a fire prevention inspection?  Self Inspection Checklist with Familiarization Visit  Traditional Fire Prevention Inspection
4.	If you could change any part of the Fire Prevention Inspection what would you change?
5.	Do you feel that the Fire Prevention Inspection is an imposition or a valuable tool to reduce risks from fire and other causes?  Imposition Valuable
6.	Are you required by laws or regulations other than the ordinances of the Eureka Fire Protection District to have the fire department conduct Fire Prevention Inspections?  Yes No

Thank you for your consideration in answering this questionnaire. Please return this in the supplied self addressed and stamped envelope by April 23, 2004

Appendix D

# Eureka Chamber of Commerce Business Listing

Edicita Orian		Daomio	,	9
Business Name	Street Address	City	State	Zip Code
4th St. Hairworks	300 W. Fourth St.	Eureka	MO	63025
66 Jewelry and Pawn	214 Main St.	Eureka	MO	63025
7-11 Store	1 W. Fifth St.	Eureka	MO	63025
A Touch of Elegance	510 N West Ave.	Eureka	MO	63025
A&J Collectibles	19 Dreyer	Eureka	MO	63025
Aberdeen Golf Club	4111 Cresent Rd.	Eureka	MO	63025
Accents Gifts & Decors	111 N. Central Ave.	Eureka	MO	63025
Almost Antique	19 Dreyer	Eureka	MO	63025
American Family Insurance	317 N. Central Ave.	Eureka	MO	63025
American Family Insurance	6 Hilltop Village Center Dr.	Eureka	MO	63025
American Realty On Line	300 W. Fourth St.	Eureka	MO	63025
American Solutions For Business	657 Legends View	Eureka	MO	63025
American Storage	306 W. Fourth St.	Eureka	MO	63025
API Mortgage	30 W. Fourth St.	Eureka	MO	63025
Applebee's	198 Eureka Towne Center Dr.	Eureka	MO	63025
Archie Communications	508 W. Fourth St.	Eureka	MO	63025
Arthur G. Romero DDS	97 Hilltop Village Center Dr.	Eureka	MO	63025
ASAP Advertising and Design	17464 Hilltop Ridge Dr.	Eureka	MO	63025
Augustine Plumbing	505 Williams Dr.	Eureka	MO	63025
Aunt Sadie's Antiques	515 N. Virginia	Eureka	MO	63025
Auto Tire	85 Hilltop Village Center Dr.	Eureka	MO	63025
Auto Zone	1443 W. Fifth St.	Eureka	MO	63025
Avail Accounting & Tax	700 Niehoff Dr.	Eureka	MO	63025
Bardsley Pool Service	622 Schmelz Dr.	Eureka	MO	63025
Bayer Realty	86 Hilltop Village Center Dr.	Eureka	MO	63025
Ben Franklin	101 Hilltop village Center Dr.	Eureka	MO	63025
Better Siding	217 Weber	Eureka	MO	63025
Bird Equipment	18549 Old Hwy 66	Pacific	MO	63069
Blevin's Elementary	25 E. North St.	Eureka	MO	63025
Blockbuster Video	156 Eureka Towne Center Dr.	Eureka	MO	63025
Breckenridge Concrete	435 W. Main	Eureka	MO	63025
Brookdale Farms, Inc.	8004 Twin Rivers Rd.	Eureka	MO	63025
Burger King	235 W. Fifth St.	Eureka	MO	63025
Bussen Quarries	6800 Bussen Rd.	Eureka	MO	63025
Busy Bee Stitchery	137 S. Central	Eureka	MO	63025
Butler & Associates	123 S. Central	Eureka	MO	63025
Butler Electrical	200 S. Central	Eureka	MO	63025
Byerly RV	295 E. Fifth St.	Eureka	MO	63025
Carol's Hallmark	157 Eureka Towne Center Dr.	Eureka	MO	63025

Carpenter Services	4651 Meramec Blvd.	Eureka	МО	63025
Cassidy Cleaners	21 E. Fifth St.	Eureka	MO	63025
Cee Kay Supply	103 Thresher Ave.	Eureka	MO	63025
Central Ave. Antiques	210 S. Central	Eureka	MO	63025
Central Baptist Church	601 N. Central Ave.	Eureka	МО	63025
Central Design Studio	123 S. Central	Eureka	МО	63025
Chanticleer Antiques	141 S. Central Ave.	Eureka	МО	63025
Check N Go	183 Eureka Towne Center Dr.	Eureka	МО	63025
Cherokee Chief Trading Post	529 N. Virginia	Eureka	МО	63025
China King	185 Eureka Towne Center Dr.	Eureka	МО	63025
Clinical Research Services	17165 Elm Trail Dr.	Eureka	МО	63025
Coating Solutions	204 Dreyer	Eureka	МО	63025
Comprehensive Chiropractic	113 W. Fifth St.	Eureka	МО	63025
Con Tech Carpentry	366 W. Fourth St.	Eureka	МО	63025
Connie's Antiques	115 E. Fifth St.	Eureka	МО	63025
Connie's Total Fitness	115 E. Fifth St.	Eureka	МО	63025
Contemporary Communications	324 Cerny	Eureka	МО	63025
Creative Expressions Learning	76 Legends Parkway	Eureka	МО	63025
Creative Gift Design	137 S. Central	Eureka	МО	63025
Cunningham-Millard-Cantriel	108 N. Central	Eureka	МО	63025
Curves For Women	535 N. Central	Eureka	МО	63025
Custom Cuts	165 Eureka Towne Center Dr.	Eureka	МО	63025
D&C Cycle	123 N. Central	Eureka	МО	63025
Daisy Home Services	997 Eureka Rd.	Eureka	МО	63025
Dance Art Studio	98 Legends Parkway	Eureka	МО	63025
David D. Brown Insurance	116 N. Central	Eureka	MO	63025
Dawn's Antiques	210 S. Central	Eureka	MO	63025
Days Inn	15 Hilltop village Center Dr.	Eureka	MO	63025
Dempsey Country Market	107 S. Central	Eureka	MO	63025
Dennis Glore	120 S. Virginia	Eureka	MO	63025
Denny's	1717 W. Fifth St.	Eureka	MO	63025
Design Florist	92 Hilltop Village Center Dr.	Eureka	MO	63025
Dien's Martial Arts	4 Hilltop Village Center Dr.	Eureka	MO	63025
Dollar Shop	109 Hilltop Village Center Dr.	Eureka	MO	63025
Dollar Tree	169 Eureka Towne Center Dr.	Eureka	MO	63025
Dr. Gregory Boschert	101 S. Central	Eureka	MO	63025
Dri Port Marine	1500 S. Outer Rd.	Eureka	MO	63025
DSW Investment	700 Niehoff Dr.	Eureka	MO	63025
Econolodge	1725 W. Fifth St.	Eureka	MO	63025
Eden Community Church	106 Lakeview Woods	Eureka	MO	63025
Edge Creative	201 Lakeview Dr.	Eureka	MO	63025
Edward Jones	5 Hilltop Village Center Dr.	Eureka	MO	63025

El Nopal	110 Hilltop Village Center Dr.	Eureka	MO	63025
Elam Enterprises	226 Walden Ct.	Eureka	MO	63025
Empress Kitchen	97 Hilltop Village Center Dr.	Eureka	MO	63025
Enterprise Rent A Car	76 hilltop Village Center Dr.	Eureka	MO	63025
Erb Contractors	103 Forest Dr.	Eureka	MO	63025
Eureka Antique Mall	107 E. Fifth St.	Eureka	MO	63025
Eureka Auto Body	639 Viola Ln.	Eureka	MO	63025
Eureka Auto Collision Center	1023 W. Fifth St.	Eureka	MO	63025
Eureka Barbar Shop	114 N. Central	Eureka	MO	63025
Eureka Car Care	527 N. Central	Eureka	MO	63025
Eureka Car Wash	79 Hilltop Village Center Dr	Eureka	MO	63025
Eureka Cars and Trucks	1721 W. Fifth	Eureka	MO	63025
Eureka Chiropractic Center	611 W. Fifth St.	Eureka	MO	63025
Eureka Copy Center	312 N. Central	Eureka	MO	63025
Eureka Dairy Queen	14 Hilltop Village Center Dr.	Eureka	MO	63025
Eureka Downtown Texaco	207 S. Central	Eureka	MO	63025
Eureka Elementary	442 W. Fourth St.	Eureka	MO	63025
Eureka Family Dental Care	302 Bald Hill Rd.	Eureka	MO	63025
Eureka Feed Station	4 S. Central	Eureka	MO	63025
Eureka Heating and Cooling	135 S. Central	Eureka	MO	63025
Eureka Kampers	1425 W. Fifth St.	Eureka	MO	63025
Eureka Medical Center	97 Hilltop Village Center Dr.	Eureka	MO	63025
Eureka Medical Office	300 W. Fourth St.	Eureka	MO	63025
Eureka Music	3 Hilltop Village Center Dr.	Eureka	MO	63025
Eureka Nails	98 Legends Parkway	Eureka	MO	63025
Eureka Nursery and Landscaping	1421 W. Fifth St.	Eureka	MO	63025
Eureka Physical Therapy	300 W. Fourth St.	Eureka	MO	63025
Eureka Save A Lot	225 Thresher	Eureka	MO	63025
Eureka Senior High School	4525 Hwy 109	Eureka	MO	63025
Eureka Six Cine	99 Hilltop Village Center Dr.	Eureka	MO	63025
Eureka Smile Center	18 Hilltop Village Center Dr.	Eureka	MO	63025
Eureka Storage	110 Dreyer	Eureka	MO	63025
Eureka Truck and Auto	1299 W. Fifth St.	Eureka	MO	63025
Eureka T's	22 Dreyer	Eureka	MO	63025
Eureka Veterinary Clinic	1415 W. Fifth St.	Eureka	MO	63025
Eurela Pediatrics	515 N. Virginia	Eureka	MO	63025
Excel Communications	573 Fairway Oaks Dr.	Eureka	MO	63025
Faithful Servant	3 Hilltop Village Center Dr.	Eureka	MO	63025
Fashion Bug	155 Eureka Towne Center Dr.	Eureka	MO	63025
Faust Construction Co.	61 Fairview Ln.	Pacific	MO	63069
FDL Mechanical Contractor	607 Stockell Dr.	Eureka	MO	63025
Fearless Fighters Paintball	1747 W. Fifth St.	Eureka	MO	63025

Fifth St. Toppers	1027 W. Fifth St.	Eureka	MO	63025
Firehouse Gallery	131 S. Central Ave.	Eureka	MO	63025
Five Star Limosines	134 S. Virginia	Eureka	MO	63025
Forget Me Nots	126 S. Central	Eureka	MO	63025
Fortel's Pizza Den	54 Legends Parkway	Eureka	MO	63025
Franklin Mechanical	320 Cahoon Dr.	Eureka	MO	63025
Frisco Antiques	222 Main St.	Eureka	MO	63025
Fuller Automotive	19 W. Fifth St.	Eureka	MO	63025
Future Aire	690 W. Fourth St.	Eureka	MO	63025
G. Clinton Borror Architect	214 N. Central Ave.	Eureka	MO	63025
Gael's Antiques and Collectibles	510 N. West Ave.	Eureka	MO	63025
Geggie Elementary	430 Bald Hill Rd.	Eureka	MO	63025
GEM Lawn Service	33 Muir St.	Eureka	MO	63025
Gershenson Construction	2 Truitt Dr.	Eureka	MO	63025
Gillick's Salon	125 S. Central	Eureka	MO	63025
Gingerbread House Antiques	138 S. Virginia	Eureka	MO	63025
GNC	155 Eureka Towne Center Dr.	Eureka	MO	63025
Golden Horseshoe Tack Shop	319 N. Central	Eureka	MO	63025
Grace Lutheran Church	135 Shaw Dr.	Eureka	MO	63025
Great Clips	110B Hilltop Village Center Dr.	Eureka	MO	63025
Great Midwest Antique Mall	100 Hilltop Village Center Dr.	Eureka	MO	63025
Hair Etc.	105 Hilltop Village Center Dr.	Eureka	MO	63025
Hanephin's	122 S. Central	Eureka	MO	63025
Hart Farms	490 Forby Rd.	Eureka	MO	63025
His & Hers Hair Styling	212 N. Central	Eureka	MO	63025
HLS Properties	623 N. Virginia	Eureka	MO	63025
Holiday Inn At Six Flags	4901 Six Flags Rd.	Eureka	MO	63025
Holiday's Past	141 S. Central Ave.	Eureka	MO	63025
Home Service Oil Co.	25 Truitt Dr.	Eureka	MO	63025
Horizon Auto Sales	1351 W. Fifth St.	Eureka	MO	63025
Hummingbird Hollow Collectibles	510 N. West Ave	Eureka	MO	63025
Hydrocontrol Systems	551 Overlook Terrace Ct.	Eureka	MO	63025
Hyndrich Brothers Towing	18515 Old Hwy 66	Pacific	MO	63069
I-44 Marine	1729 W. Fifth St.	Eureka	MO	63025
Ice House Antiques	19 Dreyer	Eureka	MO	63025
Imo's	167 Eureka Towne Center Dr.	Eureka	MO	63025
Janet's Barbar Shop	108 Main St.	Eureka	MO	63025
Janet's Cleaning Service	606 Wallach	Eureka	МО	63025
Janis Lamprecht	125 S. Central	Eureka	MO	63025
JD Grading	1030 Eureka Rd.	Eureka	MO	63025
Jefferson Bank and Trust	100 Legends Parkway	Eureka	MO	63025
Jerry's Lock and Key Repair	67 Willow	Eureka	MO	63025

JM Marschuetz Construction	2 Truitt Dr.	Eureka	MO	63025
Joe Boccardi Ristorante	128 S. Central	Eureka	MO	63025
John's Auto/Towing Service	325 Second St.	Eureka	MO	63025
JP sports Bar and Grill	95 Hilltop Village Center Dr.	Eureka	MO	63025
JR Green Insurance Services	607 Stockell Dr.	Eureka	MO	63025
JR's Pub and Grill	98A Legends Parkway	Eureka	MO	63025
Karen Fisher Peters	2A Hilltop Village Center Dr.	Eureka	MO	63025
Keep in Touch	113 W. Fifth St.	Eureka	MO	63025
Kidco	623 Wallach	Eureka	MO	63025
Klance Staging	9 Hilltop Village Center Dr.	Eureka	MO	63025
KOA St. Louis West	18475 Old Hwy 66	Eureka	MO	63025
Krueger Antiques	510 N. West Ave.	Eureka	MO	63025
KVK Construction	345 Cerny	Eureka	MO	63025
LA Nails	177 Eureka Towne Center	Eureka	MO	63025
Laurie Price / Frienda Antiques and	510 N. West Ave.	Eureka	MO	63025
Lawn by Lawn	42 Rockwood Place Ct.	Eureka	MO	63025
Legends Cleaners	54 Legends Parkway	Eureka	MO	63025
Legends Country Club	825 Legends Parkway	Eureka	MO	63025
Legends Terrace Apartments	400 Legends Terrace Dr.	Eureka	MO	63025
Lewis Electric Motor	320 W. Fourth St.	Eureka	MO	63025
Lion's Choice	1737 W. Fifth St.	Eureka	MO	63025
Long Ford Sales	18155 Old Hwy 66	Eureka	MO	63025
Louise Cassidy Avon Representative	602 Wallach	Eureka	MO	63025
Lubbes Financial Services	4533 Emerald View Ct.	Eureka	MO	63025
Magnolia's Market	119 N. Central	Eureka	MO	63025
Mark Antonacci, Attorney At Law	106 S. Central	Eureka	MO	63025
Marshall Wireless	98 Legends Parkway	Eureka	MO	63025
Mary Beth's Treasures	510 N. West Ave.	Eureka	MO	63025
Mary Lou's Guardian Day Care	17002 Redwood Glen Dr.	Eureka	MO	63025
Marymount Manor Nursing Center	313 Augustine Rd.	Eureka	MO	63025
McClain Performance Diesel	15 Truitt Dr.	Eureka	MO	63025
McDonalds	5699 Fox Creek Rd.	Eureka	MO	63025
McDonalds	15 Hilltop Village Center Dr.	Eureka	MO	63025
Meyer Painting Co.	420 W. Fourth St.	Eureka	MO	63025
M-Gems	212 N. Central	Eureka	MO	63025
Michelle's Café	104 S. Central	Eureka	MO	63025
Mid America Fuel Center	18181 Old Hwy 66	Eureka	MO	63025
Mid America Truck Tops	501 Howerton Ln.	Eureka	MO	63025
Midwest Motors	1400 S. Outer Rd.	Eureka	MO	63025
Midwest Professional Reps	104 W. Frisco	Eureka	MO	63025
Miller Pest Control	104 Forest Hills Dr.	Eureka	MO	63025
Miller Salsbury Law Firm	925 W. Fifth St.	Eureka	MO	63025

Missouri Wine Guy	2160 Hwy F	Pacific	МО	63069
Mona's Treasured Memories	510 N. West Ave.	Eureka	MO	63025
Moore Design Group	676 Southern Hills Dr.	Eureka	МО	63025
Motomart	5695 Fox Creek Rd.	Eureka	МО	63025
My Vet Animal Clinic	300 W. Fourth St.	Eureka	MO	63025
Nails By Sherry	125 S. Central	Eureka	МО	63025
Neutron Technologies	127 S. Central	Eureka	МО	63025
Nick's Old Towme Auto	12 Dreyer	Eureka	MO	63025
NSF & Associates	211 Beverly St.	Eureka	МО	63025
Nuptials Bridal	98 Legends Parkway	Eureka	МО	63025
Olde Towne Jewelers	221 Thresher Ave.	Eureka	MO	63025
Orkin Pest Control	1 Hilltop Village Center Dr.	Eureka	MO	63025
Paula Spoon - Mary Kay Products	17423 Hilltop Ridge Dr.	Eureka	МО	63025
Payless Shoe Source	173 Eureka Towne Center Dr.	Eureka	MO	63025
Pegasus Massage Therapy	625 Legends Parkway	Eureka	МО	63025
Penick Construction	86 Caribou Ct.	Eureka	МО	63025
Pevely Farms	400 Lewis Rd.	Eureka	MO	63025
Phillips Floor Covering	2634 Sunrise Dr.	Eureka	МО	63025
Phil's Bar B Que	115 W. Fifth St.	Eureka	MO	63025
Pioneer Bank and Trust	15 Augusting Rd.	Eureka	MO	63025
Pizza Hut	77 Hilltop Village Center Dr.	Eureka	MO	63025
Ponderosa Steakhouse	80 Hilltop Village Center Dr.	Eureka	MO	63025
Pool Fixers	15 E. Fifth St.	Eureka	MO	63025
Poor Richard's	108 Hilltop Village Center Dr.	Eureka	MO	63025
Premier Restoration Services	16 E. Second St.	Eureka	MO	63025
Prestige Pet Grooming	128 S. Virginia	Eureka	MO	63025
Price Memorial	300 Forby Rd.	Eureka	MO	63025
Price Professional Automotive	18449 Old Hwy 66	Eureka	MO	63025
Pricilla's Antiques & Collectibles	19 Dreyer	Eureka	MO	63025
Pro Tint	15 E. Fifth St.	Eureka	MO	63025
Properties West Realty	601 Wengler Rd.	Eureka	MO	63025
ProPrint	90 Hilltop Village Center Dr.	Eureka	MO	63025
Psoverton Consulting	608 Cerny	Eureka	MO	63025
Quiktrip	290 E. Fourth St.	Eureka	MO	63025
Rademacher Fencing	566 Workman Rd.	Eureka	MO	63025
Radio Shack	163 Eureka Towne Center Dr.	Eureka	MO	63025
Raineri Building Materials	6 Truitt Dr.	Eureka	MO	63025
Ray Dickemper Antiques	19 Dreyer	Eureka	MO	63025
Red Rooster Antiques	210 S. Central	Eureka	MO	63025
Rich & Charlie's	108C Hilltop Village Center Dr.	Eureka	MO	63025
Richard H. Helfrich DDS	302 Bald Hill Rd.	Eureka	MO	63025
RL Weible Insurance Agency	1439 Elliot St.	Eureka	MO	63025

Roadrunner Trailer & Hitch Co.	700 W. Fourth St.	Eureka	MO	63025
Robinson's Landscaping and	48 High View	Eureka	MO	63025
Rockwood Bank	219 Thresher	Eureka	MO	63025
Rockwood Counseling Center	300 W. Fourth St.	Eureka	MO	63025
Rockwood Heating and Cooling	17009 Elm Trail Dr.	Eureka	MO	63025
Rockwood Veterinary Clinic	102 Dreyer	Eureka	MO	63025
Rotometrics	800 Howerton Ln.	Eureka	MO	63025
Route 66 Senior Center	500 N. Central	Eureka	MO	63025
Route 66 Trees	18593 Old Hwy 66	Eureka	MO	63025
Rt. 66 State Park	97 N. Outer Rd.	Eureka	MO	63025
Sacred Heart Catholic Church	350 E. Fourth St.	Eureka	MO	63025
Scharnhorst Photography	137 S. Central	Eureka	MO	63025
Scheer Marketing	837 Legends View	Eureka	MO	63025
Schnucks Markets	111 Hilltop Village Center Dr.	Eureka	MO	63025
Schulte Construction	606 Butler Dr.	Eureka	MO	63025
Selbert's Auto Body	212 S. Virginia	Eureka	MO	63025
Select Motors	18601 Old Hwy 66	Pacific	MO	63069
Sellenriek Grading Co.	7 Truitt Dr.	Eureka	MO	63025
Shadescapes	614 Legends View Dr.	Eureka	MO	63025
Shell of Allenton	18201 Old Hwy 66	Eureka	MO	63025
Shell of Eureka	100 Old Towne Dr.	Eureka	MO	63025
Shelter Insurance	350 S. Central Ave.	Eureka	MO	63025
Shutterbug Photo	770 Southern Hills Dr.	Eureka	MO	63025
Six Flags St. Louis	4900 Six Flags Rd.	Eureka	MO	63025
Smith Remodeling	525 Orchard Ln.	Eureka	MO	63025
Solid Rock Kaffe Haus	129 S. Central Ave.	Eureka	MO	63025
Sowards Motors	105 E. Fifth St.	Eureka	MO	63025
Space Form Architects	106 S. Central	Eureka	MO	63025
Special K's Collectibles	19 Dreyer	Eureka	MO	63025
St. Louis County Library	103 Hilltop Village Center Dr.	Eureka	MO	63025
St. Louis Equine Veterinary	102 Dreyer	Eureka	MO	63025
St. Marks Lutheran Church	500 Meramec Blvd.	Eureka	MO	63025
Stahlhuth & Rudder	187 Eureka Towne Center Dr.	Eureka	MO	63025
Steak and Shake	1567 W. Fifth St.	Eureka	MO	63025
Stewart Appraisal Service Inc.	17142 Hidden Valley Forest Dr.	Eureka	MO	63025
Studio 145	145 S. Central	Eureka	MO	63025
Subway	106 Hilltop Village Center Dr.	Eureka	MO	63025
Sundance Salon and Spa	224 N. Central	Eureka	МО	63025
Super 8 Motel	1733 W. Fifth St.	Eureka	МО	63025
Super Smokers	62 Stockell Dr.	Eureka	МО	63025
Supermarket of Shoes	143 Eureka Towne Center Dr.	Eureka	МО	63025
Taco Bell	83 Hilltop Village Center Dr.	Eureka	МО	63025
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Tan Fastic Tan Center	98 Legends Parkway	Eureka	МО	63025
Tech Equipment Sales	321 N. Virginia	Eureka	MO	63025
The Angels Garden	619 W. Fifth St.	Eureka	MO	63025
The Medicine Shoppe	215 Thresher Ave.	Eureka	MO	63025
The Painted Daisy	133 S. Central	Eureka	МО	63025
The Players Club	745 Lewis Rd.	Eureka	MO	63025
The Preening Swan	210 S. Central	Eureka	МО	63025
The Warehouse Store	104 Hickory Hill Dr.	Eureka	МО	63025
Theatrical Concepts	98 Legends Parkway	Eureka	МО	63025
Three Friend's Antiques	510 N. West Ave.	Eureka	МО	63025
Title Insurers Agency	223 Thresher	Eureka	МО	63025
TJ Samuels	106 S. Central	Eureka	МО	63025
Today's Family Dental	208 N. Central	Eureka	MO	63025
Top Notch Early Education Center	600 Top Notch Ln.	Eureka	MO	63025
Tri County Birthright	8 Hilltop Village Center	Eureka	MO	63025
Tri County Escrow Services	607 Stockell Dr.	Eureka	МО	63025
Tri County Flooring	600 Stockell Dr.	Eureka	МО	63025
Tri County Pool and Landscaping	89 Hilltop Village Center Dr.	Eureka	MO	63025
Tsunami Motorsports	18505 Old Hwy 66	Pacific	MO	63069
Ty's Liquor	115 S. Central	Eureka	MO	63025
U-Gas Eureka	301 W. Fifth St.	Eureka	MO	63025
Uniquely Yours Interiors	16806 Enderbush Ln.	Eureka	MO	63025
Unity Medical Group	179 Eureka Towne Center Dr.	Eureka	MO	63025
Urethane Roller Specialists	100 S. Central	Eureka	MO	63025
US Bank	10 Hilltop Village Center Dr.	Eureka	MO	63025
USA Martial Arts Academy	87 Hilltop Village Center Dr.	Eureka	MO	63025
VC Horn and Son's Lumber Co.	603 Legends View Dr.	Eureka	MO	63025
Victorian Place Antiques	510 N. West Ave.	Eureka	MO	63025
Victory Auto Repair and Detailing	1023 W. Fifth St.	Eureka	MO	63025
Waddell Concrete	420 W. Fourth St.	Eureka	MO	63025
Wal Mart	131 Eureka Towne Center Dr.	Eureka	MO	63025
Wallach House Antiques	510 N. West Ave.	Eureka	MO	63025
Wallner Lawn Care	710 Hilltop Terrace Dr.	Eureka	MO	63025
Warnol Publishing	4603 Meramec Dr.	Eureka	MO	63025
Welker Construction and	29 Muir	Eureka	MO	63025
West County Mortgage	54 Legends Parkway Suite 155	Eureka	MO	63025
White Castle	78 Hilltop Village Center Dr.	Eureka	MO	63025
Wholesale Plumbing Supply	720 W. Fourth St.	Eureka	MO	63025
Wyman Center Inc.	600 Kiwanis Dr.	Eureka	MO	63025
Yogi Bear's Jellystone Park and	5300 Fox Creek Rd.	Eureka	MO	63025
Young Motors	1329 W. Fifth St.	Eureka	MO	63025

Appendix E

### Fire Department Questionnaire

1.	Does your fire department conduct fire prevention inspections in commercial and high
life hazaı	rd occupancies?
	Yes No
2.	Does your fire department conduct engine company fire prevention inspections in
	cial and high life hazard occupancies?
	Yes No
3.	Do you provide fire prevention inspection training for the staff that conducts engine
company	fire prevention inspections in commercial and high life hazard occupancies?
1 2	Yes No
4.	Are the engine company fire prevention inspections in commercial and high life hazard
occupano	cies the only inspection conducted for those buildings?
	Yes No
5.	If the engine company fire prevention inspection reveals any violations is there a
follow up	o inspection provided by a member of the fire prevention bureau?
1	YesNo
6.	Generally how many inspections are conducted by engine companies?
	per Month Week Quarter
7.	Please rate your overall idea of the reception by the business owners to your inspection
program.	• • • • • • • • • • • • • • • • • • • •
1 0	Positive Negative
8.	Please rate your overall idea of the reception by your staff to your inspection program.
	Positive Negative
9.	Overall do you consider your inspection program a public relations positive or a
negative'	
δ	Positive Negative
10.	Please feel free to comment on any aspect of your inspection program.
	The state of the s

Thank you for your valuable contribution to this research project!

Appendix F

# Greater St. Louis Region Fire Chief's Association

District	WorkAddress	City	State	Postal Code
Affton Fire Protection District	8110 Valcour Ave.	St. Louis	MO	63123-
Berkeley Fire Department	6140 North Hanley	Berkeley	MO	63134-
Black Jack Fire Protection District	12490 Old Halls Ferry	Florissant	MO	63033-
Brentwood Fire Department	2348 S. Brentwood Blvd.	Brentwood	MO	63144-
Chesterfield Fire Protection	13725 Olive Blvd.	Chesterfield	MO	63017-
Clayton Fire Department	10 N. Bemiston	Clayton	MO	63105-
Community Fire Protection District	9923 St. Martha	St. Ann	MO	63074-
Cottleville Fire Protection District	P. O. Box 385	Cottleville	MO	63338-
Crestwood Fire Department	1 Detjen Dr.	Crestwood	MO	63126-
Creve Coeur Fire Protection	11221 Olive Blvd.	Creve Coeur	MO	63141-
Des Peres Department of Public	1000 Ballas	Des Peres	MO	63131-
Eureka Fire Protection District	P.O. Box 97	Eureka	MO	63025-1128
Fenton Fire Protection District	845 Gregory Ln.	Fenton	MO	63026-
Ferguson Fire Department	106 Church St.	Ferguson	MO	63135-
Florissant Valley Fire Protection	605 rue St. Catherine	Florissant	MO	63031-
Frontenac Fire Department	10555 Clayton Rd.	Frontenac	MO	63131-
Glendale Fire Department	424 N Sappington Rd.	Glendale	MO	63122-
Hazelwood Fire Department	6800 Howdershell	Hazelwood	MO	63042-
Jennings Fire Department	7215 W. Florissant	Jennings	MO	63136-
Kinloch Fire Department	5684 Martin Luther King	Kinloch	MO	63140-
Kirkwood Fire Department	137 West Argonne	Kirkwood	MO	63122-4303
Ladue Fire Department	9213 Clayton Rd.	Ladue	MO	63124-
Lake St. Louis Fire Protection	2533 Lake St. Louis Blvd.	Lake St. Louis	MO	63367-
Lemay Fire Protection District	1201 Telegraph	Lemay	MO	63125-
Maplewood Fire Department	7601 Manchester Rd.	Maplewood	MO	63143-
Maryland Heights Fire Protection	2600 Schuetz Rd.	Maryland Heights	MO	63043-
Mehlville Fire Protection District	11020 Mueller Rd.	St. Louis	MO	63123-
Metro West Fire Protection District	P. O. Box 310	Wildwood	MO	63040-
Mid-County Fire Protection District	1875 Penn Ave.	St. Louis	MO	63133-
Moline Fire Protection District	1815 Chambers Rd.	St. Louis	MO	63136-
Normandy Fire Department	7302 Pasadena Blvd.	St. Louis	MO	63121-
Olivette Fire Department	9473 Olive Blvd.	St. Louis	MO	63132-
Pattonville Fire Protection District	13900 St. Charles Rock	Bridgeton	MO	63044-
Richmond Heights Fire	7449 Dale Ave.	Richmond Heights	MO	63117-
Riverview Fire Protection District	9933 Diamond Dr.	St. Louis	MO	63137-
Robertson Fire Protection District	12641 Missouri Bottom	Hazelwood	MO	63042-
Rock Community Fire Protection	1533 Jeffco Blvd.	Arnold	MO	63010-
Rock Hill Fire Department	9620 Manchester Rd.	Rock Hill	MO	63119-
Rock Township Ambulance	PO Box 21	Arnold	MO	63010-

Shrewsbury Fire Department	4400 Shrewsbury Ave.	Shrewsbury	MO	63119-
Spanish Lake Fire Protection	11811 Larimore Rd.	St. Louis	MO	63138-
St. Charles Fire Department	200 N. 2nd St.	St. Charles	MO	63301-
St. Louis Fire Department	2634 Hampton	St. Louis	MO	63139-
University City Fire Department	6801 Delmar	University City	MO	63130-
Valley Park Fire Protection District	55 Cresent Ave.	Valley Park	MO	63088-
Webster Groves Fire Department	6 S. Elm	Webster Groves	MO	63119-
West County EMS & Fire	123 Henry Ave.	Manchester	MO	63011-4017
West Overland Fire Protection	10789 Midland Blvd.	St. Louis	MO	63114-