A Model Assessment Tool for the Incident Command System: A Case Study of the San Antonio Fire Department

By

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Abstract

Purpose: Fire department administrators and emergency professionals must be willing to recognize, identify and administer an effective Incident Command System. The purpose of this applied research project is threefold. First, it describes the ideal components of an effective Incident Command System obtained from the literature. Second, it assesses the San Antonio Fire Departments Incident Command System using the ideal type components. Third, it provides recommendations for improving the San Antonio Fire Departments Incident Command System. A review of the literature identified five key components of an effective Incident Command System. The components include the responsibilities of the first arriving officer, responsibilities of the Incident Commander, overall scene safety, effective communications and professional development.

Methodology: The components of an effective Incident Command System indentified in the literature are used to construct the conceptual framework. The framework is used to create a practical ideal model assessment tool for the Incident Command System. The assessment tool is used to gauge the effectiveness of the San Antonio Fire Departments Incident Command System. A case study consisting of document analysis, structured interviews, and direct observation (via radio transmissions) is utilized to perform the assessment.

Findings: The San Antonio Fire Departments Incident Command System is mostly consistent with the model assessment tool. However, Incident Command System training and officer development program need improvement. Hands on Incident Command System training is extremely limited and there appears to be no officer development program. These two elements should be addressed in order to improve the San Antonio Fire Department Incident Command System.

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About the Author

Brian O'Neill joined the San Antonio Fire Department on August 13, 2001 and is currently the rank of Lieutenant. Lt. O'Neill is a third generation San Antonio Firefighter. His Father, Captain Dennis O'Neill, and Grandfather, Engineer Leonard O'Neill, preceded his service in the San Antonio Fire Department and to the citizens of San Antonio. As part of his promotional requirements and professional development Lt. O'Neill has studied the Incident Command System at length. Lt. O'Neill has applied the Incident Command System to emergency scene operations throughout his career. Lt. O'Neill can be contacted by e-mail at: briansafd@hotmail.com

Dennis, Brian and Leonard O'Neill

Chapter I: Introduction

When I close my eyes and reflect on the experience of emergency response, what I remember are the sounds-the engines as the drivers start up the trucks; the comforting 'click, click, click' of the overhead beacons as the flashing lights are turned on; the whisper of compressed air filling regulators accompanied by the harsh beep of the Vibraalert as the firefighters don their breathing apparatus; the loud screech of the radio as the dispatcher repeats the call; and finally, when everyone is set in their seats, buckled in and tense, the sound of the overhead truck room doors rolling on their tracks as they slowly open up the gates to hell. (Baum 2007, 41)

The battlefield is a scene of constant chaos. The winner will be the one who controls that chaos, both his own and the enemies. (Napoleon Bonaparte)

Scenario: Anderson Street Fire (3:05am)

It's a cold December night and Joy Franklin is sound asleep. Down the hall her six year old son is also sleeping. Startled by a loud screech, Joy springs to her feet. Her smoke alarm is sounding. She takes a deep breath and begins to choke; her eyes sting shut. The darkness of her room cannot disguise the smoke; Joy's house is on fire. She must grab her son and get out of the house. As Joy opens her bedroom door she is floored by the heat. Blind and disoriented, she pushes on making her way down the hall to the other side of the house. Before she can reach her son's room she collapses, overwhelmed by the smoke Joy loses consciences.

Minutes later her neighbor, James Garza, is returning home from his office where he had stayed up all night working. As he pulls into his driveway he notices smoke pouring out of Joy's house. Pulling out his cell phone he dials 911.

Dispatch: *"911 what's your emergency?"*

James: *"My neighbor's house is on fire! Her address is 101 Anderson Street."*

Dispatch: *"Ok sir, we have the fire department responding."*

Dispatch to the fire department: *"We have a report of a structure fire at 101 Anderson Street. The following companies respond; District Chief 1-0, Engine 8, Engine 10,*

Engine 11, and Truck 8. All companies will communicate on radio channel designation one foxtrot."

Incident Command System (ICS)

Fire departments[1] respond to emergencies daily. The goal of the fire service is the safe and effective resolution of all emergency incidents to which they respond. Emergencies are often dynamic and chaotic situations. Fire departments around the nation use the Incident Command System[2] as a tool that brings order to emergency scenes. According to a National Fire Academy applied research project written by Cole (2000, 203) "One of the most significant trends to occur in the emergency services field during the last quarter of the twentieth century has been the widespread adoption of the Incident Command System (ICS)". The Federal Emergency Management Agency[3] (FEMA) describes the Incident Command System as "the model tool for the command, control, and coordination of resources and personnel at the scene of emergencies."(Cole 2000, 204). An effective Incident Command System is vital to safe and successful emergency scene management.

The Incident Command System originated from the California wildland firefighting program know as FIRESCOPE (Firefighting Resources of Southern California Organized for Potential Emergencies). This early version of the Incident Command System was developed as a result of several uncontrolled wildfires that occurred in southern California during the early 1970's. "ICS resulted from the obvious need for a new approach to the problem of managing rapidly moving wildfires in the early 1970's. At that time, emergency managers faced a number of problems, many of these has yet to be universally resolved" (Strumpf 2001, 2). FIRESCOPE

[1] For additional fire service related, Texas State University Applied Research Projects, see Baum (1997) and Rose (1996)
[2] The Incident Command System is also know as the Incident Management System
[3] Federal Emergency Management Agency, a function within the US Department of Homeland Security that is charged with responding to Presidentially declared disasters.

aimed to address the following problems-too many people reporting to one supervisor, differing emergency response organizational structures, lack of reliable incident information, inadequate and incompatible communications, lack of structure for coordinated planning between agencies, unclear lines of authority, terminology differences between agencies and unclear or unspecified incident objectives (Strumpf 2001, 2). FIRESCOPE created a comprehensive plan aimed at the command and control of vast wildland fire incidents. FIRESCOPE implemented several important standards, which are still in use today (Lindell, Perry and Prater 2005).

Under FIRESCOPE all jurisdictions use a standard set of terminology to describe the names of units and their emergency scene function (Lindell, Perry and Prater 2005). Standardization of terminology is viewed as an important key to organizing jurisdictions that do not, under normal conditions, operate together. The use of common terminology eliminates the confusion that occurs when neighboring jurisdiction use differing terminology. FIRESCOPE also created the concept of functional specificity (Lindell, Perry and Prater 2005). Functional specificity means that each unit is tasked with a specific function and that unit knows their function before the incident ever occurs.

Along with common terminology and functional specificity, FIRESCOPE accounts for the uncontrolled expansion associated with most wildland fires. As the incident expands, sectors or sub-units are created in order to keep a manageable span of control (Lindell, Perry and Prater 2005). During emergency operations a manageable span of control can be anywhere from three to seven subordinates but can be more or less depending on the severity of the situation (Lindell, Perry and Prater 2005) . Keeping a manageable span of control allows for greater safety and operational effectiveness because the supervisor is able to stay focused on the tasks at hand.

In the early 1980's, Chief Alan Brunacini of the Phoenix Fire Department, applied the principles created by FIRESCOPE and wildland firefighting to structural firefighting. This revised version of the Incident Command System is known as the Incident Management System (IMS) (Lindell, Perry and Prater 2005). Much like the wildland fire service, structural firefighters were responding to fires with little organization and no accountability. Chief Brunacini, took many of the principles used in FIRESCOPE and made them applicable to the smaller scale operations generally faced by structural firefighters (Perry 2003). "His philosophy toward firefighting and commanding firefighting operations was somewhat less formal and more 'laid back' than the formal method (the ICS) used in California." (Coleman 1997, 8). Both FIRESCOPE and Brunacini's version of the Incident Command System dominated fire department operations during the early 1990's (Coleman 1997, 9). Despite agreement on the major issues of organization and accountability, there are some major differences between the two versions.

The first difference manifested itself in the duties of the first arriving officer (Coleman 1997). Both FIRESCOPE and Brunacini agreed that the first arriving officer must assume the role of Incident Commander (IC). The Incident Commander is the individual who is designated in charge of the entire incident (NFPA[4] 1561, 2007). Order is immediately established by the assumption of an Incident Commander at the start of the incident. FIRESCOPE insisted that the Incident Commander remain in a stationary command post and not participate in any hands on tasks. Brunacini felt the urgency of an emergency incident meant the first arriving officer could "pass" the duties of the Incident Commander to the next arriving officer if they felt their physical assistance was needed to resolve the emergency at hand (Coleman 1997).

[4] National Fire Protection Association, creates standards for firefighting. NFPA 1561, *Standard on Emergency Services Incident Management System.*

Another difference between these two versions of the Incident Command System is outlined by each systems ability to expand. As stated earlier, Brunacini developed his version of the Incident Command System to address issues with structural firefighting (Green 2002). Structural firefighting incidents are, by their very nature, smaller in scale than wildland firefighting incidents. Brunacini designed his system to match structural firefighting needs and did not allow for the massive system expansion designed by FIRESCOPE (Coleman 1997). Other differences manifest themselves in terminology involving command responsibilities and functions.

Following the events of 911 the federal government began to recognize the benefits of an effective Incident Command System. As such, they created the National Incident Management System[5] (NIMS). Like FIRESCOPE, NIMS was developed for use in major incidents stretching over several jurisdictions. The National Incident Management System incorporates many of the principles of both FIRESCOPE and the Incident Management System. "More recently, the ICS model has been incorporated into the National Incident Management System (NIMS), established by Homeland Security [6]Presidential Directive (HSPD)-5. This directive essentially declares the command structure as the US national standard, making adoption of the ICS model a prerequisite for any US agency receiving federal preparedness assistance beginning in 2005." (Thomas, et al. 2004, 19).

Although the Incident Command System was originally created to combat wildland and structural fires, it is important to point out that current Incident Command System theory recognizes the use of the Incident Command System at every emergency incident; not just fires.

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[5] The National Incident Management System. A federally mandated program for the standardizing of command terminology and procedures.

[6] For additional Texas State University Applied Research Project's on the topic of homeland security and disaster management see Phillips (1998); Gatlin (2006); Ellis (2001); Hall (2000).

The Incident Command System is used at every incident to which the fire department responds (Coleman 1997). As part of the Superfund Amendments and Reauthorization Act (SARA) Title III, the federal government requires some form of the Incident Command System to be used at every hazardous material incident (IFSTA[7] 2004). Buck, Trainor and Aguire (2007, 6) described the use of the Incident Command System in "the Pentagon[8], North Ridge Earthquake, Oklahoma City Bombing, Atlanta Olympics Bombing and DeBruce Grain Elevator Explosion".

The Incident Command System has been the subject of much revision since its inception in the 1970's. Such revision has led to many similar but separate versions of the Incident Command System. "There are several versions of ICS (Goldfarb 1997)" (Buck, Trainor and Aguirre 2006, 1). The separate versions can produce confusion. Many jurisdictions either subscribe to one version or in many cases pick and chose principles from several versions to create their own. While implementation of the Incident Command System is important to emergency scene operations, most experts[9] agree a universally standard Incident Command System is needed. Cole (2000, 212) maintains that the "common criticism of ICS is that there are considerable differences in how the system is implemented from one agency to another, and from one region to another".

There is a current need for a standard Incident Command System assessment tool in order gauge an effective system. Shields and Tajalli (2006, 324) maintain that "gauging research asks '*What should?'* –that is, how close is process x to the ideal or standard? The research purpose is to *gauge* what should be done to improve an administrative process."

[7] International Fire Service Training Association.
[8] Refers to the events of 911
[9] Coleman (1997); Cole (2000)

San Antonio Fire Department[10]

With a population of just under 1.3 million[11], the City of San Antonio ranks 2nd largest in the state of Texas and 7th in the entire United States[12]. The San Antonio Fire Department (SAFD) incorporates 50 fire stations and well over 1,000 firefighting personnel who service the city; a 51st station is scheduled to open in 2008. The San Antonio Fire Department is a highly professional organization that incorporates the Incident Command System into its emergency scene operations. A city and fire department the size of San Antonio's has the responsibility of providing the best emergency service possible. An effective Incident Command System is necessary in order for the San Antonio Fire Department to operate at a high level.

Research Purpose

Fire department administrators and emergency professionals must be willing to recognize, identify and administer the strengths of an effective Incident Command System. The purpose of this applied research project is threefold. First, it will describe the ideal components of an effective Incident Command System obtained from the literature. Second, it will assess the San Antonio Fire Departments Incident Command System using the ideal type components. Third, it will provide recommendations for improving the San Antonio Fire Departments Incident Command System. A review of the literature identified five key components of an effective Incident Command System. The components include the responsibilities of the first arriving officer, responsibilities of the Incident Commander, overall scene safety, effective communications and professional development.

The creation of a model assessment tool that includes all five components is necessary. The model assessment tool will be used to gauge the overall effectiveness of the San Antonio

[10] For more information on the San Antonio Fire Department and the City of San Antonio visit www.cosa.gov
[11] Based on 2006 Census
[12] Based on 2006 Census

Fire Departments Incident Command System. The conceptual framework table represents each component of the assessment tool along with the corresponding literature. There is a need for an Incident Command System assessment tool. "No universally accepted methods for objective evaluation of the function of the Incident Command System (ICS) in disaster exercises currently exist." (Thomas, et al. 2004, 14). This paper attempts to meet this need.

Chapter Overview

Chapter two presents the model Incident Command System that is used to assess the current effectiveness of the San Antonio Fire Departments ICS. The model assessment tool includes five components-responsibilities of the first arriving officer, responsibilities of the Incident Commander, overall scene safety, effective communications and professional development. Chapter three provides an in depth description of the San Antonio Fire Department and the City of San Antonio. Chapter four explains the methodology used to assess the San Antonio Fire Departments Incident Command System. A case study approach consisting of document analysis, structured interviews and direct observation is used. Chapter five presents the finding of the case study using the model assessment tool. Chapter six presents the conclusion and recommendations.

Chapter II: Model Assessment Tool

Public administrators often use research findings to make recommendations to improve programs; in other words, they are asked to gauge the effectiveness of program processes. One way to gauge the efficacy of program processes is to develop criteria for this judgment and then collect empirical evidence to contrast the reality of the program against the criteria (Shields and Tajalli 2006, 324)

Chapter Purpose

The purpose of this chapter is to identify and describe the components of an Incident Command System assessment tool. Currently there is a need for an assessment tool to gauge the effectiveness of the Incident Command System. The literature describes components that are necessary to the development of the model assessment tool. This chapter develops, explains, and justifies the model assessment tool (Vaden 2007).

There is extensive literature on the Incident Command System. While experts agree on the importance of an effective Incident Command System there remains a need for a standard tool to assess the system. The remainder of this section is intended to address this need. A practical ideal model of the Incident Command System is developed to assess the effectiveness of the San Antonio Fire Departments Incident Command System. There are five components necessary for an effective Incident Command System described in the literature. "The categories of the practical ideal type do and thus can be treated as statements of expectation (or working hypotheses) that direct evidence collection – and can be supported or not supported by the evidence" (Shields and Tajalli 2006, 324).

Practical Ideal Model Assessment Tool Components[13]

The five components of an effective Incident Command System identified from the literature are outlined in the practical ideal model assessment tool. The components of the practical[14] ideal Incident Command System model assessment tool are:

1. Responsibilities of the First Arriving Officer[15]
2. Responsibilities of the Incident Commander
3. Overall Scene Safety
4. Effective Communications
5. Professional Development

The **Anderson Street Fire Scenario**, presented in the Introduction, is used to supplement the corresponding literature. The Scenario is incorporated into each of the five components and is intended to increase understanding of the Incident Command System by applying aspects of the model. **Figures 2.1-2.5** are presented before each scenario. These figures provide a visual aid of the Incident Command System model.

Responsibilities of the First Arriving Officer[16]

The urgency of most emergencies creates confusion and chaos. The Incident Command System addresses this problem through the establishment of a single Incident Commander. The Incident Command System calls for the first arriving officer to assume the initial role of Incident Commander in an effort to bring immediate organization to what would be an unorganized scene (Perry 2003). Because of the immediate need for structural organization and control the first

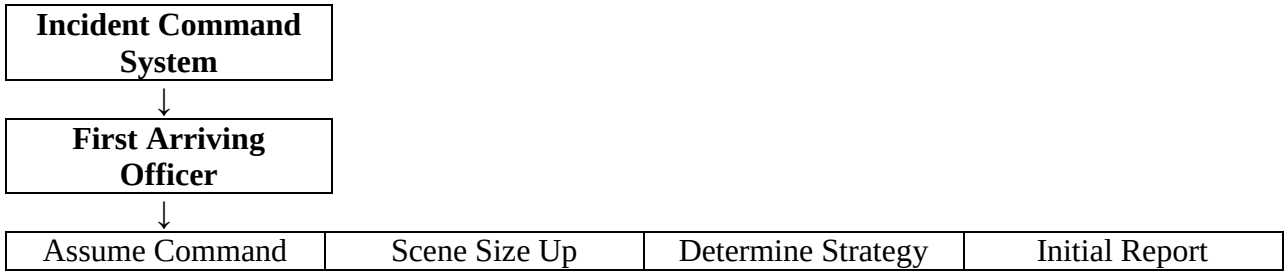
[13] For additional examples of practical ideal type models see Vaden (2007); Ley (2002); Sparks (2007)
[14] "We use the term 'practical' to indicate that the criteria or model components are not perfect but subject to revision" (Shields and Tajalli 2006).
[15]Personnel experience with the Incident Command System has taught me that the first arriving officer is responsible for initiating the entire system.
[16] For additional supporting literature see Coleman (1997); National Fire Protection Association (2007), Buck Trainor and Aguirre (2006); Cole (2000); Green (2002); Hannestad (2005); Lindell, Perry and Prater (2005); Strumpf (2001); Adams and Miller (2004); Moynihan (2007)

arriving officer is the best choice to **assume the initial role of Incident Commander**. "The philosophy is that there must always be one (and only one) IC at every incident scene, and it is the duty of arriving officers to assume command" (Perry 2003, 407).

Once the first arriving officer has assumed the role of Incident Commander, there are several decisions he or she must make in the initial moments of the incident. The first arriving officer must perform a quick **scene size up**, where he or she looks at the picture in front of them and determines **strategy** based on that initial picture and a risk assessment (Bigley and Roberts 2001). "When the first engine arrives, its captain takes a quick look around to size-up the situation, taking in such factors as hazards, weather, and safety in developing a plan of attack" (Jiang, et al. 2004, 681).

The details of the incident are verbalized to incoming responders through an **initial report**. Brunacini (2002, 82) suggests that "the first-arriving responder who will assume the role of incident commander should advise dispatch of this fact by broadcasting a standard initial radio report including the unit designation, arrival, assumption of command, conditions and the name and location of that command post". Brunacini (2002, 82) gives the following example of the initial report, "Engine 1 on the scene, north side of a medium-size commercial building with a working fire-Engine 1 will assume Ajax Command." The immediate assumption of the role of Incident Commander followed by the initial report is necessary to start the incident in a way that creates organization and safety. The key factor is that it is clear who is in charge (Moynihan 2007). Confusion undermines central authority and can lead to solo rather than coordinated action (Moynihan 2007).

Figure 2.1: Responsibilities of the First Arriving Officer



Scenario continued: Anderson Street Fire (3:08am)

District Chief 1-0 is first to arrive at Joy's house. As he pulls to the front of the address, he see James, who yells "I think there are people still inside!" The Chief takes a quick look at the picture in front of him. He notices a car parked in the driveway, a good indication that someone is home; given the time of night he was already prepared for possible victims. After completing his **scene size up**, he determines a **strategy** and gives the following **initial radio report** to incoming companies:

> ***District Chief 1-0:*** [17] *"1-0 is on scene **assuming Anderson Street Command**. We have a one story residential house with smoke showing. We have a report of possible victims. First company to arrive, lay your line and conduct a primary search for victims. Second company to arrive, lay your line and provide back up. Third company to arrive, lay a supply line. Truck company assist with the primary search."*

Responsibilities of the Incident Commander[18]

At every incident, regardless of size and complexity, the Incident Commander must perform six major responsibilities (Coleman 1997). The first five responsibilities are often referred to as the Incident Commander's "functions" (Hannestad 2005). The five functions are

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[17] Signifies radio transmissions

[18] For additional supporting literature see Buck, Trainor and Aguirre (2006); Cole (2000); Green (2002); Lindell Perry and Prater (2005); Perry (2003); Strumpf (2001); Adams and Miller (2004); Moynihan (2007)

known as command, operations, planning, logistics and administration[19]. The sixth responsibility is customer service (Brunacini 2002). At most incidents the Incident Commander can fulfill all six responsibilities by his or her self. "The ranking officer of the first team on scene might assume the role of IC and carry out all ICS roles, passing on the role of IC to higher-ranking officers arriving later on and assuming other roles" (Jiang, et al. 2004, 680).

When the incident escalates beyond the Incident Commander's span of control, the Incident Commander can delegate one or all of the roles to provide focus on the primary role of **command**[20]. The responsibility of the command role is to focus on the entire incident keeping firefighter safety as the number one priority; command is responsible for the outcome of the entire incident (Brunacini 2002).

The Incident Commander manages the strategic aspects of the incident by fulfilling the role of **operations**. NFPA 1561 (2007, 5.10.1.3) states that "all supervisory personnel assigned to operations functions shall support an overall strategic plan, as directed by the incident commander, and shall work toward the accomplishment of tactical objectives." If the Incident Commander has delegated the role of operations, it is the responsibility of operations to inform the Incident Commander of the strategic aspects of the incident. As with the role of command, operations must keep firefighter safety as their paramount concern. As stated earlier the role of operations can usually be handled by the Incident Commander.

The Incident Commander fulfills the responsibility of **planning** by taking into account all technical aspects of the incident. "The planning officer is responsible for reviewing past and then identifying future needs of the incident and may be required to anticipate the future course

[19] Sometimes called finance
[20] Personnel experience with the Incident Command System has taught me that the role of command is the most important responsibility of the Incident Commander.

of the incident" (Coleman 1997, 85). Planning is vital because of the often dynamic conditions found at most emergency incidents. The Incident Commander must be always looking at the past and planning for the future. The incident must never expand beyond the control of the Incident Commander.

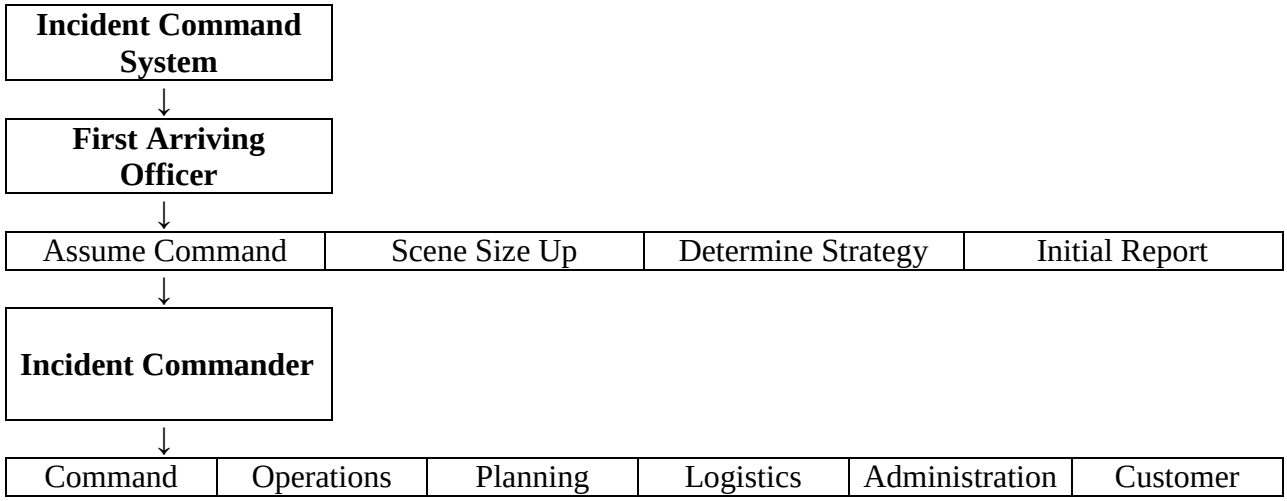
Logistics is involved with resource allocation. "The logistics section shall provide services and support systems to all the organizational components involved in the incident including facilities, transportation, supplies, equipment maintenance, fueling, feeding, communications and medical services/responder rehabilitation" (NFPA 1561 2007, 5.10.3.1). Logistics makes sure all the tools and personnel are ready and available for use when needed.

Administration is involved in the financial aspect of the incident. Bigley and Roberts (2001, 1283) state that "the finance/administration section provides accounting, procurement, and cost analysis". If the incident involved instances such as overtime pay or consultant compensation, the administrations section must account for such costs. "The incident commander shall assign finance/administration functions on the basis of the needs or complexity of the incident" (NFPA 1561 2007, 5.10.4.2)

The literature suggests **customer service**[21] as a sixth responsibility of the Incident Commander. It is important to remember that the incident is not over just because the threat has been resolved. Many times people are greatly affected by the emergency incident that has occurred. It is the responsibility of the Incident Commander to not leave the victims helpless. The Incident Commander should do whatever is in their power to assure the victims receive the necessary help to recover from the effects of the incident (Brunacini 2002).

[21] Early Incident Command literature often mentions the issue of customer service as a side note, but more recent literature has stressed its importance to the completion of the system. Brunancini (2002)

Figure 2.2: Responsibilities of the Incident Commander



Scenario continued: Anderson Street Fire (3:09am)

The Incident Commander looks at his clipboard were he keeps reminders for himself. Number one, assume **command**, he thinks back to his initial report in which he assumed Anderson Street Command; "check" he thinks. Number two, **operations**, he knows he has already declared a strategy in his initial report; "check". Number three, **planning**, taking a look at the scene he understands that planning is an ongoing process of adjusting to future needs, but for now he is content with his initial plan; "check". Four, **logistics**, "this is a standard house fire" he says, "I have more than enough companies and resources on scene to perform the job; check". Number five, **administration**, he decides this issue will need to wait until the incident has concluded, but for now he doesn't for see any added costs. Last on the Incident Commanders list is number six, **customer service**. He knows it's his responsibility to do everything in his power to help those that are affected by this fire, and that is what he intends to do. The Incident Commander realizes that if he starts to become overwhelmed he will need to delegate some of his duties to other officers on scene. But for now he is in total control.

Overall Scene Safety[22]

At its most basic level the Incident Command System is a safety tool. "NFPA 1500, Standard on Fire Department Occupational Safety and Health Program, calls for IMS as part of overall scene safety at structure fires" (Coleman 1997, 16). With the assumption of an Incident Commander and subsequent established chain of command, uncontrolled freelancing is replaced with controlled tactics with clear objectives. The Incident Commander is in total control of the incident because he or she knows where everyone is and the task they are performing.

As a part of the overall scene safety the Incident Commander should assign a **safety officer**. The safety officer's sole responsibility is to analyze the emergency scene and assure the safety of all first responders. According to NFPA 1561 (2007, C.2.1) "a safety officer shall be designated by the incident commander whenever the IC cannot perform this vital function due to the size or complexity of the incident." The safety officer does not remain stationary. It is their job to move about the scene in a way that allows them to monitor the safety of the entire incident. "The safety officer shall recon and monitor the scene and report the status of conditions, hazards and risks to the incident commander" (NFPA 1561 2007, C.2.1).

Another tool used in the Incident Command System to insure the safety of working crews is a **Personal Accountability Report (PAR)**. A PAR is initiated by the Incident Commander. The Incident Commander accomplishes a PAR by using a standard radio transmission to each company on scene in which they ask for a "PAR". When the receiving company confirms the PAR, the Incident Commander knows that each member of that crew is accounted for. "The incident commander shall conduct a personnel accountability report (PAR) from each division or group supervisor whenever there is a change in conditions that could create an unsafe operations

[22] For additional supportive literature see Brunacini (2002); Bigley and Roberts (2001); Buck, Trainor and Aguirre (2006); Cole (2000); Green (2002); Hannestad (2005); Jiang, et al. (2004); Lindell Perry and Prater (2005); Perry (2003); Strumpf (2001); Adams and Miller (2004); Moynihan (2007)

such as an ‘emergency traffic’ announcement to all companies to evacuate the building” (NFPA 1561 2007, C.2.1).

Along with the safety components described above, NFPA 1561 (2007, C.2.1), prescribes an **operational retreat policy** as part of a safe Incident Command System. This is usually accomplished with a standard radio transmission and evacuation tone. When the tone is transmitted via a standard radio transmission, all companies on the fire ground shall immediately remove themselves from the incident. The evacuation tone should be standard in the system to be effective.

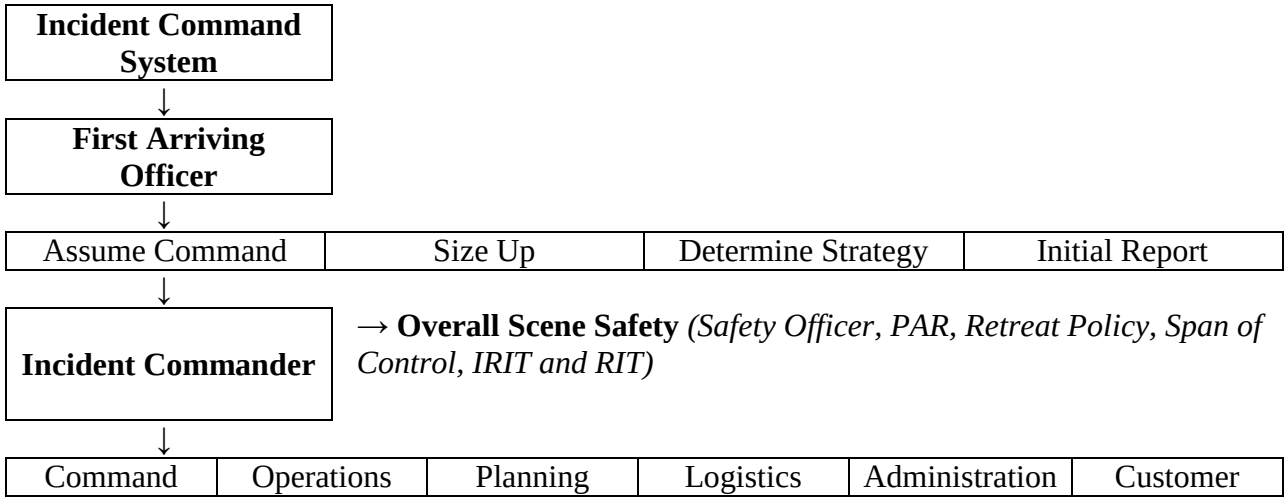
The Incident Commander is an important part of the overall scene safety. The Incident Commander must never become overwhelmed. Hence, keeping a **manageable span of control**[23] (Lindell, Perry and Prater 2005). During emergency operations a manageable span of control can be anywhere from three to seven subordinates but can be more or less depending on the severity of the situation (Lindell, Perry and Prater 2005) . Keeping a manageable span of control allows for greater safety and operational effectiveness because the supervisor is able to stay focused on the tasks at hand; delegation is key. “The management system enables an effective span of control at each level of the organization, which is determined by the ability of supervisors to monitor and effectively communicate with the personnel assigned to them” (Adams and Miller 2004, 229).

In situations where firefighters will be operating in an atmosphere that is immediately dangerous to life and health (IDLH), 29 CFR[24] 1910.134 requires increased safety. There should be a minimum of two firefighters on scene, fully equipped, whose sole purpose is to rescue other firefighters working in the IDLH atmosphere (NFPA 1561 2007, A.3.3.36). In the initial stages

[23] Personal experience has taught me that the key to keeping a manageable span of control is the delegation of responsibilities.
[24] Code of Federal Regulations

of the incident, the two person crew is commonly known as the **Initial Rapid Intervention Team**[25] **(IRIT)**. As the incident develops and more personnel arrive, the IRIT becomes a full crew of rescuers, designated as the **Rapid Intervention Team**[26] **(RIT)**. As with IRIT, the RIT's sole purpose is the rescue of firefighters working in the IDLH atmosphere. Implementation of both IRIT and RIT are necessary for a safe and effective Incident Command System.

Figure 2.3: Overall Scene Safety



Scenario continued: Anderson Street Fire (3:10am)

Safety is always the Chief's main concern at every incident he responds too. To assist him in making sure that companies working on scene will be safe, he decides to assign a **safety officer**.

Anderson Street Command: *"Anderson Street Command to Chief 1-0's aide, you are assigned to safety officer."*

Chief 1-0's aide: *"1-0's aide received, I am the safety officer."*

[25] Also known as the Initial Rapid Intervention Crew (IRIC)
[26] Also known as the Rapid Intervention Crew (RIC)

Engine 8 arrives first, lays its line, and forces entry into the house to conduct the primary search for victims. Engine 10 and Truck 8 quickly follow, while Engine 11 lays a supply line. Moment's later fire erupts from the attic and a loud crash can be heard from the command post. The Incident Commander is concerned for the safety of the companies inside. To make sure everyone is safe and accounted for, he decides to call for a **Personal Accountability Report (PAR)**.

Anderson Street Command: *"Anderson Street Command to Engine 8, do you have a PAR?"*

Engine 8: *"Engine 8 has a PAR."*

Anderson Street Command: *"Anderson Street Command to Engine 10, do you have a PAR?"*

Engine 10: *"Engine 10 has a PAR."*

Anderson Street Command: *"Anderson Street Command to Truck 8, do you have a PAR?"*

Truck 8: *"Truck 8 has a PAR."*

For now the Incident Commander is satisfied with the safety of the companies operating inside and allows them to continue their assignments. As a precaution he decides to make Engine 11 a **Rapid Intervention Team (RIT)**. In case companies inside find themselves trapped or cut off, Engine 11 will be ready to save them. Initially his aid and the engineer for Engine 8 made up the **Initial Rapid Intervention Team (IRIT)**, but with the arrival of more companies an entire crew is now needed.

Engine 11: *"Engine 11 to Command, we have finished laying our supply line."*

Anderson Street Command: *"Command received, Engine 11 you are now assigned to RIT."*

Engine 11: *"Engine 11 received, Engine 11 is now RIT."*

By assigning Engine 11 to RIT Command has made the scene safer. He is still in control of the scene. He has four companies directly under his command, which in this situation is well within his **span of control**. The Incident Commander keeps a focus on the scene looking out for developing hazards. He thinks to himself "One more loud crash and I'm sending out an evacuation tone"; **operational retreat policy**.

Effective Communications[27]

When an incident breaks down it is most often the result of ineffective communications (Brunacini 2002). A uniform and controlled communications system is essential to an effective Incident Command System. The adoption of **standard terminology** is a key aspect of effective communications. "All organizations must use common terminology in order to understand the situation and act accordingly" (Adams and Miller 2004, 229). Plain English should be used to describe the situation and give and receive orders. The use of "ten codes"[28] is not recommended. "Clear text should be used for radio communications" (NFPA 1561 2007, 6.2.2). Coded terminology leaves room for misinterpretation and error. "Mixing common language and numbered (ten codes) signals can be very confusing and mysterious if all of the participants are not familiar with the meaning and the details" (Brunacini 2002, 143).

[27] For additional supportive literature see Bigley and Roberts (2001); Buck, Trainor and Aguirre (2006); Cole (2000); Green (2002); Hannestad (2005); Jiang, et al. (2004); Lindell, Perry and Prater (2005); Perry (2003); Strumpf (2001); Adams and Miller (2004); Moynihan (2007)

[28] Ten-codes, are code words used to represent common phrases in voice communication, particularly in radio communications.

A **designated radio channel** should be assigned to each incident in order to avoid the confusion of multiple incidents communicating on the same channel. It is imperative that the Incident Commander control radio transmissions by responding to companies on the first call. An immediate response to the first call lets everyone on scene know that the Incident Commander is paying attention and in total control. By initiating and **controlling communications**, the Incident Commander is giving the incident a strong command presence, which is necessary to establish and keep control (Brunacini 2002).

The use of **benchmarks** to inform the Incident Commander of incident progress is highly desirable. "Benchmarks are announcements that a particular activity or assignment has been completed." (Coleman 1997, 298). When a unit gives the Incident Commander a standard benchmark, the Incident Commander becomes aware of the progress being made and can assign the unit to another task; always staying in control.

Figure 2.4: Effective Communications

Scenario continued: Anderson Street Fire (3:12am)

Engine 8: *"Engine 8 to Command, we have found two victims, we are bringing them out."*

Anderson Street Command: *"Command received"*

Anderson Street Command: *"Command to dispatch, send me two ambulances, and have them report directly to the scene."*

Joy and her son are taken to the ambulances for care. Both are rushed to the local hospital where they will make a full recovery. Soon after the ambulance's leave, Truck 8 gives the following **benchmark**:

Truck 8: *"Truck 8 to Command, we have an all clear on the primary search."*

Anderson Street Command: *"Command received, the primary search is complete."*

With all victims accounted for, the Incident Commander shifts his focus to stopping the fire. He notices the smoke beginning to dissipate, a sign of extinguishment. Engine 8 then gives the following benchmark:

Engine 8: *"Engine 8 to Command, the fire is out."*

Anderson Street Command: *"Command received, we have an extinguished fire."*

With the victims being cared for and the fire out, the Incident Commander can breathe a bit easier. He waits for additional benchmarks to ensure the conclusion of the incident. He has utilized the Incident Command System effectively. He **controlled communications** from the beginning of the incident. Nobody did anything unless he assigned them to do it. He always **answered on the first call**, which contributed to his strong command presence; everyone knew who was in charge. At the time of dispatch, the incident was **designated its own radio channel**,

which allowed for effective communication between the companies on scene and the Incident Commander. And no one strayed from the use of **standard known terminology** when communicating, which helped communication flow with ease.

Professional Development[29]

Incident command system training is essential for departments to be able to apply the system effectively. Research by Buck, Trainor and Aguire (2006, 21) concluded "ICS works well when official responders have trained in ICS and have a strong sense of community". **Clear Standard Operating Procedures (SOP's)** that outline the system are necessary to avoid confusion. "The incident commander determines which standardized assignments to utilize, depending on the situation. When an assignment is made, both the incident commander and assigned responder know what is expected, based on their knowledge of the written SOP" (NFPA 1561 2007, A.5.1.10). NFPA 1561 recommends that all emergency services organizations adopt an incident management system to manage all emergency incidents. Details of the incident management system must be incorporated into the organization's SOPs (Adams and Miller 2004, 229).

To supplement the written word, training evolutions are necessary to allow firefighters to experience the Incident Command System first hand and learn from the experience. How the Incident Command System functions depends mostly on how well those who are using it understand it. Without proper training the Incident Command System is ineffective. NFPA 1561 (2007, 7.2.2) recommends that "team members shall be trained together with full-scale exercises and simulations of sufficient number to develop their proficiency and allow them to maintain the necessary skills". In essence how well the system functions is determined before

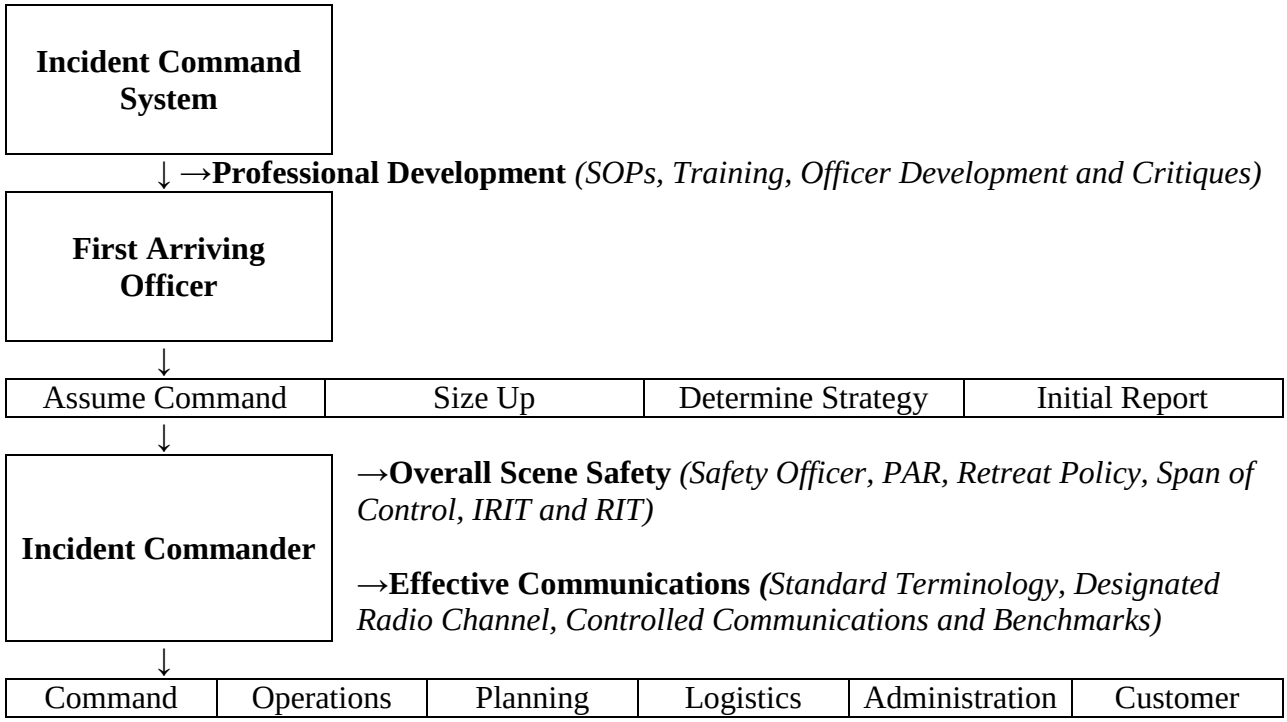
[29] For additional supportive literature see Bigley and Roberts (2001); Brunancini (2002); Cole (2000); Green (2002); Hannestad (2005); Jiang, et al. (2004); Lindell, Perry and Prater (2005); Perry (2003); Strumpf (2001); Adams and Miller (2004); Moynihan (2007)

the emergency incident ever occurs. It is vitally important that everyone know what system is being used. The Standard Operating Procedures and the training should match one another. Contradiction from either source can lead to confusion and breakdown of the system.

Company officers are the individuals who will normally initiate and establish the position of Incident Commander. Therefore, along with Standard Operating Procedure familiarization and hands on Incident Command System training, an **officer development program** is needed to teach the strategic and tactical aspects that the Incident Command System depends on. Without the knowledge of the appropriate tactics to use for each situation, the Incident Commander may make strategic decisions that can be ineffective and dangerous. "Mistakes made in the initial response to the incident can make the difference between solving the problem and becoming part of it" (Adams and Miller 2004, 227).

An effective Incident Command System includes **post incident critiques** (Coleman 1997). Post incident critiques are necessary to outline the strengths and weaknesses of the system and how it was implemented at each particular incident. An immediate critique known as a "tailboard critique" can be very helpful (Coleman 1997). With the details of the incident still fresh in everyone's mind, the aspects of the incident can be discussed with greater clarity. To supplement the tailboard critique a more in depth review of the incident should be discussed at the station in the days immediately following. Both critiques should be aimed at creating a better understanding of the Incident Command System and improving the departments use of it. Incident Command System training is a continuous process aimed at increasing knowledge of the system.

Figure 2.5: Professional Development



Scenario continued: Anderson Street Fire (3:35am)

District Chief 1-0 and all who responded relied heavily on the extensive Incident **Command System training** they had received throughout the last couple of years. The department had required them to learn their **Incident Command System SOP's** as part of their training. As the last benchmark is given, the Chief remembered something he had learned from a recent **officer development class**. He was taught that there is no time like the present to look at what was accomplished and how it was accomplished. The process is known as a **post incident critique**, there would be time for a more in depth critique latter, but a quick tailboard critique would be of great value.

Truck 8: *"Truck 8 to Command, the secondary search and overhaul are complete."*

Anderson Street Command: *"Command received, secondary search and overhaul are complete."*

Anderson Street Command: *"Command to all companies, meet me in front of the house for a quick tailboard critique."*

Anderson Street Command: *"Command to Dispatch, this incident has concluded."*

Conceptual Framework Table

The practical ideal type categories are summarized and connected to the related literature in **Table 2.1**. As mentioned earlier, the five practical ideal type categories are the responsibilities of first arriving officer, responsibilities of the Incident Commander, overall scene safety, communications, and professional development. The combination of these five categories creates the assessment tool model.

Table 2.1: Conceptual Framework Linking Ideal Type Categories to the Literature

Conceptual Framework	
Ideal Type Categories	**Literature**
Responsibilities of First Arriving Officer • Assumption of Command (all incidents) • Size up • Determine strategy • Initial report	Perry (2003) Bigley and Roberts (2001) Jaing, Hong, Takayama and Landay (2004) Brunacini (2002) Coleman (1997) Adams and Miller (2004) Moynihan (2007)
Responsibilities of the Incident Commander • Command • Operations • Planning • Logistics • Administration • Customer service	Hannestad (2005) Coleman (1997) Brunacini (2002) Jaing, Hong, Takayama and Landay (2004) NFPA 1561 (2007a) Bigley and Roberts (2001) Adams and Miller (2004) Monynihan (2007)

Table 2.1: Conceptual Framework Linking Ideal Type Categories to the Literature

Conceptual Framework	
Ideal Type Categories	**Literature**
Overall Scene Safety • Safety Officer • Personnel Accountability Report (PAR) • Operational retreat policy • Manageable span of control • Initial Rapid Intervention Team (IRIT) • Rapid Intervention Team (RIT)	NFPA 1561 (2007a) NFPA 1500 (2007b) Coleman (1997) Lindell, Perry and Prater (2005) Brunacini (2002) Code of Federal Regulations (29 CFR 1910.134) Adams and Miller (2004) Monynihan (2007)
Effective Communications • Standard terminology • Designated radio channel • Controlling communications (Strong command presence) • Benchmarks	Brunacini (2002) NFPA 1561 (2007a) Coleman (1997) Adams and Miller (2004) Monynihan (2007)
Professional Development • Incident Command System Standard Operating Procedures (ICS SOP's) • Incident Command System training • Officer development program • Post incident critiques	Buck, Trainor and Aguire (2006) NFPA 1561 (2007a) Coleman (1997) Brunacini (2002) Adams and Miller (2004)

The first component of a practical ideal model of the Incident Command System is captured with the **responsibilities of the first arriving officer**[30]. The literature states that the first arriving officer must **assume the role of Incident Commander**[31], perform an initial **scene size up**, **determine a strategy**[32] based on the scene size up and give an **initial report**[33] to incoming units. The first arriving officer sets the stage for the entire incident. By correctly

[30] Perry (2003); Bigley and Roberts (2001); Jaing, et al. (2004); Brunacini (2002); Coleman (1997); Adams and Miller (2004); Moynihan (2007)
[31] Perry (2003)
[32] Bigley and Roberts (2001)
[33] Brunacini (2002)

performing the responsibilities listed above, the first arriving officer puts the incident command system in motion; should be performed at all incidents.

The second component of an effective Incident Command System is identified in the **responsibilities of the Incident Commander**[34]. The Incident Commander is responsible for fulfilling the duties of six roles at every incident regardless of size or complexity. The Incident Commander must first and foremost fill the role of **command**. The role of command is to focus on the incident as a whole keeping safety as his or her number one priority. **Operations** is the second role the Incident Commander must fill. Operations focuses on the strategic decisions of the incident and determines the quickest and safest way to resolve the emergency. The third responsibility of the Incident Commander is **planning.** The role of planning is to focus on the past, current and future needs of the incident; always staying ahead**. Logistics** makes sure the proper tools, equipment and manpower needed to resolve the incident are accounted for. **Administration** deals mostly with the financial result of resolving the emergency. It is the job of administration to ensure all costs are tabulated. Finally, when the emergency has ended the Incident Commander must not forget the victims who have been affected. It is considered good **customer service**[35] practice for the Incident Commander to do everything in their power to help the victims with their needs.

Overall scene safety[36] is identified as the third component in the model. The proper use of the Incident Command System promotes scene safety. A **safety officer**[37], who's sole purpose it to monitor the safety of first responders, should be established at any incident involving

[34] Hannestad (2005); Brunacini (2002); Coleman (1997); Bigley and Roberts (2001); Jaing, et al. (2004); NFPA 1561, (2007); Adams and Miller (2004); Moynihan (2007)
[35] Brunacini (2002)
[36] NFPA 1561 (2007a); NFPA 1500 (2007b); Coleman (1997); Lindell, Perry and Prater (2005); Brunacini (2002); Code of Federal Regulations (29 CFR 1910.134); Adams and Miller (2004); Monynihan (2007)
[37] NFPA 1561, (2007)

immediate danger. A **Personnel Accountability Report[38] (PAR)** should be initiated by the Incident Commander whenever an unsafe change in conditions occurs. The confirmation of a PAR by all working units lets the Incident Commander know that everyone is safe. An **operational retreat policy[39]** should also exist in a safe and effective Incident Command System. When the Incident Commander becomes aware of a dangerous situation, the retreat of all first responders should be initiated.

The Incident Commander must maintain a **manageable span of control**. When the Incident Commander allows themselve to become overwhelmed with the supervision of too many subordinates, the IC risks losing control of the incident, creating an unsafe situation. A manageable span of control can be anywhere from three to seven subordinates, but can be more or less depending on the severity of the situation (Lindell, Perry and Prater 2005). The Incident Commander must never allow themselve to become overwhelmed.

Finally, the use of an **Initial Rapid Intervention Team (IRIT)[40]** and subsequent **Rapid Intervention Team (RIT)[41]**, whose sole responsibility is to rescue firefighters working in IDLH conditions, is a necessity. Implementation of both IRIT and RIT promote a safe and effective Incident Command System.

Effective communication[42] is the fourth component of an effective Incident Command System. When an incident breaks down it is most often the result of ineffective communications. The use of **standard terminology[43]** is essential in the prevention of miscommunication. The use of plain English is the preferred to coded terminology such as "ten codes". Each emergency

[38] NFPA 1561, (2007)
[39] NFPA 1561, (2007)
[40] NFPA 1561, (2007)
[41] NFPA 1561, (2007)
[42] NFPA 1561 (2007a); NFPA 1500 (2007b); Coleman (1997); Lindell, Perry and Prater (2005); Brunacini (2002); Code of Federal Regulations (29 CFR 1910.134); Adams and Miller (2004); Monynihan (2007)
[43] Brunacini (2002); NFPA 1561, (2007)

incident should use a separate radio channel. A **designated radio channel**[44] reduces the confusion that occurs when separate incidents are communicating on the same channel. The Incident Commander must control communications throughout the incident. If the Incident Commander allows others to dominate the airway, important orders and information are likely to be missed. Through the initial radio report, the Incident Commander establishes his or her authority and should never allow it to be overpowered by uncontrolled radio banter from responding units. **Controlling communications** is commonly known as having a strong command presence[45], in which everyone is aware of who is in charge.

Finally, effective communications is increased when emergency workers have a means of communicating their progress to the Incident Commander. **Benchmarks**[46], which are progress reports used by companies to inform the Incident Commander of the completion of their assigned task, allows the IC to have total control of the scene.

The fifth and final component of an effective Incident Command System is **professional development**[47]. An important part of professional development is clear and concise written **ICS Standard Operating Procedures (SOP's)** [48]. The SOP's should be used to outline the details of the system being used. To supplement the Incident Command System SOP's, hands on **Incident Command System training**[49] is necessary. The Incident Command System SOP's and the Incident Command System training should match each other in order to avoid confusion. The proper implementation of the Incident Command System depends heavily on the understanding of those who use it. The only way to understand the Incident Command System is to practice it.

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[44] NFPA 1561, (2007)
[45] Brunacini (2002)
[46] Coleman (1997)
[47] Buck, Trainor and Aguire (2006); NFPA 1561 (2007a); Coleman (1997); Brunacini (2002); Adams and Miller (2004)
[48] NFPA 1561, (2007)
[49] NFPA 1561, (2007)

An **officer development program** that focuses on the use of the Incident Command System, the role of the Incident Commander, and the various emergency scene strategy and tactics should be implemented. Since company officers are the individuals who will assume the role of Incident Commander, it is imperative that they receive the appropriate training necessary to perform there job. Finally, **post incident critiques** are necessary for gaining continual knowledge of the system. The critique is a two part series of a short term tail board critiques[50] followed by a more in depth station critiques.

Chapter Overview

The Incident Command System is an important tool used by today's emergency services as a means to mitigate emergency incidents. Fire department administrators need a tool to assess the effectiveness of the Incident Command System. This chapter has outlined the five practical ideal type categories (responsibilities of the first arriving officer, responsibilities of the Incident Commander, overall scene safety, effective communications and professional development) described in the literature as important components of an effective Incident Command System. Chapter three provides an in depth description of the San Antonio Fire Department and the City of San Antonio.

[50] Coleman (1997)

Chapter III: San Antonio Fire Department

The mission of the San Antonio Fire Department is to prevent and minimize the loss of life and property of citizens and fire service personnel; to provide Emergency Medical Services; to mitigate the consequences of natural and man-made disasters; to provide non-emergency support services; and to safeguard the environment and economic base of our community[51]

Our family, protecting yours[52]

The San Antonio Fire Department was established on June 6, 1854; comprised of a small number of volunteers. In 1891 the City of San Antonio established its first paid fire department. "City growth and technological advances in firefighting equipment and alarm systems created the need for professionals to take over as firemen." (Lerner 1986).[53] Since its inception in 1891, both the San Antonio Fire Department and the City of San Antonio have grown exponentially. As stated in the introduction, the City of San Antonio currently has a population of just under 1.3 million[54], which ranks 2nd largest in the state of Texas and 7th in the entire United States[55]. The San Antonio Fire Department (SAFD) incorporates 50 fire stations and well over 1,000 firefighting personnel who service the city; a 51st station is scheduled to open in 2008. The San Antonio Fire Department provides a wide range of emergency services including:

- Fire Suppression
- Emergency Medical Service
- Arson Investigation
- Fire Prevention
- Emergency Dispatch

[51] San Antonio Fire Department Mission Statement
[52] San Antonio Fire Department Slogan
[53] www.sanantonio.gov/safd/History/history_1848_1900.asp
[54] Based on 2006 Census
[55] Based on 2006 Census

- Technical Rescue Team
- Hazardous Materials Team
- Aircraft Rescue Fire Fighting Team

The San Antonio Fire Department also provides many other valuable services such as public fire education, juvenile firesetters intervention, school demonstrations and free smoke detector installations. Every summer San Antonio Firefighters collect donations in an effort to help find a cure for MDA[56]. The project is known as the fill the boot campaign.

All members of the San Antonio Fire Department must undergo a rigorous hiring process that includes a written exam, physical exam, medical exam, psychological testing, background investigation and polygraph test. San Antonio Fire Cadets undergo six months of training, including six weeks of emergency medical training, before becoming a member of the San Antonio Fire Department.[57] Promotional opportunities are based upon a written examination combined with seniority. Most San Antonio Firefighters are represented by the San Antonio Fire Department Union Local 624. Local 624 provides contract negotiations, representation, and advice for its members.

The City of San Antonio is home to several military bases including Lackland, Fort Sam Houston and Randolph. Three major highways dissect San Antonio; IH 35, IH 10 and Highway 281. San Antonio is also home to several rail road routes. The San Antonio International Airport along with several smaller private air fields are located in San Antonio. San Antonio is home to Southwest Research Institute and Southwest Biomedical Research Institute; both conduct research using highly hazardous chemicals and pathogens. San Antonio is also known for its large medical center. Along with the needs of the general public, the San Antonio Fire Department is tasked with mitigating emergencies that can come from any of the above sources.

[56] Muscular Dystrophy Association
[57] See Appendix E

The San Antonio Fire Department responded to 137,335 emergency calls in fiscal year 2007[58]. As of 2006, the fire suppression division of the San Antonio Fire Department consisted of 1,041 firefighters. San Antonio Firefighters are tasked with covering over 400 square miles of jurisdiction[59]. The fifty fire stations are equipped with fifty pumper companies and nineteen ladder companies. Also, included are eighteen first responder squads. First responder squads provide rapid medical response and medical support until an ambulance arrives. "Firefighting operations are carried out in three (3) shifts (24-hours on/48 hours off). The Firefighting Division is organized into seven (7) fire districts, with a District Chief in charge of each fire district. The seven (7) fire districts have a total of approximately 286 firefighters on duty each shift." [60]

The San Antonio Fire Department is a highly professional organization that incorporates the Incident Command System into its emergency scene operations. A city and fire department the size of San Antonio's has the responsibility of providing the best emergency service possible. An effective Incident Command System is necessary in order for the San Antonio Fire Department to operate at a high level.

Chapter Overview

This chapter has provided an in depth description of the San Antonio Fire Department and the City of San Antonio. Chapter four outlines the methodology used to assess the San Antonio Fire Departments Incident Command System and connects each technique to the conceptual framework.

[58] http://www.sanantonio.gov/safd/ResponseCapabilities/fire.asp
[59] See appendix E for map of San Antonio
[60] http://www.sanantonio.gov/safd/ResponseCapabilities/fire.asp

Chapter IV: Methodology

In actuality, the demands of a case study on your intellect, ego, and emotions are far greater that those of any other research strategy. (Yin 2003, 58)

Chapter Purpose

The purpose of this chapter is to describe the methodology used to gauge the San Antonio Fire Departments Incident Command System. The five components of the practical ideal model, developed for the Incident Command System, are used to direct data collection during the assessment of the San Antonio Fire Departments Incident Command System. Each component is assessed using multiple data collection methods; structured interviews, document analysis and direct observation.

Case Study

The research design selected for this paper is a case study[61]. A case study is necessary to perform a comprehensive assessment of the San Antonio Fire Departments Incident Command System because no single research method would be sufficient. According to Yin (2003, 2), "the distinctive need for case study arises out of the desire to understand complex social phenomena. In brief, the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events." With case study research, multiple research methods are incorporated into one study. With case study research, there is no attempt to generalize beyond the case. The sole purpose of this case study is to assess the San Antonio Fire Department Incident Command System.

The use of multiple research techniques is the strength of the case study approach. Instead of using one research method, such as survey research, a case study uses several data

[61] Vaden (2007, 34)

collection methods. Yin maintains that, "the need to use multiple sources of evidence far exceeds that in other research strategies, such as experiments, surveys, or histories." The process of incorporating multiple methods into one case study is known as triangulation. "When you have really triangulated the data, the events or facts of the case study have been supported by more than a single source of evidence" (Yin 2003, 99). The San Antonio Fire Departments Incident Command System program can be viewed as a "case". This case study uses document analysis, direct observation and structured interviews as techniques to collect data.

Table 4.1 summarizes the connection between the framework, data collection methods, and expected evidence[62]. When viewed as a whole, the research methods used provide a comprehensive assessment of the San Antonio Fire Departments Incident Command System.

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Responsibilities of the First Arriving Officer			
-Assumption of Command (all incidents)	-Document Analysis -Direct Observation	-Assumption of Command procedures outlined clearly -Audible assumption of Command observed	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence Radio Transmissions during multi-response incidents
-Size Up	-Document Analysis	-Size Up procedures outlined clearly	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence

[62] Vaden (2007, 34)

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Responsibilities of the First Arriving Officer			
-Determine Strategy	-Document Analysis	-Strategy determination outlined clearly	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence
-Initial Report	-Document Analysis -Direct Observations	-Initial Report procedures outlined clearly -Audible initial reports observed	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence Radio Transmissions during multi-response incidents
Responsibilities of the Incident Commander			
-Command	- Document Analysis	-Command responsibilities outlined clearly	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence -Command Procedures
-Operations	-Document Analysis	-Operations responsibilities outlined clearly	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Responsibilities of the Incident Commander			
-Planning	-Document Analysis	-Planning responsibilities outlined clearly	-Incident Management System Standard Operating Procedures
-Logistics	-Document Analysis	-Logistics responsibilities outlined clearly	-Incident Management System Standard Operating Procedures
-Administration	-Document Analysis	-Administration responsibilities outlined clearly	-Incident Management System Standard Operating Procedures
-Customer Service	-Document Analysis -Structured Interview	-Customer service responsibilities outlined clearly -Describe the current customer service philosophy for the San Antonio Fire Department (Q #1)	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence -Firefighters and Officers
Overall Scene Safety			
-Safety Officer	-Document Analysis	-Safety officer procedure identified clearly	-Incident Management System Standard Operating Procedures -Safety Officer Procedure

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Overall Scene Safety			
-Personnel Accountability Report (PAR)	-Document Analysis	-Personnel Accountability Report procedure identified clearly	-Incident Management System Standard Operating Procedures -Accountability Procedure
-Operational retreat policy	-Document Analysis	-Operational retreat policy identified clearly	-Incident Management System Standard Operating Procedures -Evacuation Policy
-Manageable span of control	-Document Analysis -Direct Observation	-Manageable span of control procedure identified -Number of subordinates directly supervised by the Incident Commander (3-7)	-Incident Management System Standard Operating Procedures Radio Transmissions during multi-response incidents
-Initial Rapid Intervention Team (IRIT)	-Document Analysis	-Initial Rapid Intervention Team procedure identified clearly	-Incident Management System Standard Operating Procedures -Initial Rapid Intervention Team Standard Operating Procedures
-Rapid Intervention Team (RIT)	-Document Analysis	-Rapid Intervention Team procedure identified clearly	-Incident Management System Standard Operating Procedure -Rapid Intervention Team Standard Operating Procedures

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Effective Communications			
-Standard terminology	-Document Analysis -Direct Observation	-Standard terminology procedure outlined clearly -Standard terminology usage observed	-Incident Management System Standard Operating Procedures Radio Transmissions during multi-response incidents
-Designated radio channel	-Document Analysis -Direct Observation	-Designated radio channel procedure outlined clearly -Audible designation of radio channel observed	-Incident Management System Standard Operating Procedures Radio Transmissions during multi-response incidents
-Controlling communications (strong command presence)	-Document Analysis -Direct Observation	-Controlled communication procedure identified clearly -Audible controlled communications observed	-Incident Management System Standard Operating Procedures Radio Transmissions during multi-response incidents
-Benchmarks	-Document Analysis -Direct Observation	-Benchmark procedure outlined clearly -Audible benchmarks observed	-Incident Management System Standard Operating Procedures Radio Transmissions during multi-response incidents

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Professional Development			
-Incident Command System Standard Operating Procedures	-Document Analysis -Structured Interview	-Clear and consistent Incident Command System Standard Operating Procedures identified -How do you familiarize yourself with the San Antonio Fire Departments Incident Command Standard Operating Procedures? (Q #2)	-Incident Management System Standard Operating Procedures -Firefighters and Officers
-Incident Command System training	-Document Analysis -Structured Interview	-Existence of Incident Command System training procedure -How would you describe the adequacy of the San Antonio Fire Departments Incident Command Training? (Q #3)	-Incident Management System Standard Operating Procedures -Interdepartmental Correspondence -Firefighters and Officers
-Officer development program	-Document Analysis -Structured Interview	-Existence of officer development program -How would you describe the adequacy of the San Antonio Fire Departments officer development program? (Q #4)	-Incident Management System Standard Operating Procedures -Firefighters and Officers

Table 4.1: Operationalization of the Conceptual Framework

Operationalization Table			
Ideal Type Categories	**Research Methods**	**Evidence**	**Sources**
Professional Development			
-Post incident critiques	-Document Analysis	-Post incident critique procedure identified clearly	-Incident Management System Standard Operating Procedures
	-Structured Interview	-Describe your experience with post incident critiques? (Q #5)	-Firefighters and Officers

Document Analysis

Document analysis is one of the three research methods selected for this case study. According to Yin (2003, 87), "the most important use of documents is to corroborate and augment evidence from other sources." Document analysis has many strengths. Documentation tends to be stable, which means it can be reviewed repeatedly[63]. Documents contain exact information and tend to cover a long period of time and events[64]. Document analysis does have some weaknesses including irretrievability and the reporting bias of the originating author.

Document analysis of the San Antonio Fire Departments Incident Command System was affected by irretrievability issues. The San Antonio Fire Department Incident Management System Standard Operating Procedure provided most of the evidence attained through document analysis. The San Antonio Fire Department Incident Management System Standard Operating Procedure referenced one document that could not be retrieved; the Radio Communications Policy.

[63] Yin (2003, 86) Figure 4.1
[64] Yin (2003, 86) Figure 4.1

Document analysis is used to assess all five ideal type categories. Document analysis is used to confirm the existence of **first arriving officer** and **Incident Commander** procedures. Document analysis is also helpful in confirming **scene safety**, **communications** and **professional development** procedures. This includes the study of the San Antonio Fire Departments Incident Command System Standard Operating Procedures. All other documents utilized by the administration to supplement the departments Standard Operating Procedures are examined. Examples of these documents include interdepartmental memorandums and administrative e-mails.

Document Analysis: Sampling Issues

Documents to be analyzed were selected with the help of knowledgeable professionals within the San Antonio Fire Department[65]. In this case, there were a limited number of documents available. The limited amount of documentation combined with the input of knowledgeable professionals within the San Antonio Fire Department enable analysis of all key documents. As stated earlier, documents including Incident Command System Standard Operating Procedures and supplemental documents were analyzed. These documents are included in the appendix. **Table 4.2** provides the list of documents analyzed.

Table 4.2: List of Documents

- Incident Management System Standard Operating Procedures[66]
- Initial Rapid Intervention Team Standard Operating Procedure
- Rapid Intervention Team Standard Operating Procedure
- Command Policy
- Accountability Policy
- Safety Officer Procedure
- Evacuation Policy
- Interdepartmental Correspondence[67]

[65] Vaden (2007, 41)
[66] See Appendix I

Direct Observation: Radio Transmissions

Direct observation is used to assess the San Antonio Fire Department Incident Command System. Direct observation, in this case, is limited to the analysis of department radio transmissions. "The observations can range from formal to casual data collection activities" (Yin 2003, 92). Observing the evidence first hand uncovers valuable information that may not have been discovered using other research methods. "If a case study is a new technology, for instance, observations of the technology at work are invaluable aids for understanding the actual uses of the technology or potential problems being encountered" (Yin 2003, 93). Direct observations can be witnessed directly in real time[68].

A weakness of direct observation is it can be time consuming and costly. Another weakness is the possibility of observer bias. In this case responses that directly involved the observer were not monitored because of possible bias. The limited time available for monitoring radio transmission can also be considered a weakness. In a one month period of observation only twenty multi-unit radio transmissions were observed. A greater and thus more representative number of observations could have been attained with a longer time frame.

Multi-unit response dispatches were observed in real-time. Because all San Antonio Fire Department radio dispatches are transmitted on the same frequency, the entire department has an equal chance of being observed. Because official radio transmission recordings could not be attained, pen and paper along with a work sheet were utilized to record the details of each observable incident[69]. As stated earlier, the Incident Command System relies heavily on radio communication. All parts of the system must be communicated over the radio. Fulfillment of

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[67] See Appendix F,G,H
[68] Yin (2003, 86)
[69] See appendix D

each component of the model is easily observed due to the necessary radio transmissions. If any component is not transmitted over the radio, then the incident under investigation failed to adhere to the criteria developed in the model. The audible assumption of command component, being observed under the first arriving officer category, would be fulfilled by the following transmission example:

- 1st arriving officer: "*Engine 8 is on scene* ***assuming command****.*"

In this example the Engine 8 has arrived on scene and the officer has taken command of the incident. If Engine 8's officer had not stated that fact over the radio, then the first arriving officer would have failed to complete his duties. The above example will hold true for every component observed. On scene radio transmissions were monitored for the purpose of identifying **first arriving officer responsibilities**, **scene safety procedures** and **effective communications**.

Sample: Direct Observation (***Radio Transmissions)***

Radio Transmissions of the Incident Command System are best observed when multiple fire units respond. When more than one unit responds, the fire companies are required to communicate with each other via radio transmissions. The Incident Command System requires all parts of the system to be verbalized over the radio. Radio transmissions are a great way to observe the Incident Command System because of the required transmissions. The Incident Command System relies heavily on radio communication thus making radio observations an excellent way to observe the system in action. Radio observations are used to assess the model components of **first arriving officer responsibilities**, **scene safety procedures** and **effective communications**.

Radio transmissions of multi-unit responses were observed over a period of one month. On every third day[70], a San Antonio Fire Department radio was monitored for multi-unit dispatches. On each day of observation the radio was monitored randomly for a 12 hour[71] period; from 9:00 am to 9:00 pm. Emergencies occur on a completely random basis. "In each random selection, each element has an equal chance of selection independent of any other event in the selection process" (Babbie 2001, 186). During the time of observation twenty multi-unit responses were observed. Observed responses included structure fires, grass fires and high speed traffic accidents. **Table 4.3** summarizes the observed radio transmissions.

Table 4.3: Radio Transmissions (February 9, 2008 through March 10, 2008)

Radio Transmissions		
Incident Type	**# of Units**	**Brief Description**
Structure Fire	5	House fire; all observable elements supported.
High speed traffic accident	2	High speed vehicle collision. Other incidents working on the same radio channel; failed to designate own radio channel. All other observable elements supported.
Structure Fire	5	House fire; first arriving company used ten code (10-97). All other observable elements supported.
Structure Fire	5	House fire; first arriving officer did not verbally assume command or give an initial report. All other observable elements supported.
Grass fire	10	2nd alarm; Incident Commander failed to respond on the first call. All other observable elements supported.
Grass fire	5	All observable elements supported.
High speed traffic accident	2	High speed vehicle collision. Other incidents working on the same radio channel; failed to designate own radio channel. All other observable elements supported.
Structure Fire	5	House fire; second company used ten code (10-97). All other observable elements supported.
Structure Fire	5	House fire; Incident Commander used ten code (!0-97). All other observable elements supported.
Structure Fire	5	House fire; food on the stove. All observable elements supported.
Structure Fire	5	House fire; all observable elements supported.

[70] A total of ten days will be observed over the one month period.
[71] A total of 120 hours of radio transmissions will be observed.

Table 4.3: Radio Transmissions (February 9, 2008 through March 10, 2008)

Radio Transmission		
Incident Type	**# of Units**	**Brief Description**
High speed traffic accident (extrication)	3	Trapped victim needing extrication. Other incidents working on the same radio channel; failed to designate own radio channel. All other observable elements supported.
Structure Fire	5	House fire; all observable elements supported.
Structure Fire	5	House fire; all observable elements supported
Structure Fire	5	House fire; detached garage. All observable elements supported.
Structure Fire	5	House fire; first arriving officer used ten code (10-97). All other observable elements supported.
Structure Fire	5	House fire; All observable elements supported.
Structure Fire	5	House fire; Incident Commander used ten code (10-22). All other observable elements supported.
Structure Fire	5	House fire; Incident Commander used ten code (10-97). All other observable elements supported.
Structure Fire	7	Apartment fire; all observable elements supported.

Structured Interviews

Structured interviews are used to assess the San Antonio Fire Departments Incident Command System. Structured interviews are important to the completion of a comprehensive program assessment. "One of the most important sources of case study information is the interview" (Yin 2003, 89). Structured interviews are valuable because questions can be focused directly on the case study topic. The focused questions are presented in open-ended form to encourage more insight into the topic. According to Yin (2003, 90), "the interviews may still remain open-ended and assume a conversational manner, but you are more likely to be following a certain set of questions derived from the case study protocol." Weaknesses of structured interviews include question and response bias along with reflexivity. Reflexivity occurs when the interviewee gives what the interviewer wants to hear[72]. In an effort to address potential weaknesses, interview questions were constructed in an open-ended manner. Also, all interviews were conducted in private in an effort to allow interviewee's to speak freely.

[72] Yin (2003, 86) Figure 4.1

Structured interview questions were developed from the conceptual framework. Questions are aimed toward the assessment of the **responsibilities of the Incident Commander** and **professional development**. Question #1, assesses the customer service responsibility of the Incident Commander. Question #2, addresses the San Antonio Fire Departments Incident Command System Standard Operating Procedure. Question #3, was created to assess the Incident Command System training proficiency. Question #4 is geared towards officer development. Finally, Question #5, examines the issue of post incident critiques.

Sample: Structured Interviews

There are roughly an equal number of firefighters and officers[73] in the San Antonio Fire Department. The sample included thirty firefighters and officers; fifteen officers and fifteen firefighters. As such, quota sampling was utilized. According to Babbie (2001, 180), "quota sampling addresses the issue of representiveness." Quota sampling was utilized to ensure an equal number of firefighters and officers were interviewed. Babbie defines quota sampling as, "a type of nonprobability sampling in which units are selected on the basis of prespecified characteristics, so that the total sample will have the same distribution of characteristics assumed to exist in the population being studied." Interviews began on February 21, 2008 and concluded on March 22, 2008; roughly one month. Interviews were conducted in private in an effort to allow participants to speak openly. Interviews ranged anywhere from five to fifteen minutes in length.

Criteria for Support

Evidence collected was weighed on a scale based on four levels of support. The four levels of support are strong support, adequate support, limited support, and no support. Strong support indicates that the evidence collected demonstrates a considerable amount of attention

[73] The term "Officers" includes the ranks of Engineer, Lieutenant, Captain and Chief

given to the component assessed. Adequate support indicates that the evidence collected demonstrates an acceptable amount of attention given to the component assessed. Support feedback of both strong and adequate indicate that evidence collected shows proof that the component is addressed. Limited support indicates that some support is given to the component, but the support is insufficient to reach adequate status. No support indicates that no proof was found to support the component analyzed.

Human Subjects Protection

This applied research project was submitted to the Texas State Institutional Review Board and as expected received exemption[74]. There was no risk or discomfort to the subjects; all interviewees were volunteers. There was no benefit given to the interviewees. All interviewee information was kept confidential. The overall nature of this research did not pose risk of harm to any participants.

Chapter Overview

This chapter has outlined the research methodology used. A case study including document analysis, structured interviews and direct observation is utilized. Chapter five presents the results of the case study used to assess the San Antonio Fire Department Incident Command System.

[74] See appendix B

Chapter V: Results

The current version of the Incident Management System reflects the merger of certain elements of the California FIRESCOPE Incident Management System with the Phoenix Fire Ground Command System. The result of these mergers is a new system that permits the early implementation of Fireground Command and a smooth escalation of the organization to meet the demands of a major incident or disaster. (San Antonio Fire Department Incident Management System Standard Operating Procedure, 2004)

The purpose of the Incident Management System (IMS) is to provide structure and coordination to the management of emergency incident operations, in order to provide for the health and safety of all persons involved in incident mitigation activities. (San Antonio Fire Department Incident Management System Standard Operating Procedure, 2004)

Chapter Purpose

The purpose of this research is to assess the San Antonio Fire Departments Incident Command System using the five components of the practical ideal type developed from the literature. This chapter summarizes the results of the data collected from the case study of the San Antonio Fire Departments Incident Command System.

The five components of the model assessment tool include the responsibilities of the first arriving officer, the responsibilities of the Incident Commander, overall scene safety, effective communications and professional development. The results indicate that the of the San Antonio Fire Department Incident Command System closely adheres to most elements of the model; responsibilities of the first arriving officer, responsibilities of the Incident Commander, overall scene safety and effective communications. The San Antonio Fire Department Incident Command System would be improved if professional development of firefighters and officers was strengthened.

Responsibilities of the First Arriving Officer

The first component of a practical ideal model of the Incident Command System is captured with the **responsibilities of the first arriving officer**[75]. The literature states that the first arriving officer must **assume the role of Incident Commander**[76], perform an initial **scene size up**, **determine a strategy**[77] based on the scene size up and give an **initial report**[78] to incoming units. The first arriving officer sets the stage for the entire incident. By correctly performing the responsibilities listed above, the first arriving officer puts the incident command system in motion; should be performed at all incidents.

Document Analysis: Assumption of Command (all incidents)

The San Antonio Fire Departments Incident Management System Standard Operating Procedure demonstrates strong support of the assumption of command by the first arriving officer. Section 502 maintains that, "The first Fire Department officer or unit to arrive at the emergency scene shall assume command of the incident and initiate whatever part of the IMS needed to effectively manage the incident scene." [79] The assumption of command is clearly stated for all incidents. "The IMS will be applied at all incidents."[80] The responsibility of the first arriving officer to assume the role of Incident Commander is further strengthen by the following example. "The first company officer on scene shall establish and announce 'command' and initiate an incident management structure appropriate for the incident."[81] The San Antonio Fire Department Incident Management System Standard Operating Procedure provides strong support for the assumption of command at all incidents. Numerous departmental

[75] Perry (2003); Bigley and Roberts (2001); Jaing, et al. (2004); Brunacini (2002); Coleman (1997); Adams and Miller (2004); Moynihan (2007)
[76] Perry (2003)
[77] Bigley and Roberts (2001)
[78] Brunacini (2002)
[79] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 4)
[80] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 5)
[81] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 5)

emails and memorandums supporting the assumption of command were located. These supplemental documents combined with the San Antonio Incident Management System Standard Operating Procedure provide **strong support** for the assumption of command element.

Direct Observation (Radio Transmissions): Assumption of Command (all incidents)

Direct observation research was conducted to determine if assumption of command procedures were being used in real life incidents. Twenty radio transmissions were observed. Because most aspects of the Incident Command System require radio verbalization, radio transmission observation is a great way to observe the Incident Command System in action. An audible declaration (over the radio) is the only way for the first arriving officer to assume command. As an example, the first arriving officer of one observed multi-unit response transmitted the following:

- Officer: "19's on scene, assuming command."

The audible declaration of command was observed in all but one incident. In the one failed case the first arriving officer simply stated that his unit was "on scene", but never verbalized his assumption of command. **Table 5.1** depicts the results of the radio transmission observation of the assumption of command.

Table 5.1 Responsibilities of the First Arriving Officer

Responsibilities of the First Arriving Officer (Radio Transmissions) N=20	
Criteria	**%Yes**
Audible Assumption of Command	**95**

Document Analysis: Scene Size Up

Document analysis was conducted to identify the responsibilities of the first arriving officer. The San Antonio Fire Department Incident Management System Standard Operating Procedure provides strong support for the element of scene size up. This document states that the size up shall include, "A brief description of the involved structure (i.e., building size and type, occupancy, etc.). If no structure involved, provide a brief description of the situation found (i.e., hazmat release, multi-vehicle accident, etc.)."[82] The San Antonio Fire Department Incident Management System Standard Operating Procedure provides strong support for the scene size up element. Numerous departmental emails and memorandums supporting scene size up were located. These supplemental documents combined with the San Antonio Incident Management System Standard Operating Procedure provide **strong support** for the scene size up element.

Document Analysis: Determine Strategy

With the assumption of command and size up complete the first arriving officer must determine strategy. The San Antonio Fire Department Incident Management Standard Operating Procedure outlines the determination of strategy by the first arriving officer. According to this document, a brief description of the actions being taken, orders for incoming companies and declaration of strategy are necessary.[83] The San Antonio Fire Department Incident Management System Standard Operating Procedure provides strong support for the determination of strategy element. Numerous departmental emails and memorandums supporting the determination of strategy were located. These supplemental documents combined with the San Antonio Incident Management System Standard Operating Procedure provide **strong support** for the determination of strategy element.

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[82] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 5)
[83] San Antonio Fire department Incident Management System Standard Operating Procedure(2004, 5)

Document Analysis: Initial Report

The assumption of command, scene size up and determination of strategy are all verbalized over the radio to incoming companies via the initial report. The San Antonio Fire Department Incident Management System Standard Operating Procedure clearly demonstrates the importance of the initial report. Many examples of initial reports are given throughout this document in order to clarify administration expectations. The San Antonio Fire Department Incident Management System Standard Operating Procedure gives the following example of an initial report:

> Engine 3 is on-scene assuming command. We have a large two-story school with a working fire on the second floor. Engine 3 will be stretching a handline to the second floor through the north stairwell and initiating an offensive attack. I need the next arriving Engine to lay a supply line and back us up with another hand line, the third arriving Engine to provide ventilation support and the Truck to conduct a primary search. Engine 3 will be Commerce Street Command. The Command Post will be located on the south side of the fire building next to the flagpole.

The San Antonio Fire Department Incident Management System Standard Operating Procedure provides strong support for the initial report element. Numerous departmental emails and memorandums supporting the use of initial reports were located. These supplemental documents combined with the San Antonio Incident Management System Standard Operating Procedure provide **strong support** for the initial report element.

Direct Observation (Radio Transmissions): Initial Report

Direct observation was conducted to determine the use of initial reports during real life emergency operations. Twenty radio transmissions of real time emergency incidents were observed for initial reports. The Incident Command System requires that all initial reports be utilized in a standard radio transmission to incoming companies. As such, the observation of on scene radio transmission makes an excellent source for observation of initial reports. In one

observed transmission of a high speed traffic accident the first arriving officer gave the following initial report:

- Officer: "Engine 10 is on scene, assuming command. We have a one vehicle accident, no trapped occupants. Truck 8 and Truck 11 can cancel. We can handle it."

Of the twenty observed radio transmission, an initial report was given in all but one incident. Direct observations of department radio transmission provide evidence of **strong support** for the use of initial reports. **Table 5.2** summarizes the frequency of initial reports observed. **Table 5.3** Summarizes the results for the first arriving officer component.

Table 5.2 Responsibilities of the First Arriving Officer

Responsibilities of the First Arriving Officer (Radio Transmissions) N=20	
Criteria	**%Yes**
Initial Report	**95**

Table 5.3: Responsibilities of the First Arriving Officer

Responsibilities of the First Arriving Officer		
Component	**Method**	**Evidence**
Assumption of Command	-Document Analysis Direct Observation	-Strong Support -Strong Support
Scene Size Up	-Document Analysis	-Strong Support
Determine Strategy	-Document Analysis	-Strong Support

Table 5.3: Responsibilities of the First Arriving Officer

Responsibilities of the First Arriving Officer		
Component	**Method**	**Evidence**
Initial Report	-Document Analysis Direct Observation	-Strong Support -Strong Support

Responsibilities of the Incident Commander

The second component of an effective Incident Command System is identified in the **responsibilities of the Incident Commander**[84]. The Incident Commander is responsible for fulfilling the duties of six roles at every incident regardless of size or complexity. The Incident Commander must first and foremost fill the role of **command**. The role of command is to focus on the incident as a whole keeping safety as his or her number one priority. **Operations** is the second role of the Incident Commander. Operations focuses on the strategic decisions of the incident and determines the quickest and safest way to resolve the emergency. The third responsibility of the Incident Commander is **planning.** The planning role focuses on the past, current and future needs of the incident; always staying ahead**. Logistics** makes sure the proper tools, equipment and manpower needed to resolve the incident are accounted for. **Administration** deals mostly with the financial result of resolving the emergency. It is the job of administration to ensure all costs are tabulated. Finally, when the emergency has ended the Incident Commander must not forget the victims who have been affected. It is considered good **customer service**[85] practice for the Incident Commander to do everything in their power to help the victims with their needs.

[84] Hannestad (2005); Brunacini (2002); Coleman (1997); Bigley and Roberts (2001); Jaing, et al. (2004); NFPA 1561, (2007); Adams and Miller (2004); Moynihan (2007)
[85] Brunacini (2002)

Document Analysis: Command

The contents of the San Antonio Fire Department Incident Management System Standard Operating Procedures were analyzed. The purpose of this analysis was the determination of existing procedures for the role of command. The San Antonio Incident Management System Standard Operating Procedures clearly and consistently outline the role of command. "Beginning with the arrival of the first unit and throughout the incident, the radio designation 'COMMAND" will be used"[86] The strong support of command procedures are contained within the San Antonio Fire Departments Incident Management System Standard Operating Procedures. Numerous departmental emails and memorandums supporting the command element were located. These supplemental documents combined with the San Antonio Incident Management System Standard Operating Procedure provide **strong support** for the command element.

Document Analysis: Operations

The document analysis of the San Antonio Fire Department Incident Management Standard Operating Procedures included existing evidence for the role of operations. The purpose of operations is clearly defined and expectations of the role are reinforced on numerous occasions throughout this document. "The primary responsibility of the Operations section is to execute the operational activities of an incident as determined by the Incident Commander."[87]The San Antonio Fire Department Incident Management System Standard Operating Procedures state that, "The Operations Section is responsible for the tactical priorities and the safety and welfare of the personnel working in the Operations Section."[88] The San Antonio Fire Department Incident Management Standard Operating Procedures demonstrate strong support for the role of operations. Numerous departmental emails and memorandums

[86] San Antonio Fire Department Incident Management Standard Operating Procedure (2004, 5)
[87] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 20)
[88] San Antonio Fire Department Incident Management Standard Operating Procedure (2004, 20)

supporting the operations element were located. These supplemental documents combined with the San Antonio Incident Management System Standard Operating Procedure provide **strong support** for the operations element.

Document Analysis: Planning

The role of planning is strongly supported by the San Antonio Fire Department Incident Management Standard Operating Procedures. This document demonstrated significant evidence for the importance of the role of planning. The primary responsibilities are clearly defined and consistently backed throughout. The San Antonio Fire Department Incident Management Standard Operating Procedure states, "Primary responsibility of the Planning Sector will be to assist the Incident Commander in developing operational strategy for extended operations by providing necessary tactical information." [89]In an effort to add clarification to the role of planning, a more detailed description of responsibilities is presented. "The Planning Section is responsible for gathering, assimilating, analyzing and processing information needed for effective decision-making."[90] The San Antonio Fire Department Incident Management System Standard Operating Procedure demonstrates strong support for the role of planning. Unfortunately, the San Antonio Fire Departments Incident Management Standard Operating Procedure is the sole document for supportive evidence for planning. Although the document itself provides evidence of strong support, the lack of multiple documents or other forms of evidence lowers the confidence level.

Document Analysis: Logistics

The San Antonio Fire Department Incident Management System Standard Operating Procedure document was also analyzed to determine the existence of logistics procedures. This

[89] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 22)
[90] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 22)

document provides strong support for the role of logistics. The primary responsibilities of the role of logistics are clearly outlined. The San Antonio Incident Management System Standard Operating Procedure states that logistics, "primary responsibility will be to provide needed equipment, both departmental and outside, and service in the form of food, fuel and mechanical expertise, to the incident area as needed."[91] The role of logistics at emergency scenes is described at length. "The Logistics Section provides service and support resources to all the organizational components involved in the incident including but not limited to facilities, transportation, supplies, equipment maintenance, fueling, feeding, communications, and rehabilitation."[92] The document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure provides strong support for the role of logistics at emergency scenes. Unfortunately, the San Antonio Fire Departments Incident Management Standard Operating Procedure is the sole document for supportive evidence for logistics. Although the document itself provides evidence of strong support, the lack of multiple documents or other forms of evidence lowers the confidence level.

Document Analysis: Administration

Evidence of the importance of the role of administration is strongly supported. Document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure demonstrates clear and concise responsibilities for the role of administration. This document not only outlines the responsibilities of the administration role but also describes the unique situations that require administrative attention. "All disasters have a cost. There are times where tracking the cost associated with mitigating a particular emergency is imperative. Examples include emergencies that may require emergency procurement of

[91] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 23)
[92] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 23)

equipment, supplies, food, etc., emergencies where State and/or Federal reimbursement is available, HazMat emergencies that can be charged to the responsible parties, and other emergencies where tracking of cost is advantageous. When incidents of this nature occur, the IC should establish an Administration/Finance Section." The analysis of the San Antonio Fire Departments Incident Management System Standard Operating Procedure demonstrates strong support for the role of administration at emergency scenes. Unfortunately, the San Antonio Fire Departments Incident Management Standard Operating Procedure is the sole document for supportive evidence for the administration element. Although the document itself provides evidence of strong support, the lack of multiple documents or other forms of evidence lowers the confidence level.

Document Analysis: Customer Service

Document analysis of the existing San Antonio Fire Department Incident Management System Standard Operating Procedure provided no evidence for the element of customer service. This document provides no support for customer service. Several interdepartmental correspondence emails[93] that support customer service were located. However, a customer service standard operating procedure is lacking. Document analysis of the customer service element provides **limited support**.

Structured Interview: Customer Service

Structured interviews were used to determine if the element of customer service is addressed within the San Antonio Fire Department. Interview responses indicate recent emphasis in the area of customer service. Responses indicate that there has been a recent change in administration. The new administration has placed great importance on the issue of customer service. Respondents indicated new customer service responsibilities such as free smoke

[93] See Appendix H

detector installation, increased community involvement and emergency scene victim assistance. One respondent indicated that, "the official philosophy of the San Antonio Fire Department is to provide customer service at a level beyond the expectations of the citizens." Another respondent described the department's customer service philosophy as, "Our family serving your family, which means a dedicated team of firefighters providing family minded service to the citizens of San Antonio." Analysis of structured interview results provides **strong support** for the element of customer service within the San Antonio Fire Department Incident Management System.

Overall, document analysis for the responsibilities of the Incident Commander demonstrated strong support for the roles of command and operations. Planning, logistics and administration were strongly support in the San Antonio Fire Department Incident Management System Standard Operating Procedure, but lacked supplemental documentation. The lack of multiple documents or other forms of evidence lowers the confidence level. **Table 5.4** summarizes the findings for the responsibilities of the Incident Commander component.

Table 5.4: Responsibilities of the Incident Commander

Responsibilities of the Incident Commander		
Component	**Method**	**Evidence**
Command	-Document Analysis	-Strong Support
Operations	-Document Analysis	-Strong Support
Planning	-Document Analysis	-Adequate Support
Logistics	-Document Analysis	-Adequate Support
Administration	-Document Analysis	-Adequate Support

Table 5.4: Responsibilities of the Incident Commander

Responsibilities of the Incident Commander		
Component	**Method**	**Evidence**
Customer service	-Document Analysis -Structured Interviews[94]	-Limited Support -Strong Support

Overall Scene Safety

Overall scene safety[95] is identified as the third component in the model. The proper use of the Incident Command System promotes scene safety. A **safety officer**[96], who's sole purpose is to monitor the safety of first responders, should be established at any incident involving immediate danger. A **Personnel Accountability Report**[97] **(PAR)** should be initiated by the Incident Commander whenever an unsafe change in conditions occurs. The confirmation of a PAR by all working units lets the Incident Commander know that everyone is safe. An **operational retreat policy**[98] should also exist in a safe and effective Incident Command System. When the Incident Commander becomes aware of a dangerous situation, the retreat of all first responders should be initiated.

The Incident Commander must maintain a **manageable span of control**. When the Incident Commander allows themselve to become overwhelmed with the supervision of too many subordinates, they risks losing control of the incident, creating an unsafe situation. A manageable span of control can be anywhere from three to seven subordinates, but can be more or less depending on the severity of the situation (Lindell, Perry and Prater 2005). The Incident Commander must never allow themselve to become overwhelmed.

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[94] Appendix A, question 1
[95] NFPA 1561 (2007a); NFPA 1500 (2007b); Coleman (1997); Lindell, Perry and Prater (2005); Brunacini (2002); Code of Federal Regulations (29 CFR 1910.134); Adams and Miller (2004); Monynihan (2007)
[96] NFPA 1561, (2007)
[97] NFPA 1561, (2007)
[98] NFPA 1561, (2007)

Finally, the use of an **Initial Rapid Intervention Team (IRIT)**[99] and subsequent **Rapid Intervention Team (RIT)**[100], whose sole responsibility is to rescue firefighters working in IDLH[101] conditions, is a necessity. Implementation of both IRIT and RIT promote a safe and effective Incident Command System.

Document Analysis: Safety Officer

Document analysis of the San Antonio Fire Departments Incident Management System Standard Operating Procedure provides strong evidence for Safety Officer procedures. The position of Safety Officer is clearly described. "The Safety Officer position is implemented to extend the Incident Commander ability to monitor and assess safety hazards and unsafe situations."[102] A detailed description of Safety officer responsibilities is provided. The San Antonio Fire Department Incident Management System Standard Operating Procedure states that the Safety Officer's primary responsibility is the safety and health of incident personnel.[103] This document provides clear and concise Safety Officer procedures. The San Antonio Fire Department Incident Management System Standard Operating Procedure in combination with the departments Safety Officer Procedure provides **strong support** for the element of Safety Officer.

Document Analysis: Personnel Accountability Report (PAR)

Document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure provides evidence for the existence of Personnel Accountability Reports (PAR). This document provides clear and concise procedures for emergency scene use of Personnel Accountability Reports.

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[99] NFPA 1561, (2007)
[100] NFPA 1561, (2007)
[101] Immediate Danger to Life and Health
[102] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 28)
[103] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 28)

The San Antonio Fire Department Incident Management Standard Operating Procedure references the Accountability Policy. This document provides detailed descriptions of Personnel Accountability Report procedures. The San Antonio Fire Department Incident Management System Standard Operating Procedure and Accountability Policy provide **strong support** for the existence of the element of Personnel Accountability Reports.

Document Analysis: Operational Retreat Policy

The San Antonio Fire Department Incident Management Standard Operating Procedure was analyzed. This document provides strong evidence of the use of an operational retreat policy. The process is initiated through the use of emergency radio traffic. Emergency radio traffic is utilized to clear all radio traffic and initiate the evacuation tone. "In accordance with the Department's Radio Communications Standard Operating Procedure, the term 'emergency traffic' shall be used to clear radio traffic for emergency transmissions."[104] This document references the San Antonio Fire Departments Radio Communications, Accountability and Evacuation Policies. Document analysis provided **strong support** for an operational retreat policy during emergency operations.

Document Analysis: Manageable Span of Control

Documents analysis of the San Antonio Fire Department Incident Management System revealed **strong support** for manageable span of control procedures. This document defines span of control as, "the number of persons or companies that can be effectively supervised by one individual."[105] According to the San Antonio Fire Department Incident Management System Standard Operating Procedure the optimal span of control at emergency scene operations is five, although three to seven is acceptable. This document states that, "when an Incident

[104] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 36)
[105] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004,1)

Commander's span of control approaches and/or exceeds five, it is time to consider dividing the situation or problem into manageable segments and delegating specific responsibilities to subordinate officers."[106]

Direct Observation (Radio Transmissions): Manageable Span of Control

Direct Observation was used to assess manageable span of control evidence at real life emergency scenes. Twenty radio emergency scene radio transmissions were monitored. The results of the direct observation provided **strong support** for consistent manageable span of control at emergency scenes. The direct observation research revealed no instances of situations where the span of control was breached. **Table 5.5** illustrates the direct observation analysis of manageable span of control.

Table 5.5: Overall Scene Safety

Overall Scene Safety (Radio Transmissions) N=20	
Criteria	**%Yes**
Manageable span of control	**100**

Document Analysis: Initial Rapid Intervention Team (IRIT)

The San Antonio Fire Department Incident Management System Standard Operating Procedure provides for the use of Initial Rapid Intervention teams at emergency scenes. This document references the San Antonio Fire Department Initial Rapid Intervention Team Standard Operating Procedure as its lead source.

The San Antonio Fire Department Initial Rapid Intervention Team Standard Operating Procedure was analyzed. This document clearly states the purpose and function of the Initial

[106] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 1

Rapid Intervention Team at emergency scenes. "The purpose of this policy is to enhance the safety of personnel during the initial attack phase in a fire, to establish a standard approach to initial operations, to specify the adequate number of personnel needed to safely conduct initial emergency operations and to limit the scope of initial emergency operations to those that can be safely performed by personnel available on scene."[107] This document states that, "a minimum of two firefighters, with full protective clothing, including SCBA, may begin operating within the IDLH[108] atmosphere as long as two additional firefighters (properly equipped, including radio) are outside the IDLH atmosphere to serve as an IRIT."[109] Both the San Antonio Fire Department Incident Management System and Initial Rapid Intervention Team Standard Operating Procedures provide **strong support** for the use of Initial Rapid Intervention Teams at emergency incidents.

Document Analysis: Rapid Intervention Team (RIT)

Evidence of Rapid Intervention Team procedures are outline in both the San Antonio Fire Departments Incident Management System and Initial Rapid Intervention Team Standard Operating Procedures. Both documents reference the San Antonio Fire Department Rapid Intervention Team Procedure as the lead document.

Document Analysis of the San Antonio Fire Department Rapid Intervention Team provides strong support for the use of Rapid Intervention Teams at emergency scenes. A Rapid Intervention Team shall be assigned to any incident where the Incident Commander feels there is a high danger to firefighter safety. A full crew, fully equipped and ready for entry, shall be designated to the Rapid Intervention Team. The sole purpose of the Rapid Intervention Team is the rescue of trapped or injured firefighters. Analysis of the San Antonio Fire Departments

[107] San Antonio Fire Department Initial Rapid Intervention Team Standard Operating Procedure (2002)
[108] Immediate Danger to Life and Health
[109] San Antonio Fire Department Initial Rapid Intervention Team Standard Operating Procedure (2, 2002)

Rapid Intervention Standard Operating Procedure provides **strong support** for the use of Rapid Intervention Teams during emergency scene operations.

Overall, the document analysis provided strong support for the component of overall scene safety. However, the lack of other forms of evidence lowers the confidence level for the elements of safety officer, Personnel Accountability Reports, operational retreat policy, Initial Rapid Intervention Teams and Rapid Intervention Teams. **Table 5.6** summarizes the results for the overall scene safety component.

Table 5.6: Overall Scene Safety

Overall Scene Safety		
Component	**Method**	**Evidence**
Safety Officer	-Document Analysis	-Strong Support
Personnel Accountability Report (PAR)	-Document Analysis	-Strong Support
Operational retreat policy	-Document Analysis	-Strong Support
Manageable span of control	-Document Analysis Direct Observation	-Strong Support -Strong Support
Initial Rapid Intervention Team (IRIT)	-Document Analysis	-Strong Support
Rapid Intervention Team (RIT)	-Document Analysis	-Strong Support

Effective Communications

Effective communication[110] is the fourth component of an effective Incident Command System. When an incident breaks down it is most often the result of ineffective communications. The use of **standard terminology**[111] is essential in the prevention of miscommunication. The use of plain English is the preferred to coded terminology such as "ten codes". Each emergency incident should use a separate radio channel. A **designated radio channel**[112] reduces the confusion that occurs when separate incidents are communicating on the same channel. The Incident Commander must control communications throughout the incident. If the Incident Commander allows others to dominate the airway, important orders and information are likely to be missed. Through the initial radio report, the Incident Commander establishes his or her authority and should never allow it to be overpowered by uncontrolled radio banter from responding units. **Controlling communications** is commonly known as having a **strong command presence**[113], in which everyone is aware of who is in charge.

Finally, effective communications is increased when emergency workers have a means of communicating their progress to the Incident Commander. **Benchmarks**[114], which are progress reports used by companies to inform the Incident Commander of the completion of their assigned task, allows the IC to have total control of the scene.

Document Analysis: Standard Terminology

Document Analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure was performed. The document provided **strong support** for the

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[110] NFPA 1561 (2007a); NFPA 1500 (2007b); Coleman (1997); Lindell, Perry and Prater (2005); Brunacini (2002); Code of Federal Regulations (29 CFR 1910.134); Adams and Miller (2004); Monynihan (2007)
[111] Brunacini (2002); NFPA 1561, (2007)
[112] NFPA 1561, (2007)
[113] Brunacini (2002)
[114] Coleman (1997)

existence of standard terminology procedures during emergency incidents. "Common terminology is essential in any emergency management system, especially with multiple-agency involvement and joint operations. It includes standard and consistent IMS terminology that is used to name or pre-designate"[115] This document also states that, "clear and simple language will be used to transmit information."[116]

Direct Observation (Radio Transmissions): Standard Terminology

Direct observation research was also conducted. The observation of twenty real life emergency scene operations were analyzed for the use of standard terminology. The direct observation occurred in the form of radio transmission of emergency scenes. Direct observation analysis demonstrated **adequate support** for the use of standard terminology during emergency scene operations. The use of ten codes was observed in five of the twenty observations. The ten code "10-97" was used on four different occasions to signify the arrival of companies on scene. The ten code "10-22" was used on one occasion to signify that the fire was out. The use of ten codes is not recommended. **Table 5.7** summarizes the results for direct observation of the standard terminology element.

Table 5.7: Effective Communications

Effective Communications (Radio Transmissions) N=20	
Criteria	**%Yes**
Standard terminology	**75**

[115] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 2)
[116] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 2)

Document Analysis: Designated Radio Channel

The San Antonio Fire Department Incident Management System Standard Operating Procedure provides **strong support** for the use of a designated radio channel at emergency scenes. "Dispatch shall provide a separate tactical channel for all regular alarms and lesser multi-unit alarms where the use of a separate channel would enhance unit-to-unit communications and coordination."[117]

Direct Observation (Radio Transmissions): Designated Radio Channel

Direct observation of real life emergency scene radio transmissions provided **adequate support** for the use of designated radio channels for multi-unit responses. Twenty emergency scene operation radio transmissions were observed. Three emergency responses were assigned radio channels used for other emergency scene operations. All three responses included interference from other incidents. The three multi-unit responses came in the form of high speed traffic accident in which two units were assigned. The sharing of a radio channel for a multi-unit response is not recommended. **Table 5.8** summarizes the results for direct observation of the designated radio channel element.

Table 5.8: Effective Communications

Effective Communications (Radio Transmissions) N=20	
Criteria	**%Yes**
Designated radio channel	**85**

[117] San Antonio Fire Department Incident Management System Standard Operating Procedure (2004, 36)

Document Analysis: Controlling Communications

Document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedures provided **limited support** for the controlling communications element. This document references the San Antonio Fire Department Radio Communications Standard Operating Procedure. The San Antonio Fire Department Radio Communications procedure was irretrievable.

Direct Observation (Radio Transmissions): Controlling Communications

Direct observation of real life emergency radio communications provided **strong support** of controlled communications during emergency scene operations. Twenty real life emergency radio transmissions were observed. In only one observation did the Incident Commander fail to control communications. The incident in question was a multiple alarm grass fire. Although the Incident Commander maintained an adequate span of control, by delegating responsibilities, he failed on several occasions to answer his radio on the first call. The remaining nineteen radio observations revealed strong support of controlled communications by the Incident Commander. **Table 5.9** summarizes the results for the direct observation of the controlling communications element.

Table 5.9: Effective Communications

Effective Communications (Radio Transmissions) N=20	
Criteria	**%Yes**
Controlling communications	**95**

Document Analysis: Benchmarks

Document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure was conducted. The result of the analysis revealed **no support** for the element of benchmarks. No other documents regarding the specific use of benchmarks were discovered.

Direct Observation (Radio Transmissions): Benchmarks

Direct observation of twenty emergency scene radio transmission provided **strong support** for the use of benchmarks. Every incident used benchmarks correctly in order to provide the Incident Commander with scene progress information. Benchmarks such as "primary search complete" and "fire knocked down" were utilized. **Table 5.10** summarizes the results of the direct observation of the benchmark element. **Table 5.11** summarizes the results for the effective communications component.

Table 5.10: Effective Communications

Effective Communications (Radio Transmissions) N=20	
Criteria	**%Yes**
Benchmarks	**100**

Table 5.11: Effective Communications

Effective Communications		
Component	**Method**	**Evidence**
Standard terminology	-Document Analysis Direct Observation	-Strong Support -Adequate Support
Designated radio channel	-Document Analysis Direct Observation	-Strong Support -Adequate Support
Controlling communications	-Document Analysis Direct Observation	-Limited Support -Strong Support
Benchmarks	-Document Analysis Direct Observation	-No Support -Strong Support

Professional Development

The fifth and final component of an effective Incident Command System is **professional development**[118]. An important part of professional development is clear and concise written **ICS Standard Operating Procedures (SOP's)** [119]. The SOP's should be used to outline the details of the system being used. To supplement the Incident Command System SOP's, hands on **Incident Command System training**[120] is necessary. The Incident Command System SOP's and the Incident Command System training should match each other in order to avoid confusion. The proper implementation of the Incident Command System depends heavily on the

[118] Buck, Trainor and Aguire (2006); NFPA 1561 (2007a); Coleman (1997); Brunacini (2002); Adams and Miller (2004)
[119] NFPA 1561, (2007)
[120] NFPA 1561, (2007)

understanding of those who use it. The only way to understand the Incident Command System is to practice it. An **officer development program** that focuses on the use of the Incident Command System, the role of the Incident Commander, and the various emergency scene strategy and tactics should be implemented. Since company officers are the individuals who will assume the role of Incident Commander, it is imperative that they receive the appropriate training necessary to perform there job. Finally, **post incident critiques** are necessary for gaining continual knowledge of the system. The critique is a two part series of a short term tail board critiques[121] followed by a more in depth station critiques.

Document Analysis: Incident Command System Standard Operating Procedures

The San Antonio Fire Department Incident Management System Standard Operating Procedures is the lead departmental document for the description of Incident Command System procedures. Analysis of this document provided evidence of **strong support** for the use of the Incident Command System at emergency incidents.

Structured Interviews: Incident Command System Standard Operating Procedures

Structured interviews were conducted to determine the use of Incident Command System Standard Operating Procedures as a source of reference for firefighters and officers within the department. The majority of the respondents provided **strong support** of the San Antonio Fire Department Incident Management System Standard Operating Procedure as the lead source of reference for department Incident Command procedures. Most interviewees described easy access to the Incident Management System procedure. Interviewees contended that they read the departmental Incident Management System SOP for familiarization. One responded simply stated, “When I have any questions, I just look the SOP up on the database.”

[121] Coleman (1997)

Document Analysis: Incident Command System Training

Document's that include Incident Command System training are limited. The San Antonio Fire Departments Incident Management System Standard Operating Procedure seems to be the main source of reference for firefighters. However, this document does not detail specific training scenarios. Two interdepartmental memorandums that described assumption of command procedures were located and analyzed. No evidence was found for a document that described Incident Command System training. Analysis of the San Antonio Fire Departments Standard Operating Procedures along with interdepartmental correspondence revealed **limited support** for the element of Incident Command System training.

Structured Interview: Incident Command System Training

Structured Interviews of firefighters and officers of the San Antonio Fire Department were conducted. The great majority of interviewees revealed that they have had limited or no Incident Command System training. Most revealed there only source of training was reading departmental standard operating procedures either for their own curiosity or for promotional opportunities. One interviewee stated, "There is a manual somewhere?" Hands on Incident Command System training is extremely limited. The few who had received the training where department officers. Another firefighter stated, "Incident Command training is non-existent." Results of the structured interviews provided **limited support** for Incident Command System training.

Document Analysis: Officer Development Program

Document analysis revealed no evidence of an officer development program. There is **no support** for the officer development program element.

Structured Interviews: Officer Development Program

Structured interviews of firefighters and officers of the San Antonio Fire Department were conducted. Results of the interviews provided **no support** for the existence of a departmental officer development program. One interviewee stated, "There isn't one that I know of." Another respondent said, "We need to work on that one". Structured interviews failed to support an officer development program.

Document Analysis: Post Incident Critiques

Document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure was conducted. The results of the analysis provided **no support** for post incident critiques. Other documents that provided support of post incident critiques were not located.

Structured Interview: Post Incident Critiques

Structured interviews of San Antonio firefighters and officers were conducted. The results of the interviewees provided **strong support** for department use of post incident critiques. Every interviewee indicated that they had participated in some form of post incident critiques. The majority of the interviewee's indicated that they felt the post incident critiques were beneficial to there understanding of the Incident Command System. One respondent stated, "Post incident critiques are positive. When companies are aloud to speak they tend to be more critical of themselves. Which allows for improvement through self-reflection." Several respondents indicated that post incident critiques were a positive change brought about by the department's new administration. Results of the structured interviews provided **strong support** for the element of post incident critiques. **Table 5.12** summarizes the results for the professional development component.

Table 5.12: Professional Development

Professional Development		
Component	**Method**	**Evidence**
Incident Command System Standard Operating Procedures	-Document Analysis -Structured Interviews[122]	-Strong Support -Strong Support
Incident Command System training	-Document Analysis -Structured Interviews[123]	-Limited Support -Limited Support
Officer development program	-Document Analysis -Structured Interviews[124]	-No Support -No Support
Post Incident Critiques	-Document Analysis -Structured Interviews[125]	-No Support -Strong Support

Chapter Overview

This chapter provided the results of the case study of the San Antonio Fire Departments Incident Command System. The case study included document analysis, direct observation and structured interviews. The results of the case study of the San Antonio Fire Department Incident Command System is strong to adequate in the components of responsibilities of the first arriving officer, responsibilities of the Incident Commander, overall scene safety and effective communications. The component of professional development needs improvement. The elements of Incident Command System training and Officer Development programs demonstrate the need for the most improvement. The final chapter provides a conclusion and offers

[122] Appendix C, question 2
[123] Appendix C, question 3
[124] Appendix C, question 4
[125] Appendix C, question 5

recommendations for improvement of the San Antonio Fire Department Incident Command System.

VI: Conclusions and Recommendations

The beauty of the practical ideal type is that when evidence is collected, students are able to make recommendations and assess strengths and weaknesses. (Shields and Tajalli, 2006)

Chapter Purpose

The purpose of this applied research project was threefold. First, it described the ideal components of an effective Incident Command System obtained from the literature. Second, the San Antonio Fire Departments Incident Command System was assessed using the practical ideal model components. The third purpose, providing recommendations for improving the San Antonio Fire Departments Incident Command System, is developed in this chapter.

Recommendations

The model assessment tool for the Incident Command System consists of five practical ideal type components developed from the literature. A case study of the San Antonio Fire Department Incident Command System was conducted using the components of the practical ideal type. **Table 6.1** summarizes the results of the case study and provides recommendations.

Table 6.1 Summary of Findings and Recommendations

Responsibilities of the First Arriving Officer		
Component	**Evidence**	**Recommendations**
Assumption of Command (All incidents)	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the assumption of command element. Radio transmission observations also provided strong support for this element. The combination of strong document analysis and direct observation results provides for **overall strong support** for assumption of command. **Continue to support the assumption of Command at the beginning of every emergency incident.**
Scene Size Up	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the scene size up element. Radio transmissions observations also provided strong support for this element. The combination of strong document analysis and direct observation results provides for **overall strong support** for scene size up. **Continue to support the size up of every emergency scene.**

Table 6.1 Summary of Findings and Recommendations

Responsibilities of the First Arriving Officer		
Component	**Evidence**	**Recommendations**
Determine Strategy	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the strategy element. Radio transmission observations also provided strong support for this element. The combination of strong document analysis and direct observation results provides for **overall strong support** for the determination of strategy. **Continue to support the determination of strategy at the beginning of emergency scene operations.**
Initial Report	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the initial report element. Radio transmission observations also provided strong support for this element. The combination of strong document analysis and direct observation results provides for **overall strong support** for the utilization of initial reports. **Continue to support the transmission of initial reports at the beginning of emergency scene operations.**
Responsibilities of the Incident Commander		
Command	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the command element. The Departments consistent application of supplemental command correspondence demonstrates a high commitment to the command element. The abundance of command documents provides for **overall strong support** for this element. **Continue to support the role of command during emergency scene operations.**
Operations	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the operations element. The Departments consistent application of supplemental operations correspondence demonstrates a high commitment to the operations element. The abundance of operations documents provides for **overall strong support** for this element. **Continue to support the role of operations during emergency scene operations.**
Planning	**Adequate Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the planning element. However, supplemental documentation for planning is lacking. Despite the strong SOP support, the limited amount of documents provides for **overall adequate support** for the planning element. **A Planning Standard Operating Procedure is needed. Continue to support the role of planning during emergency scene operations.**

Table 6.1 Summary of Findings and Recommendations

Responsibilities of the Incident Commander		
Component	**Evidence**	**Recommendations**
Logistics	**Adequate Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the logistics element. However, supplemental documentation for logistics is lacking. Despite the strong SOP support, the limited amount of documents provides for **overall adequate support** for the logistics element. **A Logistics Standard Operating Procedure is needed. Continue to support the role of logistics during emergency scene operations.**
Administration	**Adequate Support**	The San Antonio Fire Department Incident Management SOP provides strong support for the administration element. However, supplemental documentation for administration is lacking. Despite the strong SOP support, the limited amount of documents provides for **overall adequate support** for the administration element. **An Administration Standard Operating Procedure is needed. Continue to support the role of administration during emergency scenes operations**.
Customer Service	**Adequate Support**	Structured interview results demonstrated a strong customer service philosophy within the San Antonio Fire Department. An official document outlining the customer service philosophy is lacking. Despite the strong interview support, the lack official documentation provides for **overall adequate support.** **An official customer service document will help supplement the current customer friendly attitude described in the structured interviews. Continue to support a customer service program**.
Overall Scene Safety		
Safety Officer	**Strong Support**	The San Antonio Fire Department Incident Management SOP, along with the Safety Officer Policy, provides strong support for the safety officer element. The combination of multiple safety officer documents provides for **overall strong support** for this element. **Continue to support the use of Safety Officers during emergency scene operations.**
Personnel Accountability Report (PAR)	**Strong Support**	The San Antonio Fire Department Incident Management SOP, along with the Accountability Policy, provides strong support for the personnel accountability report element**.** The combination of multiple PAR documents provides for **overall strong support** for this element. **Continue to support the use of Personnel Accountability Reports during emergency scene operations.**

Table 6.1 Summary of Findings and Recommendations

Overall Scene Safety		
Component	**Evidence**	**Recommendations**
Operational retreat policy	**Strong Support**	The San Antonio Fire Department Incident Management SOP, along with the Evacuation Policy, provides strong support for the operational retreat element. The combination of multiple retreat policy documents provides for **overall strong support** for this element. **Continue to support the utilization of an operational retreat policy during emergency scene operations.**
Manageable span of control	**Strong Support**	The San Antonio Fire Department Incident Management SOP provides strong support for maintaining a manageable span of control. Radio transmission observations also provided strong support for this element. The combination of strong document analysis and direct observation results provides for **overall strong support** for maintaining a manageable span of control **Continue to support a manageable span of control during emergency scene operations.**
Initial Rapid Intervention Team (IRIT)	**Strong Support**	The San Antonio Fire Department Incident Management System and Initial Rapid Intervention Team SOPs provide strong support for the use of Initial Rapid Intervention Teams. The combination of multiple IRIT documents provides for **overall strong support** for this element. **Continue to support the utilization of Initial Rapid Intervention Teams at the beginning of emergency scenes with IDLH[126] atmospheres.**
Rapid Intervention Team (RIT)	**Strong Support**	The San Antonio Fire Department Incident Management System and Rapid Intervention Team SOPs provide strong support for the use of Rapid Intervention Teams. The combination of multiple RIT documents provides for **overall strong support** for this element. **Continue to support the utilization of Rapid Intervention Teams in situations where firefighters may become trapped or injured.**

[126] Immediate Danger to Life and Health

Table 6.1 Summary of Findings and Recommendations

Effective Communications		
Component	**Evidence**	**Recommendations**
Standard Terminology	**Adequate Support**	Document analysis provided strong support for standard terminology usage. However, radio transmission observations provided only adequate support; the use of ten codes was observed. Fortunately ten code usage was limited. Despite the strong documental support, the use of ten codes provides for **overall adequate support** for this element. **The department should strive for the complete elimination of ten codes at emergency scenes. Continue to support the use of standard terminology during emergency scene operations.**
Designated radio channel	**Adequate Support**	Document analysis provided strong support for the use of a designated radio channel. However, radio transmission observations revealed a minor amount of incidents where a designated radio channel was not utilized. Those incident where high speed traffic accident responses, with two or three companies responding. Despite the strong documental support, the high speed traffic instances provide for **overall adequate support** for this element. **The department should ensure that all multi-unit responses have a designated radio channel to avoid confusion with other working incidents using the same channel. Continue to provide multi-unit emergency responses with a designated radio channel.**
Controlling communications (strong command presence)	**Adequate Support**	Radio transmission observations demonstrated strong support for the control of communications element. However, documentation of this element is lacking. Despite the strong direct observation support, the lack of documentation provides for **overall adequate support** for controlling communications. **A detailed departmental document outlining the specific control of communications by the Incident Commander is recommended. Continue to support the control of communications by the Incident Commander during emergency scene operations.**
Benchmarks	**Adequate Support**	Radio transmission observations demonstrated strong support for the use of benchmarks. However, no documents containing benchmark procedures were located. Despite the strong direct observation support, the lack of documentation provides for **overall adequate support** for benchmarks. **A detailed document for the use of benchmarks is recommended. Continue to support the use of benchmarks during emergency operations. Benchmarks provide valuable information to the Incident Commander.**

Table 6.1 Summary of Findings and Recommendations

Professional Development		
Component	**Evidence**	**Recommendations**
Incident Command System Standard Operating Procedures	**Strong Support**	The San Antonio Fire Department Incident Management System SOP is clearly written and easily accessible; **overall strong support**. **Continue to provide firefighters with a detailed Incident Management System Standard Operating Procedure.**
Incident Command System training	**Limited Support**	Results of both document analysis and structured Interviews provided **overall limited support** for Incident Command System training. **An Incident Command System training program is recommended.**
Officer development program	**No Support**	Results of both document analysis and structured interviews provided **overall no support** for the existence of an officer development program. **The creation of an officer development program that encompasses the Incident Command System is recommended.**
Post incident critiques	**Adequate Support**	Structured interview questions provided evidence of strong support for post incident critiques. However, no support was found during document analysis. Despite the strong interview support, the lack of documentation provides for **overall adequate support** for post incident critiques. **A departmental document outlining the details of post incident critiques is recommended. Continue to support the use of post incident critiques.**

Responsibilities of the First Arriving Officer Recommendations

The initial structure and organization of the Incident Command System relies heavily on the first arriving officer. The responsibilities of the first arriving officer are important to the success of any emergency incident. The San Antonio Fire Department currently demonstrates strong support for the responsibilities of the first arriving officer. The San Antonio Fire Department Incident Management Standard Operating Procedure provides clear and concise procedures that outline the responsibilities of the first arriving officer. Observations of radio transmissions provided strong support for the practice of performing the responsibilities of the

first arriving officer. It is recommended that the administration continue to support the responsibilities of the first arriving officer. Consistent monitoring of emergency incident radio transmission is an excellent way for administrators to ensure that the San Antonio Fire Department Incident Management System Standard Operating Procedure is being practiced in the field.

Responsibilities of the Incident Commander Recommendations

The Incident Commander is the most essential component of the Incident Command System. Without an Incident Commander emergency incidents are simply uncontrolled chaos with no accountability. The Incident Commander addresses several responsibilities at every emergency incident. The San Antonio Fire Department currently demonstrates strong to adequate support for the responsibilities of the Incident Commander. The San Antonio Fire Department Incident Management System Standard Operation Procedure clearly outlines and supports the responsibilities of the Incident Commander.

The elements of planning, logistics, administration and customer service do not demonstrate strong support. The support of these elements is adequate. Structured Interview results provided support of a strong customer service philosophy in practice, but document's outlining the customer service philosophy were lacking. It is recommended that the administration develop a customer service standard operating procedure to supplement the customer service philosophy currently in practice.

Overall Scene Safety Recommendations

Perhaps the most important component of the Incident Command System is the safety component. Considering that the Incident Command System is first and foremost a safety tool, the component of overall scene safety demands great attention. The San Antonio Fire

Department demonstrates strong support of the component of overall scene safety. The San Antonio Fire Department Incident Management System Standard Operation Procedure provides a detailed reference for on scene safety. Document analysis and direct observation of scene safety activities provided evidence of a high level of departmental importance on the issue of firefighter safety. It is recommended that the administration of the San Antonio Fire Department continue to provide strong support for the overall scene safety of firefighters at all emergency incidents.

Effective Communications Recommendations

The success of the Incident Command System relies heavily on effective communications. Most failures of the Incident Command System can be attributed to the breakdown of communications. Document analysis of the San Antonio Fire Department Incident Management System Standard Operating Procedure provided strong support for most elements within the effective communications component. The elements of controlling communications and benchmarks demonstrated adequate, not strong, support. Direct observation of radio transmission revealed the practice of the Incident Commander controlling communications along with the tactical use of benchmarks. However, document analysis provided little evidence for support of these practices. It is recommended that administrators include the elements of controlled communications and benchmarks into the San Antonio Fire Department Incident Management System Standard Operating Procedure.

Professional Development Recommendations

Professional development is essential to the successful utilization of the Incident Command System. Without proper training and guidance firefighters are forced to work with in a system they do not understand. In a profession such as firefighting, the result can be

disastrous. The San Antonio Fire Department has some flaws within the component of professional development. Structured interviews provided strong support of post incident critiques in practice, but a document outlining the procedure is lacking. It is recommended that administrators include the element of post incident critiques in the San Antonio Department Incident Management Standard Operating Procedure.

More serious flaws were found in Incident Command System training and Officer Development. Document analysis revealed limited support for Incident Command System training. The San Antonio Fire Department Incident Management System Standard Operating Procedure seems to be the sole source of training. Structured interviews revealed very limited hands on training, especially for the rank of firefighter. Document analysis and structured interviews provided no evidence for the existence of a departmental officer development program.

It is recommended that administrators develop an Incident Command System training program. The program should provide hands on Incident Command scenarios. Practice of such scenarios brings greater understanding of the function of the Incident Command System among those who operate within it. It is also recommended that administrators provide an officer development program. The program should be geared toward the role officers play in the Incident Command System. Incident Commander training should be included for all officers.

Conclusion

Fire departments[127] respond to emergencies daily. The goal of the fire service is the safe and effective resolution of all emergency incidents to which they respond. Emergencies are

[127] For additional fire service related, Texas State University Applied Research Projects, see Baum (1997); Rose (1996)

often dynamic and chaotic situations. Fire departments around the nation use the Incident Command System[128] as a tool that brings order to emergency scenes.

The Incident Command System has been the subject of much revision since its inception in the 1970's. Such revision has led to many similar but separate versions of the Incident Command System. The separate versions can produce confusion. Many jurisdictions either subscribe to one version or in many cases pick and chose principles from several versions to create their own. While implementation of the Incident Command System is important to emergency scene operations, most experts[129] agree a universally standard Incident Command System is needed.

There is extensive literature on the Incident Command System. While experts agree on the importance of an effective Incident Command System there remains a need for a standard tool to assess the system. This research was intended to address this need. A practical ideal model of the Incident Command System was developed to assess the effectiveness of the San Antonio Fire Departments Incident Command System. The five components of the practical ideal model assessment tool included-the responsibilities of the first arriving officer, the responsibilities of the Incident Commander, overall scene safety, effective communications, and professional development. A case study utilizing the components of the model assessment tool was performed to assess the San Antonio Fire Departments Incident Command System. Results of the case study and subsequent recommendations were presented.

Overall the San Antonio Fire Departments Incident Command System is strong. The San Antonio Fire Departments demonstrates strong to adequate support for four of the five components. The responsibilities of the first arriving officer are clearly outlined in the policies

[128] The Incident Command System is also know as the Incident Management System
[129] Coleman (1997); Cole (2000)

set forth by the department. Structured interviews provided supplemental evidence of the existing support. The responsibilities of the Incident Commander component is provided adequate support by departmental documents. The customer service element within this component seems to be in need of a formal written policy that outlines what the administration expects. However, customer service practice is strong and the element as a whole is adequate. Overall scene safety is highly recognized and strongly supported by the San Antonio Fire Departments Incident Management System Standard Operating Procedure. The effective communications component also has strong support by the department. The controlling communications and benchmark elements lack procedural documentation. However, practice in the field demonstrates strong support of these two elements.

The component of professional development is successful for the element of Incident Command System Standard Operating Procedures. The procedures are provided to all firefighters via a departmental database. Most firefighters find access to be easy and the document itself to be helpful. The elements of Incident Command System training and officer development program are clearly lacking. Hands on Incident Command System training is extremely limited and there appears to be no existence of an officer development program. These two elements should be addressed in order to improve the San Antonio Fire Department Incident Command System. Post incident critiques is the final element in this component. The post incident critique element is strongly supported in practice, but an official document outlining its procedure is lacking.

As a whole the San Antonio Fire Department does an excellent job of implementing an effective Incident Command System. The creation of both a departmental Incident Command System training and officer development program will strengthen the overall effectiveness of the

San Antonio Fire Department Incident Command System. The San Antonio Fire Department can use the recommendations provided in this research to improve an already strong Incident Command System. Future Incident Command System research can be improved with a longer period of radio transmission observation. In this case, a time frame of three months would have provided a greater number of observations.

This research has described the importance of the Incident Command System for safe and effective emergency scene mitigation. A practical ideal model assessment tool for the Incident Command System was developed from the literature. The model assessment tool was used to analyze the San Antonio Fire Departments Incident Command System. Based on the results of this research, recommendation for improving the San Antonio Fire Departments Incident Command System was provided. This research should serve as a reference for future improvement of the Incident Command System.

Bibliography

Adams, Barbara and Miller, Leslie A. 2004. *Hazardous Materials for First Responders.* Oklahoma State University: Oklahoma: International Fire Service Training Association (IFSTA)

Babbie, Earl 2001. *The practice of social research*. Belmont: California: Wadsworth

Baum, Kevin 1997. Group dynamics and power structures: Toward a greater understanding of the line-staff relationship within the Austin fire department. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/96/

Baum, Kevin 2007. *Lessons from the Line: Why every leader should be a firefighter for a day.* Mustang: Oklahoma: Tate publishing and enterprises.

Bigley, Gregory A. and Karlene H. Roberts, 2001. The incident command system: High-reliability for complex and volatile environments. *The Academy of Management Journal* 44(6): 1281-1299.

Brunacini, Alan V. 2002. *Fire Command.* Quincy: Massachusetts: National Fire Protection Association.

Buck, Dick A., Joseph E. Trainor, and Benigno E. Aguirre, 2006. A critical evaluation of the incident command system and NIMS. *Journal of Homeland Security and emergency Management* 3(3): 1-27.

Code of Federal Regulations. *29 CFR 1910.134*

Coleman, John F. 1997. *Incident Management for the Street-Smart Fire Officer.* Sandle Brook: New Jersey: Fire Engineering

Cole, Dana, 2000. The incident command system: A 25-year evaluation by California practitioners. *National Fire Academy* Feb.: 201-230

Ellis, Dee B. 2001. Carcass disposal issues in recent disasters, accepted methods, and suggested plan to mitigate future events. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/68/

Este, Stephen 2007. The challenges of accountability in the human services: Performance management in the adult protective service program of texas. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/250

Green, Walter G, 2002. Fire ground command: The organizational mode 1985-1989. *Science of Extreme Situations* P(6): 1-5

Bibliography

Gatlin, Heather, 2006. The search for a theoretical framework for long-term disaster recovery efforts: A normative application of Jane Addams' social democratic theory and ethics. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/125/

Hall, Donald, 2000. Analysis of state disaster debris management plans. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/152/

Hannestad, Stephen E., 2005. Incident command system: A developing national standard of incident management in the U.S. *Center for Information Policy, University of Maryland*: 1-10.

Jiang, Xiaodong, Jason L. Hong, Leila A. Takayama and James A. Landay, 2004. Ubiquitous computing for firefighters: Field studies and prototypes of large displays for incident command. *CHI* 6(1): 679-686.

Lerner, Shirley 1986. The Jewish community in 19th century San Antonio. University of Texas San Antonio: pp. 5-11

Ley, Sharon, 2002. An assessment of succession planning at the state bar of texas. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/53/

Lindell, M.K., R.W. Perry and C.S. Prater, 2005. Organizing response to disasters with the incident command system/incident management system (ICS/IMS). *International Workshop on Emergency Response and Rescue* Oct/Nov: 1-6.

Moynihan, Donald P. From forest fires to hurricane katrina: case study of incident command systems. *University of Wisconson-Madision* 2007: 1-42.

Perry, Ronald W., 2003. Incident management systems in disaster management. *Disaster Prevention and Management* 12(5): 405-412

Phillips, Jeffrey, 1998. Pre-disaster emergency management in Comal county Texas: an analysis of awareness, concern, and attitudes. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/102/

National Fire Protection Association (NFPA), 2007. 1500: Standard on Fire Department Occupational Safety and Health Program. *NFPA standards committee*

National Fire Protection Association (NFPA), 2007. *1561:* Standard on emergency services incident management systems. *NFPA standards committee*: 1-30.

Bibliography

Rose, Donna L., 1996. Fit to fight fires? An assessment of mandatory participation in exercise programs and mandatory fitness stan. Applied Research Project, Texas State University Available online at: http://ecommons.txstate.edu/arp/194/

San Antonio Fire Department Incident Management System Standard Operating Procedure. *San Antonio Fire Department*: 2004: 1-38

San Antonio Fire Department Initial Rapid Intervention Team Standard Operating Procedure. *San Antonio Fire Department*: 2002

San Antonio Fire Department Rapid Intervention Team Standard Operating Procedure. *San Antonio Fire Department*: 2002

San Antonio Fire Department Personnel Accountability Report Standard Operating Procedure. *San Antonio Fire Department*: 2002

Shields, Patricia M., 2004. *Step by step: Building a research paper*. Stillwater: OK: New Forums Press, Inc.

Shields, Patricia M, 2003. The community of inquiry: Classical pragmatism and public administration. *Administration & Society* (35)5: 510-538

Shields, Patricia M. and Hassan Tajalli, 2006. The missing link in student scholarship. *Journal of Public Affairs* (12)3: 313-334

Sparks, Chance W., 2007. Greening affordable housing: An assessment of housing under the community development block grant and HOME investment partnership programs. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/251/

Strumpf, Jim, 2001. Incident command system: The history and need. *The Internet Journal of Rescue and Disaster Medicine* 2(1): 1-5.

United States Census, 2006

Vaden, Jason, 2007. A model assessment tool for classroom technology infrastructure in higher education. Applied Research Project, Texas State University. Available online at: http://ecommons.txstate.edu/arp/207/

Yin, Robert K., 2003. *Case Study Research Design and Methods*. Thousand Oaks: California: SAGE publications.

Appendix A

From: Lawrence Trevino **On Behalf Of** DC 1-O B shift
Sent: Monday, January 28, 2008 9:12 PM
To: Brian Garret O'Neill
Subject: RE: Research approval (Lt. Brian O'Neill)

You have my approval. LT

From: Brian Garret O'Neill
Sent: Monday, January 28, 2008 4:12 PM
To: DC 1-O B shift
Cc: Brian Garret O'Neill
Subject: Research approval (Lt. Brian O'Neill)

Chief Trevino,

I am conducting an applied research project as part of my capstone requirement for the Masters of Public Administration degree program at Texas State University; I am researching the Incident Command System. Upon its completion, my research will be posted in the Texas State University library. The project requires the following:

- Research the history and need of the Incident Command System
- Create a "practical ideal" model of the Incident Command System (based on scholarly literature)
- Assess my own departments (SAFD) use of the Incident Command System (using the model I have created)
- Make recommendations to improving our system

I would like to get approval to assess our departments use of the Incident Command System for the purpose of my research project. Below you will find my prospectus which outlines the details of my intended research.

Thank You,
Lt. Brian G. O'Neill
8/B
<< File: Prospectus.doc >>

Appendix B

From: Northcut, Susan R
Sent: Tuesday, February 19, 2008 1:15 PM
To: O'Neill, Brian G
Subject: Exemption Request 13-91891

Exemption Request

Based on the information in the exemption request 13-91891, which you sent Wednesday, February 13, 2008, your project has been found exempt.

Your project is exempt from full or expedited review by the Texas State Institutional Review Board.

--

Institutional Review Board
ospirb@txstate.edu
Office of Sponsored Programs
Texas State University-San Marcos
(ph) 512/245-2102 / (fax) 512/245-1822
JCK 420
601 University Drive
San Marcos, TX 78666

Appendix C

Structured Interview Questions

1. Describe the current customer service philosophy for the San Antonio Fire Department.

2. How do you familiarize yourself with the San Antonio Fire Departments Incident Command Standard Operating Procedures?

3. How would you describe the adequacy of the San Antonio Fire Departments Incident Command Training?

4. How would you describe the adequacy of the San Antonio Fire Departments officer development program?

Appendix D

Direct Observation: Radio Transmissions (work sheet)

Date:_2/9/2008___ Time:___1410 hrs_____ Companies:_19,32,37,T32,4-0____

Responsibilities of the First Arriving Officer:

1. Assumption of Command __Y__
2. Initial Report __Y__

Overall Scene Safety:

1. Manageable Span of Control __Y__

Effective Communications:

1. Standard Terminology __Y__
2. Designated Radio Channel __Y__
3. Controlling Communications __Y__
4. Benchmarks __Y__

Comments: *Structure Fire; House. All observable elements supported.*

Appendix E

THE SAN ANTONIO FIRE DEPARTMENT IS COMMITTED TO MAINTAINING A HIGHLY QUALIFIED, MOTIVATED AND DIVERSE WORK FORCE THAT REFLECTS THE DEMOGRAPHICS OF THE COMMUNITY.

"The San Antonio Fire Department offers its members an opportunity for a challenging career and provides security to the members and their families."
Captain Otis McNeil
San Antonio Fire Department Recruiting Section

CAREER OPPORTUNITIES

Minimum Qualifications

Appendix E

The minimum qualifications to take the Firefighters entrance examination include:

1. Applicant must have reached his/her 19th birthday, but will not have reached 34 years by the time of examination for the Fire Department.
2. The applicant can have none of the following items on his/her record:

   a. Conviction of a felony or other crime involving moral turpitude.
   b. Any discharge from the Armed Forces other than honorable discharge (Uncharacterized and Entry Level discharges may be accepted on individual basis)
   c. Two or more traffic violation convictions within the 12 months preceding the date of written examination.
   d. Conviction of a Class A or Class B misdemeanor or its equivalent within the 24 months preceding the date of written examination.
   e. Conviction of a Driving While Intoxicated, Driving Under the Influence of Drugs, or the equivalent within the 5 years preceding the date of written examination.

3. Must be a high school graduate or its equivalent (GED).
4. Applicants must have completed the Hepatitis B vaccine series prior to their date of entry into the Fire Training Academy.

Additional Suitability Factors (please follow link)

WRITTEN EXAMINATION

WRITTEN EXAM: Applicants who meet the minimum qualifications must pass a Civil Service entrance examination with a minimum score of 70%. The exam consists of one hundred (100) questions with a two hour and thirty minute time limit. Veterans are eligible to receive five additional points after passing the exam with a minimum of 70%. A copy of DD Form 214 must be received by the date specified in the examination announcement in order to have the veterans preference points added to the passing score. With the highest score at the top and the lowest passing score at the bottom, applicants who pass the entrance examination are placed on an eligibilty list.

Appendix E

HIRING PROCESS

Once the eligibilty list is established, the processing of applicants can begin as follows: (not necessarily in this order)

1. CANDIDATE PHYSICAL ABILITY TEST (CPAT):

The CPAT consists of eight separate events. This test is a sequence of events that requires the candidate to progress along a predetermined path from event to event in a continuous manner. This is a pass/fail test based on a validated maximum total time of 10 minutes and 20 seconds.

In these events, the candidate wears a 50-pound (22.68-kg) vest to simulate the weight of self-contained breathing apparatus (SCBA) and fire fighter protective clothing. An additional 25 pounds (11.34 kg), using two 12.5-pound (5.76-kg) weights that simulates a high-rise pack (hose bundle), is added for the stair climb event.

Throughout all events, the candidate must wear long pants, a hard hat with chin strap, work gloves and footwear with no open heel or toe. Watches and loose or restrictive jewelry are not permitted.

The events are placed in a sequence that best simulates their use at a fire scene while allowing an 85-foot (25.91-m) walk between events. To ensure the highest level of safety and to prevent candidate from becoming exhausted, no running is allowed between events. The walk allows the candidate approximately 20 seconds to recover and regroup before each event.

Two stopwatches are used to time the CPAT. One stopwatch is designated as the official test time stop watch, the second is the backup stopwatch. If mechanical failure occurs, the time on the backup stopwatch is used. The stopwatches are set to the pass/fail time and count down from 10 minutes and 20 seconds. If time elapses prior to the completion of the test, the test is concluded and the candidate fails the test.

The CPAT includes eight sequential events as follows:

- Stair Climb
- Hose Drag
- Equipment Carry
- Ladder Raise and Extension
- Forcible Entry
- Search
- Rescue
- Ceiling Breach and Pull

Appendix E

2. POLYGRAPH
3. BACKGROUND INVESTIGATION
4. BEHAVIORAL PERSONAL ASSESSMENT DEVICE (BPAD)
5. MEDICAL/PSYCHOLOGICAL EXAMINATIONS
6. CITY MANAGER REVIEW AND APPOINTMENT

- Applicants who successfully complete the CPAT and the steps listed abovewill have their file submitted to the City Manager for final consideration to the fire training academy. If selected, applicants will receive notification when to report to the San Antonio Fire Department Training Academy.

TRAINING ACADEMY

Applicants who are appointed to the Fire Academy by the City Manager will undergo approximately six months of extensive training in fire-fighting. Course work also includes emergency medical technician training and each firefighter will be a certified EMT upon graduation.

AFTER GRADUATION FROM THE FIRE ACADEMY

After graduation from the Academy, you will immediately participate in fire service activities such as fire suppression, inspections, rescue operations, pre-fire planning, and station and equipment maintenance.

ASSIGNMENT AND PROMOTIONAL OPPORTUNITIES

Appendix E

The San Antonio Fire Department offers qualified individuals an opportunity to become a member of a highly skilled professional organization. As an entry level firefighter, assignment opportunities include:

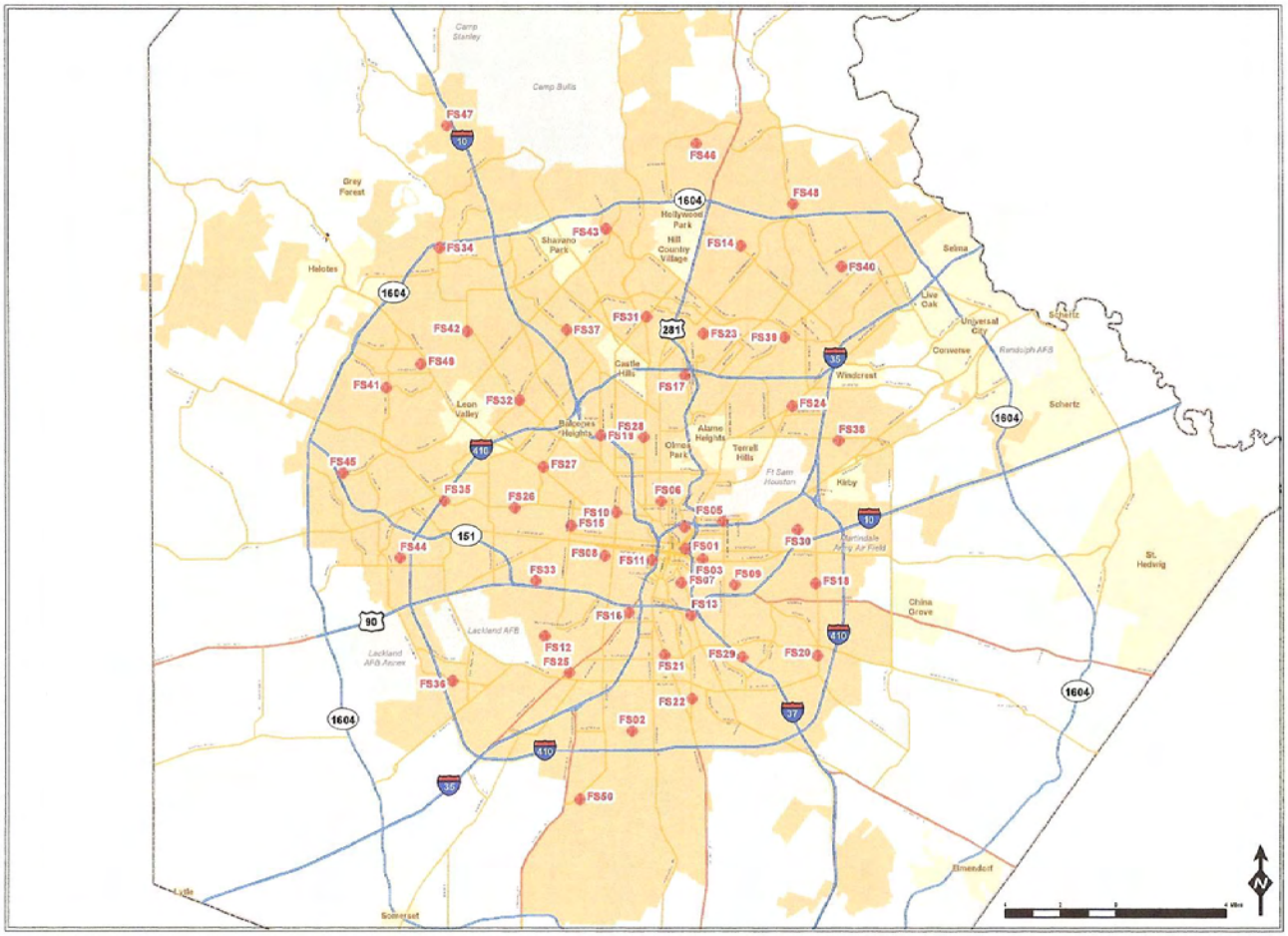
- Firefighting
- Hazardous Materials Response Team
- Technical Rescue Team

Four Years from the date the employee entered the Fire Academy, employees are eligible to take a promotional examination for the next higher rank. Examinations are given as positions become available and an eligibility list is formed from passing scores. Individuals on the list are eligible for promotion as vacancies occur in the department. As employees are promoted, additional assignment opportunities will occur, such as:

- Emergency Medical Service
- Fire Prevention
- Arson
- Fire Training Academy

SAFD Fire Station Locations

Station	Address
FS01	801 E Houston St
FS02	601 Gillette Blvd
FS03	1425 E Commerce St
FS04	1430 N St Marys
FS05	1011 Mason
FS06	503 W Russell
FS07	1414 S St Marys
FS08	619 S Hamilton
FS09	649 Delmar
FS10	1107 Culebra Rd
FS11	610 S Frio
FS12	103 Arts & Crafts Way
FS13	3203 S Presa
FS14	2515 Thousand Oaks
FS15	3150 Ruiz
FS16	2110 Nogalitos St
FS17	8545 Jones Maltsberger
FS18	1463 S WW White Rd
FS19	1310 Vance Jackson
FS20	3347 S WW White Rd
FS21	5537 S Flores
FS22	1100 March
FS23	1750 Skyplace Blvd
FS24	1956 Austin Highway
FS25	1038 New Laredo Hwy
FS26	4140 Culebra Rd
FS27	1518 Hillcrest
FS28	815 El Monte
FS29	827 Hot Wells
FS30	919 Gembler Rd
FS31	11802 West Ave
FS32	2235 Babcock
FS33	2002 S.W. 36th
FS34	15300 Babcock Rd
FS35	7038 Culebra Rd
FS36	5826 Ray Ellison
FS37	11011 Vance Jackson
FS38	6000 Distribution
FS39	10750 Nacogdoches Rd
FS40	14331 O'Connor Rd
FS41	9146 Dover Ridge
FS42	10400 Horne
FS43	2055 W Bitters
FS44	1351 Horal
FS45	3415 Rodgers Rd
FS46	1165 Evans Rd
FS47	7240 Stonewall Bend
FS48	18100 Bulverde Rd
FS49	8710 Mystic Park
FS50	12703 Applewhite Rd



Legend

- County Boundary
- San Antonio City Limits
- Military Bases
- SAFD Stations
- Limited Access
- Highway
- Major Road

The City of San Antonio has attempted to assure the accuracy of this data for its internal uses and for no other purposes. The City of San Antonio did not develop this data as a commercial product. Consequently, the City of San Antonio makes no warranty, representation or guaranty as to the content, sequence, accuracy, timeliness or completeness of all or any part of the data. The user should not rely on the data provided for any reason unless and until the user independently verifies the accuracy of any such data to the user's personal satisfaction. The City of San Antonio explicitly disclaims any representations and warranties, including, without limitation, the implied warranties of merchantability and fitness for a particular purpose. The City of San Antonio assumes no liability for any errors, omissions or inaccuracies in the data provided regardless of how caused. The City of San Antonio assumes no liability for any decisions made or actions taken or not taken by the user of this data in reliance upon any data furnished hereunder.
The use of this data indicates your unconditional acceptance of all risks associated with the use of this data.

This map was produced on 06-14-07 by the San Antonio Fire Department's GIS Section. For further information please contact 210-207-8196.

Appendix F

Multi-Unit Response checklist

1. First unit on scene (Fire or EMS) must initiate Incident Command System (ICS). On arrival first unit will assume command of the incident and designate it by name. (ex. Huebner command, Frost Bank command, Denny's command, etc.) If EMS is first on scene one of the paramedics must assume the role of Incident Commander (IC).
2. Give an initial report of the situation to responding units and give assignments upon their arrival.
3. IC must secure scene safety for responders and victims.
4. Complete scene size up and determine the need for additional resources, including Fire and EMS command officers if necessary.
5. Remain as IC till relieved by person of higher rank.

ICS Cheat Sheet

- ✓ Establish Command
- ✓ Name Command
- ✓ Secure Scene Safety
- ✓ Complete Size-up

Request additional resources as needed

Appendix G

Components of a Proper Initial Report

- [ ] Designation of arriving unit
- [ ] Assuming Command
- [ ] Description of involved structure (i.e. building size and type, occupancy, etc.)
- [ ] Obvious conditions (i.e. working fire, fully involved, smoke showing, etc.)
- [ ] A brief description of actions being taken
- [ ] Orders for other responding companies
- [ ] Declaration of strategy (offensive or defensive)
- [ ] Any obvious safety concerns
- [ ] Identification of Command and location

Appendix H

All Uniformed Personnel,

The Department and Local 624 are seeking volunteers to participate on the Fire/Ems Dispatch committee. The first meeting will be held on November 30th from 0730-0900 hr.s in the large meeting room on the 2nd floor of P.D. headquarters. Meeting will be open to all. Communications personnel are encouraged to attend. The scope of this committee is to identify, research, develop, improve and implement systems/practices directed at:

---**customer service**
---**firefighter safety** (all divisions)
---work place (dispatch) efficiency and effectiveness
---software/systems/technological innovations

The committee will also be authorized to create sub-committees in areas requiring specialization.

The Fire/EMS committee has a current co-chair vacancy. I am seeking a volunteer preferably from the A/C shift, being that I am from the B/D

Appendix I

SECTION 100: INTRODUCTION

A. The Incident Management System (IMS) provides for a systematic development of a complete and functional emergency scene command organization. It is designed for single or multi-agency use and it increases the effectiveness of Command and firefighter safety.

B. The IMS combines command strategies with organizational procedures into a management system that can be used at virtually any type of emergency incident ranging from small emergencies lasting a relatively short period of time to very large incidents lasting days or even weeks. The current version of the Incident Management System reflects the merger of certain elements of the California FIRESCOPE Incident Management System with the Phoenix Fire Ground Command System. The result of these mergers is a new system that permits the early implementation of Fireground Command and a smooth escalation of the organization to meet the demands of a major incident or disaster.

SECTION 200: PURPOSE

The purpose of the Incident Management System (IMS) is to provide structure and coordination to the management of emergency incident operations, in order to provide for the health and safety of all persons involved in incident mitigation activities.

SECTION 300 : INCIDENT MANAGEMENT PRINCIPLES

Several basic principles are necessary to ensure an efficient and effective incident management system. They are span of control, unity of command, direction and control and common terminology.

301. Span of Control

A. Span of control refers to the number of persons or companies that can be effectively supervised by one individual. The number is determined by the ability of each supervisor to monitor the activities of assigned subordinates and to communicate effectively with them. When the span of control of any supervisor is exceeded, the ability of that supervisor to provide a safe operational assignment fails.

B. The general rule of thumb for incident management is three to seven with a "Rule of Five" prevailing when possible. This means that when an Incident Commander's span of control approaches and/or exceeds five, it is time to consider dividing the situation or problem into manageable segments and delegating specific responsibilities to subordinate officers. This will allow the Incident Commander to concentrate on managing the overall incident. The same concept applies to lower level supervisors (Section Chiefs, Branch Directors, Unit Leaders, Sector Officers, etc.) as they too will be overwhelmed if their span of control is exceeded.

302. Unity of Command

A. For any action whatsoever, an employee should receive orders from one superior only. Violating this principle can cause severe disruption to an operation and possibly endanger life and property.

B. Upon the receipt of any order that is in conflict with a previous order, members will inform the officer who issued the conflicting order and be governed by his/her instructions. The officer issuing conflicting orders must inform the affected member's chain of command, e.g., "Sector 3 to Command, advise Sector 1, I've got Truck 9 assisting with a rescue". Command would then advise Sector 1 that Truck 9 has been reassigned to Sector 3.

C. Personnel accountability procedures require that, if at all possible, supervisors avoid using companies and personnel that are assigned to other sectors or areas. In order to initiate a rapid and effective search and rescue effort for lost or trapped firefighters, the Incident Commander must know where each company is working at all times.

303. Direction and Control

A. Regardless of the level of implementation, supervision is required by the Incident Management System. No member or company below the Incident Commander level will operate without supervision, i.e. without an assignment through the command structure.

B. Companies or members operating in a function or location without the knowledge of their supervisor or commander are "Freelancing." Freelancing prevents Command from being able to identify the location of companies. This information is necessary to initiate an immediate and effective search and rescue effort for lost or trapped firefighters. Effective communications are essential to personnel safety. Command must know where you are and what you are doing at all times.

304. Common Terminology

A. Common terminology is essential in any emergency management system, especially with multiple-agency involvement and joint operations. It includes standard and consistent IMS terminology that is used to name or pre-designate the following:

(1) Major functions and functional units
(2) Personnel/equipment used in tactical operations
(3) All resources established within the IMS
(4) Strategy modes of operation
(5) Status reports
(6) Emergency notification of imminent hazards
(7) Incident radio designations

B. In accordance with the Department's "Incident Management Standard Terminology Guidelines" (Attachment 1), standard terminology shall be utilized within the Incident Management System. In the absence of applicable standard terminology, clear and simple language will be used to transmit information.

SECTION 400. IMS APPLICATION

A. The IMS should be considered the basic scene coordination system to be used on any size or type of incident. The only change in using the IMS on a very large incident rather than on

small incident is the method of growth of the basic emergency management organization to meet the increased need. Thus, the full establishment of the IMS should be viewed as an extension of the existing organization. The decision to expand the organization will be that of the Incident Commander (IC) and is done when the determination is made that the initial response or reinforced response will be insufficient.

B. It must be understood that with the many different and complex situations encountered by Fire and EMS personnel, it will require a considerable amount of judgement in the decision to apply the IMS. The IMS can be viewed as a Standard Operating Procedure that defines the roles and responsibilities to be assumed by personnel and the operating procedures to be used in the management and direction of emergency incidents. The Incident Commander shall apply the system in a manner that is appropriate for the circumstances of each specific situation. The primary objective is to safely and effectively manage the incident, not to fully implement and utilize the IMS. The use of the system should not create an additional challenge for the Incident Commander but should assist the Incident Commander in managing the incident by allowing him, when necessary, to focus on the "big picture" while essential incident management activities are being accomplished by subordinate officers.

C. The IMS is required knowledge for all Department personnel and shall be applied to all drills, exercises and actual emergency scenes including, but not limited to, the following:

Minor and Major Fires 6. Aircraft Accidents

High-rise fires 7. Traffic Accidents

Hazardous Materials Spills 8. Civil Disorders

Mass Casualty Incidents 9. WMD Incidents

Natural Disasters
1. 2. 3. 4. 5.

SECTION 500. FIRE GROUND COMMAND PROCEDURES

The Incident Commander is responsible for managing the incident. The fire department empowers the Incident Commander with the authority to turn his/her decisions into actions (formulate a plan and assign companies). Simply stated, the Incident Commander outranks everybody. If a higher-ranking officer wants to effect a change in the management of an incident, he/she must first be on the scene of the incident, then utilize procedures for the transfer of command. Anyone can effect a change in incident management in extreme situations relating to safety by notifying the Incident Commander and initiating corrective action. Command Procedures are an essential component of the IMS and provide a standard framework for the Incident Commander to effectively carry out his duties and fulfill his responsibilities.

Standardized Command Procedures, initiated early and adhered to throughout the incident is the foundation for smooth and consistent implementation of the IMS for expanded emergency operations.

Within the San Antonio Fire Department's IMS, the following Command Procedures will be employed in establishing incident command and shall be applied by all Fire personnel when operating at emergency scenes, training or drills.

501. Purpose, Tactical Priorities & Functions of Command

A. Purpose of Command Procedures A. B. C. Fire Ground Command Procedures are designed to:

1. Fix responsibility for Command on a specific individual through a standard identification system, depending on the arrival sequence of members, companies, and chief officers.

2. Ensure that a strong, direct, and visible command will be established from the onset of the incident.

3. Establish an effective incident organization, defining the activities and responsibilities assigned to the Incident Commander and to other individuals operating within the IMS.

4. Provide a system for processing information to support incident: management, planning, and decision-making.

5. Provide a system for the orderly transfer of command to subsequent arriving officers.

B. Tactical Priorities of Command

The Incident Commander is responsible for the completion of the following tactical priorities:

1. Remove endangered occupants and treat the injured.

2. Stabilize the incident.

3. Conserve property.

4. Provide for the safety, accountability, and welfare of all personnel. This priority is ongoing throughout the incident.

C. Functions of Command

The functions of Command define standard activities that are performed by the Incident Commander to achieve tactical priorities. The functions of Command include:

1. Assume and announce Command and establish an effective operating position (Incident Command Post).

2. Rapidly evaluate the situation (size up).

3. Initiate, maintain, and control the communications process.

4. Identify the overall strategy, develop an incident action plan, and assign companies and personnel consistent with plans and standard operating procedures.

5. Develop an effective Incident Command organization.

6. Establish tactical objectives.

7. Review, evaluate, and revise (as needed) the incident action plan.

8. Provide for the continuity, transfer, and termination of Command.

The Incident Commander is responsible for all of these functions. As Command is transferred, so is the responsibility for these functions.

502. Establishing Command

A. The first Fire Department officer or unit to arrive at the emergency scene shall assume command of the incident and initiate whatever part of the IMS needed to effectively manage the incident scene. The exact actions of the first company will vary depending on the type of incident. The following two examples will provide guidelines to initiate the establishment of command:

1. A single-company incident (trash fire, single patient EMS incident, etc.) may only require that the company acknowledge its arrival on the scene. Although single company incidents may not require formal activation of the IMS, the IMS will be applied at all incidents.

2. For incidents that require the commitment of multiple companies (regular alarm response or multi-unit response), the first company officer on the scene shall establish and announce "command" and initiate an incident management structure appropriate for the incident.

B. The first arriving Fire Department officer (or acting officer) initiates the command process by giving an initial Radio Report. The Radio Report shall include not less than the following:

1. Designation of the unit arriving on the scene (i.e., Engine 6, Truck 40, etc.).

2. Notification to responding companies that the arriving unit is assuming command of the incident.

3. A brief description of the involved structure (i.e., building size and type, occupancy, etc.). If no structure is involved, provide a brief description of the situation found (i.e., hazmat release, multi-vehicle accident, etc.).

4. Obvious conditions (i.e., working fire, fully involved, smoke showing, two rooms involved, approximately 500 gallons of diesel , approximately 10 patients, etc.).

5. A brief description of actions being taken (i.e., investigating, laying preconnect, protecting exposures, conducting primary search, etc.).

6. Orders for other responding companies (i.e., next engine company, back us up with another preconnect, first truck company, conduct a primary search, etc.)

7. Declaration of Strategy (offensive or defensive mode).

8. Any obvious safety concerns.

~~9.~~ Identification of Command and location of the Command Post (i.e., "Main Street Command will be located south of the involved structure in the Luby's parking lot).

C. Beginning with the arrival of the first unit and throughout the incident, the radio designation **"COMMAND"** will be used along with the identification of command, usually the geographical location of the incident (e.g., "Market Street Command," "Convention Center Command"). This designation will not change throughout the duration of the incident. The designation of "Command" will remain with the officer currently in command of the incident throughout the event.

D. Examples on establishing command:

Example 1
For an offensive structure fire:
"Engine 3 is on-scene assuming command. We have a large two-story school with a working fire on the second floor. Engine 3 will be stretching a handline to the second floor through the north stairwell and initiating an offensive attack. I need the next arriving Engine to lay a supply line and back us up with another handline, the third arriving engine to provide ventilation support and the Truck to conduct a primary search. Engine 3 will be Commerce Street Command. The Command Post will be located on the south side of the fire building next to the flagpole."
Example 2
For a defensive fire :
"Engine 3 is on-scene assuming command. We have a medium size warehouse fully involved with a large two-story house exposure on the west side of the building. This is a defensive fire. Engine 3 will be positioned at the northwest corner of the fire building and protecting the exposure with a deck gun. I need the next arriving Engine to a lay supply line to Engine 3, the Truck to set up for master stream operations on the north side of the fire building and the third arriving Engine to report to the south side of the fire building and give me a report of conditions in that sector. Engine 3 will be Commerce Street Command. The Command Post will be located southeast of the fire building at Cherry St." All companies be advised that the west wall looks unstable.
Example 3
For an EMS incident :
"Truck 6 is on the scene with a multi-vehicle accident involving about seven vehicles. This will be on I-37 southbound at Josephine Street. It appears that we have about 10 to 12 patients. Truck 6 will begin triage procedures. I need a District Chief, the Technical Rescue Team, an additional fire unit, an EMS Officer an additional EMS Unit and PD for traffic control. Truck 6 will be I-37 Command."

503. Command Options

Depending on the situation, the first-arriving company officer has several command options to choose from when arriving at the incident. If a Chief Officer or unit without tactical capabilities (i.e., staff vehicle or ambulance that arrives at a working fire) initiates command, the establishment of a Command Post should be a top priority. At most incidents the initial Incident Commander will be the first Company Officer to arrive on a fire apparatus.
The following command options define the Company Officer's direct involvement in tactical activities and the modes of command that may be utilized. A Company Officer assuming Command

has a choice of modes and degrees of personal involvement in the tactical activities, but continues to be fully responsible for the Command functions. The initiative and judgment of the officer is of great importance. The modes identified are guidelines to assist the officer in planning appropriate actions. The actions initiated should conform to one of the modes of operation mentioned below.

A. Nothing Showing – Investigative Mode: These situations generally require investigation by the initial arriving company(s) while other units remain in Level One Staging. The officer should go with the company to investigate while utilizing a portable radio to command the incident.

B. Fast Attack – Mobile Command Mode:

1. Situations that require immediate action to stabilize the incident mandate the company officer's assistance to carry out the critical operation. In these situations, the Company Officer goes with the crew to provide the appropriate level of supervision. Examples of these situations include:

   a. Offensive fire attacks (especially in marginal situations).

   b. Critical life safety situations (e.g., rescue) must be achieved in a compressed time.

   c. Any incident where the safety and welfare of firefighters is a major concern.

   d. Obvious working incidents that require the participation of the Company Officer.

2. Where fast intervention is critical, utilization of the portable radio will permit the Company Officer's involvement in the attack without neglecting command responsibilities. The Fast Attack–Mobile Command mode should not last more than a few minutes and will end with one of the following:

   a. Situation is stabilized.

   b. Situation is not stabilized and the Company Officer must withdraw to the exterior and establish a Command Post. At some time the Company Officer must decide whether or not to withdraw the remainder of the crew based on: the crew's capabilities and experience, safety issues, and the ability to communicate with the crew. No crew should remain in a hazardous area without radio communication capabilities and a minimum of two fire fighters.

   c. Command is transferred to another Company or Command Officer. When a Chief Officer is assuming Command, the Chief Officer may opt to return the Company Officer to their crew or assign him/her to a subordinate position such as staff support or a sector officer.

C. Command Mode – Stationary Command Post: Certain incidents, by virtue of their size, complexity, or potential for rapid expansion, require immediate strong, direct and overall Command. In such cases, the Company Officer will initially assume an exterior, safe, and effective command position and maintain that position until relieved by a Chief Officer. If the

Company Officer assumes a Command mode, the following options are available with regards to the assignment of the remaining crewmembers:

1. The officer may place the company into action with the remaining members. One of the crewmembers will serve as the crew leader and must be provided with a portable radio. The collective and individual capabilities and experience of the crew will regulate this action. Interior crews must consist of a minimum of two fire fighters with appropriate IRIT or RIT coverage.

2. The officer may assign the crew members to work under the supervision of another company officer. In such cases, the officer assuming Command must communicate with the officer of the other company and indicate the assignment of those personnel.

3. The officer may elect to assign the crew members to perform staff functions to assist Command, such as information reconnaissance, filling out the tactical worksheet, etc.

504. Transfer of Command

A. Initial Command begins with the first Fire Department member arriving on the scene. This individual will automatically assume Command. This will normally be a Company Officer, but could be any fire department member up to and including the Fire Chief.

B. The first arriving District Chief shall assume Command of the incident following the procedures for transferring Command.

C. When dispatched to an incident, the on-duty Assistant Chief (Shift Commander) shall assume Command of the incident following the procedures for transferring Command.

D. Assumption of Command is discretionary for Deputy Chiefs and the Fire Chief.

505. Procedures for Transferring Command

Command is transferred to improve the quality of the Command organization. When Command is transferred, it should trigger upgrades in the Command structure. The following guidelines outline the transfer of Command:

A. In certain situations, it may be advantageous for the first arriving Company Officer to transfer Command to the next company on the scene. This is indicated when the initial commitment of the first arriving company requires a full crew (e.g., high-rise or an immediate rescue situation) and another company or Command Officer is on the scene. When a Chief Officer arrives at the scene at the same time as the initial arriving company, the Chief Officer should assume command of the incident.

B. “Passing Command” to a unit that is not on the scene creates a gap in the Command process and compromises incident management. To prevent this “gap,” command should not be transferred to an officer who is not on the scene. It is preferable to have the initial arriving Company Officer continue to operate in the Fast-Attack Mode until command can be transferred to an arriving on-scene unit.

C. Within the chain of command, the actual transfer of Command will be regulated by the following procedure:

1. The officer assuming Command will communicate with the person being relieved by radio or face-to-face. Face-to-face is the preferred method to transfer Command.

2. The officer being relieved will brief the officer assuming Command, indicating at least the following:

a. General situation status

b. Incident conditions (fire location and extent, HazMat spill or release, number of patients, etc.)

c. Incident Action Plan

d. Completion of the Tactical Objectives (or progress towards completion)

e. Safety considerations

f. Deployment and assignments of operating companies and personnel.

g. Appraisals of the need for additional resources.

D. The person being relieved of Command should review the tactical worksheet with the officer assuming Command. This sheet provides the most effective framework for Command transfer as it outlines the location and status of personnel and resources in a standard format that should be well known to all members.

E. The arrival of a ranking officer on the incident scene does not mean that Command has been automatically transferred to that officer. Command is only transferred when the procedure for transferring command has been completed and the new Incident Commander transmits his assumption of command to all units on the assigned radio channel.

F. The person being relieved of Command will be assigned to the best advantage by the officer assuming Command. A ranking officer may elect to have a subordinate continue the role of Incident Commander. In cases where an individual is effectively commanding an incident and satisfactory progress is being made to bring the incident under control, it may be desirable for that person to continue in an active Command role. The ranking officer must determine that the Incident Commander is completely aware of the position and function of operating companies and the general status of the situation. In these cases, the arriving ranking officer may assume a supportive role in the overall Command function. The ranking officer will assume overall responsibility for the incident by virtue of being involved in the Command process.

G. Should a situation occur where a later arriving Chief Officer cannot locate or communicate with the initial Incident Commander (after several radio attempts), they will assume and announce

their assumption of Command and initiate whatever actions are necessary to confirm the safety of the initial Incident Commander and crew.

506. Other Command Considerations

A. The response and arrival of additional ranking officers on the incident scene strengthens the overall Command function. As the incident escalates, the Incident Commander should use these command officers to fill sector, Command Staff, General Staff and accountability positions thus strengthening the Command structure.

B. When the first arriving unit is a Chief officer, efforts should be automatically directed towards establishing a Command Post and fulfilling the Command functions. A Command Post in a vehicle equipped for this purpose is a priority at all working incidents. A Command Vehicle provides workspace for the Incident Commander and staff personnel, lighting, communications equipment, supplies, reference items, and some isolation from outside distractions. Utilization of the Department's Command Bus at complex, large-scale or extended incidents greatly enhances command effectiveness.

C. Company and Command officers should eliminate all unnecessary radio traffic while responding, unless such communications are required to ensure that Command functions are initiated and completed. This requires the initial Incident Commander to give a clear on-the-scene report and continue to give updated progress reports as needed.

D. Chief officers and staff personnel should report directly to the Command Post to notify the Incident Commander of their availability to assume support duties. These personnel should park their vehicles in location that does not restrict access to the scene.

SECTION 600. BASIC COMMAND STRUCTURE

To effectively manage an incident scene, Command must develop an organizational structure, using standard operating procedures. The development of the organizational structure should begin with deployment of the first arriving fire department unit and continue through a number of phases, depending on the size and complexity of the incident. The Command organization must develop at a pace which stays ahead of the tactical deployment of personnel and resources. In order for the Incident Commander to manage the incident, he/she must first be able to direct, control, and track the position and function of all operating companies.

The Incident Commander must build a Command structure that matches the organizational needs of the incident to achieve the successful completion of the tactical objectives for the incident. Building a Command organization is the best support mechanism the Incident Commander can utilize to achieve the harmonious balance between managing personnel and incident needs. Simply put, this means:

Large scale and complex incidents = Big Command organization

Small scale and "simple" incidents = Little Command organization

601. Command Management Levels

The basic Command configuration includes three management levels:

Strategic Level — Overall direction of the incident.

Tactical Level — Objectives assigned to sectors

Task Level — Task objectives assigned to companies

A. Strategic Level

The Strategic level involves the overall command of the incident. The Command Team is responsible for the strategic level of the command structure. The Strategic Plan or Incident Action Plan (IAP) defines where and when resources will be assigned to the incident to control the situation. This plan is the basis for developing a Command organization, assigning all resources and establishing Tactical Objectives by priority. The Strategic Level responsibilities include:

1. Determining the appropriate strategy: OFFENSIVE OR DEFENSIVE

2. Establishing an incident action plan for the incident

3. Setting priorities

4. Obtaining and allocating resources

5. Predicting outcomes and planning

6. Assigning specific objectives to tactical level units

B. Tactical Level

The Tactical Level directs activities toward specific objectives. Tactical Level Officers include Sector Officers, who are in charge of grouped resources. Tactical Level Officers (Sector Officers) are responsible for specific geographic areas or functions and supervising personnel assigned to the sector. A sector assignment comes with the authority to make decisions and assignments, within the boundaries of the overall plan and safety conditions. The accumulated achievements of Tactical Objectives should accomplish the Strategic Level goals.

C. Task Level

The Task Level refers to those activities normally accomplished by individual companies or specific personnel. The task level is where the work is actually done. Task level activities are routinely supervised by Company Officers. The accumulated achievements of Task Level activities should accomplish Tactical Objectives.

D. Examples:

1. The most basic Command model combines all three levels of the Command structure. The Company Officer on a single engine response to a dumpster fire determines the strategy and tactics, and supervises the crew doing the task.

2. The basic structure for a "routine" incident involving a small number of companies requires only two levels of the Command structure. The role of Command combines the strategic and tactical levels. Companies report directly to Command and operate at the Task Level.

602. Sectors (Divisions)

A. Complex emergency situations often exceed the capability of one officer to effectively manage the entire operation. The span of control must be reduced by creating organizational sub-components to direct operations in specific geographical areas or to manage incident-related functions. This is accomplished by establishing sectors (many state and federal agencies that operate under the Incident Management System call sectors, "divisions").

B. Sectoring is a tactical division of an incident scene into physical and/or functional aspects with the assignment of a Sector Commander to monitor and control each sector. Sectors (divisions) reduce the span of control to more manageable, smaller sized units. Sectors (divisions) allow the Incident Commander to communicate principally with Sector Officers, rather than multiple, individual company officers, thus providing an effective Command structure and incident scene organization.

603. Sector (Division) Implementation

A. Situations that will eventually involve a number of companies or functions beyond Command's span of control will require the establishment of sectors (divisions). In addition, the following scenarios will require the Incident Commander to consider the use of sectors (divisions):

1. When companies are involved in large and/or complex operations (large interior or geographic area, hazardous material incidents affecting large areas, large-scale technical rescues, etc.).

2. When companies are operating from tactical positions which Command has little or no direct control over (e.g., out of sight).

3. When the situation presents special hazards and close control is required over operating companies (e.g., unstable structural conditions, hazardous materials, heavy fire load, marginal offensive situations, etc.).

604. Sectors (Divisions)/ Basic Operational Approach

A. Generally, sector (division) responsibilities should be assigned early in the incident, typically to the first company assigned to a geographic area (Alpha sector) or function (ventilation sector). This early establishment of sectors provides an effective Incident Command organization framework on which the operation can be built and expanded.

B. The use of sectors that can be effectively managed by the Incident Commander varies. In fast moving complex operations, a span of control of no more than five sectors (divisions) is indicated. In slower moving, less complex operations, the Incident Commander may effectively manage more sectors.

C. Sector procedures also provide an array of major functions, which may be selectively implemented according to the needs of a particular situation. This places responsibility for the details and execution of each particular function on a Sector Officer (Division Commander).

D. When effective sectors (divisions) have been established, the Incident Commander can concentrate on overall strategy and resource allocation, allowing the Sector Officers to manage their assigned units. The Incident Commander determines strategic goals and assigns tactical objectives and resources to the sectors. Each Sector Officer (Division Commander) is responsible for the tactical deployment of the resources at his/her disposal in order to complete the tactical objectives assigned by the Incident Commander. Sector Officers (Division Commanders) are also responsible for communicating needs and progress to Command.

E. Sectors (divisions) reduce the overall amount of radio communications. Most routine communications within a sector should be conducted in a face-to-face manner between Company Officers and their Sector Officer (Division Commander). This process reduces unnecessary radio traffic and increases ability to transmit critical radio communications.

F. The safety of firefighting personnel represents the major reason for establishing sectors (divisions). Each Sector Officer (Division Commander) must maintain communication with assigned companies to control both their position and function. The Sector Officer (Division Commander) must constantly monitor all hazardous situations and risks to personnel. The Sector Officer (Division Commander) must take appropriate action to ensure that companies are operating in a safe and effective manner.

G. Sector Officers (Division Commanders) are responsible for personnel accountability within their sector (division) and for any obligatory enforcement of the department's RIT policy. It is for these reasons that Command should not assign more than five companies per sector, or fewer, should conditions warrant less.

605. Sector (Division) Standard Operating Procedures

Department standard operating procedures on the use of sectors (divisions) will include the following:

A. It will be the ongoing responsibility of Command to assign sectors, as required, for effective emergency operations. When establishing a sector (division), the Incident Commander will assign each Sector Officer (Division Commander):

1. Tactical Objectives

2. A radio designation (Ventilation sector, North sector, Bravo sector, Foxtrot division, etc.)
3. The identity of resources assigned to the sector (division)

B. Command shall advise each Sector Officer of specific Tactical Objectives. The overall strategy and action plan should also be provided (time permitting) so the Sector Officer has some idea of what's going on and how his assignment fits in.

C. The number of companies assigned to a sector (division) will depend upon conditions within that sector (division). Command will maintain an awareness of the number of companies operating within a sector and the capability of that Sector Officer to effectively direct operations. If a Sector Officer cannot control the resources within the sector, he/she should notify the Incident Commander so that sector responsibilities can be split or other corrective action taken. In most cases, five (5) companies represent the maximum span of control for a Sector Officer (Division Commander).

D. In some cases, a Sector Officer may be assigned to an area/function initially to evaluate and report conditions and advise Command of needed tasks and resources. The assigned officer will proceed to the sector (division), evaluate and report conditions to the Incident Commander, and assume responsibility for directing resources and operations within his/her assigned area of responsibility.

E. The Sector Officer (Division Commander) must be in a position to directly supervise and monitor operations. This will require the Sector Officer (Division Commander) to be equipped with the appropriate protective clothing and equipment for his/her area of responsibility. A partner must accompany Sector Officers (Division Commanders) assigned to operate within an interior hazard zone.

F. Sector Officers (Division Commanders) will be responsible for and in control of all assigned functions within their sector. This requires each Sector Officer (Division Commander) to:

1. Complete objectives assigned by Command.

2. Account for all personnel by maintaining an awareness of the locations and activities of assigned companies.

3. Ensure that operations are conducted safely.

4. Monitor work progress.

5. Redirect activities as necessary.

6. Coordinate actions with related activities, and adjacent sectors.

7. Monitor welfare of sector personnel.

8. Request additional resources as needed.

9. Provide Command with essential and frequent progress reports.

10. Reallocate resources within the sector.

G. The Sector Officer (Division Commander) should be readily identifiable and maintain a visible position as much as possible. Sector Officers (Division Commanders) should wear a command vest identifying them as Sector Officers (Division Commanders) if feasible.

H. The primary function of Company Officers working within a sector is to direct the operations of their individual crews in performing assigned tasks. Company Officers will advise their Sector Officer of work progress, preferably face-to-face. All requests for additional resources or assistance within a sector must be directed to the Sector Officer. Sector Officers will communicate with Command.

I. Each Sector Officer (Division Commander) will keep Command informed of conditions and progress in the sector through regular progress reports. The Sector Officer (Division Commander) must prioritize progress reports to essential information only. Command must be advised immediately of any significant changes, particularly those involving the ability or inability to complete an objective, hazardous conditions, accidents, structural collapse, etc.

J. When a company is assigned from staging to an operating sector, the company will be told what sector (division) and which Sector Officer (Division Commander) they will be reporting to. The

Sector Officer (Division Commander) will be informed of which specific companies or units have been assigned by the Incident Commander. It is then the responsibility of the Sector Officer (Division Commander) to communicate directly with assigned companies to relay any instructions relative to the specific action requested. Fire companies shall leave their passports at the designated location prior to reporting to their assigned sector.

K. Sector Officers (Division Commanders) will monitor the condition of the crews operating in their sector. Relief crews will be requested in a manner to safeguard the safety of personnel and maintain progress toward the sector objectives. Sector Officers (Division Commanders) will ensure an orderly and thorough reassignment of crews to the Rehabilitation (Rehab) Sector. Crews must report to Rehab intact and with their passport to facilitate accountability.

606. Sector (Division) Designations

A. Sectors shall be designated either by location (in relation to the building, i.e., front side, left side, right side, etc.) or function. When designating a Sector by location, an alphabetic nomenclature shall be utilized (A, B, C, D, etc.). When designating a Sector by functional activity, the type of functional activity shall be the Sector designation (i.e., ventilation, rescue, evacuation, interior supervision, forward command, etc.).

B. When using alphabetic nomenclature to designate sectors (divisions),

1. Sector “A” would be the front of the building or the address side and the other sectors (Sector B, Sector C and Sector D) would go clockwise around the building in alphabetical order.

2. If unable to determine an address side or street side, the initial Incident Commander will designate side A of the building which could be the point of entry for the initial fire attack line or the street side of the fire building.

3. Where the structure or incident scene has multiple sides and/or distinct areas, the alphabetic nomenclature can be expanded to the extent necessary to designate a name to each necessary sector or division (E Sector, F Sector, G sector, etc.).

4. It is advantageous to use military terminology to refer to the alphabetic designations. For example, Sector A should be called “Alpha Sector”, Sector B “Bravo Sector”, Sector C “Charlie Sector” etc. This will lessen the likelihood of miscommunications caused by sectors that sound similar (i.e., B, E, D).

C. For high-rise structures, where an entire floor is being designated as a sector, the sector designation should be determined by the floor number utilizing numeric nomenclature (1, 2, 3, 4, etc.). For example, a sector on the 5th floor would be called, “Sector 5”. If a Sector Officer is responsible for multiple floors, the sector will be designated according to the lowest floor number of the floors involved in fire, e.g., "Sector 10" for a building with fire suppression efforts on floors 10 through 12. Other high-rise sectors and areas are designated according to the functional area such as Lobby Control and Roof Control (See "High-Rise Procedures").

D. In the case of high-rise fires where more than one sector may be needed on a particular floor, the alphabetic nomenclature can be combined with the numeric nomenclature to indicate the floor/level

and the relative location of the sector. For example, if several sectors are established on the third floor of a high-rise building, a sector located on the front side of a building on the third floor should be called the "3 Alpha Sector" and a sector on the left side of the building on the third floor should be called the "3 Bravo Sector", in the rear on the third floor, "3 Charlie Sector", etc.

E. Regardless of nomenclature utilized to designate sectors (divisions), clear and adequate communications must take place when designating sectors and when making company assignments within that sector. The company officer should know the sector designation, where to report, who to report to, and ideally, the sector objective.

INTROCTION 700. EXPANDED COMMAND STRUCTURE

During large-scale incidents, even with the use of sectors, the Incident Commander's span of control can quickly become exceeded. The IMS provides a standard mechanism to add management layers into the incident's organizational structure thereby reducing the IC's span of control to manageable levels. The expanded management layers in the IMS are "Branches" and "Sections."

701. Branches

A. As the incident organization grows in complexity and/or when the number of sectors exceeds the span of control that the Incident Commander can effectively manage, the Incident Organization should be divided to Branches.

B. The Branch level of the organization is designed to provide coordination between sectors and Command. Branch Officers supervise and manage a number of Sector Officers (Division Commanders) and report to the Incident Commander. Within the organization, Branch Officers perform at a level that is defined using the following example:

Strategic Level — Incident Commander
Coordination Level — Branch Officer
Tactical Level — Sector Officers
Task Level — Companies

C. Branch Officers should be utilized at incidents where the span of control with sectors is maximized; incidents involving two or more distinctly different major management components (e.g., a large fire with a major evacuation, a large fire with a large number of patients). The Incident Commander may elect to assign Branch Officers at forward positions to coordinate the activities between sectors.

702. Branch Officer Utilization

A. The intent of the Branch Level of the Command structure is to split an incident into manageable components and reduce the Incident Commander's span of control. Branch Officers will normally be utilized at very large-scale incidents that involve two or more major components. The following types of incidents are examples where Branch Officers should be utilized:

1. A HAZMAT incident that requires a major evacuation.

2. A large-scale incident spread over a wide geographic area.

3. An incident with mass casualties and a significant hazard (e.g., fire, HAZMAT, plane crash, flood, etc.).

4. Complex, difficult and/or extensive high-rise fires.

5. Any incident where the number of sectors exceeds the span of control that can be effectively managed by the Incident Commander.

B. Branch Officers manage and direct activities of Sector Officers. Branch Officers should operate on separate radio channels if possible. The radio designation of Branch Officers should reflect the function or geographic area of the Branch (e.g., Fire Control Branch, Medical Branch, Convention Center Branch, etc.). Radio communications should then be directed from the Sector Officer to the Branch Officer instead of Command. Sector Officers will relay this information to the companies working in their sector.

C. When Command implements Branch Officers, the Sector Officers should be notified by Command of their new supervisor. This information should include:

1. What Branch the sector is now assigned to.
2.The radio channel the Branch (and sector) is operating on.

D. Depending on the situation, Branch Officers may be located at the Command Post or at a remote location. When located at the Command Post, Branch Officers can communicate on a face-to-face basis with the Incident Commander and/or the Operations Officer. When an incident encompasses a large geographic area, it may be more effective to have Branch Officers in forward operating positions. When Branch Officers are sent to forward positions, they should utilize a Command Officer's vehicle as a forward Branch Command Post (when feasible). In these situations, Command must assign officers in the Command Post to monitor each branch radio channel.

A. As designed, the IMS can be expanded in a modular fashion based upon the type and magnitude of an incident. The organization staff builds from the top down with responsibility placed with the Incident Commander. As the need develops, four separate sections can be established to assist the IC in managing the incident: Operations, Planning, Logistics and Admin/Finance. The organizational structure selected for a particular incident will depend upon the management needs of the incident. During the initial phases of the incident, the initial Incident Commander and his/her staff normally carry out the functions of these sections. If one individual can simultaneously manage all major functional areas, no further organization will be required. If one or more of the areas requires independent management, the Incident Commander will assign an individual to that area.

B. When an incident escalates into a major operation that is beyond the Incident Commander's span of control, additional organizational support will be needed. The use of Sections will allow the Incident Commander to respond to these organizational growth demands by providing additional command and control to critical components of the management structure. As additional ranking

officers arrive on the scene, the IMS should be expanded through the involvement of Command Officers and staff personnel to fill these Sections positions.

C. Section Officers, also known as General Staff positions, shall assist the Incident Command staff with the overall management of the incident scene and operate at the Strategic Level. The Incident Commander implements sections as needed, depending on the situation and priority of needs. One incident may only require an Operations Section, while another incident may require all four sections to be implemented.

D. Where the communications system permits, Section Officers should operate on separate radio channels and utilize the radio designation that identifies their Section (Planning, Logistics, etc.).

704. Operations Section

A. Primary responsibility of the Operations Section is to execute the operational activities of an incident as determined by the Incident Commander.

B. Generally, the Operations Section will manage branches and/or sectors comprised of emergency operations field units engaged in three distinct types of activity: Fire and Rescue, Medical Services (EMS) and HAZ-MAT.

The following chart is provided as an example of an Operations Section:

INCIDENT COMMANDER

ADMIN/FINANCE SECTION

LOGISTICS SECTION

PLANNING SECTION

OPERATIONS SECTION

C. In most cases, the Incident Commander will be directly responsible for the tactical activities occurring in the Operations Section. This is due largely in part because the scope of operations is limited and the Incident Commander is always responsible for the safety of everyone operating at the incident scene.

D. It may be advisable to designate an Operations Section Chief when the Incident Commander must operate their Command Post in a remote location where they may not have a visual reference of the scene or if he/she should decide to reduce their span of control over complicated on-scene operations. When activation of an Operations Section is necessary, the individual appointed to that position, usually a Chief Officer, will head that section and have primary responsibility to execute the operational activities as determined by the Incident Commander. This individual will report directly to the Incident Commander and will manage his/her section in response to the strategy provided by the Incident Commander.

E. The Operations Section is responsible for the tactical priorities, and the safety and welfare of the personnel working in the Operations Section. The Operations Section Chief uses the tactical radio channel to communicate strategic and specific objectives to Sector and/or Branch Officers.

F. Roles and Responsibilities of the Operations Section Chief:

1. Coordinate activities with the Incident Commander.

2. Implement the Incident Action Plan.

3. Assign units to Sector/Branches based on tactical objectives and priorities.

4. Build an effective organizational structure through the use of Branches and Sectors.

5. Provide Branches and Sectors tactical objectives.

6. Manage Operation Section activities.

7. Provide for personnel life safety and welfare.

8. Determine needs and request additional resources.

9. Consult with and inform other sections and the Incident Command Staff as needed.

G. If the Operations Chief is located at the Command Post, he/she should use the radio designation of "Command." The vast majority of incidents can be effectively managed without an Operations Chief, or with the Operations Chief located at the Command Post.

H. If the Operations Chief is located out of the Command Post at a "forward" position, he/she should use the radio designation of "Operations." Implementing an "Operations" radio designation in the middle of a major incident can create some confusion with radio communications. In such instances, it is absolutely essential that all personnel operating at the incident be made aware of the activation of an Operations Section located away from the

Command Post. All Sector and/or Branch Officers must then direct their communications to "Operations" instead of "Command."

I. Whether in the Command Post or away from the Command Post, the Operations Chief, working under the direction of the Incident Commander, will direct all operational activities.

705. Planning Section

A. Planning staff functions shall include those components of the IMS that are involved with information management that support the Incident Commander and other levels of the incident command structure. The following chart is provided as an example of a Planning Section:

B. Primary responsibility of the Planning Sector will be to assist the Incident Commander in developing operational strategy for extended operations by providing necessary tactical information.

C. The Planning Section will be comprised of personnel in three distinct areas of expertise: Resources, Documents and Technical.

D. The Planning Section may be responsible for providing any of the following information:

1. Tactical information surveys.

2. Building and/or complex diagrams.

3. Area maps.

4. Resource location and availability.

5. Maintenance of records and logs.

6. Specialized assistance from outside agencies.

E. The Planning Section is responsible for gathering, assimilating, analyzing, and processing information needed for effective decision-making. Information management is a full-time task at large and complex incidents. The Planning Section serves as the Incident Commander's "clearinghouse" for information. This allows the Incident Commander to have a single person provide him/her with information instead of having to deal with dozens of information sources. Critical information should be immediately forwarded to Command (or whoever needs it). Information should also be used when making long-range plans. The Planning Section Chief's goal is to plan ahead of current events and to identify the need for resources before they are required.

F. Roles and Responsibilities of the Planning Section Chief:

1. Evaluate current strategy and incident action plan with the Incident Commander.

2. Refine and recommend any needed changes to plan.

3. Evaluate Incident Organization and span of control.

4. Forecast possible outcome(s).

5. Evaluate future resource requirements.

6. Utilize technical assistance as needed.

7. Evaluate tactical priorities, specific critical factors and safety.

8. Gather, update, improve, and manage information with a standard systematic approach.

9. Liaison with any needed outside agencies for planning needs.

G. "Planning Section Chief" is common terminology for the person in charge of the Planning Section. The person assigned to this position may or may not be a chief officer.

706. Logistics Section

A. The Logistics Section provides service and support resources to all the organizational components involved in the incident including but not limited to facilities, transportation, supplies, equipment maintenance, fueling, feeding, communications, and responder rehabilitation. The following chart is provided as an example of a Logistics Section:

B. Primary responsibility will be to provide needed equipment, both departmental and outside, and service in the form of food, fuel and mechanical expertise, to the incident area as needed.

C. The Logistics Section, usually under the command of a chief officer, will be compromised of personnel and equipment in three categories: Equipment, Personnel and Service.

D. Command may assign the Logistics Section its own radio channel. The Logistics Section Chief may establish sectors or branches for his/her section as needed.

E. Roles and Responsibilities of the Logistics Section Chief:

1. Provide and manage any needed supplies or equipment.

2. Forecast and obtain future resource needs (coordinate with the Planning Section).

3. Provide any needed communications equipment.

4. Provide fuel and needed repairs for equipment.

5. Obtain specialized equipment or expertise per Command.

6. Provide food and associated supplies.

7. Secure any needed fixed or portable facilities.

8. Coordinate immediate Critical Incident Stress Debriefing.

9. Provide any other logistical needs as requested by Command.

10. Supervise assigned personnel.

G. "Logistics Section Chief" is common terminology for the person in charge of the Logistics Section. The person assigned to this position may or may not be a chief officer.

707. Administration/Finance Section

A. All disasters have a cost. There are times where tracking the cost associated with mitigating a particular emergency is imperative. Examples include emergencies of such a scale that may require emergency procurement of equipment, supplies, food, etc., emergencies where State and/or Federal reimbursement is available, HazMat emergencies that can be charged to the responsible parties, and other emergencies where the tracking of cost is advantageous. When incidents of this nature occur, the IC should establish an Administration/Finance Section.

B. The Admin/Finance Section is responsible for:

1. Procuring services and/or supplies from sources within and outside the Fire Department or City as requested by Command (coordinated through the Logistics Section).

2. Documenting all financial costs of the incident.

3. Participating in the development of the incident action plan.

4. Documenting for possible cost recovery of services and/or supplies.

5. Analyzing and advising the Incident Commander on legal risks for incidents.

6. Documenting for compensation and claims of injury.

7. Obtaining any and all needed incident documentation for potential cost recovery efforts.

C. The duties of the Administration/Finance Section may be broken down into four functional units:

D. "Admin (or Finance) Section Chief" is common terminology for the person in charge of the Admin/Finance Section. The person assigned to this position may or may not be a chief officer.

1. Time Unit

2. Procurement Unit

3. Compensation/Claims Unit

4. Cost Unit

ADMIN/FINANCE SECTION

COMPENSATION/CLAIMS UNIT

COST UNIT

PROCUREMENT UNIT

TIME UNIT

708. The Incident Commander (Expanded Incident)

A. Once the Operations Chief is in place and functioning, the Incident Commander's focus should be on the strategic issues, overall strategic planning, and other components of the incident. The focus is to look at the "big picture" and the impact of the incident from a broad perspective. The Incident Commander should provide direction, advice and guidance to the Operations Chief in directing the tactical aspects of the incident. In order to maintain continuity and overall effectiveness, the Incident Commander and Operations Chief should normally be in the Command Post together.

B. Role and Responsibilities of the Incident Commander after activation of an Operations Chief:

1. Review and evaluate the plan, and initiate any needed changes.

2. Provide ongoing review of the overall incident (THE BIG PICTURE).

3. Select priorities.

4. Provide direction to the Operations Chief and any other established Section Chief.

5. Review the organizational structure, initiate change or expansion to meet incident needs.

6. Initiate Section and Branch functions as required.

7. Establish liaison with other City agencies and officials, outside agencies, property owners and/or tenants.

8. Other duties as necessary.

709. Unified Command

A. Unified Command may be employed at multiple agency and/or multiple-jurisdictional incidents. Unified Command is a joint-command arrangement where command authority and responsibility is shared between individuals. These individuals generally represent departments or agencies that are playing a major role in mitigating the particular emergency or who have jurisdictional authority over all or some portion of the incident scene.

B. When an incident is operating under a Unified Command structure, the command team fulfills the functions of Command and carries out the roles and responsibilities of Command. Although authority and decision-making are shared between departments/agencies, one person will have overall authority to make a final decision on any contemplated Command action. The person given that authority is generally the person representing the department or agency having the greatest degree of jurisdictional authority.

C. The following is an example of a Unified Command structure that may be employed at the scene of a terrorist incident such as the detonation of an explosive device causing a building collapse:

800. IMS COMMAND STAFF

The IMS provides a series of standardized supervisory levels to be implemented to create a command structure. The particular levels to be utilized in each situation shall depend on the nature of the incident and the scale and complexity of emergency service activities at the scene. Since the IMS is of modular design, only those elements that are necessary at a particular incident will be activated. Regardless of incident size or complexity, operational control must be established and maintained during each phase of the operation. In incidents of relatively small magnitude and area, it may be possible for the Incident Commander to maintain this control without expanding and staffing intermediate command levels. In large-scale operations that cover significant areas and require many resources for effective management, the Incident Commander may choose to expand the organization when the operation exceeds his/her span of control. In all cases, duties or areas of responsibilities not specifically assigned to the support staff will remain the responsibility of the Incident Commander.

801. Command Support Officer

A. The early stages of an incident scene are often dynamic and intense. As the incident grows past the requirements of a first alarm assignment, the Incident Commander can become overloaded and overwhelmed with information management, assigning companies, filing out and updating the tactical worksheet, planning, forecasting, calling for additional resources, talking on the radio, and fulfilling all of the other functions of Command. As additional resources arrive, the Incident Commander should consider utilizing an arriving Chief Officer as a Command Support Officer.

B. The following list will provide a general description of the assistance available by use of a Command Support Officer:

1. Define, evaluate, and recommend changes to the action plan.

2. Provide direction relating to tactical priorities, specific critical fire ground factors, and safety.

3. Evaluate the need for additional resources.

4. Assign logistics responsibilities.

5. Assist with the tactical worksheet for control and accountability.

6. Evaluate the fire ground organization and span of control.

7. May assume the role of the Operations, Planning or Logistics Officer in an expanded organization.

8. Other duties as necessary.

802. Command Staff

Command Staff positions are established to assume responsibility for key activities in the IMS that are not part of the line organization; they include Safety Officer, Public Information Officer, and Liaison Officer. These positions operate in direct support of the Incident Commander and contribute to the overall management of the incident. The following three areas of support are available to the Incident Commander:

A. Safety Officer

The Safety Officer position is implemented to extend the Incident Commander ability to monitor and assess safety hazards and unsafe situations. This designates an individual whose primary responsibility is scene safety but does not reduce the Incident Commander's responsibility for the safety and health of incident personnel. The Incident Commander shall appoint a Safety Officer at all multiple alarms and at lesser alarms where high risk activity is occurring (i.e., commercial fires, incidents where firefighter injuries have already occurred, hazardous materials incidents, incidents, technical rescues, etc.). Complex incidents or those that cover a large geographical area may also require the appointment of Assistant Safety Officers. Nothing is intended to prohibit the IC from appointing a Safety Officer at any incident that he/she believes warrants the establishment of a Safety Officer.

The following procedures relate to the appointment of a Safety Officer:

1. The Safety Officer position reports directly to the Incident Commander and should be assigned as early in the incident as possible. The Incident Commander will announce the implementation of the Safety Officer position over the fire ground channel, e. g., "Command to all Commanders, 6-O is the designated Safety Officer". The Safety Officer will wear a green identification vest labeled "Safety" to further identify this position to other members. Each incident commander vehicle is supplied with one "Safety" vest.

2. The individual given the Safety Officer assignment must monitor and assess safety hazards and unsafe situations and recommend measures for ensuring personnel safety. The Safety Officer keeps the Incident Commander informed of present problems and potential hazards. The

   Incident Commander will use the information provided by the Safety Officer for strategic and tactical level planning.

3. Typically, when dangerous situations are found and corrective action can be implemented locally, the Safety Officer will immediately inform the affected supervising commanders. If corrective action were not taken to the satisfaction of the Safety Officer, the Safety Officer

has the authority to alter, suspend, or terminate any activity that is an unacceptable risk and the Incident Commander would then be informed of the corrective action taken by the Safety Officer. The Incident Commander maintains final authority over any issues related to safety.

4. When operating in forward or otherwise hazardous positions, the Safety Officer must be attired in appropriate personal protective equipment, including SCBA; have radio communication equipment; and be accompanied by another fire fighter.

B. Public Information Officer

1. The Public Information Officer (PIO) interfaces with the media to disseminate information as authorized by the Incident Commander. This function relieves the Incident Commander of the need to work directly with the media.

2. When the Incident Commander is not able to handle both the command responsibilities of the incident and the media, the PIO position should be staffed. When the Department's Public Information Officer is not available at the scene, other personnel will be assigned this duty, e.g., the Arson Investigator.

3. The PIO acts as a central clearing point for the dissemination of information. This reduces the risk of generating conflicting information from multiple sources.

4. The PIO must coordinate all releases of significant information with the Incident Commander. The Incident Commander will decide on sensitive topics, such as the cause of the incident, victim's names and any other information that should not be (and does not have to be) released immediately to the press.

5. The PIO also prevents the media from interfering with operations by restricting their movement and providing timely news releases and opportunity for close inspection tours, interviews, etc. as conditions dictate.

C. Liaison Officer

1. The Liaison Officer is the point of contact for outside departments or agencies involved in an incident. This position is established as necessary to maintain a manageable span of control at the Incident Commander level.

2. The Incident Commander will designate the member to serve as the Liaison Officer. The Liaison Officer will wear a white identification vest labeled "Fire Liaison" to identify this position to other Fire Department members and personnel from outside agencies and departments. Each incident commander vehicle is supplied with one "Fire Liaison" vest.

3. One of the most important responsibilities of the Liaison Officer is to coordinate the management of assisting or coordinating outside departments and agencies. This is essential to avoid the duplication of efforts. It allows each department or agency to perform what it does best. Liaison management provides lines of authority, responsibility and communication, and increases the control necessary to provide for the safety of personnel from all involved agencies.

803. General Staff

General Staff positions are identified as the group of incident management personnel comprised of the Operations Section Chief, Planning Section Chief, and Logistics Section Chief. These positions may be activated as required during expanded IMS operations and should be staffed by Chief Officers when possible. (See Section 704-707.)

SECTION 900. STAGING PROCEDURES

A. The objective of the Staging procedure is to provide a standard system of placement for responding apparatus, personnel and equipment prior to assignment at regular alarms, multiple alarms and other multi-unit incidents.

B. Effective utilization of Staging Procedures:

1. Will prevent excessive apparatus congestion at the scene.

2. Will allow time for Command to evaluate conditions prior to assigning companies.

3. Places apparatus in an uncommitted location close to the immediate scene to facilitate more effective assignment by command.

4. Produces more effective communications by virtue of reducing radio traffic during the critical initial stages of fire operations.

5. Allows Command to formulate and implement a plan without undue confusion.

C. Staging will involve two levels: Level 1 and Level 2

901. Level 1 Staging

A. The Level 1 procedure will apply automatically to all multiple unit responses except multiple alarms.

B. The Level 1 Staging Procedure is as follows:

1. The first pumper company will proceed directly to the scene and operate to best advantage.

2. The first truck company will also proceed directly to the scene and will place park the apparatus in the position providing the greatest tactical advantage.

3. The responding Chief Officer will report directly to the scene and assume command.

4. All other pumper and truck companies will stage in their direction of travel, uncommitted, approximately one block from the scene until assigned by Command a position. This provides a maximum of possible tactical options with regard to access, direction of travel, water supply, etc.

5. Staged companies will report their arrival, company designation, and their location relative to the incident ("1-1 is 10-97 staging South"). It may be necessary to be more specific when reporting staging locations ("1-1 is 10-97 staging at San Pedro and Ashby").

6. As companies transmit their arrival and staging location, an acknowledgement is not required by Command and Fire Alarm is not to acknowledge unless instructed to by Command.

7. Staged companies will stay off the air until orders are received from Command, unless it appears that they were forgotten by Command. In such cases, after a reasonable amount of time, they will contact Command and re-advise him of their standby status.

8. Staged companies awaiting assignment will pull map books, preplans and other reference material and familiarize themselves with the fire building and immediate fire area.

C. These staging procedures attempt to reduce radio traffic, but should not reduce effective communications or the initiative of officers to communicate. If staged companies observe critical tactical or safety conditions, they will advise Command of such critical conditions.

902. Level 2 Staging

A. Level 2 Staging will be used at all multiple alarms or at any other alarm where the Incident Commander deems assembling available apparatus in a common location to be advantageous.

B. The Level 2 Staging Procedure is as follows:

1. When an incident escalates beyond a regular alarm or when the Incident Commander determines that the establishment of Level 2 Staging is advantageous, the IC shall promptly select a suitable location for Level 2 Staging and announce the location to all responding companies ("Attention all responding companies, the Level 2 Staging area will be San Pedro and Ashby").

2. The Level 2 Staging area should be a sufficient distance away from the Command Post and incident to provide adequate space for assembly and for safe and effective apparatus movement.

3. When Command announces the location of the Level 2 Staging Area, all responding companies will report to and remain in the Staging Area until assigned by Command.

4. Level 2 Staging will automatically supersede Level 1 Staging but companies already staged in Level I will remain in Level 1 until assigned.

5. Command may designate a Staging Officer who will be responsible for tracking the companies in the Level 2 Staging area and will serve as a communications link between Command and the staging area.

6. If Command does not designate a Staging Officer, the first officer to arrive at the Level 2 Staging area will automatically become the Staging Officer, will notify Command of his arrival and will assume Command of the Staging Area.

7. Due to the limited number of Truck companies, if the first arriving officer is a Truck officer he will transfer command of Staging to the first arriving Pumper company officer.

8. The radio designation for the Staging Officer, Area and Function will be "Staging". All communications involving Staging will be between Staging and Command or Staging and Operations if established.

9. Once Level 2 Staging has been initiated by the IC, all responding companies will stay off the air (do not report arrival via radio), respond directly to the designated Staging Area and report in person to the Staging Officer. They will stand by their unit with crew intact and warning lights turned off.

10. As resources are requested by Command and assignments are given, the Staging Officer will verbally instruct companies to report to the specific sectors designated by Command, telling them where and to whom to report. The Sector Officer will inform Command of the company that will be reporting to the assigned location.

11. Staging will keep Command informed of available companies. Command may instruct Staging to maintain a base level of resources until further notice. In such circumstances Staging will communicate directly with Fire Alarm to request additional resources.

12. The Staging Officer will be responsible for the following functions:

    1. Coordinating with Police Department to block streets, intersections and other access required for the Staging Area.

    2. Insuring that apparatus is parked in an appropriate manner.

    3. Maintaining a log of companies available in the Staging Area and inventory all specialized equipment that might be required at the scene.

    4. Reviewing with Command what resources must be maintained in the Staging Area and coordinate the request for these resources from Fire Alarm.

    5. Assuming a position that is visible and accessible to incoming and staged companies. This will be accomplished by leaving the warning lights operating.

    6. Directing responders to the Staging Area (i.e., directions, travel routes, special instructions, etc.).

    7. Monitoring the safety and welfare of personnel assigned to staging.

Note: Staging procedures apply to EMS companies responding to incidents commanded by firefighting personnel.

SECTION 1000. CHECK-IN PROCEDURES/AGENCY COORDINATION

A. It is the Incident Commander's responsibility to provide for the safety of all personnel involved in the incident mitigation effort. This includes personnel from other City Departments (i.e., Public Works, SAPD, Metropolitan Health, etc.), City service organizations (i.e., City Public Service, San Antonio Water System (SAWS), etc.), State agencies (i.e., Texas Commission on

Environmental Quality (TCEQ), Department of Public Safety (DPS), etc.), Federal agencies (i.e., Department of Transportation, FBI, etc.) or anybody else that may assist in the mitigation effort. In order to provide for their safety, the IC must attain and maintain contact with a representative from each group and through that representative, maintain an awareness of the number of personnel on scene from each group, their approximate location and the activity they are involved in. The only way to accomplish this is through a standard check-in procedure.

B. The IC shall be responsible for initiating check-in procedures when he/she becomes aware that outside departments, agencies or groups are on scene. The IC may delegate this responsibility to an Aide, a subordinate officer or any other Fire Department member if he/she, due to other required activity, is unable to devote time and effort to check-in activities. Where a Liaison Officer has been appointed and where the amount of liaison activity permits, this individual is the logical choice for coordinating the check-in process.

C. The Department's Check-in Procedure shall be as follows:

1. A Check-In location will be established. At fairly small incidents, the check-in location may be at or near the Command Post. At larger incidents that encompass a large geographical area, remote check-in locations may have to be established. If the Check-In location is remote from the command post, the person responsible for check-in duties must maintain radio contact with the IC.

2. Representatives from all outside departments, agencies or groups shall check-in at the established Check-In location. Some outside departments, agencies or groups know that they need to check-in and other do not. The person assigned check-in duties must maintain an awareness of outside departments, agencies or groups that may be on scene. If they become aware that an outside department, agency or group is on scene and a representative from that department, agency or group has not checked in, he/she should notify the IC so that efforts can be made to make contact with a representative.

3. As representatives from outside departments, agencies or groups report to the Check-In location, they shall be required to fill out a Check-In Sheet that captures their name, the name of their department, agency or group, a method of contact (cell phone, pager, dispatcher, etc.), a listing of resources (people, equipment, etc.) that the department, agency or group has on scene and a brief statement of their intended activity.

4. Completed Check-In Sheets shall be given to the IC (or his representative). Where the Check-In location is remote from the Command Post, the person responsible for Check-In shall notify the IC of the presence of representatives by radio. Pertinent information can be passed on to the IC (or his representative) via radio, phone, cell phone, fax machine, etc.

5. The IC must approve all intended activity prior to personnel from a department, agency or group taking action. At the discretion of the IC, this coordination may be done directly with the IC at the Command Post or may be coordinated through the person responsible for Check-In or some other.

SECTION 1100. OPERATIONAL SAFETY

A. An Incident Commander has no greater responsibility on the fire ground or at any other emergency scene than seeing to the safety and well being of emergency personnel. Regardless of the incident size or complexity, operational safety must be established and maintained during each emergency scene incident. The Incident Commander will use the IMS organizational features to maintain operational control in a manner that recognizes hazards and assists in the prevention of accidents and injuries.

B. Along with the use of the IMS, it is essential that all department personnel rely on their standard operating procedures, training and equipment to continuously provide a high degree of safety when operating at emergency incidents.

1101. Risk Management

A. The Incident Commander shall integrate risk management into the regular functions of Incident Command. The concept of risk management shall be utilized on the basis of the following principles:

1. Activities that present a significant risk to the safety of members shall be limited to situations where there is a potential to save endangered lives.

2. Activities that are routinely employed to protect property shall be recognized as inherent risks to the safety of members, and actions shall be taken to reduce or avoid these risks.

3. No risk to the safety of members shall be acceptable when there is no possibility to save lives or property.

B. The Incident Commander has the ultimate responsibility for the safety of all Fire Department members operating at an incident and for any and all other persons whose safety is affected by Fire Department operations. Risk management provides a basis for the following:

1. Standard evaluation of the situation

2. Strategic decision making

3. Tactical planning

4. Plan evaluation and revision

5. Operational command and control

1. Has routine evaluation of risk been ongoing?

2. Are the incident's strategic options well-defined?

3. Are personnel functioning in accordance with standard operating procedures?

4. Are personnel trained to the extent necessary to accomplish the task assigned?

5. Are personnel wearing the protective clothing ensemble and equipment needed for the hazard encountered?

6. Is the incident being managed effectively?

7. Are incident communications effective?

8. Are adequate safety procedures being utilized?

9. Are an adequate number of Safety Officers in place?

10. Are sufficient back-up crews for rapid intervention in place?

11. Are adequate resources available?

12. Has rest and rehabilitation been considered and addressed?

13. Are changing conditions being regularly evaluated and addressed?

14. Is experience based on previous incidents and critiques being utilized?

C. The risk to Fire Department members is the most important factor considered by the Incident Commander in determining the strategy that will be employed in each situation. When managing risk at an emergency incident, the IC shall consider the following:

A "no" answer to any of the above questions shall be taken into consideration when determining strategy, developing tactics and assigning tasks. The IC must ensure that the activities occurring at the emergency scene do not represent an unreasonable risk to the safety of emergency responders.

D. When considering risk management, the IC shall consider the following Rules of Engagement:

1. What is the survival profile of any victims in the involved compartment?

2. We WILL NOT risk our lives at all for a building or lives that are already lost.

3. We may only risk our lives a LITTLE, in a calculated manner, to save SAVABLE property.

4. We may risk our lives a lot, in a calculated manner, to save SAVABLE lives.

E. The Incident Commander shall evaluate the risk to members with respect to the purpose and potential results of their actions in each situation.

F. In situations where the risk to Fire Department members is excessive, activities shall be limited to defensive operations.

G. Risk management principles shall be routinely employed by supervisory personnel at all levels of the Incident Management System to define the limits of acceptable and unacceptable positions and functions for all members at the incident scene.

H. At significant incidents and special operations incidents, the Incident Commander shall assign an incident Safety Officer that has the expertise to evaluate hazards and provide direction with respect to the overall safety of personnel.

I. At civil disturbances or incidents involving the risk for physical violence, the Incident Commander shall ensure that appropriate protective equipment (e.g., body armor) is available and used before personnel are allowed to enter the hazard area. Without appropriate protective equipment, personnel shall maintain a safe position until the area has been deemed sufficiently safe for emergency personnel to operate without unreasonable risk to personal safety.

J. At terrorist incidents or other incidents involving potential nuclear, biological, and chemical exposure, the Incident Commander shall exercise risk management practices and ensure that appropriate protective equipment is available for and used by members at risk.

K. The acceptable level of risk is directly related to the potential to save lives or property. Where there is no potential to save lives, the risk to Fire Department members should be evaluated in proportion to the ability to save property of value. When there is no ability to save lives or property, there is no justification to expose Fire Department members to any avoidable risk, and defensive fire suppression operations are the appropriate strategy.

1102. Time Management

A. It is imperative that the Incident Commander maintain an awareness of elapsed time and the impact elapsed time can have on fire conditions, structural integrity, the survivability of victims, etc.

B. Time management is the responsibility of the Incident Commander. The safety of personnel engaged in incident mitigation activities is very much affected by the Incident Commander's ability to monitor elapsed time and make adjustments to the operational plan based not only on current conditions by also on a prediction of future conditions.

C. The following time management strategies shall be employed at all working fires, hazardous materials incidents, and all other incidents where time management may enhance the safety of personnel:

1. Dispatch shall log and track elapsed time beginning at the time call-taker receives the call for assistance. Designated Dispatch personnel shall transmit elapsed time information to the Incident Commander at ten (10) minute intervals and shall continue to do so until such time the incident is deemed stabilized by the Incident Commander. The Incident Commander shall notify Dispatch when they deem the incident to be at a point where elapsed time information is no longer relevant.

2. The Incident Commander shall record elapsed time information on the tactical worksheet and shall consider elapsed time when making operational decisions.

3. The Incident Commander shall establish a Time Management Sector at incidents where time management activities are complicated by the number of personnel on the scene, the size or complexity of the structure or any other factor that may make time management difficult. The Time Management Officer shall be responsible for tracking and recording key timeframes including incident elapsed time, company work times, rehab times, etc.

4. The Time Management Sector can also be used in lieu of an Air Management Officer (see Air Management SOP) to monitor and track the length of time companies have been on breathing air in an IDLH atmosphere.

1103. Radio Communications

A. Effective radio communications are necessary to ensure the safety of firefighters operating in hazardous environments. Effective communications will be accomplished in accordance with the following guidelines:

1. All radio communications that occur at the scene of an emergency shall be in accordance with the Department's Radio Communications Standard Operating Procedure.

2. Dispatch shall provide a separate tactical channel for all regular alarms and lesser multi-unit alarms where the use of a separate channel would enhance unit-to-unit communications and coordination.

3. At multiple alarms, Dispatch shall provide not less that one separate tactical channel and one command channel.

4. At large and/or complex incidents where one tactical channel and one command channel are not sufficient to ensure effective communications, the Incident Commander shall request additional channels as needed.

5. Radio transmissions shall be in clear text utilizing common terminology.

6. In accordance with the Department's Radio Communications Standard Operating Procedure, the term "Emergency Traffic" shall be used to clear radio traffic for emergency transmissions.

7. Personnel transmitting messages over the radio shall speak as clearly and distinctly as possible so that their transmissions can be understood.

1104. Resource Accountability

A. The Incident Commander is responsible for knowing what resources are on the scene, where they are located and what they are doing. In order to ensure resource accountability, the Incident Commander must have a standard method of tracking on-scene resources and recording their activities.

B. At regular alarms and greater, Incident Commanders shall utilize a tactical worksheet, a tactical workboard or other appropriate tool (i.e., computer program) to record the designation, location and assignments of on-scene resources.

C. A tactical worksheet, tactical workboard or other appropriate tool (i.e., computer program) shall also be utilized at multiple unit incidents where someone is providing strategic level coordination and is not involved in tactical or task related activities.

D. Other resource accountability methods such as Personnel Resource Tracking Sheets, Equipment Resource Tracking Sheets, Agency Check-in Sheets, Agency Status Sheets, etc. shall be employed at very large incidents where the number of resources at the scene makes the use of the standard tactical worksheets or workboards impractical.

1105. Personnel Accountability Procedures

A. Personnel accountability is a critical scene management element during emergency operations. The Incident Management System includes Personnel Accountability Procedures that provide a systematic approach to improving the Incident Commander and subordinate Commander's ability to recognize when firefighters are trapped or lost and to provide a rapid and effective search and rescue response to the situation.

B. Personnel Accountability Procedures include the use of company helmet accountability tags, personnel accountability tags (PATS) for each member; company responder boards, company Passports and MDT response information. These hardware items assist supervising commanders maintaining an awareness of the location of firefighters, the identity of their assigned company, and the identity of those firefighters that have actually responded to the incident.

C. The Department's Personnel Accountability SOP will be used at each emergency incident.

1106. Rapid Intervention Teams

A. In order to provide the best opportunity to rescue firefighters that may become incapacitated, trapped or missing, the IC must establish Rapid Interventions Teams, wearing full protective clothing and equipped properly to affect a viable rescue. The number of RIT teams needed will be driven by the size of the incident, the hazards inherent to the structure or incident scene and/or the danger posed by the activities of firefighting personnel.

B. In accordance with the Department's Rapid Intervention Team SOP, the IC shall designate Rapid Intervention Teams as necessary to prepare for and perform rescues of downed, trapped or missing firefighters.

1107. Responder Rehabilitation

A. The purpose of responder rehabilitation, or rehab, is to evaluate and assist personnel who may be suffering from the effects of sustained physical exertion during emergency operations.

B. The Incident Commander has the responsibility to ensure that the physical and mental condition of emergency responders operating at the scene of an emergency incident does not deteriorate to a

point where it affects the safety of each member or it jeopardizes the safety or integrity of the operation.

C. Command officers should consider the need for rehab during the initial planning stages of an emergency response. In addition, all officers should maintain an awareness of the condition of each member operating within their immediate span of control and ensure that adequate steps are taken to provide for each member's safety and health. This is especially important while conducting operations in extreme environmental conditions and/or when dealing with a mass casualty incident (See Department's Rehab/Heat Stress and Critical Incident Debriefing policies

SECTION 1200. OVERHAUL/DISENGAGEMENT

The Incident Management System will provide the control necessary to bring about an orderly overhaul and disengagement once the incident is stabilized and the requirement for resources diminishes. The Command function will continue to operate as long as Fire Department units are on the scene.

1201. Overhaul

A. Command will develop an operation plan of overhaul once the incident is stabilized. The following items will need to be considered during this process:

1. Number and types of companies needed.

2. Specialized equipment needed.

3. Area to be overhauled/searched.

4. Assignment of companies and equipment to specific areas.

B. Command will continue to utilize those components of the IMS necessary to ensure effective operations.

1. Sectors;

2. Branches;

3. Sections;

4. Companies/Units; etc.

C. Relief of Companies

1. Sector Officers will keep Command apprised of the need for relief companies.

2. Command will develop a plan to systematically relieve companies and notify Fire Dispatch of types and numbers of companies needed and at what intervals.

1202. Disengagement

A. Command will begin to disengage resources as soon as stabilization of the incident permits. Fire companies and support units from Police and/or Public Works will be cleared as quickly as possible within the following guidelines:

1. Only Command has the authority to clear companies.

2. Companies will notify dispatch when leaving the scene after being relieved by Command so their status can be appropriately updated.

B. Command itself will begin a de-escalation process as the situation is stabilized and as conditions warrant. The following activities shall apply to Command during this process:

1. The IMS structure can be disengaged in a descending order with Command responsibility being transferred back down through the system via the chain of command.

2. Responsibility for final termination of the incident will rest with the District Chief in whose response area the incident occurred. In the event the level of command needed at the incident is such that the presence of a District Chief unnecessary, a company officer may be left in charge and the dispatcher will be notified of the same.

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